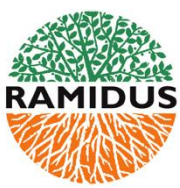
London Office Policy Review 2012



Prepared for: Greater London Authority
By RAMIDUS CONSULTING LIMITED
Date: September 2012

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with Roger Tym & Partners

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Dedication

During the preparation of this report one of the principal authors died very suddenly. David Chippendale had been involved in the LOPR since its inception, and has played a major part in laying sound foundations for what is now seen as the authoritative review of London office policy. David was a leading personality of the property research industry and will be hugely missed by many friends and colleagues. We dedicate LOPR 12 to David's memory.

Acknowledgements

Ramidus Consulting Limited was appointed in February 2012 to undertake LOPR 12. The team comprised Rob Harris, David Chippendale, Ian Cundell and Sandra Jones. We have worked very closely with Dave Lawrence and Adala Leeson of Roger Tym & Partners, who have provided invaluable input to the forecasting and policy analysis.

Martin Davis of DTZ and Theresa Keogh and Hannah Lakey of EGi have once again provided data, and we thank them for their assistance.

Contents

Readers' notes

(1) Data on potential supply, including construction activity, planning permissions and outstanding planning applications, are mainly sourced from the London Office Database of Estates Gazette Interactive (EGi) and London Residential Research (LRR) databases, supplemented where necessary by original research.

(2) The London Office Policy Review is presented in metric, with the exception of rents and values. Because it is particularly prevalent within the property industry to use imperial measures when quoting rents and prices, we have quoted these in metric with imperial conversions in parentheses.

(3) All sq m figures refer to net internal area (NIA) unless otherwise stated. The main area of exception is when citing occupancy densities, where the planning and construction professions use gross figures. We have highlighted where we have used GIA, particularly in Chapter 7.0 which discusses the demand forecasts.

(4) Part-year time periods are generally referred to in the format of "Q1 10" (first quarter, 2010) and "H2 10" (second half, 2010).

(5) For brevity, the City of London and the City of Westminster are referred to simple as the City and Westminster, respectively.

(6) Reference is made to availability rates, i.e. the proportion of the total office stock in a market or sub-market that is being actively marketed for letting. Note that this is not equivalent to a vacancy rate, as some available space is occupied while being marketed.

(7) In the report we use the geographical definitions given below.

- Central Activities Zone (CAZ), Inner London (IL) and Outer London (OL). The CAZ cuts across borough boundaries.
- Central London: office data on availability and take-up are based on post codes as this is the geographical unit used by the market, and for consistency with previous LOPRs.
- Outer Metropolitan Area (OMA): beyond London, and including parts of the South East and East of England regions.

(8) A map showing London boroughs, CAZ, Inner London and Outer London is provided in Appendix A1.

(9) A map showing the market area of Central London, as defined by DTZ, is shown in Figure 1.4.

Management summary

The London Office Policy Review 2012 has been prepared at a pivotal time for the London office market. A long, sustained period of growth was brought to a shuddering halt by the credit crunch of 2008 and the wider economic chaos that has ensued since. While some market actors and observers patiently await a return to the *status quo ante*; some evidence suggests that the market is entering a new, long-run phase.

Recent change: looking back to look forward In order to fully understand London's office market today, it is necessary to place the recent shock in its wider, historic context. In the mid-1980s, financial deregulation, technological innovation, management change and industrial restructuring all combined to underpin a substantial expansion of the stock of offices, especially in Central and Inner London. This expansion lasted through to 2008 – interrupted only by the brief early-1990s recession.

But, and this is critical, even before the credit crunch, the rapid expansion of the office economy was almost certainly reaching its mature phase. As a result, it is likely that the office property market is entering – indeed is already in – an era of consolidation, organisation and product evolution. This does not discount further growth, but suggests a different *pattern* of growth.

London's future as a World City and global financial centre is secure for the reasonably foreseeable future, and the general picture is optimistic. Chapters 1.0 and 2.0 reveal a city that has learned how to adjust to the slings and arrows of market fortune very well, despite a very difficult post-2008 period. The employment forecasts in Chapter 7.0 indicate a dynamic metropolitan area. There will be demand for new space, and for new types and formats of office space and related employment space, but in terms of quantity, forecasts suggest there is little need for expansion beyond that already in the pipeline. The rate of growth in office jobs, 2011-2036, is forecast to be half that which prevailed over the past two decades. The key policy task will be to monitor both the quantity and quality of space emerging, balancing new proposals with others that fall out of the pipeline, so that the pipeline is responsive to changes in demand.

A key effect of the massive post-1985 expansion was the breaking up of the old London "villages". Perhaps the most iconic was Fleet Street, but there were other areas such as the Rag Trade Quarter, North of Oxford Street; the furniture village, North of the City and the Mayfair property industry village. These areas broke up partly as newer and larger businesses compromised on old location loyalties and priced other occupiers out. At one point a major bank could be found in almost every part of Central London.

The old villages have been superseded by a patchwork of new villages – what we refer to as mega schemes – located away from the core area, to create a polycentric London office market. These are, in effect, mini-CBDs with integrated environments, public realm and good quality, modern office space. They have helped to redefine the Central London office market and provide buildings appropriate for London's global role. It is telling that when the media covers "The City" it is as likely to be illustrated with a picture of Canary Wharf as one of the Bank of England. This process of change is not a new one: key to London's long history of success has been its ability to adapt and change.

It is evident that the London property market continues to evolve, but that the pattern of future growth might be different. In terms of spatial policy, therefore, priority is moving from one of resource creation to resource management and allocation. In most markets these are resolved by the pricing mechanism, but the long lead times of property dictate that it becomes a matter for planning. And planning requires evidence-based choices.

Resilient London ... That London is a very successful place barely requires saying. It has met challenges to its dominance as a centre of finance, both planned and unplanned, and continued to prosper. Frankfurt and Paris have both posited themselves as rivals but have never seriously challenged. More recently Dubai's building boom demonstrated that the *necessary* condition of having plenty of new office space is not *sufficient* to ensure success.

Clearly, London is doing something right.

While the loss of business confidence associated with the economic turbulence, suppressed demand for office space and the lack of bank debt effectively brought the property development market to a temporary halt, London's economy seems to have fared better than many expected in the recent economic disruption (Chapter 3.0).

London continues to attract inward investment, whether from established sources, emerging overseas markets (e.g. Russian banks and South American extractive industries), or from the M4 corridor (as prospective deals involving major TMT companies illustrate). The level of interest, and the fact that it has been more or less sustained through recent times, underlines the enduring attractiveness of London.

The impact of recession has been predominantly cyclical and already indications are that a gradual recovery can be expected. As confidence returns, it is reasonable to expect demand for office space to increase. This is, however, subject to the comments about slower structural growth discussed above. We highlight in Chapter 3.0 a series of cyclical and structural changes in London's property market. The former relate mainly to the recession and include a fall in occupational demand, downward pressure on rents and a virtual cessation of development. The latter include longer-term trends, including the polycentric London (Chapter 6.0), changing workstyles (Chapter 5.0), public sector rationalisation (Chapter 10.0) and stagnation in Outer London (Chapter 4.0).

The financial crisis looks likely to leave a more permanent legacy on London's office market in the form of tighter fiscal regulation and changes to taxation. In both cases politicians must work hard to minimise the negative impact on London's attractiveness to international business. Given this caveat, London's future as a major global business centre looks secure in the medium-term, not least because of its tremendous head start, together with the new relationships and loyalties that are forming with today's emerging economies and that will underwrite its office market in the future. Furthermore, while London's financial services are a critical component of its continuing success, they are only a part. It can be noted that between 1986 and 2010, while financial and insurance jobs in London grew by 18% (from 308,000 to 365,000), jobs in broader business services grew by 98% (from 349,000 to 672,000).

In terms of volume, for over two decades London has delivered the space needed to support its burgeoning global role, and the data so far suggest that this is set to continue

(Chapters 1.0 and 2.0). Spatial policy in London has effectively underpinned London's World City status. London's property market also has the capacity and flexibility to continue to support its global role. The real questions revolve around the impact of potentially slower demand growth, the emerging geography of demand and supply, and the future of many Outer London centres in terms of their roles as office centres.

But change is constant and spatial policy must respond to evolving patterns.

Evolving London ... It is worth considering the inflationary occupancy cost picture faced by the core West End market through the lens of economic change. The pressure is partly from shortage of stock, but also from weight of money from "flight-to-safety" investors keen on converting commercial space to residential. A significant issue must be whether the benefits of allowing more residential at the expense of some apparently prime office stock, is a trade-off worth making to keep London attractive to wealthy foreign investors. The supporting argument is that large schemes in, for example, Victoria and Paddington, provide alternative locations for corporate offices.

The core West End could face what the City faced in the 1980s: high cost and an inability to provide large units of space for corporate occupiers, so causing it to lose occupiers to alternative sites where there are 'mini-West Ends'. Unlike in the 1980s, however, this should not be seen as a problem partly because the alternative sites are complimentary to the core market area and partly because there is an alternative and constructive use for core West End properties in the form of residential and leisure. Demand from boutique office occupiers (such as hedge funds) is more able to be satisfied in existing stock.

Such trends can be part of the natural process of change – part of London's evolution. This evolution is not a sign of weakness, but of a robust and dynamic economy, provided areas are not left to stagnate. London 2012 is already a very different place from London 1980. These are losses that the new London office market can absorb. The key aim of spatial policy must be to complement the evolution by ensuring a diverse ecology.

Spatial policy: playing the long game Opportunity Areas and mega schemes – London's new villages – take a long time to mature. The largest of the most recent mega schemes, Canary Wharf, collapsed into administration before finally succeeding (its success being dated almost exactly to when PM Tony Blair committed the Jubilee Line Extension to being open by the Millennium). Similarly, King's Cross had a fully developed masterplan over twenty years ago. This faltered and failed, before HS1 arrived and now development is getting underway. The inescapable conclusion is that big schemes take a long time to evolve and thus rely on an array of assumptions about the medium- and long-term future of demand for commercial space. Furthermore, most of the big schemes were underpinned by infrastructure investment. While a developer's vision and willingness to take risk play the greatest role in bringing projects to fruition, spatial planning has a key role in shaping proposals and providing a long-term framework within which design and massing decisions can be made.

In the context of these timescales, it is important to consider the role of the fourteen second generation mega schemes currently planned or underway (Chapter 6.0). These schemes could deliver 3.74 million square metres of office space. This figure is 54% more than was delivered by the seven first generation mega-schemes between 1984

and 2008, a period of massive expansion in the London office economy. At the completion rates of first generation schemes, the 3.74 million sq m equates to 37 years of supply. It also represents a 13% addition to total London office stock.

Given this potential level of supply, and given that the forecast growth in office jobs is half the level of historic growth, there appears to be a mismatch between supply side expectations and demand side reality. We believe that spatial policy should play the long game and provide a flexible framework within which Opportunity Areas and mega schemes can evolve and respond to changing market conditions.

The emerging geography How and where London's new villages emerge, and in what precise form, will be determined by many factors, but one stands out: access to rapid and reliable public transport infrastructure. This is likely to be even more critical as technology permits great worker mobility with lighter, yet more powerful equipment, from ultra-light laptops to tablets and smart phones (Chapter 5.0). In London, for the immediate future, the big infrastructure is Crossrail. This is likely to be to London what the M4 corridor has been to the Thames Valley, with big gravitational pull along the Heathrow-Central London-Stratford axis.

We expect to see significant office development in Central London and the most viable outlying locations – which in practice will mean the most well-connected locations: simply put, the *Crossrail Ribbon*. Although Crossrail will initially benefit Central London offices most, over time it will open up and enable new opportunity areas. As well as allowing more rapid and convenient movement within London, there are two airports on Crossrail, Heathrow and London City, as well as easy links to HS1 and the proposed HS2.

One effect of Crossrail's East-West axis is very likely to be the leaching of demand from centres to the North and South, which has particular implications for centres such as Brent Cross/Cricklewood and Croydon. These are already challenging locations in which to make office development viable and it is unlikely to get any easier.

Two further features of the changing geography are worth noting: the relative positions of West and East London, and the changes taking place in Outer London.

East and West: yin and yang? It is not surprising that East London has been subject to much policy intervention since the 1980s, culminating in this Olympic year. The result is a great deal of development, both real and potential, that has changed the geography of London definitively.

West London, by contrast, has had no such intervention: one very good reason being that intervention has not been needed. However West London is part of the changing geography of London, and those forces that have underpinned its past success are also changing. Trends in the TMT sector, and other demand stalwarts such as pharmaceuticals and oil, could quickly undermine the area's key strengths. West London is more vulnerable than is generally recognised and the risk of losing some big employers and sectors should not be ignored (Chapters 4.0 and 5.0). While the absence of a co-ordinated policy focus has been understandable in the past, we caution against complacency in the future.

We flag this up in the context of discussions about national aviation policy. As national policy evolves, and a response to the need to increase airport capacity in the South East emerges, the implications for London's office occupational market will need to be considered. In particular, there are significant issues for Outer London that will need to be fully understood as part of the wider cost-benefit appraisal of the various options for increasing capacity.

Endangered species: offices in Outer London Beyond Central and Inner London – and in particular away from the Crossrail Ribbon – town centres are likely to experience growing problems. With notable exceptions, the changing retail landscape will further depress the viability and vitality of their high streets. More particularly in the context of LOPR, most Outer London centres lack the critical mass of office work to support more than a locally focussed office market.

The very *raison d'être* for corporate offices in Outer London has been receding for some time (Chapter 4.0). Some of those that have been successful – especially in South London – will have to face up to the reality that attracting and retaining corporate office occupiers will become more challenging. The threat, and growing reality, of public sector rationalisation (Chapter 10.0) could further weaken Outer London's office markets.

The overall outcome is likely to be a growth in vacant and under-utilised secondary office property throughout large parts of Outer London. This will aggravate the problems of the high street identified by the Portas Report, although we recognise that London's business and residential density distinguish it somewhat from other parts of the country by giving more scope for regeneration. Nevertheless, it is likely to be necessary to accept that flexibility and imagination in the re-use of redundant or underutilised office space will be essential to reviving many centres.

There are many options beyond the obvious conversion to residential, which would bring its own issues of service provision and pressure on infrastructure. Redundant office space can meet a variety of forms of demand, but this will require spatial planning to be more creative and responsive to local market conditions. For example, it is not only large enterprises that are changing in the face of new technology. SMEs routinely use "set down" space, whether in coffee bars, hotel foyers, serviced offices or even arts centres – anywhere with free Wi-Fi. Collectively these are known as "third places" – neither homes nor traditional places of work. Encouraging the supply of space in the new office economy, on high streets, for flexible work patterns (Chapter 5.0) and small businesses with new needs could be a key role for spatial policy. It is our view that there is a large, as yet unquantified demand for such space. This needs to be researched.

London's spatial policy should actively encourage and support experimentation by boroughs in encouraging and developing such concepts as part of town centre regeneration strategies.

Mixing it up A key strategic challenge for spatial policy will be to create the flexibility to respond to changes in the office market, while creating the certainty to attract investors. Part of this must be the recognition that not all new office space will be Grade A institutional investor class. London is attractive to investors for many reasons that have been rehearsed elsewhere. The important policy implication is that a high standard of building is not enough if that creates a dispersed monoculture.

The new off-centre schemes will, most likely, show signs of specialisation – but they should not be extended monocultures, and policy should consider to what extent, if at all, it can support and encourage the emergence of new sector-led but diverse villages. If (say) Google creates a TMT cluster around King's Cross, does policy simply respond to this or does it attempt to encourage it? While the London Plan is explicit about not "picking winners", there is possibly more room for identifying successes (in office market terms) at early stages, and reinforcing the catalysts of growth.

This need for mixed environments is not limited to emerging off-centre schemes. The introduction of residential living into Midtown has greatly enhanced its vitality and extended its working day; while the City has made great strides over two decades in enhancing its retail offer.

There is a great deal of scope for exploring new workplace forms and configurations, especially in Opportunity Areas. Our focus on hybrid office-industrial activities (Chapter 9.0) amplifies one such area of demand which support London's global role and are, therefore, of strategic interest to spatial planning. They are also essential for supporting a broad base of job opportunities that it would be undesirable to allow to leach out of the London economy. We believe that more work should be undertaken to understand how spatial policy can support this key area, and perhaps to raise awareness within the development market. In particular, we believe that boroughs should be encouraged to explore how some such activities might support regeneration of town centre locations, and how appropriately priced land and buildings might be ensured.

Meet the neighbours The strength of London's economy is well known, but it is not an island. Its regional neighbours – the South East and East of England – are a part of its success. There is a legitimate policy interest in understanding the relative performance of London and it regional neighbours.

Our analysis suggests that comparative performance is a complex picture. Examination of the data reveals that there are many regional centres suffering the same property market malaise as Outer London locations, just as there are pockets of great success in each area. The reality is that many regional centres and Outer London are confronting the fact that their role as back office locations to firms based in Central London has largely disappeared: they no longer provide low cost alternatives for back offices or public sector administrations. Some of the demand for such space is being diverted to mega schemes; much of the demand has simply disappeared as technology and economics have transformed office work.

These dynamics of change should not be seen in a negative sense. Outer London performed a vital London role when companies located their back offices there between the 1960s and 1980s; and it can do so again. The spatial policy response is complex, but the discussions above under *Endangered species* and *Mixing it up*, go some way to suggesting how office policy might begin to respond.

Responsible development There is a sense that climate change awareness and the need for responsible behaviour is gathering momentum, particularly among the younger generation and increasingly it is a factor in business decisions (Chapter 10.0). Large

corporates acknowledge it as an important issue in recruitment and retention of staff as well as brand image.

The property industry might have been slow on the uptake, given its thirst for energy and resources, but several leading investors and developers have recently spoken out publically on the need for responsible development and there are initiatives to measure and monitor its impact on investment performance. This impetus combined with legislation will bring it into the mainstream and will influence building design and values. This has already been taken into account in London spatial policy.

1.0 Supply and demand in Central London

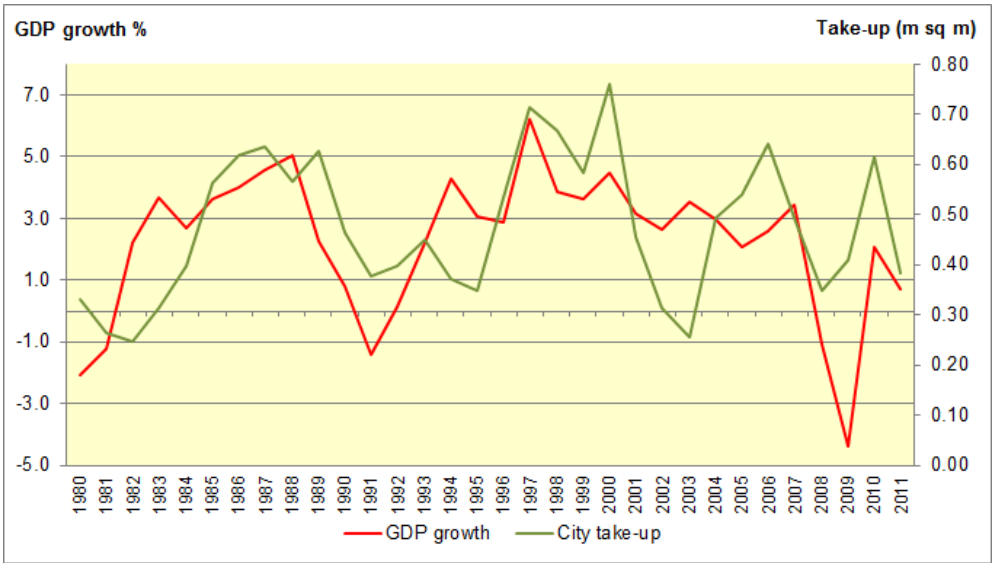
1.0.1 The previous edition of the London Office Policy Review (LOPR 09) was published in November 2009. The evidence base for the Central London analysis was mostly derived from market and planning data to 31st December 2008.[1] This was supplemented with a mid-year update, including first half 2009 data on key indicators, due to a later than usual publication, and a need to examine the effects of the 2008 credit crunch. The update captured the collapse in take-up in the first quarter of 2009 as the economy effectively came to a halt and development plans were shelved or cancelled outright.

1.0.2 LOPR 12 extends the evidence base to 31st December 2011 and, of course, needs to consider a wide range of new factors, ranging from the severely austerity tinged budgetary environment to the European currency crisis.

1.1 The Central London office market in context

1.1.1 That property is a derived market, where the property cycle follows the economic cycle, is illustrated in Figures 1.1 and 1.2. The charts compare UK GDP growth with City take-up and headline rents.[2] The pattern of office property following the economic cycle has held up consistently with regard to the volume of activity in the market (Figure 1.1).

Figure 1.1 National GDP growth and City take-up, 1980-2011



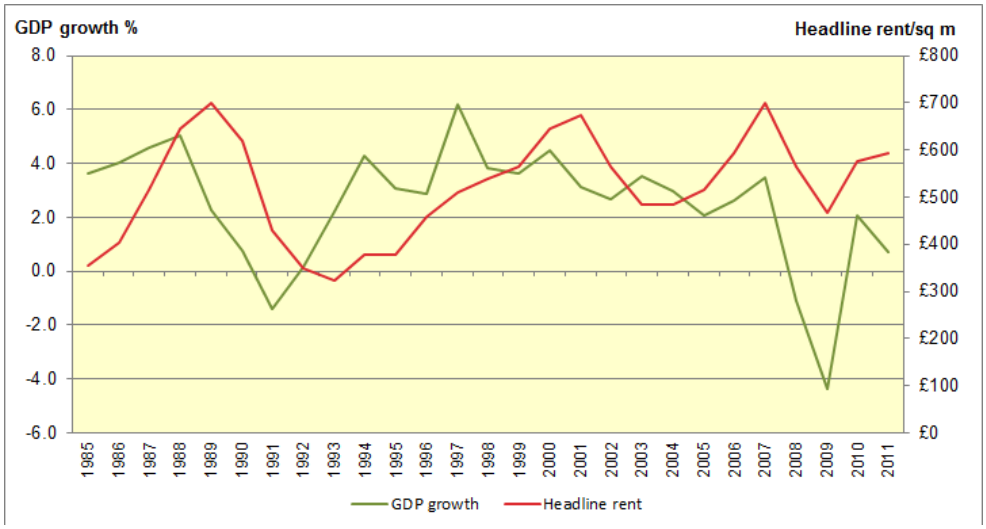
Source: DTZ Research; OECD

1.1.2 When plotted against rents, the same pattern emerges but with a recent and novel twist: in 2011, for the first time in the data series, the two measures took noticeably different trajectories (Figure 1.2). Although such a de-coupling would reflect wider political narrative about the importance of the City to the

[1] All previous LOPRs have been based on market data up to the end of the previous calendar year.
[2] Note that the City office market is used in Figures 1.1 and 1.2 because it is the only market for which sufficient time series data is available.

economy, it requires much clearer evidence before such a conclusion can be drawn. It might simply reflect the data cut-off, and should be seen in context with Figure 2.3 which shows a divergence of rent and availability, driven largely by stock shortage.

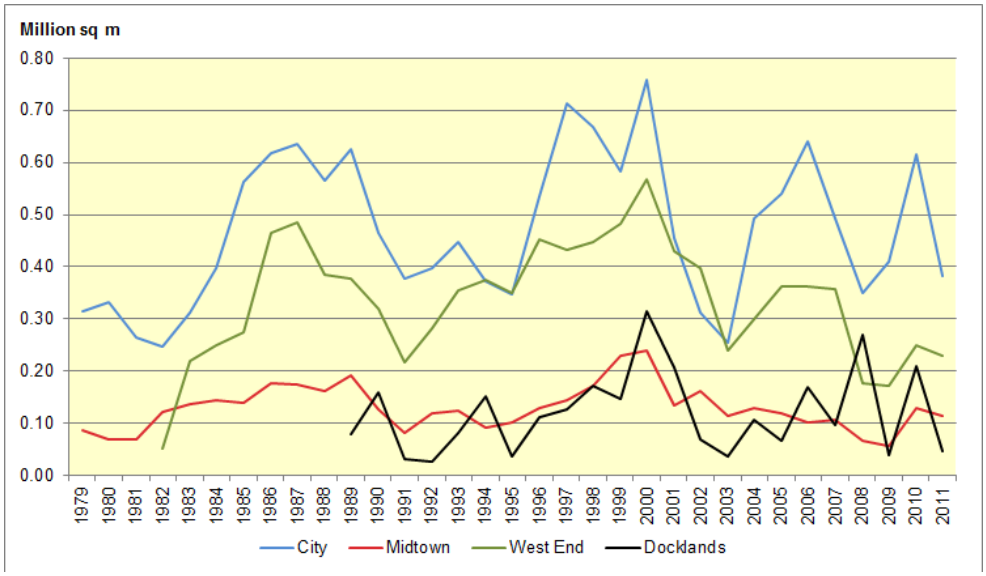
Figure 1.2 National GDP growth and City rents, 1985-2011



Source: DTZ Research; OECD

1.1.3 Further caution is suggested by the manner in which the long-term demand trend in the City office market is clearly reflected in the other main Central London sub-markets (Figure 1.3) – showing that that the City's cycle, although amplified, seems to be indicative of Central London as a whole.

Figure 1.3 Take-up in major sub-markets, 1979-2011



Source: DTZ Research

1.1.4 In LOPR 09 we noted that '*a potentially more amplified boom appeared to have been cut off in its tracks'*. In fact there was a strong resurgence of demand in 2010 which, if development finance had been available, would surely have initiated a new round of construction. In the event, business confidence took a new dive with the emergence of financial instability in the Eurozone, and demand plummeted once again in 2011 (see Section 1.8).

1.2 Market and planning data in Central London

1.2.1 As with LOPR 09, this review examines the Central London office market in the context of crisis and recessionary forces that are proving stubborn. The core evidence base for the report has been rolled forward two years to 31st December 2011.

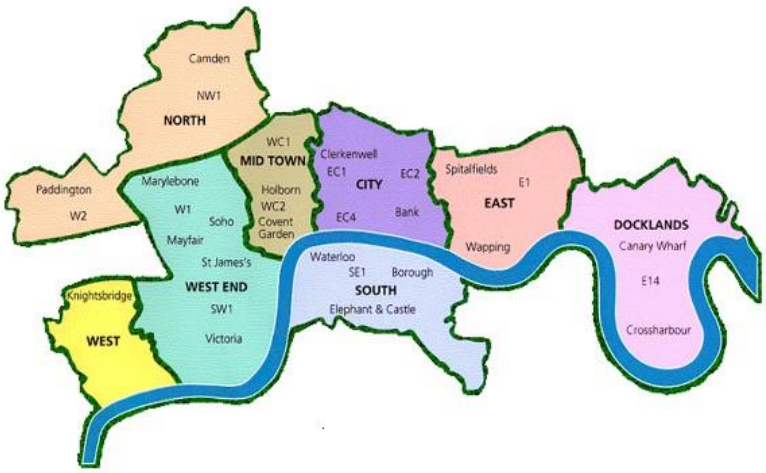
1.2.2 It remains the case that Central London dominates the London market. The LOPR series has analysed office construction and planning activity since 1995 across a wide definition of Central London, which includes 11 central boroughs. According to government statistics, these 11 central boroughs[3] contain 76% (19 million sq m) of the total stock of "commercial offices" and the overwhelming majority of the take-up.

1.2.3 Central London's dominance is illustrated, as Chapter 4.0 will show, by the fact that beyond the central area office markets performed poorly even in the "good times".

1.2.4 Central London also has long-running market and planning data sources which allow analysis of trends over several property cycles. In this Chapter we utilise two primary data series.

1.2.5 Market data on take-up and availability have been provided by DTZ Research and are based on its definition of Central London, with sub-markets derived from aggregated post codes (Figure 1.4).

Figure 1.4 The Central London office market



Source: DTZ Research

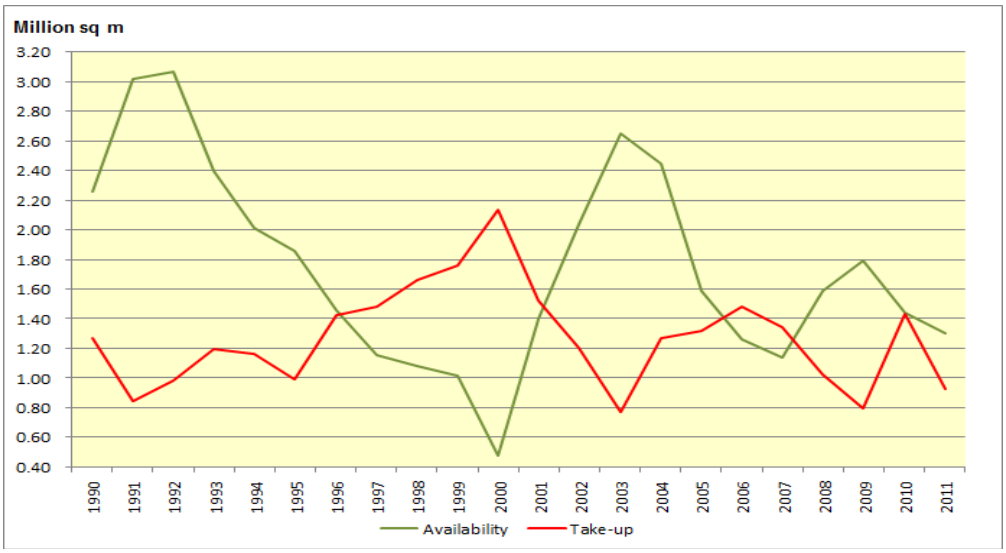
[3] Camden, City, Hackney, Hammersmith & Fulham, Islington, Kensington & Chelsea, Lambeth, Southwark, Tower Hamlets, Wandsworth and Westminster.

1.2.6 Planning data on office construction and planning pipeline have been provided by EGi London Offices, based on the 11 central boroughs referred to above.

1.3 Central London availability and take-up overview

1.3.1 Figure 1.5 illustrates a key market dynamic that might have been exacerbated by the tumultuous events since the sub-prime crisis unleashed its tempest. As a consequence of late-1980s overbuilding, London was left with a huge over-supply in the early-1990s, which declined steadily over the next decade.

Figure 1.5 Availability and take-up, Central London, 1990-2011[4]



Source: DTZ Research

1.3.2 Supply rose again in response to the dotcom demand bubble and although it fell sharply after that bubble burst, despite relatively modest take-up, it remained higher than for much of that in the previous decade.

1.3.3 Significantly, supply has not recovered to anywhere near the level of the "noughties", much less to those levels seen in the 1990s. This, as Figure 1.6 illustrates, is most likely the result of letting of new developments in a *relatively* small number of large deals, while lettings of second hand space remained reasonably stable – all in the context of a far from exceptional 2010 take-up total of just over 1.4 million sq m. This would certainly be consistent with an economic picture of the "squeezed middle", with credit-strapped mid-sized companies constrained, while larger corporate firms – tied to the global rather than local economy – could move.

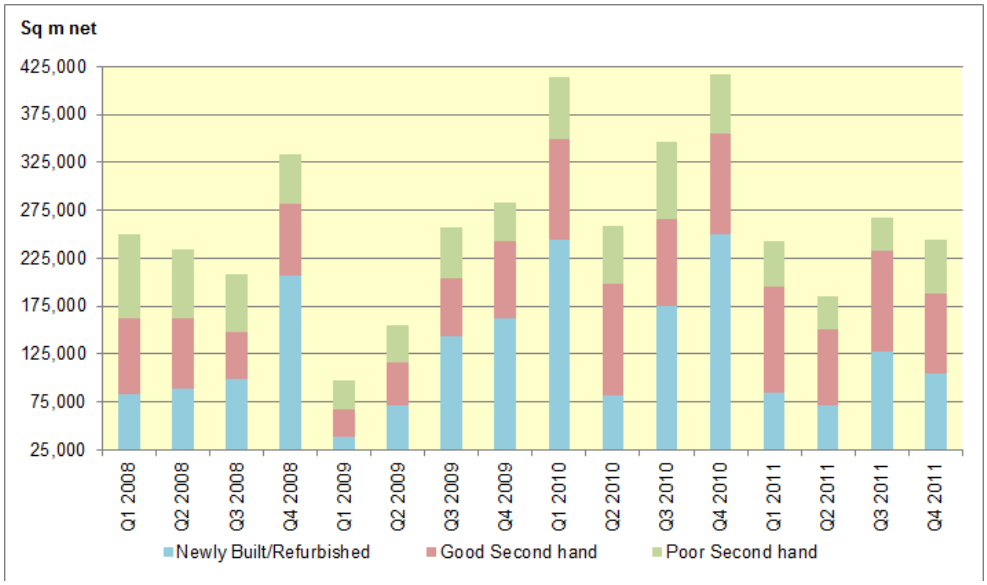
1.3.4 But then the uncertain economic climate seems to have headed off this nascent recovery, with both supply and take-up falling in 2011. In some respects it could be argued that the market is returning to a pattern familiar

[4] Office take-up is based on the total amount of space leased, and does not take into account the release of existing space – it is not a measure of net demand, otherwise known as "net absorption".

before the boom of the late-1980s, with tight supply most likely holding rents up, rather than demand pressure.

1.3.5 Appendix A2 contains a list of 2011 Central London lettings over 5,000 sq m.

Figure 1.6 Take-up, Central London, by quarter, 2008-2011



Source: DTZ Research

1.4 Central London take-up and availability by quality

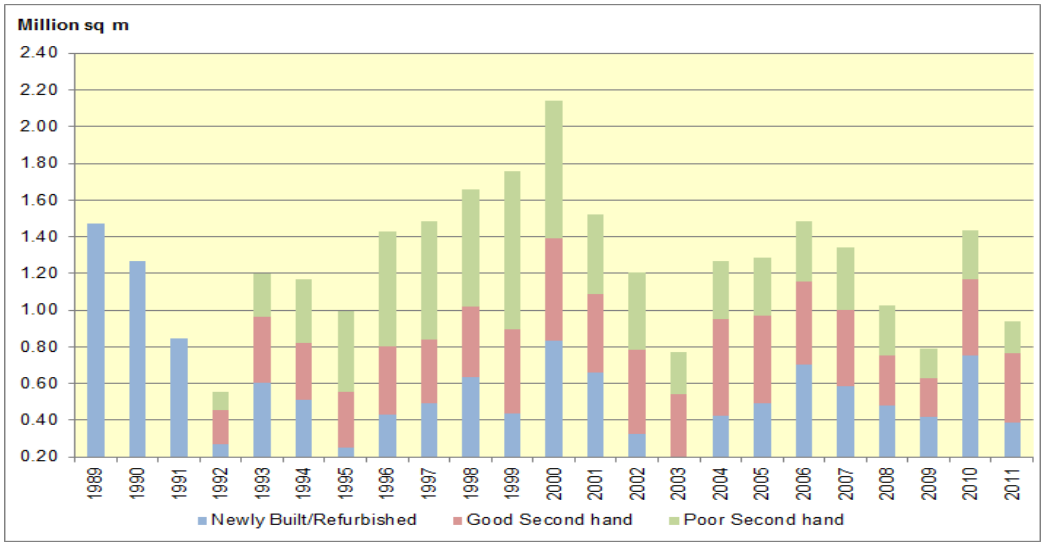
1.4.1 Take-up across Central London fell sharply from 2007 to 2009, and then seemed to recover in 2010, led to a very large extent by lettings in new space (Figure 1.7). It is notable that the fall in lettings of new space apparently accounts for the dip in take-up in 2011, with second hand take-up holding up.

1.4.2 As already noted, the 2010 spike in take-up was underpinned by a relatively small number of large lettings. The largest during 2010 was the UBS pre-let of 70,000 sq m at 5 Broadgate. In Docklands, Shell took almost 19,000 sq m at 40 Bank Street; while in the West End, Universal Pictures and WPP subsidiary Mindshare took a total of 16,000 sq m at Central St Giles.

1.4.3 Other notable deals included: CBRE at Henrietta House, W1 (9,800 sq m); Lend Lease at Regent's Place, NW1 (8,000 sq m); Weil Gotshal & Manges at 110 Fetter Lane, EC4 (6,700 sq m); Bloomberg at 16-18 Finsbury Circus, EC2 (7,000 sq m), and Canadian Imperial Bank of Commerce at 150 Cheapside (5,500 sq m).

1.4.4 Appendix A3 contains a list of Central London take-up by location and quality in 2011, and the change on 2010. The data show that overall take up fell by nearly 35%, with SE1 the only "non-core" area to show an increase.

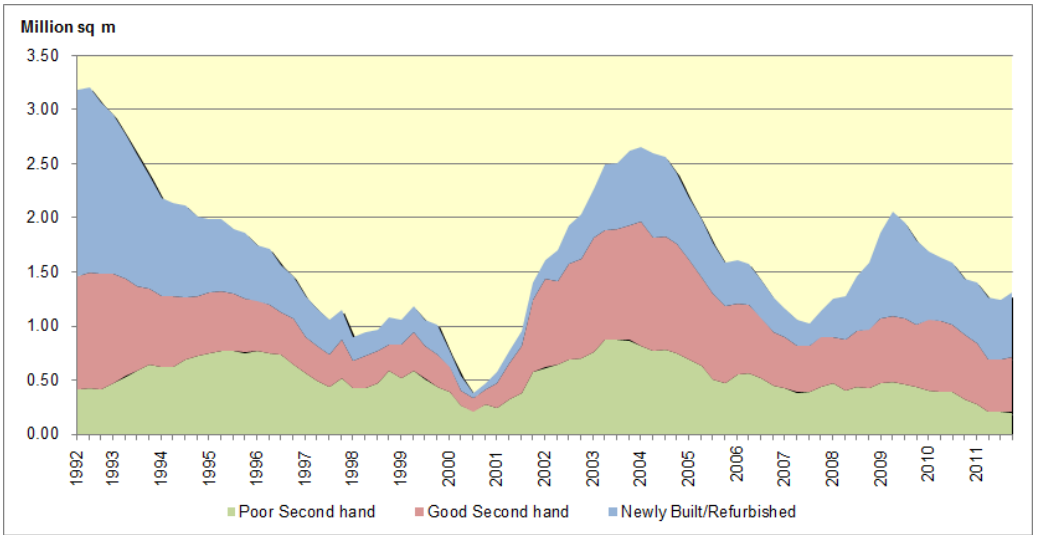
Figure 1.7 Take-up, Central London, 1989-2011



Source: DTZ Research

1.4.5 Figure 1.8 provides further context for the 2010 spike: supply which rose sharply in 2009, led by new space started in 2007, fell equally sharply as the 2010 letting flurry happened, with a modest up-tick in Q4 11, with supply overall falling just 8.5%.

Figure 1.8 Quarterly availability, Central London, by quality, 1992-2011



Source: DTZ Research

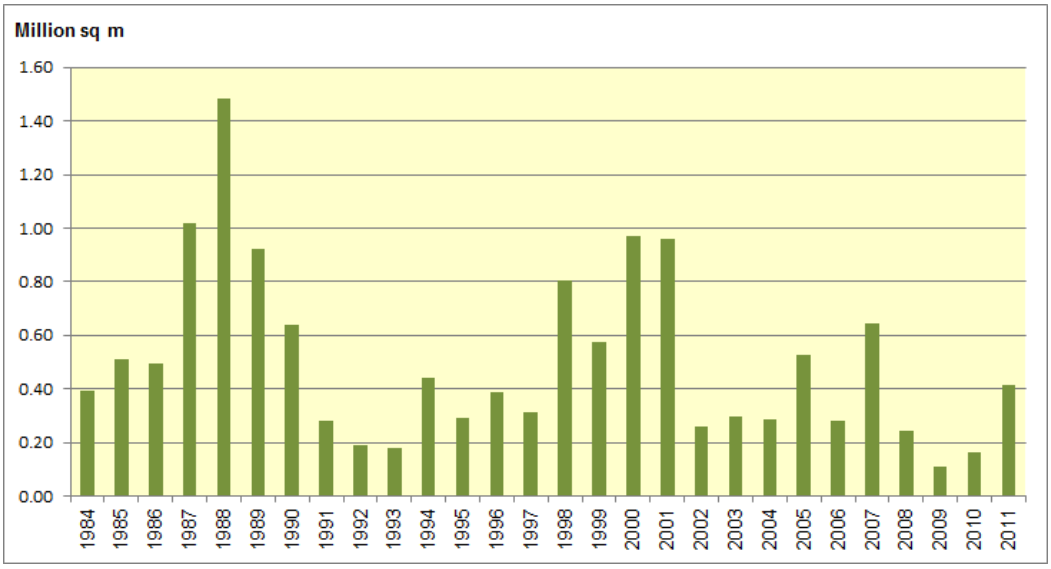
1.4.6 Appendix A4 shows office availability by location and quality in 2011, and the change on 2010.

1.5 Office starts in Central London

1.5.1 Figure 1.9 shows that 2008, 2009 and 2010 saw only modest levels of development starts (lower even than 1991, 1992, and 1993), and it was only in 2011 that construction picked up, albeit at a historically moderate level.

1.5.2 Given construction lead times, supply is likely to remain constrained for another 12-18 months, which might have the effect of further buoying rents.

Figure 1.9 Office starts, Central London, 1984-2011



Source: DTZ Research

1.5.3 The most notable starts in 2011 were those of 20 Fenchurch Street, EC3 – the "Walkie Talkie", and The Leadenhall Building, EC3 – aka "The Cheese Grater" – which together account for around one-third of 2011 Central London starts. There were two further starts in excess of 10,000 sq m in the City market at 60 Holborn Viaduct, EC1 (19,230 sq m) and Finsbury Circus House, 12-15 Finsbury Circus, EC2 (15,708 sq m).

1.5.4 In the West End, the most notable start was of the North East Quadrant Building at Regent's Place. Other significant starts in the West End were at 1 Howick Place, SW1 (12,922 sq m); St James's Gateway, 213-214 Piccadilly, W1 (6,284 sq m), and the refurbishment of 6 Agar Street, WC2 (5,762 sq m). Elsewhere in Central London, starts were thin on the ground, with only one scheme commencing in Midtown, at 280 High Holborn, WC1 (5,850 sq m) and three in the Southbank, the largest of which was the refurbishment and extension of 65 Southwark Street, SE1 (4,514 sq m).

1.5.5 Of the 331,000 sq m commenced in 2011, 209,000 sq m (63%) was located in the City; 98,000 sq m (28%) in the West End; 8,000 sq m (2%) in the Southbank; 6,000 sq m (2%) in Midtown, and the balance of 17,000 sq m (5%) spread around other Inner London locations.

1.5.6 Figure 1.10 shows the distribution of 2011 office starts by Central London borough and the breakdown of space that is pre-let.[5] Only 11% of 2011 starts are pre-let, compared with the 25% of 2008 reported in LOPR 09. Appendix A5 shows office developments starts in Central London during 2011.

Figure 1.10 Office starts by borough, Central London, 2011 (>500 sq m)

Borough	Letting status at construction start (sq m)		
	Speculative	Pre-let	Total
Camden	38,907	13,471	52,378
City	150,105	17,836	167,941
Hackney	6,692	0	6,692
Hammersmith & Fulham	0	0	0
Islington	39,105	0	39,105
Kensington	0	0	0
Lambeth	0	0	0
Southwark	7,033	503	7,536
Tower Hamlets	2,389	0	2,389
Wandsworth	6,456	0	6,456
Westminster	47,640	1,129	48,769
Central London	**298,327**	**32,939**	**331,266**

Source: EGi London Office database

1.6 Offices under construction in Central London

1.6.1 Figure 1.11 shows that space under construction is down 57% on the 2008 figure reported in LOPR 09 and, significantly perhaps, the proportion that is let is down sharply from 29% in 2008 to just 9.3% in 2011. A list of schemes under construction at the end of 2011 is included in Appendix A6.

Figure 1.11
Offices under construction, Central London, end-2011 (>500 sq m)

Borough	Letting status at end-2011 (sq m)		
	Available	Let	Total
Camden	36,368	28,123	64,491
City	295,233	23,297	318,530
Hackney	16,586	0	16,586
Hammersmith & Fulham	0	0	0
Islington	42,965	5,586	48,551
Kensington & Chelsea	0	0	0
Lambeth	0	0	0
Southwark	103,452	502	103,954
Tower Hamlets	2,913	0	2,913
Wandsworth	8,189	0	8,189
Westminster	135,567	9,378	144,945
Central London	**641,273**	**66,886**	**708,159**

Source: EGi London Offices database

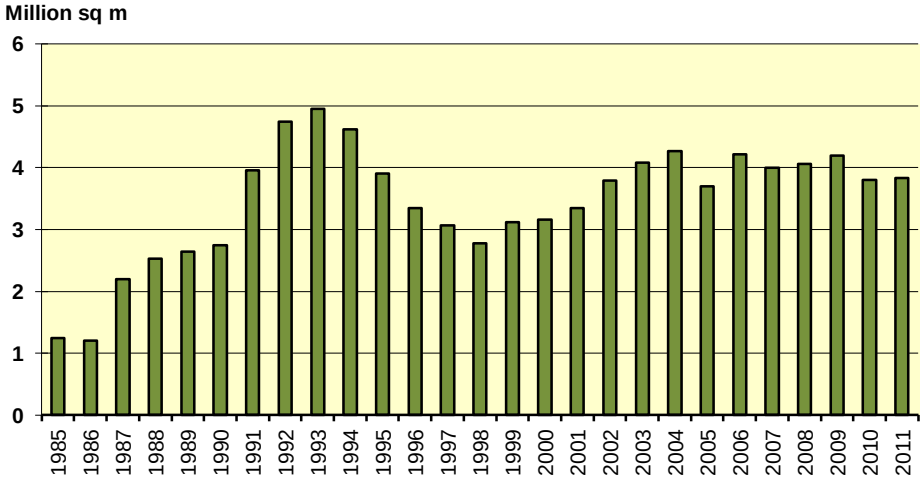
[5] Numbers differ from the DTZ data due to slightly different reporting conventions.

1.6.2 The City remains the epicentre of development activity with just over 40% of buildings under construction and over 45% of available buildings.

1.7 Permissions and applications in Central London

1.7.1 Figure 1.12 shows Central London planning permissions, which have come through at a fairly steady rate, although this has been helped by the June 2009 decision to allow planning authorities to renew consents for an extra three years, in the light of recession.

Figure 1.12 Planning permissions, Central London, 1985-2011



Source: EGi London Offices database

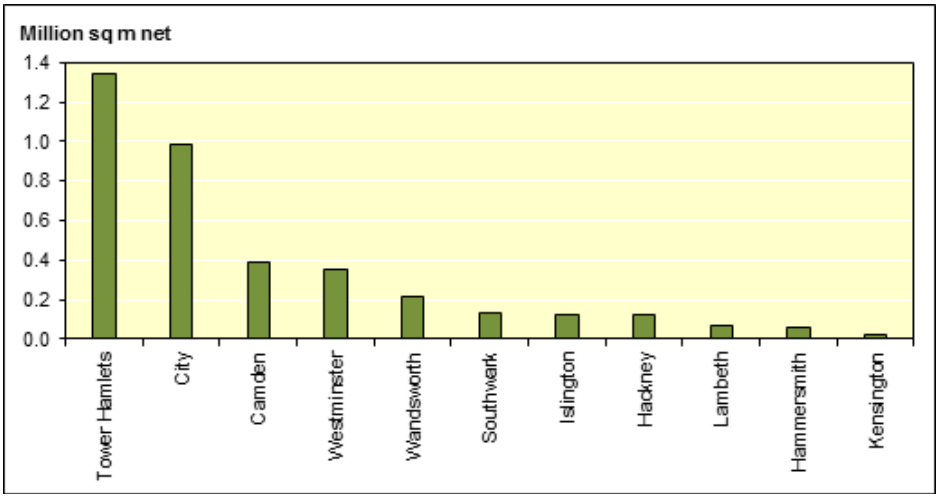
1.7.2 At the end of 2011, 3.8 million sq m of unimplemented consents, compared to 4.06 million sq m in 2008 (as reported in LOPR 09) and 4.2 million sq m at the end of 2006 (LOPR 07). By historic terms, the pipeline of consents has been very stable for several years, but it should be noted that the level of "churn" in the pipeline may rise as the full effects of the three year time lime limit for full consents kicks in (see also Benchmark 5, Chapter 2.0). Appendix A7 contains a full listing of outstanding Central London office permissions of more than 5,000 sq m at the end of 2011.

1.7.3 Figure 1.13 shows permissions by Central London borough at the end of 2011. Tower Hamlets and the City dominate the permissions pipeline. Total permitted development continued to be strongly influenced by very large development schemes. Six schemes, each over 100,000 sq m, together accounted for 37% of all permitted development, including the following.

- Wood Wharf, E14 (368,691 sq m)
- King's Cross, NW1 (309,389 sq m)
- North Quay, E14 (222,036 sq m)
- Riverside South, E14 (185,283 sq m)
- Battersea Power Station, SW8 (157,777 sq m)
- Heron Quays West, E14 (154,540 sq m)

1.7.4 Adding permissions and applications gives a total of 4.16 million sq m, down 9% on the comparable figure at the end of 2008 – which was itself a 10% decline from 2006. This is hardly a catastrophic fall and is relatively mild compared to previous downturns, as Figures 1.13 and 1.14 illustrate.

Figure 1.13 Office permissions, Central London, by borough, end-2011



Source: EGi London Offices database

1.7.5 Unsurprisingly, the City and Tower Hamlets continue to dominate the pipeline. The hugely uneven distribution is reflected in Figure 1.14. Four of the major permissions listed in paragraph 1.7.2 above (Wood Wharf, North Quay, Riverside South and Heron Quays West) are effectively major additions to the Canary Wharf mega scheme.

Figure 1.14 Office development pipeline, Central London, end-2011

Borough	Development status (sq m)		
	Permissions	Applications	Total
Camden	392,493	25,058	417,551
City	989,455	17,480	1,006,935
Hackney	123,457	2,156	125,613
Hammersmith & Fulham	55,607	102,424	158,031
Islington	123,799	8,205	132,004
Kensington & Chelsea	22,238	31,379	53,617
Lambeth	68,539	53,272	121,811
Southwark	132,935	6,161	139,096
Tower Hamlets	1,346,339	46,965	1,393,304
Wandsworth	218,108	9,371	227,479
Westminster	355,523	31,865	387,388
Central London	**3,828,493**	**334,336**	**4,162,829**

Source: EGi London Offices database

1.7.6 Reflecting this skewed distribution, Tower Hamlets had the highest total permissions by borough at 1.35 million sq m (35%), which as well as Docklands included major schemes in the eastern City fringe such as Aldgate Union and News International.

1.7.7 While the level of consents has been fairly stable and consistent (subject to the caveat about "churn"), a further fall in the level of space at the application stage is evident, down to 334,336 sq m at the end of 2011, from 511,794 sq m at the end of 2008 (itself a 40% decline from 2006).

1.7.8 Given that it is likely that London has now completed a major growth phase, and is entering a period of organisation and consolidation (see Chapters 6.0, and 7.0), we are fairly sanguine about this, but care should be taken to monitor for localised supply squeezes.

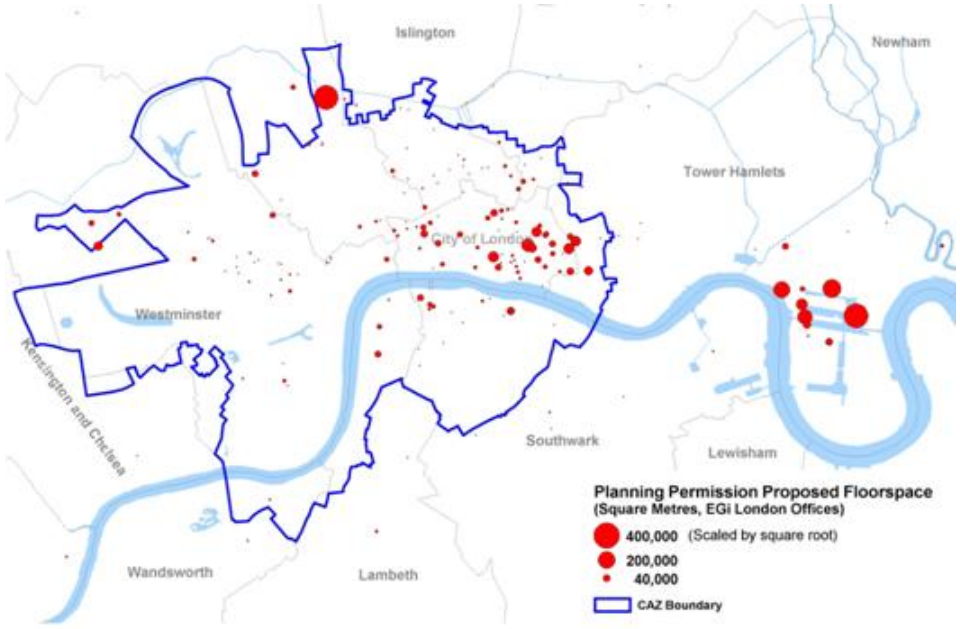
1.7.9 A quarter (26%) of permissions, a total of 989,000 sq m, were located in the City, including major schemes such as Walbrook Building, EC4; 5 Broadgate, EC2; 100 Bishopsgate, EC3; Trinity, EC3 and London Wall Place, EC2.

1.7.10 There was a further 392,000 sq m in Camden, accounting for 10% of Central London consents, predominantly in King's Cross but with further significant schemes at 80-84 Charlotte Street, W1; 132-142 Hampstead Road, NW1, and 50-57 High Holborn, WC1.

1.7.11 In Westminster there were 356,000 sq m in outstanding consents at the end of 2011, 9% of the Central London total, including major schemes such as Victoria Circle, SW1; Arundel Great Court, WC2; 55-65 North Wharf Road, W2; Kingsgate House, 66-74 Victoria Street, SW1, and 18 Hanover Square, W1. The "Big Four" boroughs of Camden, City, Westminster and Tower Hamlets together accounted for 80% of outstanding planning consents in Central London at the end of 2011.

1.7.12 Figure 1.15 maps the distribution and the relative size of individual permissions across CAZ and the Isle of Dogs at the end of 2011. It is broadly similar to the distribution seen in 2008 (LOPR 09), but it is worth noting that this pattern will change for the first time in several years should the large scheme at Earl's Court commence (Chapter 6.0), even though this scheme is outside CAZ.

Figure 1.15 Distribution and relative size of permissions across CAZ and the Isle Dogs, end-2011.



1.8 Supply and demand: overview

1.8.1 The foregoing analysis has presented a largely statistical interpretation of key trends in the Central London office market. This section offers a more market-based perspective, including insights into how the market is perceived by the agency community – in other words those who talk directly to occupiers and owners and are actively facilitating transactions on a daily basis.

1.8.2 **The false dawn** The 2010 Central London office market was described by EGi as follows.

> *There was confidence in the air and, after two years of caution and reining in, companies were ready to engage in forward planning and commit to new leases. Requirements from the banking and financial sector, which had been shelved or at least delayed, were re-ignited and active searches translated into lettings.*[6]

1.8.3 There were six lettings over 18,500 sq m from financial institutions in 2010. JLL described "*a domino-effect whereby one decisive institution stepped forward in the City to acquire a chunky new lease and it was followed by a whole series of large lettings. There was a real sense of urgency or, with very little new development underway, a fear [amongst occupiers] that they would be left without options.*"[7]

1.8.4 Again EGi: "*2010 displayed all the signs of a classic turning point – rising confidence, strong take-up, limited new supply and rising rents. If there had*

[6] Estates Gazette (2011) *London Office Market Analysis Q3 11*
[7] Estates Gazette (2011) *op cit*

been development finance available, there is no doubt that today, there would be a queue of buildings lining up to enter the market in 2012-2013."[8]

1.8.5 But by the middle of 2011 it was clear that the turning point had not been consolidated. EGi outlined the position in Q3 11: "*a year on, with fears of a double dip recession and European neighbours facing bankruptcy, the lack of development funding seems to have been a blessing*". According to CBRE, take-up from the finance sector reached 120,760 sq m in Central London in the first three quarters of 2011, compared with 501,625 sq m in 2010.[9]

1.8.6 The general picture of caution was underlined by the stalled nature of a number of London's signature developments, all of which were eagerly awaiting either funding or a pre-let to kick start the funding/construction process, including the following.

- The Pinnacle: Arab Investments (100,000 sq m).
- Principal Place: Hammerson (55,000 sq m).
- 100 Bishopsgate: GPE/Brookfield (87,300 sq m).
- 120 Fenchurch Street, Generali (39,000 sq m).

1.8.7 In its Q4 11 issue of London Office Market Analysis, EGi stated:

> *There is no denying that 2011 has been a tough year in the London office market and 2012 looks likely to be another. The promise of recovery that characterised 2010 evaporated.*[10]

1.8.8 **Take-up** Central London take-up fell by 31% in 2011 according to EGi data, from 1.3m sq m in 2010 to 891,000 sq m in 2011, which was significantly below the five year average of 1.14 million sq m.

1.8.9 In the City, JLL reported "*the lowest volume of take-up since 2003.*"[11] The West End and Midtown sub-markets were more resilient than the City, but they too fell short of their five-year averages.

1.8.10 Take-up from financial sector and business services have been hardest hit. In the City, JLL found that the Banking and Finance sector accounted for 21% of take-up in 2011 compared with 43% in 2010, and that 21% is a share of a greatly reduced total. Financial Services accounts for more than half of all office-based employment in the City (Chapter 7.0, Figure 7.8) and a similar level in Tower Hamlets (falling within the market definition of the City), so it is reasonable to expect take-up to reflect that market share in an average year.

1.8.11 Across Central London there has been a proportionate increase in take-up from the TMT sector, (Technology, Media and Telecommunications), which has helped to maintain overall volumes. Its share of take-up rose from 8% in 2010 to 15% in 2011 according to JLL.[12] In the West End its share rose from

[8] Estates Gazette (2011) *op cit*
[9] Interview with Digby Flower, CBRE October 2011
[10] Estates Gazette (2012) *London Office Market Analysis Q4 11*
[11] Interview with Bill Page, Jones Lang LaSalle January 2012
[12] Jones Lang LaSalle (2012) *On Point: the Central London Office Market Q4 11*

9% to 18%, even though overall take-up was more stable in the West End.[13] According to Cushman & Wakefield, the TMT sector accounted for 22% of all take-up in Central London in 2011.[14]

1.8.12 The number of large units let in Central London declined in 2011. In 2010 there were 16 lettings of more than 9,290 sq m; whereas in 2011 that number fell to just six. The number of pre-lettings declined too. In 2010 there were eight in the City alone but in 2010 the only incidence of pre-letting was Aon's acquisition of 18,210 sq m in the Leadenhall Building.[15]

1.8.13 The situation was rather different in the West End where, although take-up fell in 2011 by 14%, there were eleven pre-lets reflecting tight supply in this area of the market.[16] Notable examples were Debenhams (13,500 sq m in North East Quadrant, NW1); Double Negative (8,040 sq m at 160 Great Portland Street, W1) and Savills (6,100 sq m on Margaret Street, W1).

1.8.14 In the first quarter of 2012 there have been three pre-lets, all of which were in the West End and two of which were to retailers. Jimmy Choo took 3,430 sq m in Ashdown House, Victoria Street and Burberrys took 11,600 sq m in No1 Page Street, while Savills took an additional 3,250 sq m in Margaret Street.

1.8.15 **Demand** Cushman and Wakefield reported an increase in active demand towards the end of 2011 although noting that occupiers remain cautious, describing a "lack of urgency".[17] According to their data, there is c110,000 sq m under offer at the end of Q1 12 as deals have been slow to complete. JLL recorded a similar increase, particularly in the City where demand rose by 43% in 2011. 23% of demand was from businesses in the TMT sector according to JLL while financial services accounted for 23% against their long-term average of 27%.[18]

1.8.16 New requirements in 2012 are expected to emerge from the dynamic and expanding TMT sector, or from what agents describe as 'lease events', by which they mean impending lease breaks or expiries. JLL calculate that known lease events are due in 2013 and 2014 on 1.6 million sq m across Central London.

1.8.17 As already noted above, the TMT sector has emerged as an important driver of demand in Central London since 2008. Cushman and Wakefield describe the sector as "*fast moving and social but highly cost driven*", characteristics that have led to a focus on Central London to access appropriate skills and offer the vibrant urban experience to attract staff, but also in City fringe and Midtown locations, where costs are lower than core City or West End.[19]

[13] Jones Lang LaSalle splits the Central London market into City and West End in its analysis. It does not separately analyse the Midtown market. Covent Garden falls with its definition of West End.
[14] Interview with Elaine Rossall, Cushman and Wakefield January 2012
[15] Jones Lang LaSalle (2012) *op cit*
[16] Jones Lang LaSalle (2012) *op cit*
[17] Interview with Elaine Rossall, Cushman and Wakefield April 2012
[18] Jones Lang LaSalle (2012) *op cit*
[19] Interview with Elaine Rossall, Cushman and Wakefield January 2012

1.8.18 JLL noted that media businesses that might have located in Soho previously, have been driven to Shoreditch, Farringdon and Clerkenwell. The average size of lettings in this sector is small – less than 700 sq m in 2011, according to DJ Deloitte, but there are also notable high profile businesses with footloose requirements that have the scale to shift geographies in London.

1.8.19 At the end of Q1 12 there were active requirements from the likes of Google, LinkedIn and Skype. Google is understood to be negotiating terms to take a large pre-let at King's Cross, amounting to 73,000 sq m; LinkedIn is searching for 6,500 sq m and Skype has 5,000 sq m under offer in Waterhouse Square EC1. Other large TMT requirements include: Sony (10,000 sq m) and IBM (20,000 sq m). In the media subsector, there are requirements from: Havas (20,000 sq m), Ogilvy & Mather (15,000 sq m), Publicis (9,000 sq m), Saatchi & Saatchi (15,000 sq m) and Weber Shandwick (6,000 sq m).

1.8.20 **Rental values** The consensus view among London agents is that there will be some rental growth in Central London during 2012. Their optimism is based on a belief that there will be an improvement in economic indicators during the year and that that, together with the fact that development supply has been heavily constrained by the lack of debt finance, should be enough to create undersupply in parts of the market. JLL's Bill Page expects that "*vacancy will trend downwards in 2012*"; while Digby Flower of CBRE points to a looming shortage of large floorplates, "*once the limited supply of groundscrapers has been absorbed*" since "*the next generation of developments will be relatively small, around 100,000 sq ft because that was all that could be funded*."[20] Bill Page also points to the fact that London's economy has outperformed the rest of the UK.[21]

1.8.21 The West End rental market has proved more robust than the City in recent years. Here, especially in the core markets of Mayfair and St James's, supply is heavily constrained by planning restrictions and listings and this is compounded by the active loss of office stock to high value residential uses (see Chapter 8.0, *Office to residential conversion*). Rental values in this part of the West End are driven by demand from the niche financial sector hedge funds, which take relatively small units and cluster together in areas frequented by high net worth individuals.

1.8.22 Prime City rents were £592 per sq m (£55 per sq ft) at the end of 2011 while core West End rents reached £996 per sq m (£92.50 per sq ft). There is a widely held view that West End rents will exceed £1,076 per sq m (£100 per sq ft) in 2013.

1.8.23 Some commentators however, are sceptical about forecasts of a return to rental growth in Central London in 2012-13. Capital Economics is of the view that "*over the next six to nine months office rental value growth will slow pretty sharply from its current rate of around 7% year on year to zero*."[22] They go on to say that "*renewed falls in the City and West End office rental values, of perhaps 5% look likely in 2013*". Their view is based on results from the latest

[20] Interview with Digby Flower, CBRE January 2012
[21] Interview with Bill Page, Jones Lang LaSalle January 2012
[22] Capital Economics (2012) *UK Commercial Property Update* 9th January 2012

CBI/PwC Financial Services Survey Q1 12 and they believe it is supported by the continued weakness of the UK economy.

1.8.24 Capital Economics acknowledges the significance of low volumes of development activity in sustaining rental levels but points to low levels of take-up and postponed searches as evidence for downward pressure on rents. They conclude that: "*our forecast that City and West End office rental values will decline in 2013 and 2014 is in stark contrast to the current consensus*".[23]

1.8.25 **Outlook** The general view among market practitioners is that demand for office space will pick up towards the end of 2012 and that there will be an upturn in 2013. This is based on known lease expiries and breaks in 2013 and 2014 and the expectation that business confidence and economic performance will improve. Active demand has already begun to increase and, since vacancy rates have remained at manageable levels it is reasonable to expect that rental growth will resume once demand increases.

1.8.26 There is already some limited evidence of returning developer confidence, with the confirmation/announcement of a number of significant projects, including the following.

- Schroders managed fund Welput is drawing up plans for a 20,000 sq m redevelopment of its New Court building on Carey Street, WC2.
- Dubai-based PCP has announced the purchase of Arundel Great Court near Strand, WC2. The site has planning consent for 50,000 sq m of offices plus a hotel and residential units.
- The Crown Estate is continuing its transformation of its holdings, revealing plans for a mixed use development including 20,000 sq m of offices known as St James's Market, SW1.
- AXA Real Estate and MGPA started speculative development of a new 14,784 sq m building at 6 Bevis Marks EC3 in Q1 2012. Development finance was raised from Eurohypo.
- Argent has begun two speculative buildings at King's Cross Central, of 12,375 sq m and 5,425 sq m. These are in addition to two buildings that have been pre-let, which also went under construction in Q1 2012.

1.8.27 It is worth noting the significance of constrained supply in controlling the property cycle in the past five years. The severity and speed with which the economy turned down could easily have caused a property crash and it is widely acknowledged that it was the lack of debt for development funding that has protected the market from severe repercussions.

[23] Capital Economics (2012) *op cit*

2.0 Benchmarking the Central London office market

2.0.1 In 2001, London Property Research and DTZ Research provided a series of benchmarks on the performance of the Central London office market, in order to assist the GLA and boroughs to define and implement a robust policy for office development. The report[24], suggested five strategic benchmarks.

2.0.2 These were incorporated in LOPR 02[25], LOPR 04[26], LOPR 06[27] and LOPR 07[28] and LOPR 09[29] providing a useful tool for monitoring the changing relationship between supply and demand in Central London.

2.0.3 The benchmarks are intended to inform policy makers on whether they should encourage the provision of additional capacity or, on the other hand, whether some existing or proposed office sites could be "safely" permitted to change to other uses without detracting from London's long-term office supply.

2.0.4 The benchmarks are broad-brush tools, intended to illustrate the general direction of the office market, rather than to guide specific local area policies.

2.1 Benchmark 1: Permissions versus starts

2.1.1 *The stock of permissions (measured as net internal area) should be at least three times the average rate of starts over the preceding three years.*

2.1.2 Benchmark 1 illustrates the relationship between office space with outstanding consents approved by local planning authorities and the prevailing level of office starts. It is not possible for local planning authorities to guarantee the implementation of office development – that is a matter for the market – but it is appropriate for them to approve an overall level of office permissions to allow for the provision of office space without restricting supply unnecessarily.

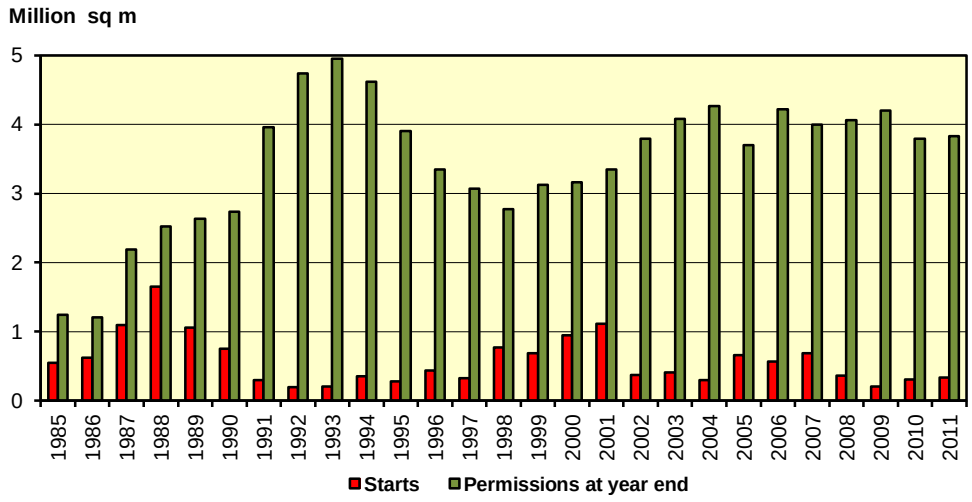
2.1.3 Figure 2.1 illustrates the long-term relationship over 26 years between the level of starts and the volume of permissions at year end in Central London. For Central London as a whole, in overall strategic terms, office supply has not been constrained by the planning system in terms of the quantum of permitted development over the whole of this period.

2.1.4 The impact of the high rate of construction over 2005 to 2007 was to reduce the ratio of average starts from 12:1 at the end of 2004 to just over 6:1 at the end of 2007 (Figure 2.2). By the end of 2008, with low construction starts during the year reducing the average rate of starts, and the level of permissions being maintained at just over four million sq m, the ratio recovered to 7.5:1. It has risen steadily since, with a plateau emerging only in

[24] London Property Research & DTZ Research (2001) *London Office Monitoring Project - Stage II (Benchmarks) SDS Technical Report Ten* Greater London Authority
[25] London Property Research & EGi (2003) *London Office Policy Review 2002*, Greater London Authority
[26] London Property Research (2004) *London Office Policy Review 2004, SDS Technical Report Nine* Greater London Authority
[27] London Property Research (2006) *London Office Policy Review 2006* Greater London Authority
[28] Ramidus Consulting (2007) *London Office Policy Review 2007* Greater London Authority
[29] Ramidus Consulting (2009) *London Office Policy Review 2009* Greater London Authority

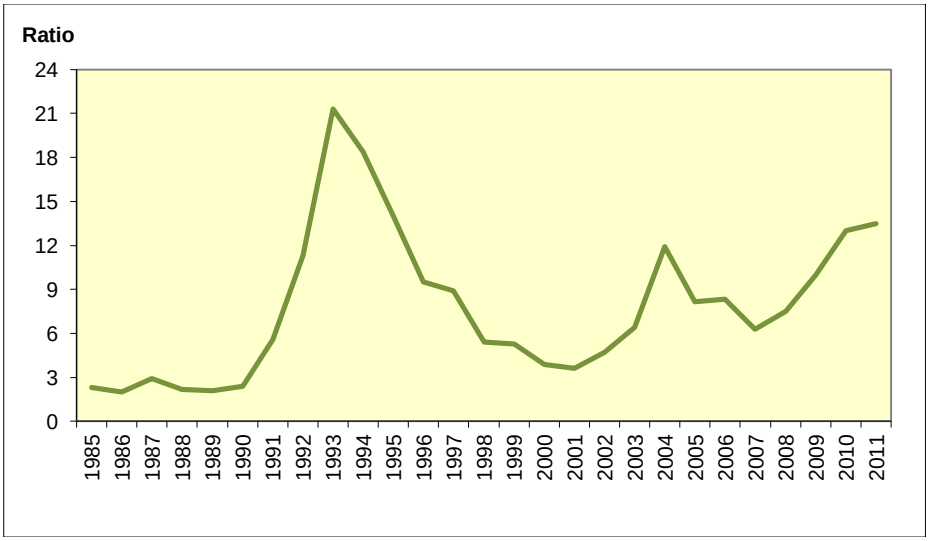
2011 when construction starts picked up for the first time since the credit crunch. The ratio stood at 13.5:1 at the end of 2011.

Figure 2.1 Office starts and permissions, Central London, 1985-2011



Source: EGi London Offices database

Figure 2.2 Ratio of permissions to average of previous three years starts



Source: EGi London Offices database, Ramidus Consulting

2.1.5 The ratio of permitted space to starts has fallen close to the 3:1 minimum only once since the 1980s, this during the peculiar supply slump of the dotcom bubble and burst. It is safe to say that the planning system has not been a constraint on office development and shows no sign of become a constraint.

2.2 Benchmark 2: Availability versus stock

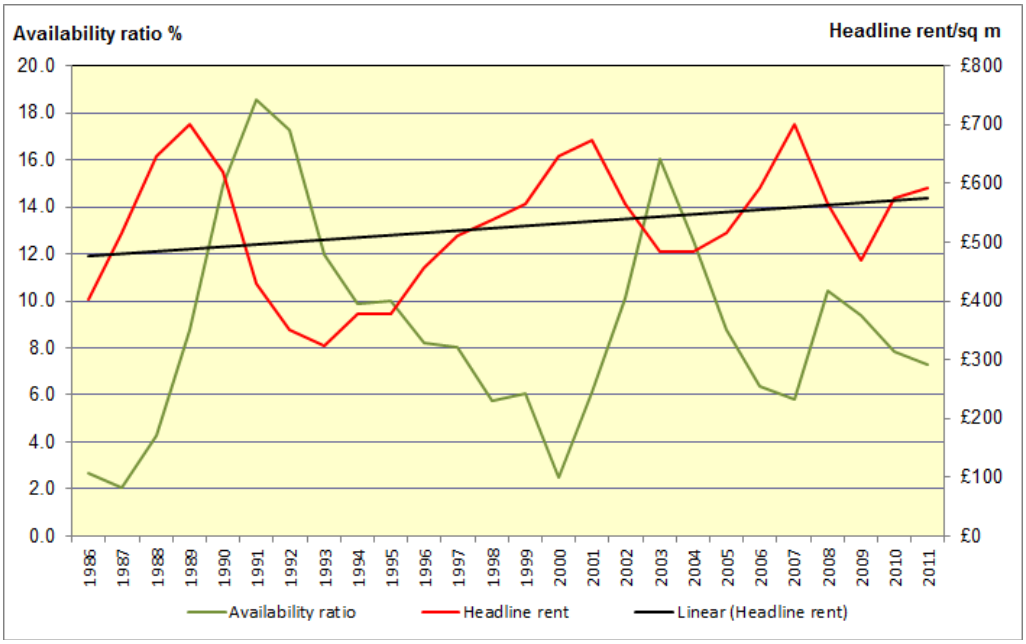
2.2.1 *When the Central London availability rate is moving in a direction such that the 8% level seems likely to be crossed, particularly close attention should be paid to other market indicators, and the level of office supply should be reviewed.*

2.2.2 An 8% availability rate is a pivotal measure for the London office market. Rates above 8% offer occupiers a wider choice of accommodation with the tendency for rents to fall, especially when availability is rising and wider choice is anticipated. If availability rates are below 8%, and falling, then there is a tendency for rents to rise, reflecting a narrowing choice of accommodation.

2.2.3 The overall Central London availability rate rose from 6.2% in 2006 to 7.6% at the end of 2008, climbing to over 8% in 2009 before steadily falling to just 6% in 2011. However, this single figure masks a greater variation by sub- market. It is at sub-market level that supply and demand are reconciled and rent levels are set. Figures 2.3 and 2.4 indicate the long-term relationship between availability rates and rental change in the City and West End.

2.2.4 In the City, the availability rate was 6% at the end of 2006 and then fell marginally in 2007 to 5.8% (Figure 2.3). By the end of 2008, the availability rate had more than doubled from the cyclical low of 5.9% to 10.5%. The impact of rising availability can be seen on headline rent levels which fell from peak levels of £700 per sq m (£65 per sq ft) during 2007 to £565 per sq m (£52.50 per sq ft) at the end of 2008. This proved to be something of a spike, with availability falling steadily to just over 7% at the end of 2011.

Figure 2.3 City availability ratio versus headline rent, 1986-2011



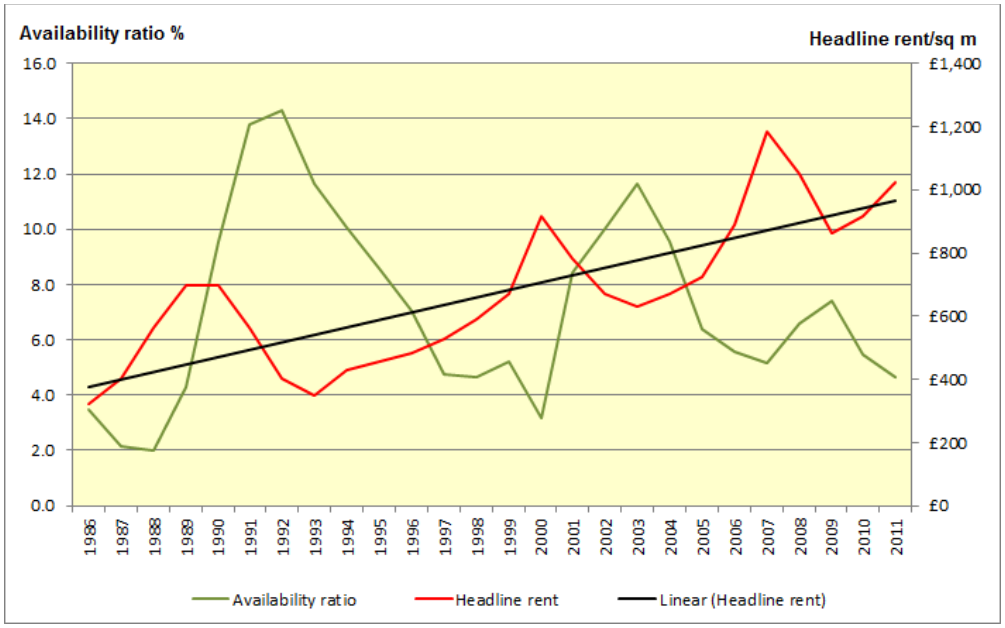
Source: DTZ Research

2.2.5 The effect of hovering around the 8% benchmark has been to see City rents rally from a 2009 low of £468 per sq m (£43.50 per sq ft) to a more normal

£592 per sq m (£55 per sq ft). It is worth noting that the trend remains shallow in nominal terms and this fact is returned to in Benchmark 4.

2.2.6 In the West End the availability rate is lower than in the City and headline rents higher, a trend that has established firmly over the past two decades (Figure 2.4). At the end of 2006, West End availability was 5.6%. It then fell to a low point of 4.5% in Q3 07 and rose steadily until 2009. At the end of 2007 the rate was 5.2%, rising to 6.6% at the end of 2008. At the time it seemed that, although the rate was sub-8%, the expectation of rising supply had already impacted on rent levels, which in the second half of 2008, fell from £1,184 per sq m (£110 per sq ft) to £1,049 per sq m (£97.50 per sq ft).

Figure 2.4 West End availability ratio versus headline rent, 1986-2011



Source: DTZ Research

2.2.7 However, the anticipated rise in supply did not occur, in part because of continued economic uncertainty, but also because of some competition from other uses in core West End locations, mostly notably "super-prime" residential. Unsurprisingly, rents started to climb again and although they had not reached their 2007 levels at the end of 2011, the fact that availability ratios have now been below the 8% benchmark since 2005 suggest there will be little real downward pressure.

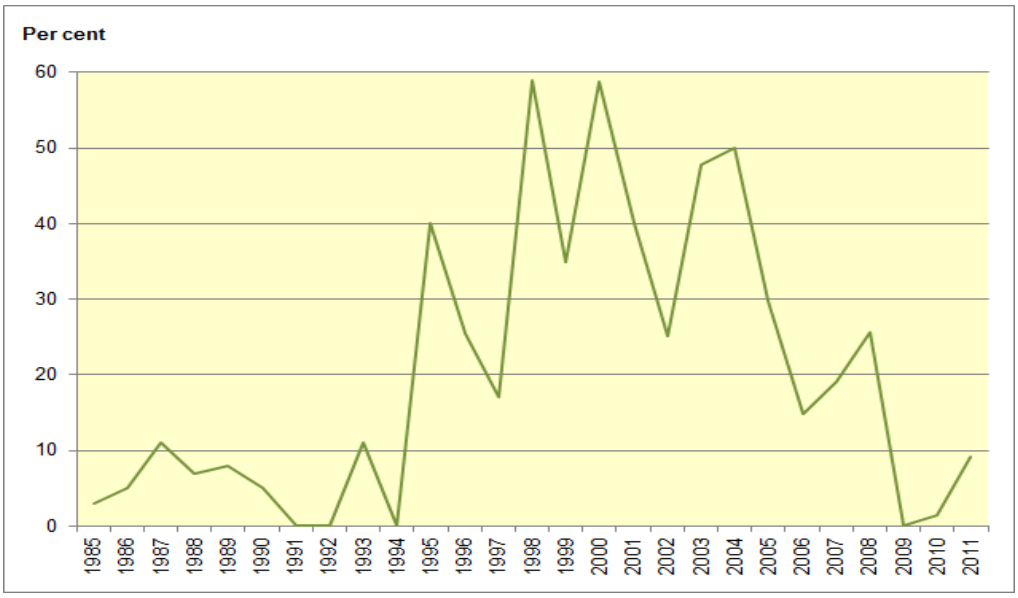
2.2.8 In fact the only real source of downward pressure might be if the character of the market changes significantly and pressure from residential investors intensifies. In the short-term this would constrain supply even further, and this would in turn inflate rents, but the effect of displacing demand outside the West End could, in the long run, conceivably bring some degree of stability to a market that has looked very inflationary for a significant period.

2.3 Benchmark 3: Pre-lets versus overall starts

2.3.1 *Up to 50% of annual starts being comprised of pre-lets and owner-occupier schemes can be regarded as a normal and healthy market, provided the overall volume of starts is consistent with strategic policies to maintain London's World City role, as defined in strategic Benchmark 1.*

2.3.2 Figure 2.5, which shows the long-term trend in the proportion of office starts accounted for by pre-letting activity, indicates that the proportion increased to 20% in 2007 and further to 26% in 2008, as reported in LOPR 09.

Figure 2.5 Proportion of starts accounted for by pre-lets, 1985-2011

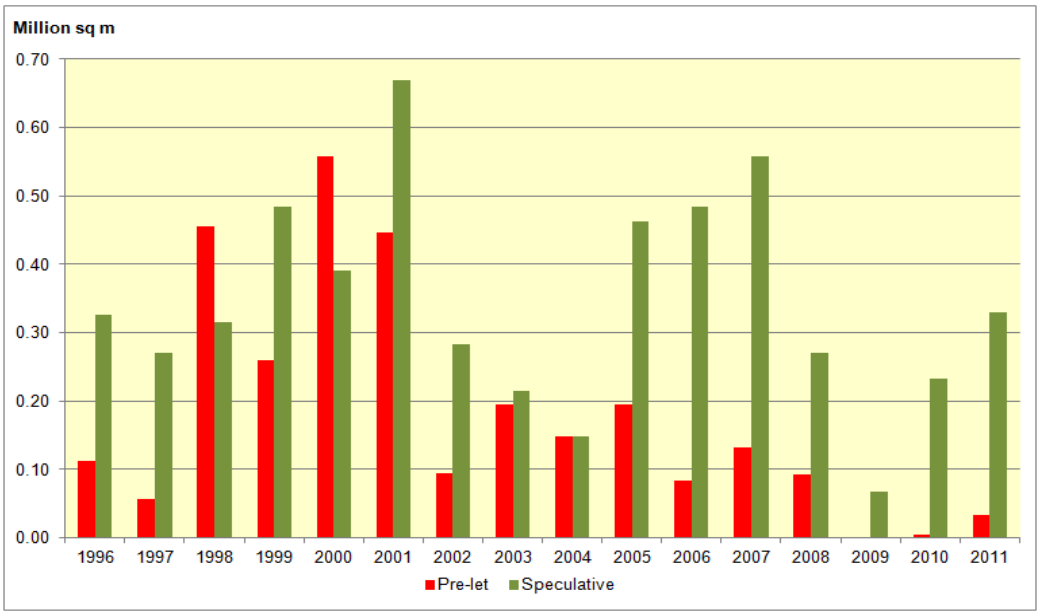


Source: EGi London Offices database, Ramidus Consulting

2.3.3 Since 2008 there has been a marked pause in development activity, which is reflected in Figure 2.6 – with no pre-let at all starting in 2009 and an almost invisible (less than 3,500 sq m) in 2010. To a large extent this reflects the inelasticity of development when recovering from downturns – the "development lag" – and we expect both the level of construction and the proportion of pre-lets to show an increase in 2012, in particular reflecting the UBS letting at Broadgate.

2.3.4 LOPR 09 noted that the role of pre-lets was relatively modest in the run up 2007 and the ensuing credit crunch. Obviously with drastically reduced activity and severely curtailed credit it becomes possible that only a significant recovery in pre-letting will kick start new construction.

Figure 2.6 Construction starts by letting status at start, 1996-2011



Source: EGi London Offices database, DTZ Research

2.4 Benchmark 4: A range of rent levels

2.4.1 *In seeking to promote worthwhile choice for office occupiers, planning policy should seek to ensure that office development occurs in a range of established office locations which have good public transport, such that new office space should be available in non-prime locations at no more than 50% of top rents in Central London.*

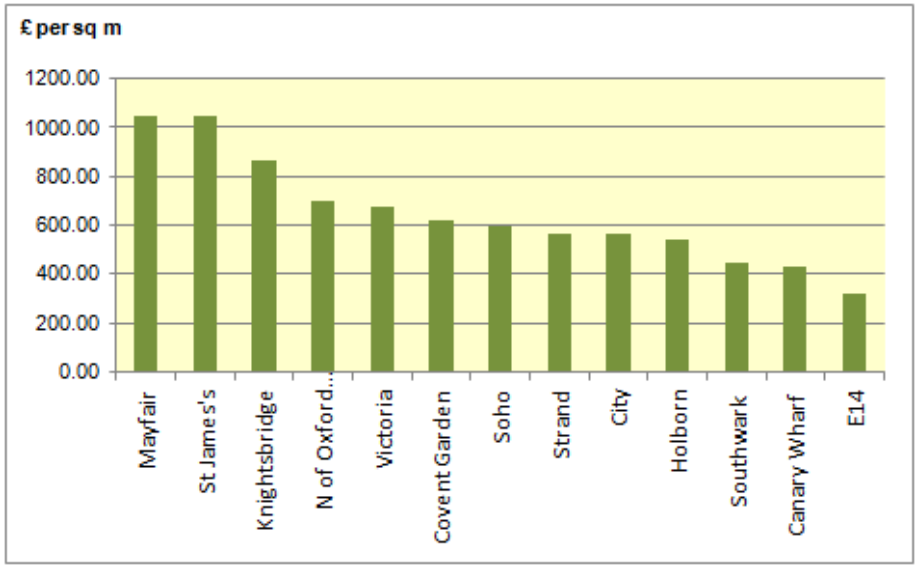
2.4.2 The purpose of Benchmark 4 is to monitor rents across a range of locations that are accessible by public transport, to explore the broad variation in cost to occupiers at a comparable specification – in this case for the best quality space. Figure 2.7a shows headline rents for 13 office locations at the end of 2008; and Figure 2.7b updates this graph to the end of 2011.

2.4.3 In 2008 the discounts available in markets beyond the most expensive West End core ranged from just 17% in Knightsbridge to 69.2% in E14 (non-Canary Wharf), a "spread" of 52 percentage points. By 2011, although overall rents had changed relatively little, the pattern had changed somewhat. Figure 2.7b gives a strong visual impression of value concentrating in the West End core, albeit at a slightly lower level than in 2008, £1,022 per sq m (£95 per sq ft) against £1,049 per sq m (£97.50 per sq ft). In part this impression is caused by an apparent slump in Knightsbridge rents, from £860 per sq m (£80 per sq ft) to £645 per sq m (£60 per sq ft), with no obvious cause, putting it on a par with Victoria, which is also down slightly.

2.4.4 It is notable, however, that the markets that have held up most strongly are those directly adjacent to the core West End markets – North of Oxford Street, and in particular Soho. It is the case that occupiers squeezed out of Mayfair and St James's do not have to go very far to find more reasonable rental levels. Rents for Grade A space in nearby Soho and North of Oxford Street

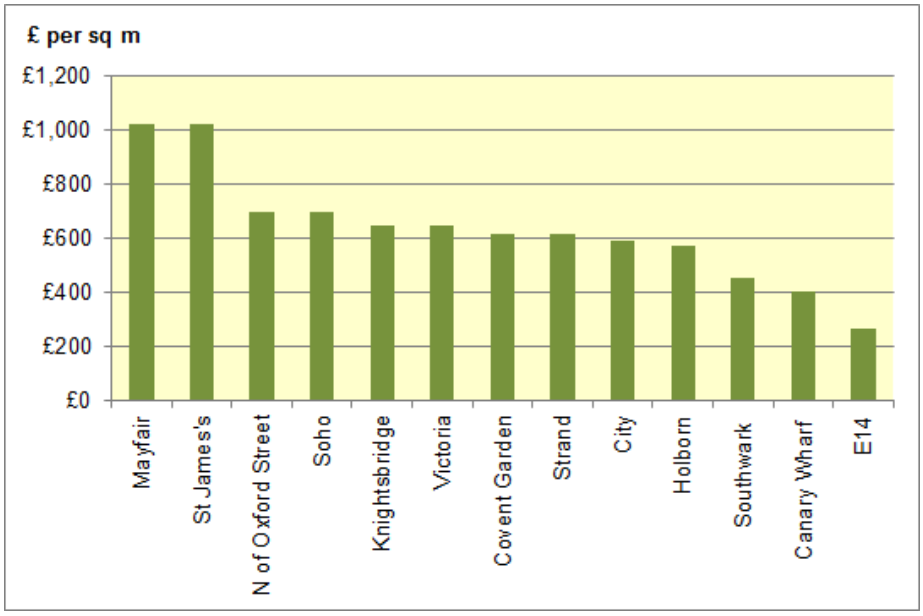
are around £725 per sq m (£67 per sq ft). In fact the level of £1,049 sq m (£97.40 per sq ft) applies to only a very narrow band of property – generally small units of less than 500 sq m and a narrow band of occupiers – often hedge funds. Even within the heart of Mayfair it is possible to lease Grade A space at significantly lower rents. For example, hedge fund, Kedge Capital, leased 2,681 sq m in Curzon Street at a rent of £807 per sq m (£75 per sq ft) in January 2012. The West End office market has shown itself to be adaptable and therefore sustainable in this way.

Figure 2.7a Headline rents in sub-markets, end-2008



Source: DTZ Research, cited in LOPR 09

Figure 2.7b Headline rents in sub-markets, end-2011



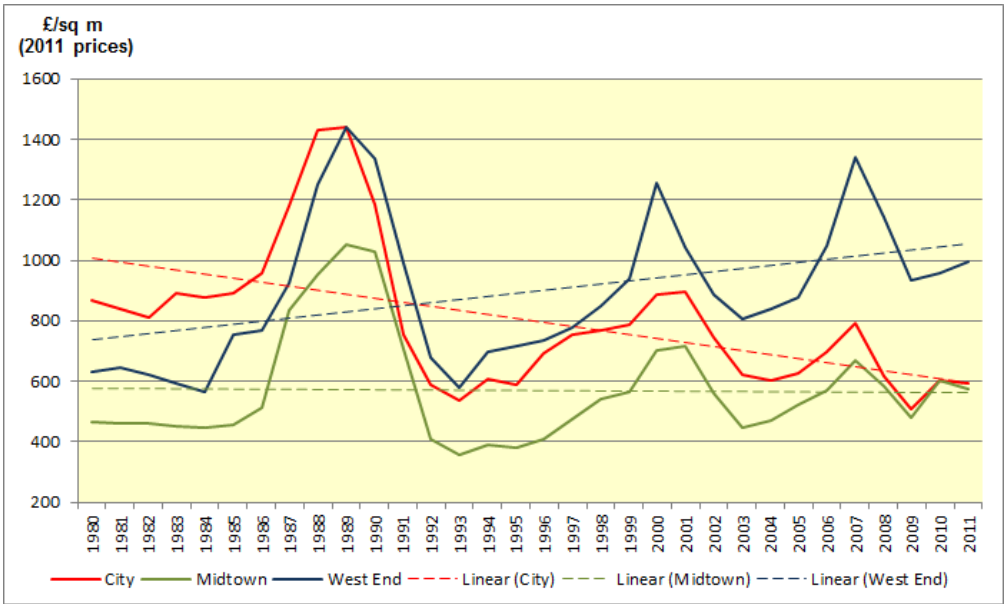
Source: DTZ Research

2.4.5 As LOPR 09 noted, not all occupiers are sufficiently footloose, of course, to take advantage of the lowest rents in Central London, taking into account other considerations such as functional linkages, agglomeration factors, journeys to work for staff, the availability of support services and so on. The fact that there is a range of office rents by location does serve, however, to strengthen the hand of occupiers in leasing negotiations.

2.4.6 There is perhaps room for concern that the concentration in values and the narrowing of the range of discounts available to 42 percentage points (now ranging from 32% in North of Oxford Street to 74% in E14 non-Canary Wharf) is reducing the choice available to occupiers.

2.4.7 Figures 2.7a and 2.7b provide a snapshot of *nominal* rents at the end of 2008 and 2011. Although rents move in an apparently cyclical pattern, there are longer-term trends at work. As indicated in previous LOPRs, if we look at rents in *constant* rather than current prices (as used in Figures 2.3 and 2.4), the linear trend for the City has been for rents to fall over the past 30 years and for Midtown rents to have a flat trend (Figure 2.8). Only in the West End has there been a long-term trend for office rents to rise in real terms.

Figure 2.8 Central London office rents, 1980-2011, 2011 prices



Source: DTZ Research

2.4.8 The long-term, contrasting regression lines for the West End and the City reflect largely their relative positions with respect to supply rather than demand. The West End is the only market in which real rents during a recent peak (2007) are higher than in any previous peak and this is reflected strongly in the trend line. And while real West End rents recovered in 2011, those in the City and Midtown slipped. It is worth noting that Midtown, true to its name, has remained, in real terms, on a flat trend since 1980. The City is getting less expensive, in real terms, as each year passes.

2.4.9 We also note that the functional definition of Midtown has changed for most agents, and that today's Midtown incorporates Covent Garden and Tottenham Court Road for many. Under this definition there has been structural change and the rents have risen in real terms since 1980.

2.5 Benchmark 5: Years supply of office space

2.5.1 *Across Central London as a whole, strategic planning policy should seek to ensure that there is at least 3.25 years supply of new office space in the development and planning pipeline. This strategic benchmark is not to be applied to small areas where capacity constraints effectively prevent significant gains to the office stock, but should be applied with a view to expanding the office development pipeline in locations with good public transport and substantial land capacity.*

2.5.2 Benchmark 5 looks at the historical performance of take-up of Central London offices and compares this with the supply of completed new space, space under construction and planning permissions. The relationship between take-up and actual and potential supply is expressed in years supply at the average rate of take-up (in the case of LOPR 12, over 15 years). Figure 2.9 shows annual average take-up of new and refurbished space since 1997 in each Central London sub-market.[30]

Figure 2.9 Annual average take-up, new and refurbished, 1997-2011

Sub-market	New and refurbished (sq m)		
	Pre-leased	Leased	Total
City	55,593	158,801	214,394
West End	11,037	84,993	96,030
Midtown	5,203	35,633	40,836
Docklands	42,995	59,616	102,611
South & East	18,135	26,801	44,936
North & West	8,504	19,521	28,025
Central London	**141,492**	**386,340**	**527,832**

Source: DTZ Research

2.5.3 Across Central London the average annual take-up of new and refurbished space between 1997 and 2011 was just short of 530,000 sq m, comprising just less than 141,500 sq m of pre-leased space and just over 386,000 sq m of lettings after construction start. Over two-thirds of pre-lets were in the City and Docklands, as with LOPR 09, but overall, pre-lets have fallen by 10,000 sq m, reflecting very weak performance in the post-credit crunch period.

2.5.4 Across the board, average take-up was slightly up in the City, West End and Docklands, with falls in South & East and Midtown, reflecting lack of stock.

[30] City (EC1-4); West End (W1,SW1); Midtown (WC1-2); Docklands (E14); South & East (E1,SE1), and North & West (NW1,SW3,SW7,W2)

2.5.5 Figure 2.10 shows actual and potential new and refurbished supply at the end of 2011 in each of these sub-markets, for the three categories of (1) new and refurbished space: completed and still available at end-2011; (2) under construction, excluding space either pre-let or let during construction prior to end-2011, and (3) outstanding planning permissions. Note that the geographical area covered here is somewhat smaller than the earlier data for construction and permissions that covered the whole of the central 11 boroughs; hence the totals for under construction and permissions are lower than Figures 1.11 and 1.13. This is to ensure that the take-up and supply data are from identical areas.

Figure 2.10 Actual and potential new and refurbished supply, end-2011

Sub-market	New, completed & available	Under construction & available	Planning permissions (new and refurbished)	Total
City	369,416	328,212	1,123,555	1,821,183
West End	84,254	96,395	291,886	472,535
Midtown	95,830	26,315	85,795	207,940
Docklands	0	0	1,114,490	1,114,490
South & East	81,786	104,511	418,753	605,050
North & West	51,355	17,089	397,081	465,525
Central London	**682,641**	**572,523**	**3,431,560**	**4,686,723**

Source: DTZ Research (column 2); EGi London Offices database (columns 3 & 4)

2.5.6 Perhaps unsurprisingly the volume of space under construction has fallen by nearly 200,000 sq m since LOPR 09 reflecting the absence of finance and pre-lets in the wake of the credit crunch (the UBS letting at Broadgate starting only in 2012). The volume of newly available space is up by around 70,000 sq m, mostly accounted for by Midtown and North & West although in the major markets new supply is down.

2.5.7 The overall pipeline has fallen from 4.98 million sq m at the end of 2008 to 4.69 million sq m at the end of 2011; on the whole a marginal fall mostly accounted for by falling construction in the City combined with the take-up of completed space.

2.5.8 Figure 2.11 shows years of supply, by type of space, against annual average take-up, 1997-2011, as shown in the previous tables. Note that, as in previous LOPRs, in calculating the years of supply (either completed or under construction), availability is compared only with space leased in Figure 2.9, excluding the demand represented by pre-lets. Space that is already under construction can no longer by definition meet demand from the pre-letting market. Supply represented by unimplemented planning permissions, however, could go down either the speculative or pre-let routes, and is therefore compared with overall take-up including pre-lets.

Figure 2.11 Years supply measured against annual average take-up, 1997-2011

Sub-market	New, refurbished & complete (years)	Under construction & available (years)	Planning permission, new/refurbished (years)	Total new supply (years)
City	2.3	2.1	5.2	9.6
West End	1.0	1.1	3.0	5.2
Midtown	2.7	0.7	2.1	5.5
Docklands	0.0	0.0	10.9	10.9
South & East	3.1	3.9	9.3	16.3
North & West	2.6	0.9	14.2	17.7
Central London	**1.8**	**1.1**	**6.5**	**9.4**

Source: Ramidus Consulting, EGi and DTZ

2.5.9 Taking Central London as a whole, Figure 2.11 indicates that, based on the long-term average rate of take-up, there was at the end of 2011 (a) just under two years supply available for immediate occupation; (b) just over one year of supply under construction and available (half of the level at the end of 2008) and (c) six and a half years of supply in unimplemented planning permissions, down from seven years in 2008. Taken together, the completed, construction and planning pipeline at the end of 2011 represented just less than nine and a half years of supply at historic rates of demand.

2.5.10 Benchmark 5 suggests that if overall supply falls below 3.25 years then there is potential for shortages. Given as we have seen nearly ten years supply, either in the process of being implemented or with planning permission, it appears that at the strategic level the development industry and the planning system are delivering the necessary office capacity in Central London.

2.5.11 The credit crunch has had the effect of curtailing construction activity, causing a fall in quickly available space (i.e. complete or under construction) from 3.8 years of supply to 2.9 years, with Docklands "out of stock" of immediate supply and the West End chronically short of immediate supply, a story that is hardly new and entirely consistent with Benchmark II. Supply of space under construction in North & West has fallen markedly, but this is mainly due to the completion of a small number of large schemes at Regent's Place and Paddington in an otherwise small market.

2.5.12 Overall there are no signs of a tight squeeze, other than in the short-term, beyond the all-too-familiar tale of the West End, and even here outstanding permissions keep the years of supply to around the critical 3.25 years. To an extent Midtown, with completed space up from 0.5 years to 2.7 years, might act as a safety valve here, as might London's mega schemes (Chapter 6.0).

2.6 Benchmarks: overview

2.6.1 The overall picture that emerges from the benchmarking exercise is that of a Central London market that has coped well with an extremely turbulent few years. Construction was quickly reined in, reducing the risk of catastrophic oversupply, while pre-lets kept the market active at least into 2010. The only

real problem area is the West End, where chronically tight supply, combined with weight of money from flight-to-safety investors, gives the market a potentially inflationary balance.

2.6.2 We note however that the chronic undersupply is primarily focussed on a narrow segment of the market for small units of less than 500 sq m in the heart of Mayfair and St James's. For larger units the occupier base has shown itself to be flexible and locations across a much wider West End geography have become acceptable and indeed sought after. This is reflected in the smoothing of rental values across a wide area of Soho, North of Oxford Street, Victoria and Covent Garden. The opening of Crossrail in 2018 will reinforce this trend as more locations gain competitive advantage, most notably around Tottenham Court Road, which was relatively 'undiscovered' in office market terms before the construction of Central St Giles.

2.6.3 It is important to note that, while there is no specific unit size analysis in the benchmarks, anecdotal evidence strongly suggests that there is no pressing need for large units in the core Mayfair or St James's markets.

2.6.4 In general terms, the overall scale of the pipeline is being maintained. We note that the 2009 decision that gave planning authorities the scope to extend existing consents by three years – a response to the recession – is reaching its limit. It is likely that the principal effect of this will be greater workload for developers seeking renewals more often (every three rather than five years); but the possibly is of a higher rate of "churn" of applications and should be closely monitored for potential impact on the development pipeline.

2.6.5 We note locations other than Mayfair where rents have risen ahead of inflation – where there has been material change in the environment or acceptability of the office market. This has implications for the utility of the benchmarks.

2.6.6 Historically, demand in Docklands has been almost exclusively for new stock because there was no second hand Grade A stock. This has changed as high quality, second hand stock comes back to the market, and the equation might be less imbalanced as the second hand market becomes established.

2.6.7 One final point to note is that there have been structural changes within Central London markets, notably the emergence of a second hand market in Docklands and geographical expansion of the Midtown market. These suggest there might be a case for recalibrating the benchmarks and this should be done prior to the next LOPR. Although it might be that the benchmarks are still fit for purpose, it may be that a "reality check" is now due to ensure that the baseline assumptions remain valid.

2.6.8 One specific issue is that we suggest that the 8% tipping point is reviewed in the light of changes to occupational densities (Chapter 5.0) as well as the years of supply.

3.0 The impact of recent economic events

3.0.1 In this Chapter we consider how recent events in the domestic and global economies have affected London, its competitive position in the global hierarchy of cities, the implications for its role as a financial centre and the impact on its office markets.

3.0.2 In looking at its office markets, we consider the demand for London offices as investments and the demand to occupy office space in London. Finally in this Chapter, having considered the ways in which the market has changed, we attempt to classify some of the most important changes according to whether they are 'structural' or 'cyclical' because the distinction has important policy implications.

3.1 Recent context to the London economy

3.1.1 To create a context for the economic and property market conditions that we find in early-2012, we begin with a brief outline of key economic events since the start of 2011.

- In January 2011 came the news that the UK economy had shrunk by 0.5% in Q4 10. That was possibly due to the bad weather but then, in January, inflation rose to 4%, its highest annual rate for two years. These announcements began a series of bad news announcements that undermined business confidence and led to requirements for office space being put on hold.

- It was followed in March by the earthquake and Tsunami in Japan which shocked the world's financial markets, and not long afterwards Moody's cut Greece's credit rating by three grades to a B1, and downgraded Spain to Aa2. Borrowing costs for the weaker members of the Eurozone began to rise, raising the spectre of a need for rescue packages. Concerns for the financial and political stability of the Eurozone further undermined business confidence in Europe and beyond.

- In April, the US was shocked when Standard and Poor's downgraded its debt outlook from stable to negative for the first time since the Pearl Harbour attack in 1941. China meanwhile had increased its interest rates twice already in 2011 fuelling concern that growth of the economy which had been driving demand for commodities across the globe, could be slowing down.

- Over the summer there were riots in Greece and in the UK. In August Standard and Poor's actually downgraded the USA's AAA rating to AA+. These were extraordinary times and as the adverse economic news snowballed, businesses became more and more reluctant to make decisions, particularly ones that involved capital expenditure or forecasting expansion.

- In September unemployment rose above 2.5 million in the UK and the IMF cut UK economic growth forecasts. In the following month the Bank of England injected an additional £75bn into the banking system in

another round of Quantitative Easing. In Europe, the European Financial Stability Facility was enlarged to increase its capacity to fund bailouts. All of these events signalled that the economic crisis remained deep, and added to the nervousness of business leaders.

- In November both the Greek and the Italian Prime Ministers resigned. There was better news in the UK in November as the UK third quarter GDP was stronger than expected, with growth of 0.5%, and inflation had begun to fall. That was tempered however, by a fall in output in the final quarter of 0.2%.

- In December David Cameron vetoed a revision of the Lisbon Treaty and IMF President Christine Lagarde warned that the world was "*at serious risk of sliding into a 1930s style slump*".

- In its fourth quarter Central London Market Report, JLL reported that "*The global economic background has deteriorated further in the last three months as Europe's sovereign debt crisis has pushed the Eurozone to the brink of recession. … Previously unthinkable speculation about the break-up of the single currency, with its dire economic consequences, refuses to go away…*" By this point, the effect was to all but strangle letting activity in the office market, as observed by Digby Flower of CBRE at the time, "*Anyone who can avoid making a decision will avoid making a decision*." [31]

- By the end of 2011, the CBI/KPMG London Business Survey[32] found that only 13% of London businesses felt more optimistic about the prospects for the economy over the next six months compared with 43% in June of that year. Confidence in the prospects for their own businesses also declined by the end of 2011, with just 31% feeling optimistic compared with 51% in June. These sentiments very much echo the pattern of demand in the London office market.

- The extent to which this was a temporary phenomenon, while confidence was low rather than a permanent shelving of requirements, is as yet unclear since the economy at the time of writing is still weak. However there is evidence of an increase in demand for office space in Q1 12, which indicates improving business confidence, although it has yet to be translated into take-up (Section 1.8).

3.2 The London economy since 2008

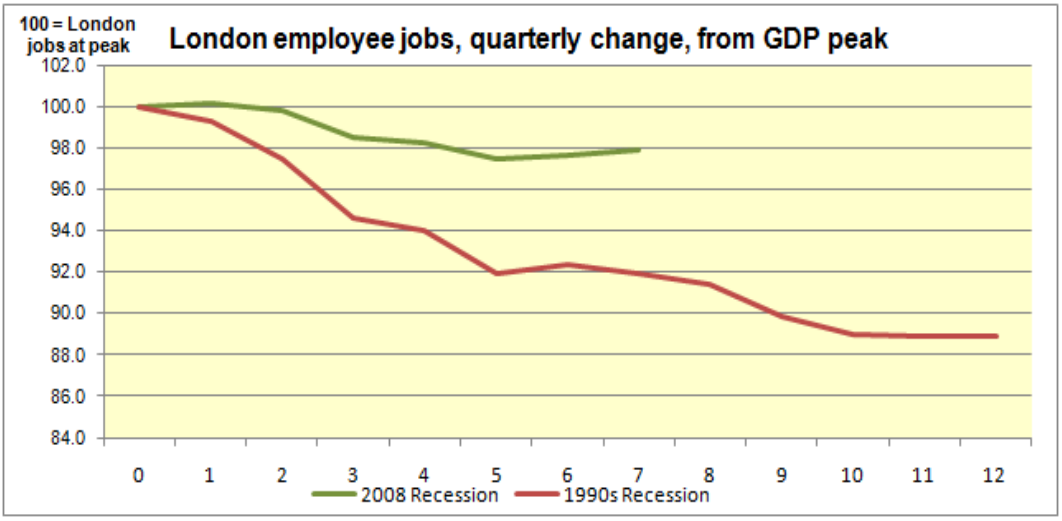
3.2.1 Despite the severity of the recent economic turmoil at a national level and the marked decline in business confidence, a review of the economic indicators suggests that the actual *impact* on the London economy has been less severe and more short-lived than was originally anticipated, although this has not always translated into business confidence and it is confidence that has the most immediate, short-term, influence over property markets.

[31] Interview with Digby Flower, CBRE January 2012
[32] CBI/KPMG (2011) *London Business Survey* December 2011

3.2.2 During the recent recession, London outperformed the rest of the UK, and it is expected that this will continue for the next few years. Both informal indicators such as public transport usage and business surveys, along with more formal indicators such as employment and GDP, show growth in activity in the London economy. But despite such positive signals, consumer confidence remains weak with real wage growth being squeezed, and higher taxes dampening consumption.

3.2.3 One of the important points about recent economic turbulence is that in London (and the UK generally) the impact of the recession on employment was less severe than in previous recessions. Figure 3.1 shows a comparison of London jobs from the peak of UK output in the early-1990s and since 2008. In the two years from the UK GDP peak, employee jobs in London fell by 2.6% in 2008-09, compared to a fall of 8.1% in the earlier 1990s recession.[33]

Figure 3.1 Quarterly change in London jobs from UK output peaks



Source: GLAE (2010) *op cit*

3.2.4 Following this less severe loss of jobs, London employment is expected to grow over the next few years, with private sector employment growth outweighing public sector contraction. While the Government's austerity strategy is likely to dampen economic growth in the short-term, business consensus suggests that it will rebuild market confidence in the country's finances and underpin longer-term stability.

3.2.5 Figure 3.2 shows a summary of GLA Economics' recent economic forecast for London. It can be seen that growth gains strength, albeit modestly, between 2011 and 2013. All of the forecasts in the table show only modest improvements through to 2013, reflecting the on-going level of uncertainty, and indeed some of the very real economic threats. These same uncertainties will continue to play through to the commercial property market.

[33] GLAE (2010) *London's Labour Market in the Recent Recession* Working Paper No44 Dec 2010

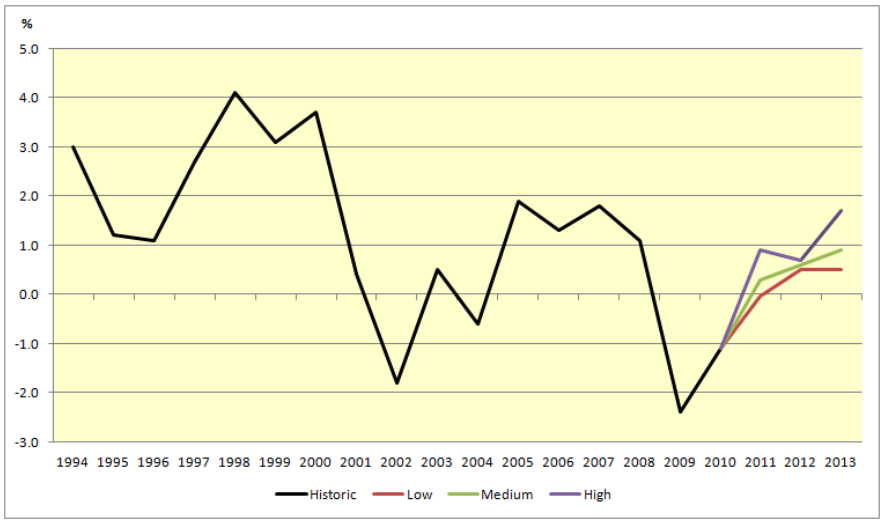
Figure 3.2 London economy forecasts

Economic indicator	2010	2011	2012	2013
London GVA (constant 2006, £bn)	1.1	1.4	2.0	2.4
(Consensus of independent forecasts)		1.5	2.5	2.9
London civilian workforce jobs	-1.1	0.1	0.4	0.4
(Consensus of independent forecasts)		0.3	0.6	0.9
London household spending (constant 2006, £bn)	2.3	0.4	1.2	2.0
(Consensus of independent forecasts)		0.7	1.8	2.5
London household income (constant 2006, £bn)	-0.2	0.1	1.1	2.1

Source: GLAE (2011) *op cit*

3.2.6 Figure 3.3 shows the GLAE's forecast of London Gross Value Added (GVA) in its historic context. The chart shows the severity of the recent fall in output, but also the rapid recovery. The average view is that real output growth will remain positive in 2011 and reach 2.9% in 2013.[34] Even so, this will mean that GVA will remain below pre-recession levels in 2013.

Figure 3.3 London GVA, % change, 1993-2013



Source: GLAE (2011) *op cit*

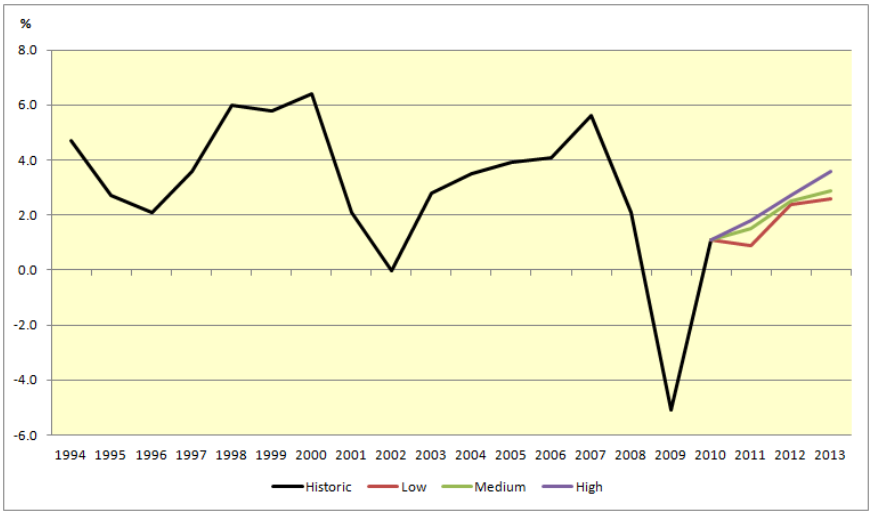
3.2.7 Oxford Economics is more cautious on GVA than the consensus quoted by the GLA for 2011 and 2012, and more optimistic in 2013. It predicts GVA growth of 0.8% in 2011 and 1.9% in 2012 and 3.4% in 2013.[35]

3.2.8 The recovery in jobs is forecast to follow a similar pattern (Figure 3.4). The consensus view is that the number of jobs will grow by 0.3% in 2011; by 0.6% in 2012 and by 0.9% in 2013.[36] Interestingly, it can be seen how jobs

[34] GLAE (2011) *London's Economic Outlook: Autumn 2011* Nov 2011
[35] Oxford Economics (2011) *Economic Outlook for London*
[36] GLAE (2011) *op cit*

growth lags output growth, but also hints at returning to pre-recession levels before GVA.

Figure 3.4 London employment, % annual change, 1993-2013



Source: GLAE (2011) *op cit*

3.2.9 While it is correct to note the relationship between these forecasts and the commercial sector, it is also appropriate to say that they are in stark contrast to the specific performance of the central London, trophy investment market, which is discussed more fully in Section 3.5. Suffice to say at this point that the wider London office market is tied much more closely to the national economic picture than is the central area investment market which has not, been driven by latent occupier demand rather, it has been driven by the weight of money seeking opportunities to invest.

3.3 The impact on the office occupational market

3.3.1 Chapter 1.0 set out a detailed analysis of recent trends in the Central London office market. It provided the statistical evidence as well as highlighting key transactions and identifying occupiers and business sectors that have been active in the period since 2008. For this reason, we confine ourselves here to a brief assessment of the direct consequences of recent economic events on the London occupational market. There are also important differences between the Central London and Outer London office markets, but these are dealt with in Chapter 4.0, *Prospects for non-CAZ office centres*.

3.3.2 LOPR 09 was written in the wake of an economic crisis that shook the world and had an acute impact on the London office market. As we noted at the time: *"The fact that the recession has a systemic failure of the banking system at its core means that London, the world's pivotal international financial centre, and its property market, have been hard hit."*

3.3.3 The subsequent downturn in the economy was reflected in a loss of business confidence that translated into greatly reduced demand for office space throughout 2009. At the time, the widely held view was that occupier

demand for office space would remain subdued in 2010 but gradually improve during 2011. The pattern turned out to be rather different.

3.3.4 At the beginning of 2010, there was a real sense that the economy was returning to health and the London office market experienced a remarkable, if short-lived, recovery. Office take-up rose strongly and rental growth was eagerly trumpeted. It seemed to mark a welcome turning point; but as 2011 unfolded and as bad news emerged about the UK and world economies, it became evident that the recovery, at least in the occupational market, had faltered (see Section 1.8, *Supply and demand: overview*).

3.3.5 As it turned out, 2011 experienced historically low volumes of take-up, as businesses reacted to a succession of economic bad news stories. Persistent problems in the UK and overseas economies created uncertainty, undermined business confidence and discouraged forward planning.

3.3.6 The severity of the economic events left their mark on London. In the short-term they undermined business confidence and caused a downturn in demand for office space but at the same time, starved the market of debt finance, thereby, inadvertently protecting the market from overbuilding.

3.3.7 In an ironic twist, the instability in overseas markets acted in London's favour by rendering it stable and safe in comparison. London's investment markets have attracted huge volumes of investors' capital since 2008, not only from new sources of capital in emerging economies, but also from high net worth individuals in vulnerable European economies, notably Greece.

3.3.8 Another legacy of the financial crisis, increased regulation and taxation reform, could make the UK less attractive to the international financial sector (even though the UK government claims to recognise the value of the City's financial sector, and to be alert to the risks of damaging it). In its 2011 Prospectus, Central London Forward set out the potential impact of reforms.

> *The City sees threats to London's international position from potential new regulation at both European and national levels. As well as selling itself and its wares, London needs to influence and shape UK, EU and worldwide policy and regulatory environments. The government is opposed to a Europe-wide transaction tax on shares and other City exchanges (the so-called Tobin tax), as potentially undermining the UK's global position unless similar action is taken by the US and non-EU countries.*[37]

3.3.9 John Vickers' *Independent Commission on Banking* (ICB) published its final report and recommendations for the banking industry in September 2011.[38] Its main proposals were: the 'ring-fencing' of retail and investment operations, with separate boards of directors; a requirement for banks to hold bigger capital cushions of at least 10% (the international norm is 7%) and up to 17% where new types of capital instruments are involved; and for more competition on the High Street.

[37] Vail & Associates (2011) *Central London Prospectus 2011* December 2011
[38] Independent Commission on Banking (2011) *Final Report & Recommendations* September 2011

3.3.10 The government is set to adopt the report's proposals in a White Paper to be published in Spring 2012 for implementation by 2019. The capital rules are unlikely to apply to international banks that can prove their operations will not threaten the UK taxpayer, apparently a concession to HSBC, which has pondered publicly whether it will continue to keep its headquarters in the UK, where it has been since its takeover of the Midland Bank in 1992.

3.3.11 The UK's largest insurer, Prudential, has stated that it will consider relocating its headquarters to Hong Kong if the new regulation is brought into being because of the effect it could have on its American business.[39] However, soon after this public statement, news emerged that Prudential was looking for a new HQ in the City.[40]

3.3.12 Barclays, HSBC and Standard Chartered, also threatened to relocate their headquarters from London in response to pressure to break up the commercial and investment banking in 2010. However, those threats were toned down following the ICB report, which advised against the break up.[41]

3.3.13 There is some evidence that the taxation of high paid executives has had a detrimental effect on London's attractiveness as a number of companies have relocated their HQs away from London since 2007.[42] In most cases taxation was cited as the primary reason. However, over recent times there has been some evidence of new investment.

3.3.14 Booz and Co identified two companies that relocated their headquarters *to* London. These were: Canon Europe (from Amsterdam) and Lowe (from New York). To this list could be added Aon, which will move its HQ from Chicago to London. Aon will be the first US S&P 500 company to be domiciled in the UK. The decision was driven by the desire to be close to the Lloyd's of London insurance market and to gain greater access to emerging markets. Its chief executive said that the decision was taken to "*reinforce the global connectivity of the firm*". The liberalisation of taxation on 'controlled foreign companies' also played a part in their decision.[43]

3.3.15 As well as international relocations to London, there has been some evidence of companies, particularly in the TMT sector, relocating from the South East *into* London. Three examples are shown below.

- Vodafone chose to relocate its HQ from Newbury to Paddington.
- Nokia has announced its relocation from Hampshire, also into Paddington, at Kingdom Street, W2.
- Publisher Macmillan recently took over 8,000 sq m at the Regent Quarter development in King's Cross, alongside a decision to relocate staff from Oxford and Basingstoke to the new scheme.

[39] The Guardian.co.uk *Prudential Boss: New EU Rules Could Force Insurer Out of UK* 13th March 2012
[40] Sunday Telegraph *Prudential Seeks New Building for London HQ* by Graham Ruddick 6th May 2012
[41] Bloomberg *Barclays, HSBC Threats to Quit London Recede with Breakup Risk* 3rd February 2011
[42] Booz & Co for the GLA (2009) *London World Capital of Business* October 2009
[43] Financial Times *Aon to Relocate Headquarters to London* by Alistair Gray 13th January 2012

Added to this, businesses in the TMT sector that might previously have been expected to locate in the Thames Valley or M4 Corridor are choosing to locate in Central London (see Section 1.8).

3.3.16 The impact of recession and public sector cuts will be felt most strongly in other regions of the UK but London also has some of the most deprived areas in the country. There is a risk of civil unrest that cannot be ignored as the summer 2011 riots attest. Agents reported that investors operating from outside the UK but with UK investments, were concerned by the media portrayal of unrest in the UK and sought reassurance. While this did not have any tangible affect on value or investment demand, it had the short term effect of slowing some investment decisions over the summer it is important to recognise the potential risk of reduced investment values if civil unrest were to escalate in the future.

3.3.17 Job losses have been less severe than might have been reasonably expected given the length and depth of the recession. Opportunities for new graduates however have been very limited and it is reasonable to expect this to boost the scale of self employment and the number of small start up businesses in London.

3.3.18 Another uncertainty highlighted by TheCityUK, is that the City has not yet begun to think through where it stands if the way ahead for countries within the Eurozone turns out to be much closer fiscal union.[44] The economic climate remains uncertain in the aftermath of the financial crisis. There are significant concerns over the future of the Euro and, while there seems to be a temporary calm after the bailout agreement with Greece, there remain real uncertainties about the future of Greece and Spain.

3.3.19 While occupier demand in general remains sluggish and businesses are reluctant to make decisions against the backdrop of so much uncertainty in the wider UK and Eurozone economies, the market is, to some extent, protected by a supply squeeze, particularly in Central London, and particularly for Grade A space. This has largely resulted from the withdrawal of the UK banking sector from development funding.

3.3.20 Furthermore, despite a more positive outlook for Central London, the property market remains vulnerable. Apart from continuing concern over a "double dip" recession, the Government's austerity programme, rising oil and energy prices and the Eurozone debt crisis all have the potential to derail recovery. In areas of Outer London, the Government's austerity programme is currently the most visible threat. Large parts of Outer London and its office market are underpinned by public sector employment, and this is now under severe threat of retrenchment.

3.3.21 There are however exceptions, most notably Chiswick and Hammersmith, which are active and rental growth has been achieved. Corporate occupiers are in a relatively good position with significant cash reserves. However, few are willing to invest the cash for business expansion purposes or make commitments to new property with so much economic uncertainty remaining.

[44] Vail & Associates (2011) *op cit*

3.3.22 The overriding theme in the office market is one of continuing uncertainty, and there seems little prospect that the fortunes of the markets beyond Central London, are likely to improve substantially in the short-term.

3.4 London's competitive position

3.4.1 In this section we look at London's global competitive position in the light of recent economic events and shifts in global balances of power. There is no doubt that London, despite real concerns over higher tax and tighter regulation, remains a very powerful and competitive global city. This should underpin the continuing strength of its financial and business service sectors as employers and major drivers of the economy.

3.4.2 McKinsey Global Institute's Cityscope database ranks world cities according to a range of criteria. On GDP, London is ranked third behind Tokyo and New York, with Paris in fourth place and Los Angeles in fifth. The study forecasts that London will be overtaken by Beijing by 2025 and will slip into fourth position. If MGI's forecast is correct, London will remain the highest placed European city. MGI also points out that the UK is unusually dependent on London, with 33% of the national GDP and 24% of its population.[45] This suggests that the difficult economic conditions have not had any negative impact on London's position relative to other cities. Indeed, anecdotal evidence suggests that it being seen as a safe haven and its isolation from the single European currency may have strengthened its position as Europe's leading international city.

3.4.3 This is confirmed by research undertaken by Z/Yen Group, which gathers opinions from 1,700 financial services professionals in global financial centres. As shown in Figure 3.5, it found that London has retained its position as the leading global financial centre in the face of regulatory upheaval, sluggish economic conditions and turmoil in the Eurozone".[46]

Figure 3.5 Global Financial Centres Index Q1 12

Top Ten Centres	Rating
London	781
New York	772
Hong Kong	754
Singapore	729
Tokyo	693
Zurich	689
Chicago	688
Shanghai	687
Seoul	686
Toronto	685

Source: Z/Yen (2012) *op cit*

[45] McKinsey Global Institute (2011) *Urban World: Mapping the Economic Power of Cities*
[46] Z/Yen Group (2012) *The Global Financial Index* March 2012

3.4.4 The trade surplus generated by financial services and insurance has been rising fairly steadily since the early-1990s and in 2011 was 2.6% of GDP in the UK. If the exports of related services such as law, accountancy and management consultancy were added in, the surplus exceeds 3% of GDP. This contribution, in part, reflects decline elsewhere in the economy, since the decline of other sectors such as manufacturing has boosted the proportion contributed by financial services. But that merely serves to underline its significance.

3.4.5 London is the centre of the UK's banking industry, which holds the third largest stock of customer deposits of any country in the world. 17% of all global trading in equities took place in London in 2009, a higher proportion than anywhere except New York. And UK fund managers, predominantly in London, managed portfolios worth 11% of the global total - again second only to the US.[47] Twice as much foreign exchange trading occurs in London as in New York and Tokyo combined.[48]

3.4.6 London's attractiveness as a centre for investment has also held up well since the credit crunch. Ernst & Young recently found London to be the most attractive city in Europe in which to establish operations.[49] The survey, showed that London's closest rivals were Paris and Berlin (although both some way behind). Despite all this relatively good news, there are threats to London's global position.

3.4.7 There are threats to London's position, some of which arise from the consequences of the banking crisis, and some from the response to the recent economic events. Others relate to global trends that were emerging already. These are considered below.

3.4.8 The data in Chapter 7.0 illustrate the importance of financial services as a source of employment in London. The employment forecasts anticipate a decline in this sector over the next few years. These forecasts are derived from economic indicators and rely on assumptions about historic trends projecting forwards. There is no doubt that the City must confront the prospect of downturn in many of its business areas as credit becomes more scarce and Europe's debt crisis drags on, hampering investment and trade. This threat arises directly from the banking crisis.

3.4.9 As already noted in Section 3.3, the City is also faced with the prospect of tighter regulation from domestic and EU policymakers, higher taxes on the very wealthy and stricter immigration rules, all of which potentially threaten its position and all of which are to a large extent a response to the banking crisis and the recession, and thus the indirect consequence of these events.

3.4.10 **Tobin Tax** is a Financial Transaction Tax proposed by the EU. The current plan is to levy a micro-tax of 0.1% on share and bond transactions and 0.01% on complex securities such as derivatives. Any investing institution

[47] Oxford Economics (2011) *London's Competitive Place in the UK and Global Economies* January 2011
[48] The Economist *Death by a Thousand Cuts* 7th January 2012
[49] Ernst & Young (2012) *2011 Euro Attractiveness Survey*

resident in a participating country would be liable to pay and the revenues would be shared between the EU's budget and national treasuries. The EU estimates that 62% of the revenue would come from the UK. The UK government opposes it, unless it is adopted globally, on the grounds that it would threaten London's competitive advantage, in comparison with New York and could lead to an exodus of trading institutions.

3.4.11 **Solvency II** is a European regulatory proposal to raise the amount of capital insurers must hold against risks and thereby drive improvements in corporate governance in the EU. ABI director general Otto Thorensen has warned that European insurers could be disadvantaged because of the Solvency II rules and could reduce the amount of capital that they invest in UK infrastructure.[50]

3.4.12 The impact of these measures is untested although available research is largely inconclusive. In the Z/Yen study cited above, 73% of respondents said that a Financial Transaction Tax (FTT) would reduce the competitiveness of a financial centre, but 57% said that the forced splitting of retail and investment banking would have no impact. It suggested that fears over regulation have been replaced in the minds of financial professionals by worries over personal taxation.

3.4.13 Various proposals to increase tax revenue from high earners are under consideration at the beginning of 2012, including an additional stamp duty band on homes valued at over £2 million and the reduction of tax relief on pension contributions from 40% to 20%.

3.4.14 The greatest concern for London however, is one that was emerging before the banking crisis or the economic recession and is independent of both. It is London's competitive position against rising financial centres in Asia.

3.4.15 The question that must be addressed is whether London's long established credentials – its expertise, the size of its labour pool, the network of firms, its liquidity, language and time zone, are enough to outweigh the threats to its position. Asia's rise can be seen as an opportunity rather than a threat, to offer financial expertise to these economies as they grow and as long as their own financial centres are immature. It seems logical to expect trade between the City and these emerging economies.

3.4.16 Already there is tangible evidence of this. China has loosened its currency controls, allowing more volatility in daily trade in the Renminbi from April 2012.[51] Also in April, HSBC issued a three year RMB denominated bond, the first to be launched outside Chinese sovereign territory. These moves represent an enormous step on the way to the Renminbi becoming a tradable currency, and London looks likely to be chosen as the centre for its trading, along with Hong Kong. Estimates of the significance of this for London, suggest that there "*would be a billion pounds of extra business and significant new jobs created almost overnight*".[52]

[50] PostOnline.co.uk *Investment in UK Infrastructure Threatened by Solvency II* 2nd March 2012
[51] Financial Times *China's Renminbi Move Welcomed* by Simon Rabinocitch15th April 2012
[52] BBC News website *City to be Offshore Currency Market for China* by Robert Peston 11th January 2012

3.4.17 In April 2012, Sherbank, Russia's biggest bank, announced that it would launch a share offering in London to raise £3.7bn, and if it proves successful, a raft of similar share offerings could follow.[53] The Kremlin has indicated that it intends to sell stakes in key industries and would be likely to look to the London markets in which to effect this. Sherbank controls nearly a third of Russia's banking market and the London share offering would be its first experience of raising capital through a European exchange. Several other Russian businesses, including Russian Helicopters and Georgian Railways are preparing for a float in London.[54]

3.4.18 The UK has valuable historic links with nations across the globe and is establishing a new set of ties and loyalties through its role as a financial centre. It is not only the emerging Asian economies that are turning to London, there is also evidence that 'extraction economies', such as South Africa, Canada and Australia, all of which have benefitted from the rise of commodity prices, would also look to London to support them as they need finance to fund business expansion. Their presence in the property investment market is often cited as evidence of their focus on London.

3.4.19 The risk of reputational damage arising from the financial crisis is suggested as a threat to London but in reality it is equally likely to work in London's favour, as London is generally seen as a safer and more stable haven than alternative centres. This is underlined by the influx of overseas money to the London office investment markets.

3.4.20 London's economy, through its status as a world financial centre, fluctuates more with world financial movements than local UK economic variations. Recent economic events reverberated across the globe but the emerging economies continued to grow strongly and London seems to be well-placed to benefit from that growth.

3.5 London's office investment market

3.5.1 In the investment market, the very same economic conditions that undermined business confidence and caused a steep decline in occupier demand have had almost the reverse impact. A loss of confidence in economies across the world, and falling values on stock exchanges and in currency values, combined with the falling value of sterling, have helped to fuel a huge increase in overseas capital seeking a safe haven for investment with attractive returns.

3.5.2 This investment-drive has been equity led and, without the need for debt, has not been inhibited by the credit crunch. Prime property yields at 5% are still significantly more attractive to these capital-rich investors than risk free rates such as 10 or 20-year gilts or swaps at around 2.5%. Agents report a huge demand for prime London real estate, despite the lack of debt and there is not enough product coming to the market to satisfy that demand.[55]

[53] Sunday Times *Russian Lender Taps City Coffers* by Danny Fortson 8th April 2012
[54] FT.com *Georgian Railways to List in London* by Robert Wright 16th April 2012
[55] Interview with Tony Gibbon, Partner GM Real Estate April 2012

3.5.3 Prime office property yields in CAZ vary from 4% in Mayfair and St James's to 6.25% in Southwark, but most locations range between 5% and 5.5% as illustrated in Figure 3.6. The data also show the steep yield compression in recent years, reflecting high levels of interest from overseas investors.

Figure 3.6 Prime office yields in London, 2009-2012

Within CAZ	Q1 09	Q3 09	Q1 10	Q3 10	Q1 11	Q3 11	Q1 12
Canary Wharf	7.00%	6.75%	5.50%	5.50%	5.50%	5.50%	5.50%
City Core	6.50%	6.25%	5.25%	5.00%	5.00%	5.00%	5.00%
EC2/3 Fringe	9.00%	8.50%	6.25%	6.00%	6.00%	6.00%	6.00%
SE1 Southwark	7.75%	7.00%	6.50%	6.25%	6.25%	6.25%	6.25%
WC1 Holborn	6.75%	6.25%	5.75%	5.50%	5.50%	5.50%	5.50%
Soho	6.75%	6.25%	5.25%	5.25%	5.25%	5.25%	5.25%
SW1 Victoria	6.25%	5.75%	5.25%	5.25%	5.25%	5.25%	5.25%
W1 Mayfair	6.00%	5.50%	4.50%	4.00%	4.00%	4.00%	4.00%
W2 Paddington	7.00%	6.50%	5.75%	5.50%	5.50%	5.50%	5.50%
Beyond CAZ							
Croydon	8.25%	7.75%	7.50%	7.00%	6.75%	6.75%	6.75%
Wimbledon	8.25%	8.25%	6.75%	6.75%	6.75%	6.50%	6.25%
Brentford	8.25%	8.25%	7.25%	7.25%	7.25%	7.25%	7.25%
Chiswick	7.75%	7.75%	6.25%	6.25%	6.25%	6.25%	6.00%
Hammersmith	7.75%	7.75%	6.25%	6.25%	6.25%	6.25%	6.00%
Kingston	8.25%	8.50%	7.50%	7.50%	7.50%	7.50%	7.25%
Richmond	7.75%	7.75%	6.50%	6.50%	6.50%	6.25%	6.25%
Uxbridge	7.75%	7.75%	6.25%	6.25%	6.25%	6.25%	6.00%

Source: Cushman and Wakefield Research

3.5.4 Beyond CAZ, yields have also fallen in the strongest office centres, according to data from Cushman and Wakefield. In Chiswick, Hammersmith and Uxbridge, for example, prime yields were 6% at the end of Q1 12, down from 7.75% in Q1 09.

3.5.5 Yields for secondary properties vary widely. According to Cushman and Wakefield: "*Secondary yields range from a relaxation on prime yields of 50 bases points above prime to 400-500 bases points and more depending on the capital required, the level of capex, location and the letting risk.*"[56]

3.5.6 Prime yields for retail property, according to Cushman and Wakefield are around 4% for the best CAZ locations of Oxford Street, New Bond Street and Regent Street. These have not fallen as steeply as offices in recent years. The equivalent figures for Q1 09 were 5.0%, 4.25% and 5.25%.

3.5.7 Statistics logging investment transactions by origin of purchaser illustrate the influence of foreign buyers in Central London. In 2011, foreign buyers accounted for 56% of transactions by value and 57% in 2010 (Figure 3.7). These statistics demonstrate that London has continued to attract foreign capital and underline its role as a safe haven.

[56] Interview with Elaine Rossall, Partner and Head of London Markets Research, Cushman and Wakefield May 2012.

Figure 3.7 Central London investment by purchaser type

Type	Value (£m) 2011	% share 2011	Value (£m) 2010	% share 2010
Overseas Investor	5,365.0	56	5,957.3	57
Property Company	1,935.9	20	1,596.1	15
UK Institution	1,857.6	19	1,383.3	13
Private Individual	227.7	2	613.1	6
Owner/Occupier	132.3	1	659.3	6
Financial/Bank	2.4	0	0	0
Other	93.2	1	320.0	3

Source: Data courtesy of Drivers Jonas Deloitte, Jan 2012

3.5.8 Of these, Far Eastern investors were the most significant, accounting for around 17% of transactions by value in 2011, substantially more than their 6% share in 2010. US investors were more prominent in 2010 with a 13.7% share, which dipped to 10.1% in 2010. These are shown in Figure 3.8.

Figure 3.8 Central London investment by purchaser type

Type	Value (£m) 2011	% share 2011	Value (£m) 2010	% share 2010
Overseas Far Eastern	1,623.3	16.9	654.6	6.2
Public Property Company	1,191.6	12.4	915.2	8.7
Overseas Euro (Other)	1,044.5	10.9	596.5	5.7
Overseas US	969.5	10.1	1,443.1	13.7
Private Property Company	744.3	7.7	698.5	6.6

Source: Data courtesy of Drivers Jonas Deloitte, Jan 2012

3.5.9 According to CBRE[57] sovereign wealth funds and cash-positive pension funds with long term hold strategies, have been the key drivers of high levels of global capital flowing into Central London commercial real estate since the credit crunch. Their figures show that buyers from Asia and the Middle East have been particularly prominent.

3.5.10 Since 2008, Central London has attracted 41% of all the capital invested into European real estate from outside the region, compared to 17% in the previous three years, 2006-2008. Exchange rates have played a role, as UK property looks cheap to foreign investors as well as the long established attributes of transparency, long income flows and relative liquidity. The Asian funds in particular like the security provided by the UK legal system, underlining its role as a safe haven.

3.5.11 Equity-rich investors are well placed to take advantage of opportunities on the market as debt is extremely restricted on all but the very best properties.

[57] CBRE Newsdesk 20th February 2012

The shortage of debt finance is seen as "*the biggest single threat to the recovery of the property market in Europe*".[58]

3.5.12 CBRE's Real Estate Investor Intentions Survey[59], finds the same to be true of the UK market. The report's author notes that "*the biggest single perceived threat to property market recovery is still investors' inability to source debt"; and that* the greatest impact is in non-core or non-prime markets. Banks that are lending *"remain focussed on prime assets in key markets and terms on offer vary widely depending on the borrower*."[60]

3.5.13 Demand for such investments extends beyond Central London where buildings can offer secure income and the strength of tenants is assured. Equally, premiums are being paid for long RPI-linked leases to UK government departments and international corporate occupiers whose trading performance is not linked solely to trends in the UK economy.

3.5.14 There is likely to be a growth in the number of sales by receivers as banks elect to clear more non-core assets from their balance sheets. Pricing uncertainty is great as many secondary assets are becoming increasingly obsolete and might be considered as redevelopment opportunities for other uses rather than as long-term income generating assets. Yields could move out substantially for secondary investments.

3.6 Structural and cyclical change: the prospects for London

3.6.1 The London office market is dynamic and responsive. It has a long history of cyclical movement but it also adapts and evolves to more permanent changes. It has experienced a very severe jolt over the past few years. At such times, opinions tend to polarise between those who believe that "*everything will get back to normal soon*", and those who believe that, in some sense "*the market has changed forever*". The degree to which there will be a return to the *status quo ante* is an important one in policy terms, not least in terms of the overall profile of demand for office space.

3.6.2 It is helpful to distinguish between change that arises directly from the economic crisis and shifts that may have occurred independently but have perhaps been accelerated or stalled by the impact of economic recession. Here we attempt to sift the cyclical changes from the structural changes, as summarised in Figure 3.9.

3.6.3 **Cyclical change** While recent economic difficulties were severe and remain to some extent unresolved, London has weathered the storm relatively well. London's (and the UK's) experience, has resulted in fewer job losses than in the early-1990s recession and growth is now returning, albeit modestly. Thus, the impact of economic recession is cyclical.

3.6.4 Interwoven into the recession discussion is the question of business confidence. This has been dented severely and the effect has been a marked impact on volumes of office demand. However, confidence is

[58] City of London Corporation (2012) *op cit*
[59] CBRE (2012) *Real Estate Investor Intentions 2012*
[60] Peter Damesick quoted in CBRE press release, Cannes 7th March 2012

expected to rise during 2012, and there is not expected to be a long-term fall in confidence in either the London office market, or the business sectors that underpin it.

Figure 3.9 Cyclical and structural change in the London office market

Cyclical change	Cyclical or structural	Structural change
Impact of recession	Financial supervision	Polycentric London
Confidence	London's reputation	Mega schemes
Rent & yield adjustment	Threat from other cities	Marginal office centres
Output-related demand fall	UK tax regime	Public sector demand
Development downturn	Demand profile	Changing work styles

3.6.5 The banking crisis and consequential lack of debt, has starved the property industry of opportunities to develop new buildings and this has been instrumental in preventing oversupply and calming the traditional property cycle. This is expected to be a purely cyclical phenomenon.

3.6.6 There is a close correlation between property values and economic indicators as demonstrated in Chapter 1.0, Figures 1.1 and 1.2. We would expect this relationship to persist.

3.6.7 The office property market is consistently measured by the industry in terms of rental and yield performance. Rents are expected to respond to the rise in business confidence when it occurs, particularly given that the market is not burdened with the same overhang of space as it was in earlier development cycles. As noted above, prime office yields have performed independently of occupational demand recently (Figure 3.6), because they have been driven by investment demand, largely from overseas investors.

3.6.8 **Cyclical or structural change** There is a set of changes that have coincided with the economic crisis and could leave a lasting legacy but they remain in a transient phase. For example, changes to financial supervision in the City could have an impact on demand at least while they are being debated and could potentially have a long-term impact if they are too stringent, as evidenced by Prudential's threat to move to Hong Kong. But, despite publically declaring a wish to re-balance the economy, the government will be keen to avoid damaging London's position as a world financial centre.

3.6.9 The potential threat from other cities to challenge London's position as a global financial centre no longer appears to emanate from Paris and Frankfurt – that battle seems to have been won. Now the threats are from cities in emerging economies. The renewed 'special relationship' between US and UK seems to suggest that there will be a pulling together of the old guard to maintain status in the face of competition from new 'upstarts'. At present, expanding businesses in emerging economies are gravitating to

London to raise capital for expansion on the world stage (see paras 3.4.16 and 3.4.18), but in the longer term that could change as the financial centres closer to home mature.

3.6.10 Proposed changes to the UK taxation regime could potentially threaten demand for office space in London if, as suggested by some, they influence location decisions of international companies.

3.6.11 A final area of change where the question of cyclical versus structural remains unresolved is that around the profile of demand for office space. Forecasts for growth in Financial & Business Services employment suggest a slower rate of growth in the years ahead, which raises the question of what will be the key drivers of demand for office space. One area of interest is the rise of the TMT sector.

3.6.12 **Structural change** There are structural changes underway in the London office market at this time, as can be reasonably expected in any dynamic economy that adapts and evolves to new conditions. In the case of London, two significant new conditions are: the end of a prolonged expansionary phase in office employment, (see Chapters 6.0 and 7.0); and the changing geography of Central London's office markets, which is discussed in Chapters 1.0, 2.0 and 6.0). There has also been a steep decline in the value of offices in much of Outer London (see Chapter 4.0) and an emergence of a polycentric geography (Chapter 6.0).

3.6.13 These have not arisen as a consequence of recent economic events although they may have been accelerated by the focus on cost reduction. The public sector's presence in Outer London is a good example of a shift that has been prompted by austerity measures but not a market response to recent economic events. Small business start ups may be another consequence along with Hubs, collaborative workspaces and so on – new forms of property provision that provide for a burgeoning self-employed and flexible workforce.

3.6.14 Over the coming years, demand for office space in London is very unlikely to be driven by the kind of pre-recession corporate expansion. Whether the political agenda of "re-balancing the economy" is accepted or not, we are unlikely to see a return to the *status quo ante*. More likely is a period of sustained but modest growth. Meanwhile, small businesses are likely to remain dynamic and possibly grow at a faster rate than the corporate sector.

3.6.15 In Chapter 6.0 we examine the growing influence of London's mega schemes. These first emerged in the late-1980s and so are not an outcome of the more recent changes. However, their impact is on-going and important, in a structural sense, for their impact on the geography of the London office market. Not least, we believe that they have been contributing towards the marginalisation of many Outer London office centres that would, traditionally, have soaked up demand moving away from the central area.

3.6.16 Outer London's traditional role as a back office for London has, in most senses, disappeared. There are many centres where the demand for office

space has changed, structurally: there is very unlikely to be any resurgence of office demand in these centres.

3.6.17 We are currently experiencing the effects of austerity measures in the public sector, suggesting some structural change in public sector demand for office space. Central government has been very active, and effective, in relocating civil servants to the regions as part of its decentralisation programme (see Section 10.2). But perhaps a bigger change currently just getting underway is the impact of cuts on the wider public sector. Local government, the health sector and the police are all major users of office space, and all are currently examining ways of reducing their commitment to real estate.

3.6.18 This wider public sector rationalisation could have its severest impact on Outer London where already fragile office markets could see significant amounts of office space become surplus to requirement.

3.6.19 The issue of changing work styles is dealt with more fully in Chapter 5.0. There is no question that large numbers of occupiers are introducing different forms of flexible working. These vary in their design and application, and indeed in their impact. But the overriding theme is an overall reduction in appetite for corporate office space. This spreads across the private and public sectors. There is equally little question that such programmes are only partly driven by economic drivers. They are also a response to technological change and emerging business models. This is a structural change not an economic efficiency impact.

3.7 Recent economic events: overview

3.7.1 London's economy seems to have fared better than many expected in the light of economic recession, nevertheless, two direct consequences of recession have had major impacts on the London office market. These were: the loss of business confidence, which suppressed demand for office space and the lack of bank debt, which effectively halted the development pipeline. Ironically, the two created a balance whereby the lack of new construction compensated for the loss of demand.

3.7.2 On the positive side, despite London's dependence on the faltering financial sector, overseas investors have seen the capital as a safe haven for their funds and the demand for investment property in London has been remarkably strong.

3.7.3 The impact of recession will be predominantly cyclical and already indications are that a gradual recovery can be expected. As confidence returns, it is reasonable to expect demand for office space to increase and property agents report tangible evidence of latent demand resurfacing. When it does, the lack of construction will inevitably put inflationary pressure on rental values.

3.7.4 The financial crisis looks likely to leave a more permanent legacy on London's office market in the form of tighter fiscal regulation and changes to taxation. In both cases politicians will work hard to minimise the negative impact on London's attractiveness to businesses.

3.7.5 London's future as a major global business centre looks secure in the medium-term not least because of its tremendous head start, together with the new relationships and loyalties that are forming with today's emerging economies and that will underwrite its office market for the future.

3.7.6 The focus on cost reduction prompted by recent economic events probably accelerated and highlighted other underlying structural changes such as the move to flexible working; greater densities in office occupation and rationalisation of the public sector, all of which impact on the office market but could not be attributed directly or wholly to the recession.

3.7.7 Employment growth forecasts suggest that there will be lower growth in office employment in future in London – this is supported by the projections in Chapter 7.0 and by the analysis in Chapter 6.0. For this reason, our view is that the market is probably moving towards a model led by stock renewal rather than the net expansion that characterised the past 20 years. That said, we expect continuing shifts in the geography of business activity, but these will be, at least in part, offset by an increase in diversity of uses in established locations. This again, might have been highlighted and exacerbated by the recession but was already in process.

3.7.8 In sum, the severity of the recession has accelerated and highlighted underlying structural change. It is appropriate to recognise that London's future will continue to lie in its role as a world leading centre for international business, and that recent events in the economy have not changed that. It might face more competition in other parts of the world in future, but London, by virtue of its maturity and scale, is ahead of the competition at the moment and has and will retain a "first mover advantage".

4.0 Prospects for non-CAZ office centres

4.0.1 LOPR 09 reviewed the prospects for potential strategic office centres in London's outer boroughs, as well as centres in inner London but outside CAZ. LOPR 12 revisits this work to examine whether it has stood the test of time, and to consider any updates that might be appropriate in the light of strategic changes since 2009.

4.0.2 Time constraints prevent a revisiting of the approximately 100 centres reviewed, so our focus is on looking for signs of strategic impact to establish where prospects have improved or waned. We also take a close look at the economic profile of the Outer London boroughs, since the data reveal a troubling picture for all but a handful of centres.

4.0.3 One tangential issue that arises in the analysis of Outer London is the lack of data coverage there. Little is published on the property market beyond the central area, making it necessary to stitch together disparate sources. A map showing Central, Inner and Outer London is shown in Appendix A1.

4.1 Central and Outer London performance

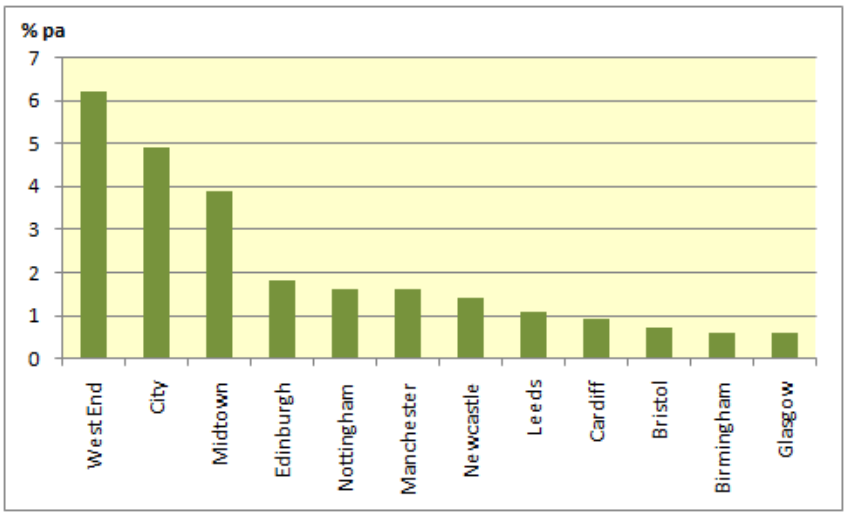
4.1.1 The Central London office market is driven by factors that distinguish it from other markets, in particular its status as a global city and the appetite from international investors for its primary product. These features contribute to far greater volatility than occurs in other markets.

4.1.2 Further, the definition of Central London has evolved. Until the very late-1970s it comprised the City and some parts of Victoria. In the 1980s the West End emerged strongly and, in the 1990s, Docklands became a separate, but functionally related outpost of Central London. And at the same time boundaries were pushed out at satellite centres: London is now a polycentric office market (see Chapter 6.0). Central London's particular features, and its continuing evolution, are nothing new; but they are key to understanding the comparative picture with Outer London.

4.1.3 Analysts identify a *"two speed property market"*, defined effectively as *"central London and then the rest"*, and Outer London, to all intents and purposes, slots into "the rest". Figure 4.1 illustrates this, with Central London's three key sub-markets significantly outstripping other centres in a DTZ rental forecast. Outer London follows the pattern of the regional centres (see below). DTZ was forecasting Central London to continue leading the market over the next five years, with West End rents rising at 6% per annum, 2011-15, and City rents rising at 5% per annum.

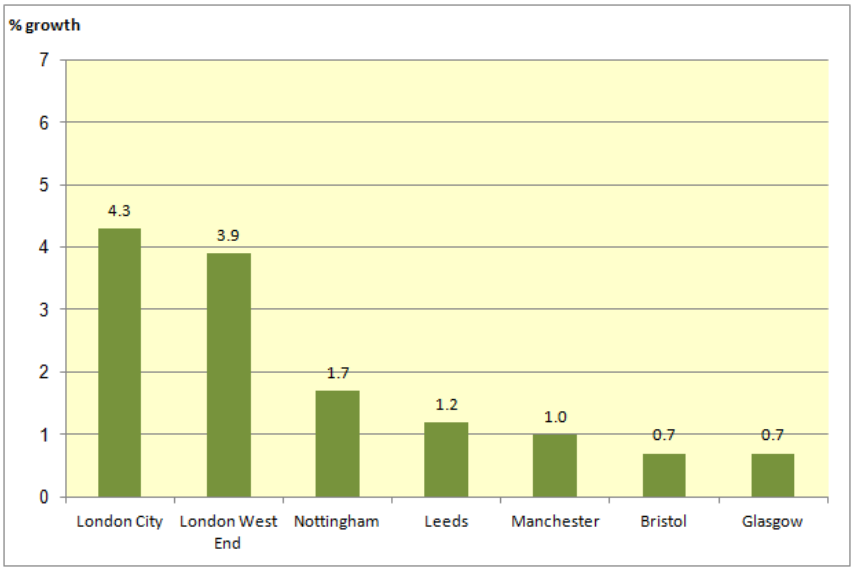
4.1.4 Figure 4.2 shows that sentiment had slipped somewhat by the end of 2011. Although the West End did better than expected with growth of 11.8%, the City and Midtown were not hitting previously forecast levels. By contrast, DTZ's forecast for markets outside Central London is more tempered, and as with the City, Manchester for example performs less well than expected, with a similarly trimmed forecast for 2012-16. As already mentioned, the prospects for Outer London reflect the pattern for outside London.

Figure 4.1 UK office rental growth forecasts, 2011-2015



Source: adapted from DTZ *UK Fair Value Index Q1 11*

Figure 4.2 UK office rental growth forecasts, 2012-2016



Source: adapted from DTZ *UK Fair Value Index Q4 11*

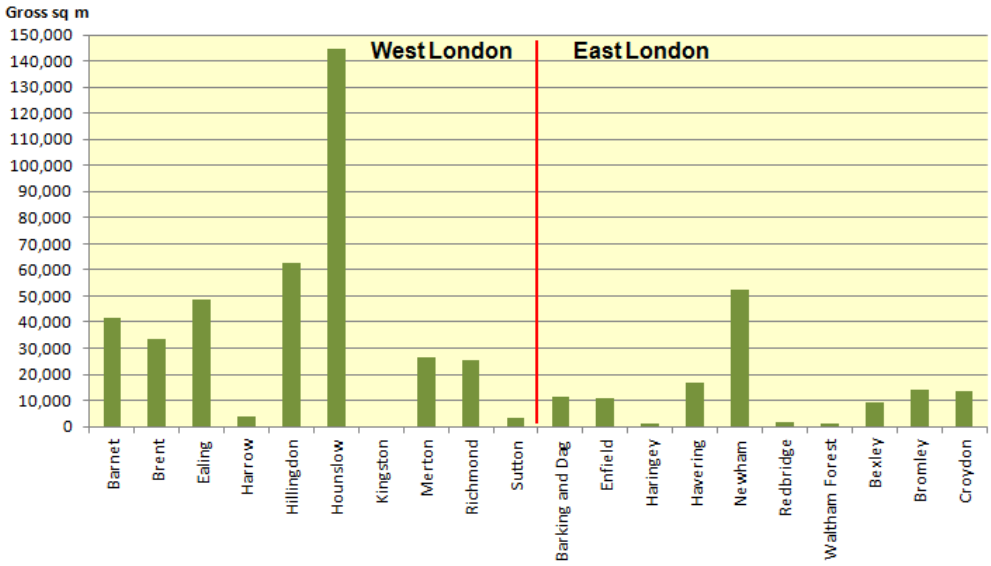
4.1.5 The degree to which Outer London lags Central London in property market performance terms is shown by analysing office development and office employment trends.

4.1.6 There can be little room for doubt that office markets in Outer London, with a small number of exceptions, have been in long-term decline. While a number of off-centre campuses have absorbed office growth in Inner London (e.g. More London, London Bridge City and Paddington, and more recently King's Cross), many corporate office jobs have left Outer London, and it seems clear that there is a growing number of centres suffering high office vacancy rates with little prospect of growth. Perhaps more worrying

than the headline vacancy rate is *underutilisation* since this is a far less visible problem but perhaps a very significant one as organisations seek to reduce their commitments to expensive real estate.

4.1.7 The pattern is clear. Prior to the credit crunch, Outer London performed dismally in office market terms, both in office development and office employment, despite the more general context of strong economic growth and corporate expansion during this period. For example, in 2008, no new office buildings were built in nine of the 20 Outer London boroughs. In fact, in any of the five years leading up to 2008, between 10 and 13 of the Outer London boroughs delivered no new office construction (Figure 4.3); with the picture particularly acute in the East London boroughs.

Figure 4.3 Office floorspace completions in Outer London, 2000-2008

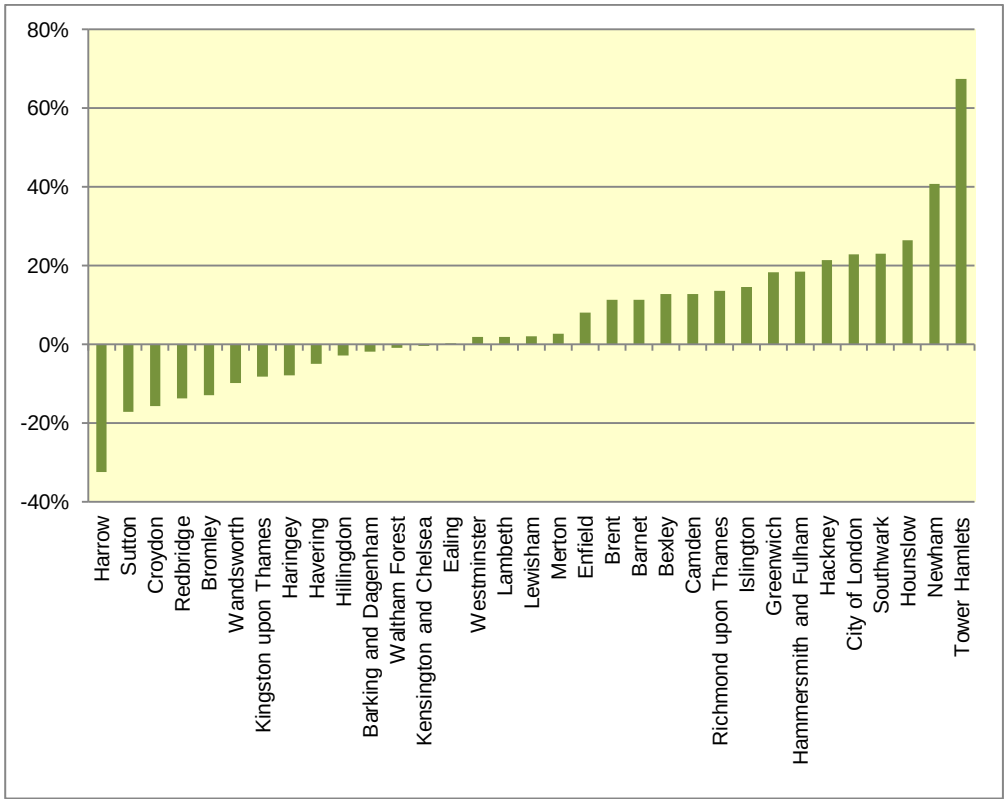


Source: Ramidus Consulting

4.1.8 From 2000 to 2008, the highest average annual rate of construction in Outer London was just 16,098 sq m (gross), in Hounslow, and that far exceeded any other borough. The next highest was Hillingdon with just 6,971 sq m (gross). And over the same period, average annual completions were less than 5,000 sq m (gross) in 16 of the 20 boroughs. Again, it should be emphasised that this took place during a period of significant growth in the wider economy and office market.

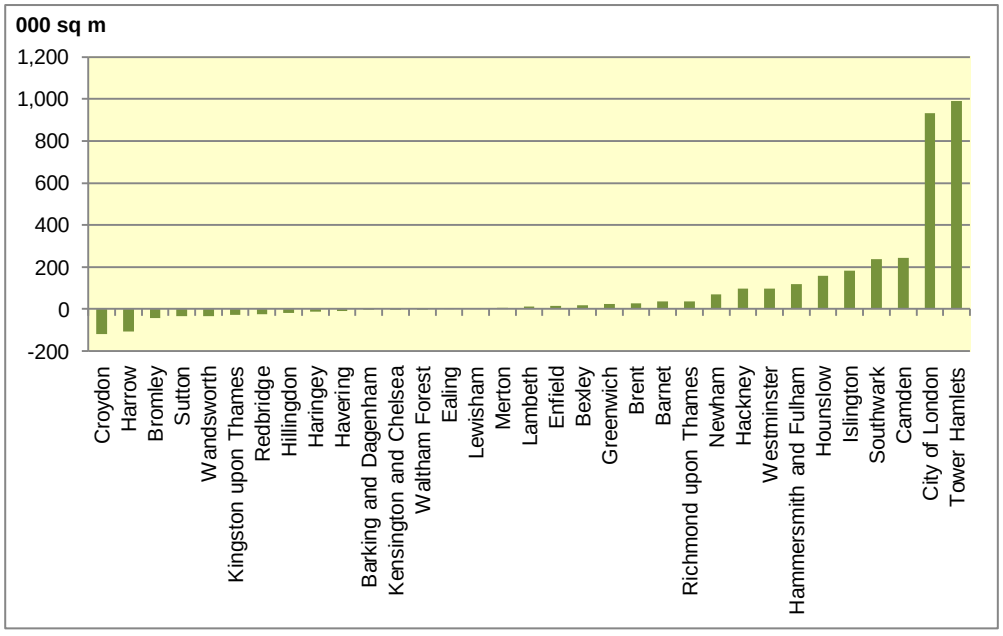
4.1.9 Reinforcing these findings, past change in stock for all London boroughs, for the period 2000-12, is set out in Figures 4.4 and 4.5. In percentage terms, by far the largest growth has been in Tower Hamlets, where the stock has grown by 67%, followed by Newham at 40%. The City, Greenwich, Hackney, Hammersmith & Fulham, Hounslow and Southwark all grew by around 20% (Figure 4.4). By contrast, there were thirteen boroughs, all in Outer London except Wandsworth, where the stock fell. The biggest percentage reductions were in Croydon, Harrow and Sutton.

Figure 4.4 Change in office stock, % by borough, 2000-2012



Source: VOA (2012) *Business Floorspace Statistics*

Figure 4.5 Change in office stock, sq m by borough, 2000-2012



Source: VOA (2012) *Business Floorspace Statistics*

4.1.10 In terms of absolute rather than percentage change, the concentration of office growth in Tower Hamlets and the City becomes clear (Figure 4.5). The fringe boroughs of Camden, Southwark and Islington all increased stock by around 200,000 sq m over the 12 year period. But there was relatively low growth in Westminster. Croydon and Harrow each experienced a loss in office stock of over 100,000 sq m.

4.1.11 The construction and stock figures demonstrate the at best fallow, and at worst, moribund conditions in the majority of Outer London boroughs, and the picture is mirrored in employment data. And the property market data are mirrored in certain economic indicators, clearly demonstrating that Outer London has shown substantially less dynamism than either London's central areas or the wider South East economy (Figure 4.6).

Figure 4.6
Peak-to-peak employment change, 1989-2007, Outer London compared with neighbouring sub-regions[61]

Region	Employment change, 1989-2007	
	000s	%
Inner London	394	19.9
Outer London	62	4.1
Outer Metropolitan Area	449	20.3
Rest of Greater South East	561	20.7
Rest of Great Britain	1,897	13.7

Source: LSE (2009) *op cit*

4.1.12 Peak-to-peak, comparing 1989 with 2007, employment in Outer London grew at less than a quarter of the rate of other parts of London and the Greater South East, and much slower even than the rest of Great Britain.[62]

4.1.13 The difference in total employment performance is further highlighted by performance in Gross Value Added (GVA), where in the year or so after the credit crunch, Inner London performed markedly better than Outer London (Figure 4.7). Overall, Outer London declined by 2.0%, while Inner London grew by 1.8%. The table also highlights the difference in performance between West London and South and East London.

4.1.14 A critical factor in Outer London's performance was the loss of the majority of its manufacturing base, costing about 150,000 jobs over the past two decades. Outer London was following in the trail of those Inner London boroughs which had lost most of their production jobs by the early-1980s. Arguably this represents a once-and-for-all transition, since Outer London too now has few 'real' manufacturing jobs left to lose, and those that remain might well derive particular competitive advantage from staying in London, than those for which the city's congestion and high costs were simply constraints on expansion or profitable operation.

[61] For precise definitions of Inner and Outer London here, refer to the source document.
[62] LSE (2009) *London's Place in the UK Economy 2009-10* City of London Corporation, October 2009

Figure 4.7 Sub-regional GVA, London, 2009

Sub-region	Total GVA 2009 (£m)	Change on 2008 %
Inner London	186,243	1.8
Inner London – West	122,214	1.5
Inner London – East	64,029	2.3
Outer London	83,419	-2.0
Outer London – East and North	22,089	-2.1
Outer London – South	20,348	-1.7
Outer London – West and North West	40,981	-2.2

Source: ONS/GLA Intelligence Unit, 14 Dec 2011

4.1.15 However, it is also clear from the data that Outer London has performed poorly in office market terms. The reasons for this are multiple and complex. But it is possible to highlight a number of key factors accounting for why office employment has declined in suburban office locations since the late-1980s.

- **Changes to property cost differential** A steep rental gradient from Central London in the past persuaded businesses to relocate to Outer London (and in many cases beyond), to reduce costs. This role of Outer London has been usurped by the emergence of campus-style schemes around the periphery of Central London, including Broadgate, London Bridge City, More London and Paddington: a new generation of high quality environments with better connectivity to the West End and City.

- **Changes to salary cost differential** In this too, the historic advantage of the suburbs has been upstaged. The Central London salary weighting has all but disappeared and back office functions are now more likely to be relocated to Bangalore or Glasgow than Outer London as advances in technology have eroded the need of physical proximity.

- **Changing work styles** Work styles have changed dramatically in response to technology and business priorities. One symptom of this is the virtual disappearance of the typing pool and large clerical, back office functions, staples of the suburban office market. Many such jobs have simply disappeared.

- **Falling public sector demand** Central and local government have both been key occupiers of suburban offices, but now there is real retrenchment and rationalisation, as the public sector cuts costs. This will lead to the redundancy of substantial tracts of suburban office space over the next few years.

- **Outmoded physical environment** The environmental quality of some locations is tired and poorly maintained, with office accommodation and other employment premises ill-suited to modern business needs, often due to being provided as lip service to planning requirements.

4.1.16 Not all Outer London office centres are in structural decline. West London provides, and will likely continue to provide, the primary locations for office development in Outer London. Chiswick, Stockley Park and Uxbridge all have critical mass and vibrant, established markets. After suffering from a dearth of "big ticket" lettings, there have been some more positive indicators since 2010, particularly in Chiswick Park which has experienced rental growth in the past year, while Uxbridge and Stockley Park have both suffered recessionary pressures on rental values.

4.1.17 Wimbledon is robust and Ealing has potential; and, in the longer term, we consider that office-led development might be viable at Stratford, where there is substantial infrastructure investment and government support. Most significantly, Stratford has a Crossrail station that transforms journey times into the West End and to Heathrow, strengthening its appeal as a low cost alternative to Central London, should there be a need. Ealing has a Crossrail station too, but it might serve to enhance residential values rather than create additional value for office development. Its proximity to Chiswick could be an asset if the pressure is sufficient to squeeze occupiers outwards. Croydon in our view has lost ground, even since LOPR 09, and while it also has a mature, often loyal, established office occupier sector, it is badly exposed to government retrenchment and one of its key private sector occupiers, Nestlé, has recently announced plans to relocate to Crawley. In addition, while its rail connections into Central London have always been good, it does not stand to gain from Crossrail and therefore, by default, loses competitive advantage.

4.1.18 Kingston has potential based on the pull of the university, but suffers from severe traffic congestion and the quality of its existing office stock is aging. The area around Park Royal (where BSkyB is currently in talks to take c16,000 sq m on the former Diageo site) has potential as a centre for hybrid office-workspace-industrial floorspace.

4.1.19 In terms of the evolving market, the more successful West London centres discussed above might, to greater or lesser extents, be affected by developments in Brent Cross/Cricklewood, Earl's Court and White City. The precise nature of schemes in these locations is uncertain at the moment, but their long-term impact should be monitored.

4.1.20 Even within Outer London, the geography of employment is not uniform. Figure 4.8 shows the density of employment by borough, clearly showing the higher density of activity in the southern and western sub-regions.[63]

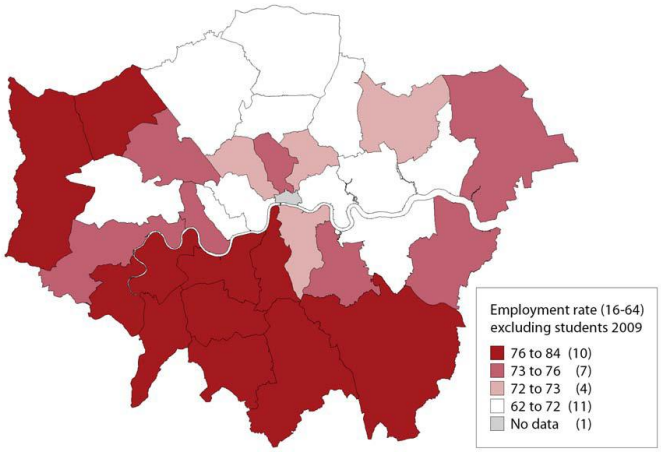
4.1.21 Analysis of mean annual change in employment across the two economic cycles of 1989-01 and 2001-07 (Figure 4.9) shows significant variation for Rest of London.[64] Four boroughs (Barnet, Havering, Redbridge and Sutton) experienced positive annual average employment growth 1989-01 but negative annual average employment growth in 2001-07.

[63] Outer London Commission (2010) *The Mayor's Outer London Commission: Pre-publication Report* May 2010
[64] Outer London Commission (2010) *op cit*

4.1.22 Three boroughs (Bromley, Ealing and Haringey) experienced negative annual average employment growth 1989-2001 but strong positive annual average employment growth in 2001-07.

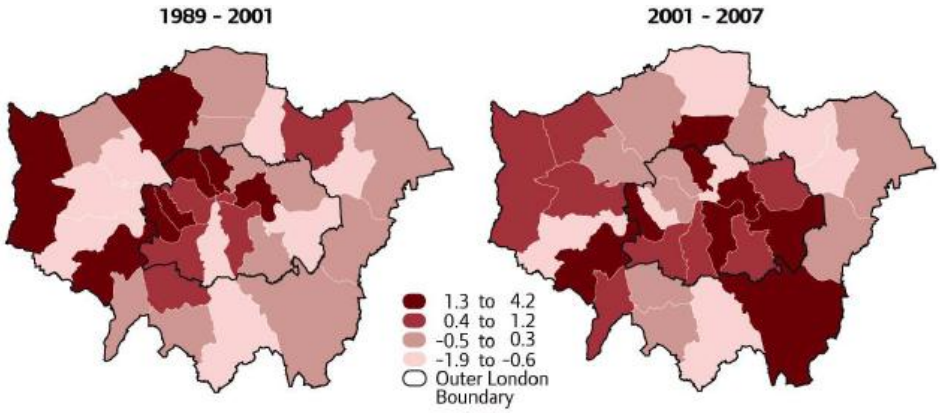
4.1.23 Five boroughs in outer West and South London (Harrow, Hillingdon, Kingston, Merton and Richmond) experienced positive average annual employment growth across both cycles. Employment growth was particularly strong across the two cycles in Hillingdon (3% pa and 0.9% pa) and Richmond (2% and 1.8%).

Figure 4.8 Employment rates, London boroughs, 2009



Source: Outer London Commission, *op cit*

Figure 4.9 Average annual % change in employment over economic cycles



Source: Outer London Commission, *op cit*

4.1.24 Seven boroughs (Barking & Dagenham, Bexley, Brent, Croydon, Enfield, Hounslow and Waltham Forest) experienced negative average annual employment growth across both cycles. The relatively modest performance of Croydon, Merton and Sutton in both cycles is of note.

4.2 Outer London forecasts

4.2.1 Outer London is more similar, in office property market terms, to the South East than it is to Central London. While a substantial proportion of residents commute, not all to Central London, the region has a very important economy in its own right, with more jobs than any UK city outside London. It is also home to many substantial businesses competing in international markets, whose performance is of national significance.

4.2.2 Figure 4.10 provides GLAE data showing the scale of the Inner and Outer London economies, with projected employment and population figures. It can be seen that Outer London is larger, in employment terms, than either CAZ or the Rest of Inner London. As might be expected, it also accounts for the bulk of population.

Figure 4.10 Employment and population projections, London, 2007-2031

Measure	Region	Number (000s)		Per cent of total	
		2007	2031	2007	2031
Employment	CAZ	1,198	1,378	26	25
	Rest of Inner London	1,513	1,911	32	35
	Outer London	1,966	2,163	42	40
	Total	4,676	5,452	100	100
Population	CAZ	275	339	4	4
	Rest of Inner London	2,731	3,383	36	38
	Outer London	4,565	5,097	60	58
	Total	7,571	8,818	100	100

Source: GLAE (2010) *Economic Evidence Base*

4.2.3 However, Outer London's proportion of both employment and population is forecast to fall over the period to 2031, despite growing in absolute terms. By contrast figures for Inner London grow over the same period.

4.2.4 As shown in Figure 4.8, there are almost two million people working in Outer London, around 42% of the London total, more than in Greater Manchester, or any other UK conurbation. In terms of sheer scale, this is obviously an important component of the national economy.

4.2.5 The forecast comparative performance of Central London and the Rest of London is further shown in Figure 4.11, with data from Oxford Economics.[65] This demonstrates well the two speed London economy.[66]

4.2.6 Employment growth projections for the three key Central London boroughs are significantly above those in the Rest of London. And this, of course, ignores other high performers in Inner London (e.g. Camden, Islington and Southwark). GVA projections in the Rest of London (while inexplicably

[65] Oxford Economics (2011) *The Economic Outlook for London* April 2011

[66] It should be recognised that Oxford Economics' definitions of Central London and Rest of London differ markedly from those used elsewhere in this report.

outpacing the City and Westminster in 2011) are significantly lower than the Central London boroughs.

4.2.7 Within the Rest of London, the pattern of employment change is variable (Figure 4.12). While Primary and Manufacturing decline in accordance with general expectations; the drop in Public Administration and Health & Education is tied into the austerity measures.[67] By contrast, Hotels & Catering, Business Services and Other Services are all expected to perform relatively strongly.

Figure 4.11 Summary economic forecasts for Central and Rest of London

Measure	2011	2012	2013	2014
GDP (basic prices, % year)	2.1	3.1	3.9	4.3
Employment (000s)	4,752.1	4,802.7	4,891.9	4,992.8
Employment (% year)	0.9	1.1	1.9	2.1
Unemployment (%)	4.4	4.4	4.2	3.9
Employment by borough (% year)				
City	3.0	1.9	3.2	2.7
Westminster	0.8	1.2	2.2	2.3
Tower Hamlets	3.1	1.8	2.5	2.6
Rest of London	0.6	0.9	1.6	1.9
GVA by borough (% year)				
City	1.7	4.1	5.4	5.6
Westminster	1.4	3.0	3.9	4.2
Tower Hamlets	3.0	4.5	5.4	5.9
Rest of London	2.2	2.7	3.5	3.8

Source: Oxford Economics (2011) *op cit*

Figure 4.12 Rest of London sector forecasts

Sector	% per annum change				Mean
	2010	2011	2012	2015	2016-20
Primary	2.4	-1.9	-3.9	-4.6	-3.8
Manufacturing	-4.5	-3.1	-0.1	-0.9	-1.3
Construction	-6.4	-4.0	0.7	3.6	1.8
Wholesale Distribution	-4.7	2.0	0.3	0.4	-0.1
Retail Distribution	-4.0	2.7	1.0	1.0	0.5
Hotels & Catering	-5.8	5.3	2.6	1.6	1.4
Transport & Comms	-6.1	2.3	0.7	1.3	0.4
Financial Services	1.3	4.6	1.3	0.1	0.0
Business Services	2.7	2.4	3.4	4.0	1.7
Public Admin	-5.9	-6.7	-5.7	-3.4	-1.9
Health & Education	0.0	-2.5	-1.6	-1.0	-0.3
Other Services	-3.0	-3.1	1.7	4.0	1.9
Total Employment	0.7	3.0	1.9	1.9	0.8

Source: Oxford Economics (2011) *op cit*

[67] Oxford Economics (2011) *The Economic Outlook for London* April 2011

4.2.8 A closer look at the pattern of specialisation pinpoints some more specific activities where Outer London has substantially more employment than might be expected. The most notable of these is the cluster of air transport, support and cargo handling activities in and around Heathrow, directly contributing some 60,000 jobs, almost half of the UK total in these activities. Some part of the 50,000 Outer London jobs in taxis, rail and urban transport also appear to be airport-linked, though the rest reflects particular ways in which mobility needs of local residents/workers are met in this extended suburban region.

4.2.9 Apart from these transport-based activities, the most conspicuous group of specialisations within the Rest of London involves a cluster of information and creative activities, spanning publishing, film/television, advertising/market research and design/photography. Together these employ some 65,000 workers – concentrated in West and South London.

4.2.10 Outside these broad clusters, three areas of manufacturing are still strongly represented in the Rest of London: 'other' food products (in Brent/Ealing where they may be linked to specialities of the Asian population); basic pharmaceuticals; and computer manufacture.

4.2.11 The more substantial sectoral clusters are all to be found in the southern and western quadrants of London. In the North and East sub-regions, it appears particularly true that employment is not very specialised, combining representation of a fairly wide range of activities at some scale, with a variety of small scale local or firm level specialisations.

4.3 Individual office centres: Inner London, non-CAZ

4.3.1 As noted in Section 4.1, LOPR 09 updated earlier work to examine the prospects for London office markets beyond CAZ, and LOPR 12 continues this process. LOPR 09 recommended that certain centres be removed from further detailed monitoring since there was little to no prospect of them becoming strategic office centres; instead they would continue to serve local demand only, although some 'legacy' non-local occupiers might remain. These centres are shown in Figure 4.13.

Figure 4.13
Inner London, non-CAZ centres recommended for removal in LOPR 09

Immediate removal		Likely future removal
Bethnal Green Brixton Dalston Finsbury Park Hoxton Holloway Kennington	Mare Street Putney (non-riverside) Stoke Newington Streatham Wandsworth Town Centre Wapping (inland)	None

4.3.2 We see no case for bringing any of these locations back into detailed monitoring, and recommend that the GLA considers whether they should be removed from the office guidelines column in the London Plan Annex 2.

4.3.3 Figure 4.14 summarises our updated views for the remaining non-CAZ Inner London centres. A number of changes are worth noting. First, although their overall strategic impact is modest a pattern is emerging of office development either not being part of, or being a reduced element in, large-scale developments.

Figure 4.14
Inner London, non-CAZ: office market policy options

Borough/centre	LOPR 04	LOPR 09	LOPR 12 update
Hackney			
Tower Hamlets			
Isle of Dogs Millennium Quarter	Consider revising policy to promote residential-led mixed use	Promote residential-led mixed use	Promote residential-led mixed use
Camden			
Camden Town	Promote residential/non-office-led mixed use	Promote residential/non-office led mixed use	Promote residential/non-office led mixed use
Kentish Town	Promote residential/non-office-led mixed use	Promote residential/non-office led mixed use	Promote residential/non-office led mixed use
Islington			
Angel	Promote residential/non-office-led mixed use	Promote residential/non-office led mixed use	Promote residential/non-office led mixed use
Kensington & Chelsea			
Chelsea	No strategic necessity to promote offices	Promote residential/non-office-led mixed use	Promote residential/non-office led mixed use
Kensington	No strategic necessity to promote offices	Promote residential/non-office-led mixed use	Promote residential/non-office led mixed use
Notting Hill	Promote residential-led mixed use	Promote residential/non-office-led mixed use	Promote residential/non-office led mixed use
North Kensington	Promote residential-led mixed use	Promote residential/non-office-led mixed use	Promote residential/non-office led mixed use
South Kensington	No strategic necessity to promote offices	Promote residential/non-office-led mixed use	Promote residential/non-office led mixed use
Lambeth			
Southwark			
Surrey Quays	Promote residential-led mixed use	Promote residential-led mixed use	Promote residential-led mixed use

Figure 4.14, continued

Borough/centre	LOPR 04	LOPR 09	LOPR 12 update
Hammersmith & Fulham			
Sands End	Promote residential-led mixed use	Promote residential-led mixed use	Promote residential-led mixed use
Fulham	Promote residential-led mixed use	Promote residential-led mixed use	Promote residential-led mixed use
Hammersmith (town centre)	Promote offices on strategic sites, residential-led mixed use away from centre	Promote offices on strategic sites, residential-led mixed use away from centre	Promote offices on strategic sites, residential-led mixed use away from centre
Shepherd's Bush	Promote residential-led mixed use	Promote residential/non-office-led mixed use	Promote residential/non-office-led mixed use
White City	Promote strategic office centre	Monitor closely as potential strategic office site	Potentially strategic (see para 4.3.5)
Wandsworth			
Battersea (riverside)	Promote residential/non-office-led mixed use	Promote residential/non-office-led mixed use	Monitor for impact of Battersea power station (para 4.3.4), but unlikely to be office led
Battersea (Clapham Junction)	Promote residential/non-office-led mixed use	Promote residential/non-office-led mixed use	Promote residential/non-office-led mixed use
Haringey			
Westminster			
Queensway, Westbourne Grove	No strategic necessity to promote offices	Promote residential/non-office-led mixed use	Promote residential/non-office-led mixed use

4.3.4 The interminable saga of the Battersea Power Station redevelopment continues but it is notable that the adjacent Royal Mail site has secured consent for an overwhelmingly residential development, as has the Cooper Group nearby. The weight of development pressure is evident, but we suggest that Battersea Power Station must remain in monitoring until its future becomes clear.

4.3.5 At White City the BBC Television Centre presents a development opportunity. However: "*Office stock in the area is currently quite limited in volume, and establishing the area as a new business location will require a market shift. Even though rail and road links are good, there is high peak hour congestion on surrounding main roads. This problem is recognised by Transport for London which is planning improvements, but given that major capacity changes are unlikely, this could prove a principal restriction on future development. The presence of large land holdings also limits the opportunities to remodel the road network*".[68] Despite its accessibility restrictions, Crossrail and HS2 will change things; and the interest of a

[68] GVA/Centre for Cities (2012) *Evolving London: the future shape of the capital*

major education institution like Imperial College is likely to generate spin-off demand. White City should be monitored for its growth potential.

4.3.6 Earl's Court is being heavily promoted but we note that the proposed commercial space has been reduced substantially. We would be cautious of over-interpreting this change other than to note it as a potential indicator of the shifting balance between commercial and residential space.

4.4 Individual office centres: Outer London preamble

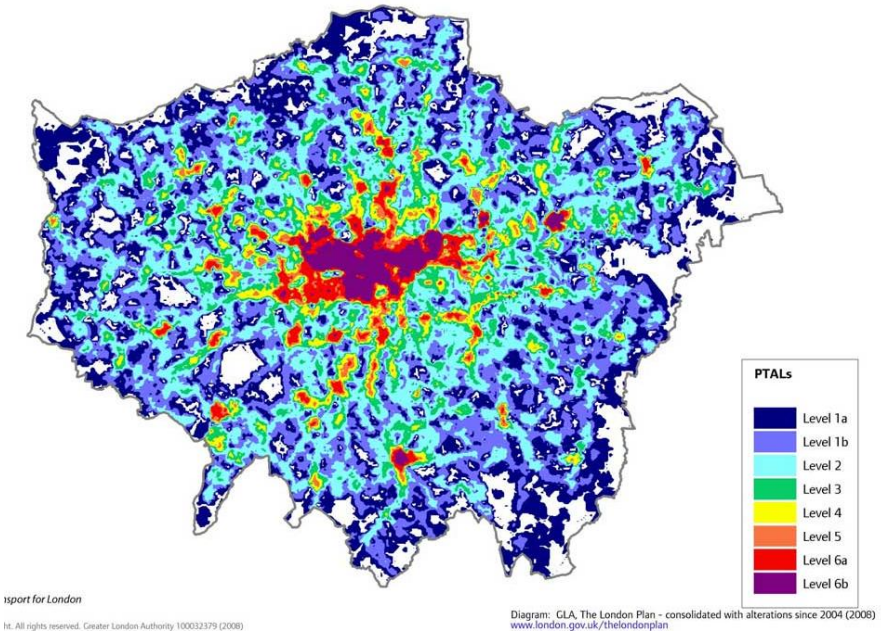
4.4.1 LOPR 09 found that one striking characteristic of the Outer London boroughs was that no single borough had room for more than one "lead" centre – the long-term decline of Outer London's office market simply does not, on the whole, support a deeper network of centres.

4.4.2 Little has changed to alter this broad view, but at the metropolitan scale several developments seem likely to have long-term effects on the detailed pattern of viability and, in particular, seem likely to cause consolidation in major centres on an East-West axis. Before examining individual office centres, these developments are set out below.

4.4.3 **Crossrail** No longer in doubt as during LOPR 09, Crossrail is set for delivery in 2018 and will significantly improve the connectivity of several centres, especially in East London.

4.4.4 Of interest here is the Transport for London map of access to public transport (Figure 4.15, cited in The London Plan 2004, updated in 2008), which neatly illustrates how the areas with strongest access to public transport closely match successful commercial centres.

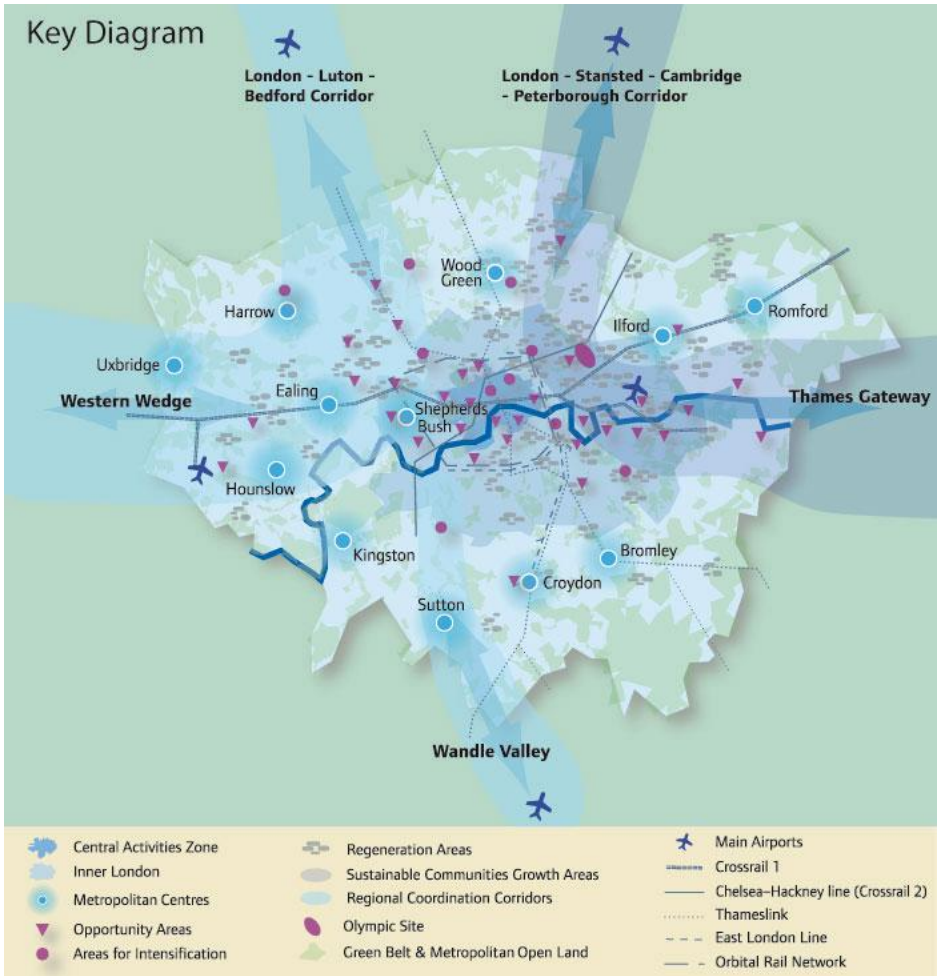
Figure 4:15 Access to public transport



Source: Transport for London, *op cit*

4.4.5 When combined with other developments (Figure 4.16) it is likely that the net effect of Crossrail will be to consolidate areas that are either already strong or already undergoing development pressure. Further, there is a significant risk that it could have the effect of shifting the centre of gravity along its axis "sucking in" demand that might otherwise be prepared to consider locations further North or South.

Figure 4.16 Crossrail in context



Source: GLA (2011) *The London Plan 2011*

4.4.6 **Olympic legacy** Likely to compound this is the move of Olympic Legacy into its post-Olympic phase. The granting of consent for a 400,000 sq m office park, known as International Quarter, poses a real challenge to Outer London centres, since occupiers seeking non-Central London space in decent locations will have much less incentive to extend their search.

4.4.7 **Earl's Court** A similar pattern could emerge to the West, where the already strong centres such as Hammersmith and Park Royal are set to be joined by a substantial commercial centre at Earl's Court, albeit smaller than originally envisaged.

4.4.8 **HS2** Although delivery will not be for many years hence, it is possible that HS2 will introduce some nuance to this overall "linear middle" pattern, but either way it seems very likely that centres to the North and South will be placed under significant competitive pressure.

4.4.9 We turn now to the centre-by-centre review of prospects for individual office centres in Outer London.

4.5 Individual office centres: Outer London assessment

4.5.1 LOPR 09 provided a centre-by-centre assessment of Outer London's potential strategic office locations. Many were found to be unsuitable as *strategic* office locations for a variety of reasons and were recommended for removal from future monitoring. These are listed in Figure 4.17.

Figure 4.17 Centres recommended for removal from monitoring

Immediate removal		Likely future removal
Acton	Leyton	
Barnes	Leytonstone	
Beckenham	Mitcham	
Canning Town	Morden	
Catford	Newbury Park	
Charlton	New Cross	
Chingford	New Malden	
Colliers Wood	Norbury	
Coulsden	Orpington	Barking Reach
Dagenham	Purley	Feltham
Deptford	Rainham	Finchley
Edmonton	Ruislip	High Barnet
Erith	Sidcup	Raynes Park
Greenford	Silvertown	Southall
Greenwich Town Centre	Thamesmead	
Hampton	Teddington	
Hanger Lane	Tolworth	
Harold Hill	Upminster	
Hayes	Wanstead	
Hendon	Willesden	
Hornchurch	Woodford	
Kilburn	Woolwich	

Source: LOPR 09

4.5.2 These centres, along with those listed in Figure 4.13 above, have minimal prospect of becoming strategic office centres; at best they serve local demand. Consideration should therefore be given to removing them from the office guidelines column in Annex 2 of the London Plan.

4.5.3 The following review examines points of interest arising since LOPR 09, and adds indicators of the economic "critical mass" (or more often, lack

thereof) to aid understanding of why some areas lack both necessary and sufficient strength to be viable strategic centres.

4.5.4 **East London**
The key factors changing the face of East London are, of course, the Olympic legacy and Crossrail, and most recently the designation of the Royal Dock Enterprise Zone is likely to have an impact.

4.5.5 **Barking & Dagenham** As with earlier LOPR reports, LOPR 09 found Barking & Dagenham dealing with the legacy of deindustrialisation and this is a process that continues.

Property indicators	Office stock (sq m)[69]	Office rent (£ sq m)[70]	House price trend 2009 (%)[71]	House price trend 2011 (%)
	124,000	108	-17.60	1.1
Economic[72] Indicators	**Business/1000 2009 (08)**	**Business/1000 rank 2009**	**Competitiveness Index 2010 (09)**	**CI Rank 2010 (out of 33)**
	19.2 (18.3)	33	85.5 (85.3)	33

4.5.6 This is in part reflected in the low businesses per 1,000 residents score – the lowest in London – and this is a useful indicator of whether there is a sufficiently robust local business base to support an "office economy". The borough ranks 366 out of 379 nationally. Perhaps unsurprisingly, the area is also lowest in terms of competitiveness as measured by the UK Competitiveness Index (UKCI) – ranking 323.

4.5.7 Our view was, and remains, that there is little to gain by considering Rainham and Dagenham as potential office centres. Barking Reach was retained solely due to the nominal availability of sites, but the large Barking Riverside residential scheme is clearly where the future lies in this area.

4.5.8 LOPR 09 suggested that Barking town centre may be appropriate for office-led, mixed use development. We now believe that significant office development is likely to concentrate on Stratford, and so we suggest that it be re-classified for non-office led development.

4.5.9 **Bexley** Ranks 29 in terms of business per 1,000 residents and 30 in London by UKCI (292 and 201 nationally).

Property indicators	Office stock (sq m)	Office rent (£ sq m)	House price trend 2009 (%)	House price trend 2011 (%)
	170,000	108	-7.00	-2.4
Economic Indicators	**Business/1000 2009 (08)**	**Business/1000 rank 2009**	**Competitiveness Index 2010 (09)**	**CI Rank 2010 (out of 33)**
	26.6 (26.9)	29	94.4 (95.2)	30

[69] Source: NOMIS
[70] Source: Local property agent intelligence and various research reports
[71] Source: Land Registry. "House price trend" relates to the year to April 09 and to December 11
[72] Centre for International Competitiveness (2010) *UK Competitiveness Index 2010* Cardiff School of Management University of Wales

4.5.10 Our recommendation remains unchanged: Remove Erith, Thamesmead and Sidcup from further consideration as potential strategic office centres. Sidcup and Bexleyheath should be considered for offices in the context of mixed-use development.

4.5.11 **Greenwich** Is only a few places off bottom in terms of businesses per 1000, which, perhaps, is unsurprising given the structure and history of the borough (it ranks 305/379 nationally). It ranks 27 in terms of UKCI in London, but nationally a respectable (by Outer London standards) 166/379.

4.5.12 LOPR 09 suggested that Greenwich peninsula may have attained "first mover" advantage, but the continued sluggish economy has not really permitted this to be consolidated.

Property indicators	Office stock (sq m)	Office rent (£ sq m)	House price trend 2009 (%)	House price trend 2011 (%)
	200,000	108[73]	-14.40	2.7
Economic Indicators	**Business/1000 2009 (08)**	**Business/1000 rank 2009**	**Competitiveness Index 2010 (09)**	**CI Rank 2010 (out of 33)**
	25.3 (25.1)	30	97.2 (96.5)	27

4.5.13 With this in mind, and given the planning consent for Stratford International, our recommendation that *"Remove Greenwich town centre, Charlton and Woolwich from future consideration as strategic office centres. Closely monitor the progress of Greenwich Peninsula with particular attention to potential impact on the viability of future development at Stratford"* remains unchanged, but with a significant change of emphasis: there is a real possibility that Greenwich and Stratford will come into direct competition and Stratford is, on the whole, a superior location.

4.5.14 Woolwich is more likely to be a source of labour for Greenwich Peninsula and Stratford than a strategic centre, so consideration should be given to removing it from Annex 2 of the London Plan

4.5.15 **Havering** The highest ranked East London centre in terms of businesses per 1,000 residents, at 25 (249/379 nationally). However, its poor performance in terms of UKCI – 31 in London and a mediocre 210 nationally – is reflected effectively in its property market.

Property indicators	Office stock (sq m)	Office rent (£ sq m)	House price trend 2009 (%)	House price trend 2011 (%)
	180,000	167	-10.20	-1.5
Economic Indicators	**Business/1000 2009 (08)**	**Business/1000 rank 2009**	**Competitiveness Index 2010 (09)**	**CI Rank 2010 (out of 33)**
	30.1 (29.7)	25	93.7 (95.0)	31

4.5.16 Romford is the principal centre in Havering, with Harold Hill, Hornchurch and Upminster recommended for removal from further consideration in LOPR 09; and Romford itself recommended to support offices only in the context of mixed-use schemes led by other uses.

[73] Rent is c£377 in Greenwich Peninsula

4.5.17 This remains the recommendation, but we note that Crossrail could weaken Romford's position further, since easy access to Stratford would give little reason for all but the most cost-constrained occupiers to choose it over the better connected centre.

4.5.18 **Lewisham** Strictly an inner borough, Lewisham was included solely to illustrate that even having necessary conditions to foster office development does not provide sufficient cause. This is illustrated by its poor businesses per 1,000 residents rank, although it is a better than average UKCI for East and South London.

4.5.19 Our recommendation is unchanged: remove Catford, Deptford and New Cross from future consideration. Maintain Lewisham in the context of mixed-use development led by other uses.

Property indicators	Office stock (sq m)	Office rent (£ sq m)	House price trend 2009 (%)	House price trend 2011 (%)
	184,000	129	-7.60	-1.3
Economic Indicators	**Business/1000 2009 (08)**	**Business/1000 rank 2009**	**Competitiveness Index 2010 (09)**	**CI Rank 2010 (out of 33)**
	24.7 (24.0)	31	104.8 (101.9)	21

4.5.20 **Newham** On paper Newham scores very poorly in terms of businesses per 1,000 residents – ranking 32 of 33 London boroughs (360/379 nationally) and 29 in terms of UKCI (193 nationally).

4.5.21 But as LOPR 09 stated: *"Newham is at the epicentre of thinking about the development of new office centres in London. Since long before the Olympic bid, Stratford has been mooted as a location for a strategic office centre."* The Olympics now loom and planning for the post-Olympic era is gathering pace, despite delays and uncertainty surrounding the future of the stadium.

4.5.22 Concern that Stratford might suffer in the face of "first mover" advantage at Greenwich has abated, but is replaced by the real need to monitor both Stratford and Greenwich in the context of the array of mega-schemes around London (see Chapter 7.0).

Property indicators	Office stock (sq m)	Office rent (£ sq m)	House price trend 2009 (%)	House price trend 2011 (%)
	285,000[74]	215 (Stratford)	-20.50	1.7
Economic Indicators	**Business/1000 2009 (08)**	**Business/1000 rank 2009**	**Competitiveness Index 2010 (09)**	**CI Rank 2010 (out of 33)**
	20.2 (19.4)	32	95 (91.3)	29

4.5.23 Elsewhere the designation of the 125 ha Royals Enterprise Zone should be noted, not least in the form of the c300,000 sq m Chelsfield scheme at Silvertown Quays, led by a new "branded pavilions" concept, inspired by New York's Samsung Experience.

[74] To this could be added the 450,000 sq m that is planned.

4.5.24 Obviously the Enterprise Zone has the potential to change the market balance – Canary Wharf shows how that can happen – and so the Royals must remain in monitoring for the foreseeable future, a change from the expected outcome in LOPR 09.

4.5.25 **Redbridge** In common with other East London boroughs Redbridge languishes in the lower reaches of the business per 1,000 residents league at 27 (261/379 nationally) and UKCI at 25 (although it is a relatively mid-table 131/379 nationally).

Property indicators	Office stock (sq m)	Office rent (£ sq m)	House price trend 2009 (%)	House price trend 2011 (%)
	195,000	129	-10.50	-5.6
Economic Indicators	**Business/1000 2009 (08)**	**Business/1000 rank 2009**	**Competitiveness Index 2010 (09)**	**CI Rank 2010 (out of 33)**
	29.1 (28.4)	27	100.1 (97.9)	25

4.5.26 The LOPR 09 our recommendation was: *"There is no purpose in continuing to monitor Wanstead, Woodford or Newbury Park. Ilford should be kept on the radar, although it is highly unlikely that office development will take a lead role in regeneration of the area."*

4.5.27 There is no evidence to justify a change to this stance.

4.5.28 **West London**
Once again the principal changes in West London are about infrastructure: Crossrail, HS2 and the return of the debate about a third runway at Heathrow. All could serve to intensify development pressure although, for the first time in many generations, significant countervailing pressure in the East will provide genuine competition.

4.5.29 Whereas the East falls into the lower reaches of the businesses per 1,000 residents table, the West presents a much more mixed – and in some ways counter-intuitive – picture. Although it remains the case that Inner London boroughs are higher up the table, the lead is less clear-cut (outside Central London) and the divergence between business density and general competitiveness is more pronounced.

4.5.30 **Brent** Illustrates this divergence, scoring well on business density – 16 in London and 152 nationally – but only slightly above East London in terms of competitiveness – 24 in London, although a healthier 114 nationally. This is suggestive of some necessary conditions to support an office economy, but perhaps not sufficient strength overall.

Property indicators	Office stock (sq m)	Office rent (£ sq m)	House price trend 2009 (%)	House price trend 2011 (%)
	267,000	194	-3.90	-1.5
Economic Indicators	**Business/1000 2009 (08)**	**Business/1000 rank 2009**	**Competitiveness Index 2010 (09)**	**CI Rank 2010 (out of 33)**
	38.9 (38.2)	16	101.9 (101.0)	24

4.5.31 LOPR 09 noted that, other than Park Royal, Wembley was by far the best new opportunity for office provision and Quintain's Wembley City – largely retail and leisure led – does indeed include up to one 100,000 sq m of office provision.

4.5.32 Notwithstanding this, Park Royal remains the principal centre in the short-term, although as Wembley develops it presents a genuine challenge both in the market place and in terms of planning strategy. It is suspected that various new forms of flexible business space will come to dominate.

4.5.33 **Ealing** By contrast Ealing, at rank 15 (150 nationally) on business density and 17 on UKCI (a very respectable 65 nationally), shows the true locational advantage of West London. LOPR 09 found that although all centres in Ealing scored well, future effort should be focussed on Ealing itself as a matter of efficient resource allocation.

Property indicators	Office stock (sq m)	Office rent (£ sq m)	House price trend 2009 (%)	House price trend 2011 (%)
	456,000	291	-4.20	5.7
Economic Indicators	**Business/1000 2009 (08)**	**Business/1000 rank 2009**	**Competitiveness Index 2010 (09)**	**CI Rank 2010 (out of 33)**
	39.1 (39.4)	15	108.6 (108.1)	17

4.5.34 There is no specific evidence to change this view and, if anything, the need for efficiency is heightened by the bringing forward of large development proposals in inner West London.

4.5.35 **Harrow** Somewhat enigmatic. Harrow ranks 12 in terms of business density (114 nationally and 3 among Outer London boroughs) and 18 in terms of UKCI (70 nationally). But historically the office activities that such density might support have not been seen on a large scale in the Harrow markets, suggesting a lack of critical mass for non-local businesses.

Property indicators	Office stock (sq m)	Office rent (£ sq m)	House price trend 2009 (%)	House price trend 2011 (%)
	270,000	215	-13.50	1.5
Economic Indicators	**Business/1000 2009 (08)**	**Business/1000 rank 2009**	**Competitiveness Index 2010 (09)**	**CI Rank 2010 (out of 33)**
	42.0 (41.0)	12	106.5 (106.6)	18

4.5.36 Efforts to concentrate office development in this area remain unlikely to be fruitful and we reiterate the recommendation of LOPR 04 and LOPR 09, to concentrate on residential-led mixed-use regeneration. Because of the possible Brent Cross effect on such office markets as there are, all centres (Harrow-on-the-Hill, Wealdstone and Stanmore) should remain in monitoring at least until the next LOPR.

4.5.37 **Hounslow** The somewhat lowly rank of 17 in London on business density (154 nationally and 6 in Outer London) belies Hounslow's proximity to Heathrow, more meaningfully reflected in a UKCI rank of 14 in London, 40 nationally and 3 among Outer London boroughs.

4.5.38 Hounslow remains a critical part of the Western Corridor market. All centres in Hounslow (Chiswick, Brentford, Hounslow and Feltham) should remain in monitoring as strategic office centres, with particular attention paid to the impact of competing uses, especially residential. This is a "green light" area and every effort should be made to protect all but the most marginal office locations.

Property indicators	Office stock (sq m)	Office rent (£ sq m)	House price trend 2009 (%)	House price trend 2011 (%)
	779,000	355 (Chiswick)	-9.70	3.6
Economic Indicators	**Business/1000 2009 (08)**	**Business/1000 rank 2009**	**Competitiveness Index 2010 (09)**	**CI Rank 2010 (out of 33)**
	38.8 (38.1)	17	114.1 (110.8)	14

4.5.39 Although monitored, a question remains over Feltham where, as noted in LOPRs 04 and 09, mixed-use regeneration might be more appropriate.

4.5.40 **Hillingdon** The lowest scoring West London borough in terms of business density at rank 21 (205 nationally), but like Hounslow scores respectably when measured by UKCI at 15 (4 in Outer London and 42 nationally). Like Hounslow, benefits very much from proximity to Heathrow, the Western Corridor and some of the major office schemes in West London.

Property indicators	Office stock (sq m)	Office rent (£ sq m)	House price trend 2009 (%)	House price trend 2011 (%)
	1,348,000	269	-7.40	-1.1
Economic Indicators	**Business/1000 2009 (08)**	**Business/1000 rank 2009**	**Competitiveness Index 2010 (09)**	**CI Rank 2010 (out of 33)**
	34.4 (33.7)	21	112.9 (111.7)	15

4.5.41 The three core areas of Stockley Park, Uxbridge and Heathrow Perimeter must obviously remain closely monitored and office development should be supported. Hayes and Ruislip are not significant office locations and need not be returned to monitoring.

4.5.42 **South London**
Overall, South London has had trouble regaining its "glory days" as a network of office markets, partly because of changing occupiers' preferences (back offices are much further away), and partly because of the difficulty of finding a viable way to redevelop a large, aged office stock.

4.5.43 There are signs of pragmatism in planning in some areas, with a less intense defence of office space.

4.5.44 **Bromley** Although Bromley remains home to some large office occupiers, it is notable that the most recent consent granted in Bromley, the £90m Bromley South Central scheme, does not involve any office content.

4.5.45 The businesses per 1,000 residents rank of 18 (172 nationally) and UKCI of 20 (85 nationally) suggest a decidedly average area in terms of office potential – the large occupiers are essentially outliers and could relocate.

Property indicators	Office stock (sq m)	Office rent (£ sq m)	House price trend 2009 (%)	House price trend 2011 (%)
	334,000	215	-7.20	4.5
Economic Indicators	**Business/1000 2009 (08)**	**Business/1000 rank 2009**	**Competitiveness Index 2010 (09)**	**CI Rank 2010 (out of 33)**
	37.1 (37.4)	18	105.1 (107.2)	20

4.5.46 It is unlikely, in the long run, that Bromley will maintain its position as a significant office centre, a view reflected in the call for a pragmatic approach in LOPR 09. The emergence of Ebbsfleet presents a real long-run challenge. This view remains, especially in respect of marginal sites, so pragmatism is probably even more needed. A change of Bromley's London Plan Annex 2 category from A/B to B is worth considering.

4.5.47 **Croydon** By far the major office centre in South London and the largest outside CAZ. But the story of stagnation in Croydon has persisted to such an extent that Croydon Borough Council has now indicated that it is taking a more pragmatic approach to development, with a willingness to consider change of use to residential, conceding that there is too much office space in need of overhaul. Indeed Croydon is the weakest South London borough in terms of business per 1,000 residents and UKCI at 26 and 23 respectively.

4.5.48 Although the national UKCI rank is a more respectable 96, we would hope that such a well-connected centre would be punching at a higher weight and suspect the under-performance reflects the legacy of past development that is long overdue for renewal.

4.5.49 The decision by Nestlé to leave Croydon for Crawley was described as "*gutting*" by the Council Leader and, despite several large companies remaining, is indicative of the challenge that Croydon faces.

Property indicators	Office stock (sq m)	Office rent (£ sq m)	House price trend 2009 (%)	House price trend 2011 (%)
	749,000	221	-13.20	0.9
Economic Indicators	**Business/1000 2009 (08)**	**Business/1000 rank 2009**	**Competitiveness Index 2010 (09)**	**CI Rank 2010 (out of 33)**
	30.0 (30.1)	26	103.3 (103.3)	23

4.5.50 Croydon itself remains a very well connected location; a key part of polycentric London and the efforts by the council to develop a more flexible strategy should be monitored closely. No other centre in the borough needs to be considered.

4.5.51 **Kingston upon Thames** “On paper" Kingston and Surbiton have many attractions. The Royal Borough is the highest ranked South London borough in terms of the UKCI, at 13, and with the same ranks in terms of businesses per 1,000 residents.

4.5.52 Yet they remain small-scale and constrained office markets. Previous LOPRs recommended a pragmatic stance focused on the best sites, and this recommendation is retained. A change of the London Plan Annex 2

category from A/B to B is worth considering, reflecting supply constraints. There remains no purpose in monitoring Tolworth or New Malden.

Property indicators	Office stock (sq m)	Office rent (£ sq m)	House price trend 2009 (%)	House price trend 2011 (%)
	335,000	215	-11.90	-2.8
Economic Indicators	**Business/1000 2009 (08)**	**Business/1000 rank 2009**	**Competitiveness Index 2010 (09)**	**CI Rank 2010 (out of 33)**
	40.1 (39.3)	13	114.3 (112.2)	13

4.5.53 **Merton** A decidedly average businesses per 1,000 residents rank of 19 and an identical UKCI rank probably reflect the office concentration here into a single major centre: Wimbledon. This remains the major centre and a thriving business centre and should be the focus of any office provision in the borough, led by the market.

Property indicators	Office stock (sq m)	Office rent (£ sq m)	House price trend 2009 (%)	House price trend 2011 (%)
	284,000	323 (Wimbledon)	-19.30	-10.2
Economic Indicators	**Business/1000 2009 (08)**	**Business/1000 rank 2009**	**Competitiveness Index 2010 (09)**	**CI Rank 2010 (out of 33)**
	37.0 (36.6)	19	105.9 (106.4)	19

4.5.54 **Richmond upon Thames** Is the top scoring Outer London borough in terms of both businesses per 1,000 residents and UKCI (7 and 10 respectively in London and very high, 21 and 13, nationally).

4.5.55 Perhaps unsurprisingly, as long ago as LOPR 04 Richmond was identified as one of the few Outer London areas where office development may be viable. LOPR 09 concluded "*Our general view is that Richmond and Twickenham should continue to be monitored as potential office centres, although Richmond is by far the most promising*". This remains our view.

Property indicators	Office stock (sq m)	Office rent (£ sq m)	House price trend 2009 (%)	House price trend 2011 (%)
	379,000	323	-11.90	1.1
Economic Indicators	**Business/1000 2009 (08)**	**Business/1000 rank 2009**	**Competitiveness Index 2010 (09)**	**CI Rank 2010 (out of 33)**
	58.1 (58.3)	7	123.4 (123.9)	10

4.5.56 **Sutton** LOPR 09 said of Sutton "*In terms of pure office development Sutton is the poor relation of South London*". This is reflected in its lowly 23rd rank for businesses per 1,000 residents, and UKCI of 26.

Property indicators	Office stock (sq m)	Office rent (£ sq m)	House price trend 2009 (%)	House price trend 2011 (%)
	192,000	161	-10.50	0.0
Economic Indicators	**Business/1000 2009 (08)**	**Business/1000 rank 2009**	**Competitiveness Index 2010 (09)**	**CI Rank 2010 (out of 33)**
	31.4 (31.7)	23	100.1 (100.9)	26

4.5.57 Standalone speculative development, as noted as long ago as LOPR 04, is unlikely to be viable. It is doubtful that offices will make up a significant part of mixed-use development. Given its location, Sutton's London Plan Annex 2 category B status should be maintained, but the market should lead.

4.5.58 **North London**
Riots and regeneration were the story of North London in 2011, a contamination that spread far and wide. This has prompted a focus on Haringey as a potential enterprise zone, although it is unlikely any development will be office-led.

4.5.59 **Barnet** Is ranked 8 in London and 2 in Outer London in terms of businesses per 1,000 residents, but a modest 16 in terms of UKCI. It is ranked 68 and 66 respectively nationally, suggesting an area not under too much stress, perhaps not surprisingly given the excellent transport infrastructure. But it has never been a major office centre.

Property indicators	Office stock (sq m)	Office rent (£ sq m)	House price trend 2009 (%)	House price trend 2011 (%)
	446,000	161	-5.00	-1.2
Economic Indicators	**Business/1000 2009 (08)**	**Business/1000 rank 2009**	**Competitiveness Index 2010 (09)**	**CI Rank 2010 (out of 33)**
	48.6 (47.9)	8	109.6 (107.9)	16

4.5.60 In LOPR 09 we expressed some doubt as to whether the substantial office element at the proposed Brent Cross/Cricklewood scheme would be viable. We remain of the view that "*… it would not be surprising if, over the course of the development, some changes of use occur if the market does not deliver large office occupiers*". For the time being its London Plan Annex 2 category should remain A/B – monitor.

4.5.61 We further reiterate the view that potential impact on smaller local centres be monitored closely, even though the "B" category applied to Edgware and some smaller centres in London Plan Annex 2 looks optimistic, since if the office scheme does go ahead it could leach demand in much the same way as we expect Stratford to in the East.

4.5.62 **Enfield** Suffered damage in the riots in 2011, with the destruction of an industrial unit, it remains dominated by logistics, thanks to its proximity to the M25. It ranks just 24 in terms of businesses per 1,000 residents in London (an unimpressive 247 nationally) and 28 measured by UKCI (171 nationally). It is not and not likely to become a major office centre.

Property indicators	Office stock (sq m)	Office rent (£ sq m)	House price trend 2009 (%)	House price trend 2011 (%)
	446,000	161	-5.00	1.9
Economic Indicators	**Business/1000 2009 (08)**	**Business/1000 rank 2009**	**Competitiveness Index 2010 (09)**	**CI Rank 2010 (out of 33)**
	30.1 (29.4)	24	96.7 (95.0)	28

4.5.63 However, all centres except Edmonton (both Angel Edmonton and Edmonton Green) should be monitored until the office content of Brent Cross/Cricklewood becomes clear (no change from LOPR 09).

4.5.64 **Haringey** LOPR 09 recommended all Haringey centres to be removed from monitoring as potential strategic office centres. We see no reason to change this stance.

4.5.65 **Waltham Forest** Has no functional office market to speak of and is the lowest ranked North London borough by both businesses per 1,000 residents (28) and UKCI (32) and, as its house price performance illustrates, it is hard to see how office development could fend off pressure from residential development.

Property indicators	Office stock (sq m)	Office rent (£ sq m)	House price trend 2009 (%)	House price trend 2011 (%)
	136,000	108	-13.40	6.9
Economic Indicators	**Business/1000 2009 (08)**	**Business/1000 rank 2009**	**Competitiveness Index 2010 (09)**	**CI Rank 2010 (out of 33)**
	27.3 (27.0)	28	91.8 (92.7)	32

4.5.66 Any "Olympic effect" is likely to be absorbed by Stratford rather than focus on Waltham Forest, and there seems little purpose in retaining the London Plan Annex 2 category of B for Walthamstow.

4.6 London compared to the South East and East of England

4.6.1 In this section we consider the relative strengths and weaknesses of London's office markets in comparison with centres outside London in the rest of the South East and East of England. The question here is whether the office markets beyond London are more successful than those in London; more specifically whether the South East and East of England as regions are outperforming London. To assess this question, we examine indicators of economic activity.

4.6.2 London is in many ways the focal point of the South East and East of England, and has a huge influence over this wider economy, with its tentacles reaching out across the region. A Centre for Cities report,[75] found that people living outside of London travel an average of 61km a day into the city. There are many ways to measure the strength or success of an economy and the evidence can be adapted to suit several narratives. We have sought to address the possibility that London is being outperformed by its neighbouring regions and used measures appropriate to this purpose.

4.6.3 One such measure is The UK Competitiveness Index produced by the University of Wales in Cardiff.[76] In its latest report it compared the ranking of 12 UK regions (Figure 4.18), and found that*: "For the first time since the UKCI's inception London is no longer the UK's most competitive regional economy, and is displaced by South East England."*

[75] Centre for Cities (2012) *Cities Outlook 2012*
[76] Centre for International Competitiveness (2010) *op cit*

Figure 4.18 Regional ranking by UKCI

Rank 2010	Region	Score 2010	Score 2008	Rank 2008	Change in score 08-10	Change in rank 08-10
1	South East	110.5	109.7	2	0.8	1
2	London	109.6	112.5	1	-2.8	-1
3	East of England	108.9	105.6	3	3.3	0
4	North West	93.8	94.5	6	-0.7	2
5	East Midlands	93.5	97.7	4	-4.2	-1
6	South West	91.8	95.0	5	-3.2	-1
7	West Midlands	90.3	94.4	7	-4.0	0
8	Scotland	89.4	94.3	8	-4.8	0
9	Northern Ireland	89.0	88.8	10	0.2	1
10	Yorks and Humber	87.3	89.6	9	-2.3	-1
11	North East	86.5	83.1	12	3.4	1
12	Wales	83.9	86.8	11	-2.8	-1

Source: Centre for International Competitiveness (2010) *op cit*

4.6.4 However, the same UKCI ranking methodology, applied at borough level, reveals a more complex picture. We extracted data for the three top regions (London, South East and East of England), broken down into 143 boroughs. Figure 4.19 shows the top 30 boroughs by UKCI ranking. The top eight boroughs are all in London. In many ways this makes it more surprising that the South East has overtaken London in the overall UKCI ranking and suggests some deep divisions within London and indeed within the South East. In fact, all of the top eight are in Inner London and seven of them have at least part of their territory in CAZ.

4.6.5 This is illustrated further if the index value for the City is highlighted. With an index value of 603.9, compared with second placed Westminster at 192.6, it clearly has a disproportionate influence on the overall ranking at regional level. Similarly there is a wide gap between Westminster in second place and third placed Camden.

4.6.6 The obvious inference here, is that the explanation, as for Outer London one, lies in granularity. In other words, while there might be some measures by which the South East outperforms London at a regional level, it is far more helpful to look centre by centre and try to understand what attributes determine economic success. We know from the foregoing analysis in this Chapter that Outer London's office markets have, on the whole, declined and that the forces that historically drove office expansion in Outer London have waned in more recent times.

4.6.7 Returning to the UKCI ranking at borough level, the highest ranked South East centre is Windsor and Maidenhead – which also has a successful office market. Maidenhead is one of the most sought after office locations in the Western Corridor although it is hampered by constrained supply. Guildford at number 17, Reading at 23 and St Albans at 25 are all strong

office markets, which suggests that this index is an effective indicator of office market strength. For this reason we drilled down into its component parts to try to identify the elements that drive success. It quickly became clear that this supported our view that distinction between London and South East or East of England is not a particularly instructive one.

Figure 4.19 UKCI ranking 2010

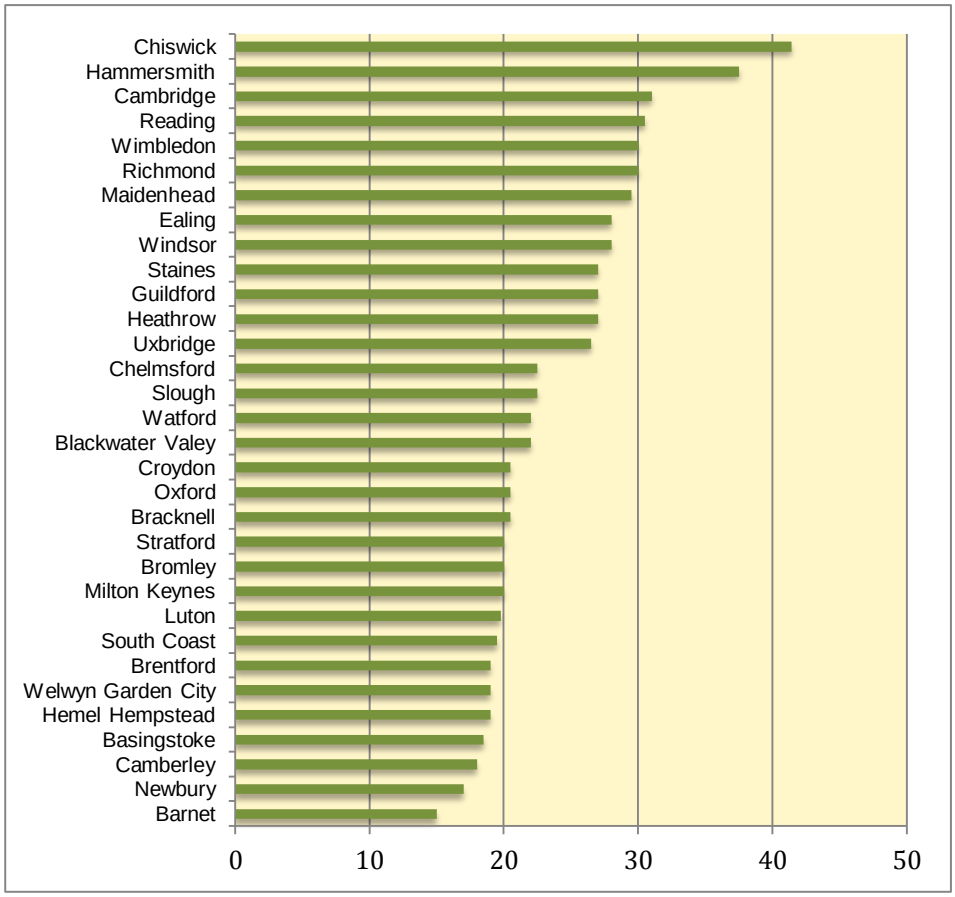
2010 Rank	Borough	2010 score
1	City	603.9
2	Westminster	192.6
3	Camden	161.9
4	Islington	141.9
5	Hammersmith & Fulham	141.5
6	Tower Hamlets	135.4
7	Kensington & Chelsea	132.7
8	Wandsworth	130.1
9	Mole Valley	126.6
10	Windsor & Maidenhead	125.9
11	Southwark	125.8
12	South Buckinghamshire	124.5
13	Richmond upon Thames	123.4
14	West Berkshire	123.1
15	Bracknell Forest	122.3
16	Wokingham	121.8
17	Guildford	120.4
18	Runnymede	120.2
19	Elmbridge	120.0
20	Surrey Heath	119.4
21	Lambeth	119.3
22	Waverley	119.3
23	Reading	118.5
24	South Cambridgeshire	118.3
25	St Albans	118.0
26	Hackney	117.7
27	Chiltern	117.1
28	Woking	117.0
29	Winchester	116.6
30	Welwyn Hatfield	116.1

Source: Centre for International Competitiveness (2010) *op cit*

4.6.8 **Office rents** Office rental values signal the strength of demand for office space in a centre and as such are a strong indicator of success. Figure 4.20 shows office rental values per sq ft in office locations across Outer

London, the South East and East of England in centres reported on in research by Jones Lang LaSalle[77] and Lambert Smith Hampton[78].

Figure 4.20 Office rents: £ per sq ft, Q4 11



Source: Lambert Smith Hampton and Jones Lang LaSalle (see footnotes 77 and 78)

4.6.9 The highest rents are achieved in Chiswick and Hammersmith in West London, both of which benefit from proximity to Central London, followed by Cambridge. It is clear that the strongest markets are more likely to be located to the West or South West of London and that Cambridge is an exception.

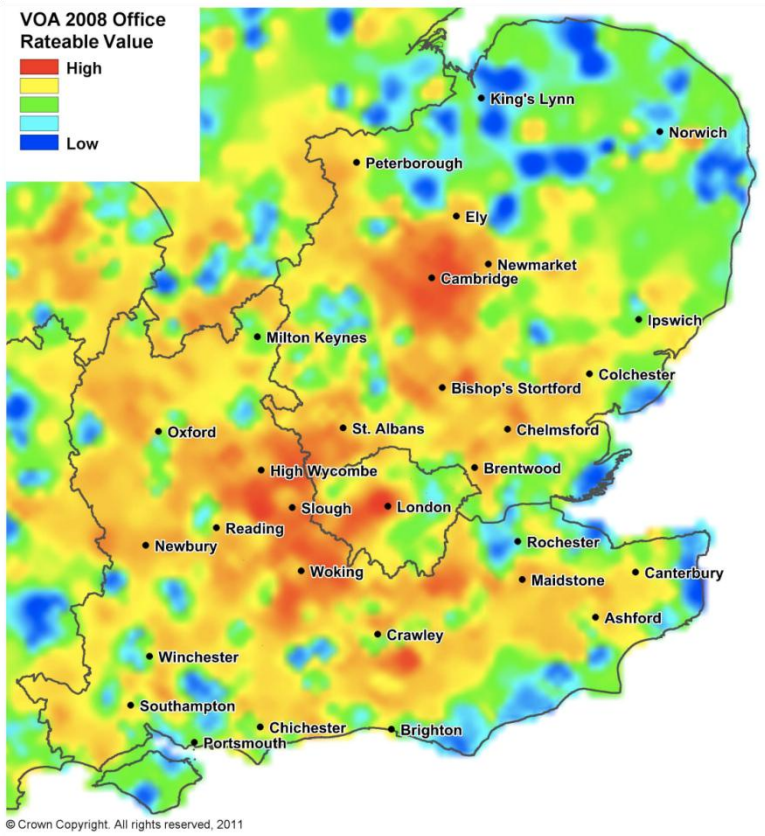
4.6.10 It is immediately evident from the rental value chart that success is distributed unevenly through the study area. In fact, in this sample, the most expensive market is in London and the centre with the lowest rental value is outside. This simple observation immediately casts doubt on the assertion that markets beyond London have been more successful. Equally there is no simple rental gradient reflecting distance from Central London as proved by the Cambridge example.

[77] Jones Lang LaSalle in-house Western Corridor rental data, courtesy of James Finnis
[78] Lambert Smith Hampton (2011) *Time to build?* National Office Market 2011

4.6.11 This rental pattern can be seen clearly in the heat map shown in Figure 4.19, which is based on 2008 office rateable values as a proxy for office rental value.

4.6.12 Cambridge comes out very strongly by many measures and might be the primary reason why the East of England region appears to be performing well. It is notable that there are few locations monitored to the North, East, or South East, and it is probably safe to assume that a lack of commercial activity in other centres means that they are of little interest to commercial property agents reporting to investors and developers. This view is again supported by the heat map in Figure 4.21.

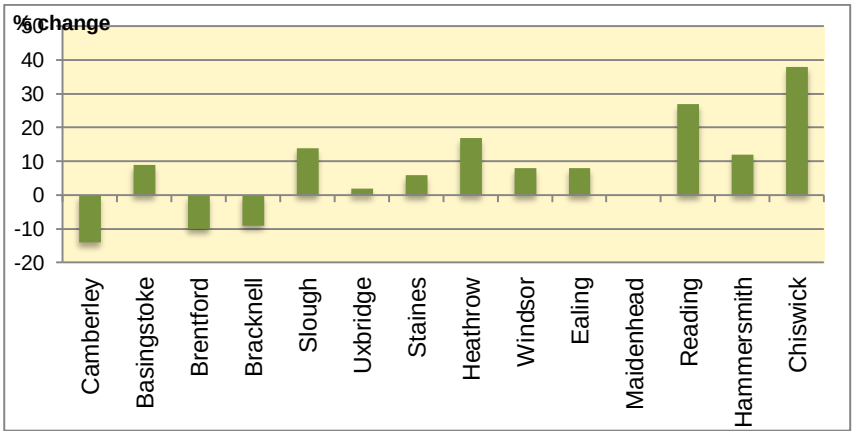
Figure 4.21
Office rateable values across London, South East and East of England



Source: VOA and Roger Tym

4.6.13 Figure 4.22 shows change in rental values over time for centres to the West of London. This allows us to consider the proposition suggested by the UKCI data that London centres have lost ground to South East centres. The centres are displayed on the chart, left to right, in the order that reflects their place in the rental value hierarchy. Thus, the centre at the left end of the X-axis has the lowest rental value and the centre on the right has the highest value: this highlights disparities between value and rate of change.

Figure 4.22 Office rental value Q1 05 to Q4 11, % change



Source: Jones Lang LaSalle, Western Corridor rental data

4.6.14 Maidenhead, for instance, is a high value centre but it has experienced no growth since 2005. On the evidence of this data, the centres that have grown most are Chiswick and Heathrow in Outer London and Reading and Slough in the South East. The research from Lambert Smith Research[79], does not show rental value change centre by centre but it does single out Cambridge for special mention because prime rents grew by 35% between the end of 2009 and 2011.

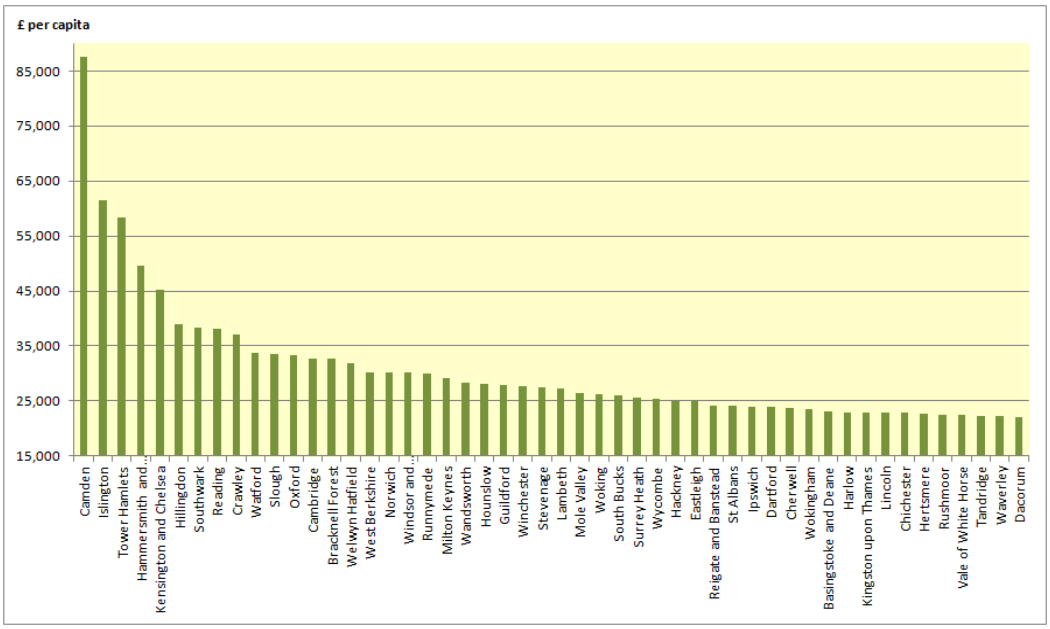
4.6.15 Of course, office rent levels are only one measure of success. In the charts below we rank the top fifty among the 143 London, South East and East of England local authority districts referred to above in para 4.6.4. They are ranked by measures that are indicators of economic strength. In some cases, the City and Westminster outperform the others to such an extent that we have excluded them from the charts. In these cases we have ranked the following fifty top performers.

4.6.16 **GVA per capita** Figure 4.23 excludes the City and Westminster because they are outriders at the high end of the scale. Taking this into account, the top seven performers are all London boroughs, and almost a quarter of the top fifty (12) are London boroughs. With the City and Westminster, London's performance would obviously be better.

The highest performers are Camden, Islington and Tower Hamlets (all benefiting perhaps from their functional proximity to the CBD). Then Hammersmith & Fulham, Kensington and Hillingdon are all part of the West London corridor. And these are followed by Southwark which, perhaps, owes its position to the strip of commercial activity along the Thames.

[79] Lambert Smith Hampton (2011) *op cit*

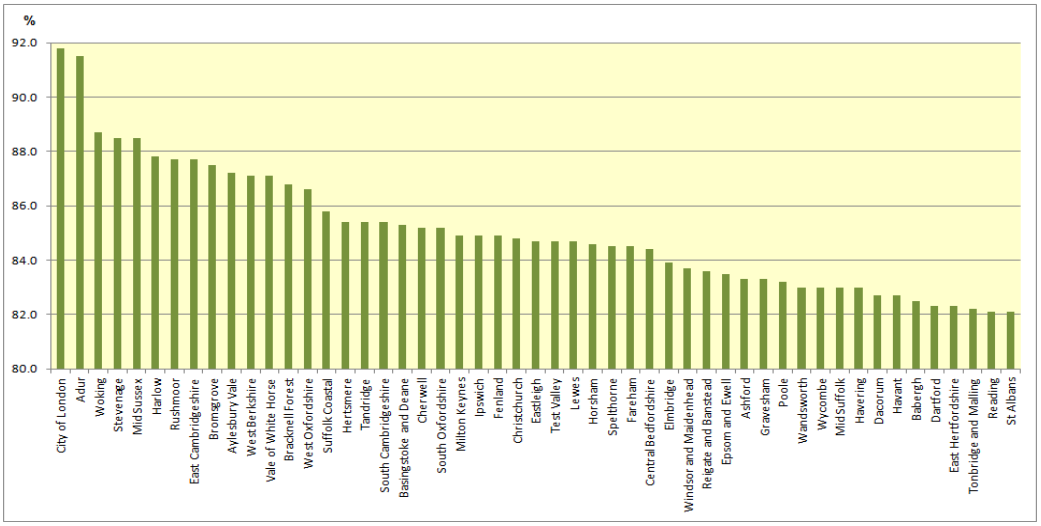
Figure 4.23 GVA per capita



Source: Centre for International Competitiveness (2010) *op cit*

4.6.17 **Economic activity rates** Figure 4.24 is an interesting chart insofar as only two London boroughs, the City and Wandsworth, make it into the top fifty. This perhaps begins to demonstrate the structural weakness of much of the Greater London area and offers an explanation for the apparent underperformance of the London region. Data from 64 cities monitored by the Centre for Cities show that London has an above average rate of long-term unemployed but lower than average rate for youth unemployment.[80]

Figure 4.24 Economic activity rates

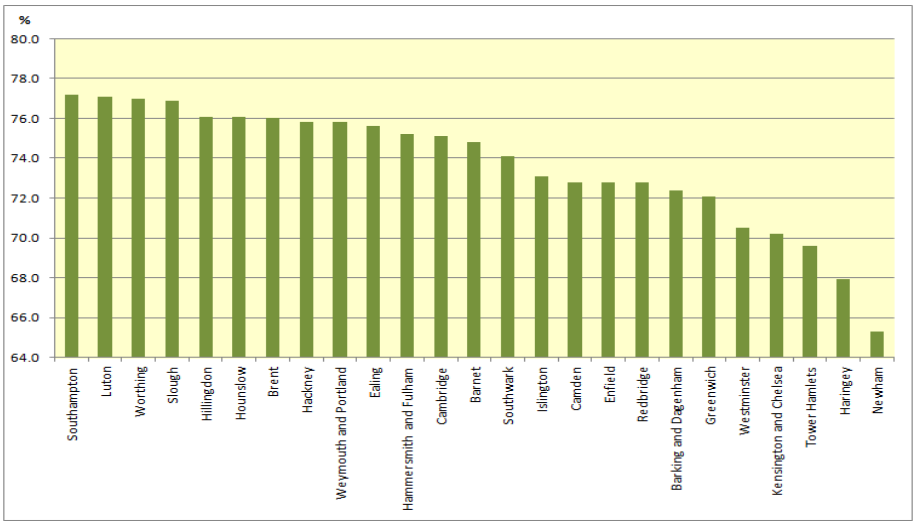


Source: Centre for International Competitiveness (2010) *op cit*

[80] Centre for Cities (2012) *op cit*

4.6.18 To demonstrate the severity of this issue, we have in this instance also produced a chart showing the 25 worst performers among the sample of 143 local authority areas (Figure 4.25). It can be seen that the bottom 13 are all London boroughs, and 19 of the 25 lowest are London boroughs.

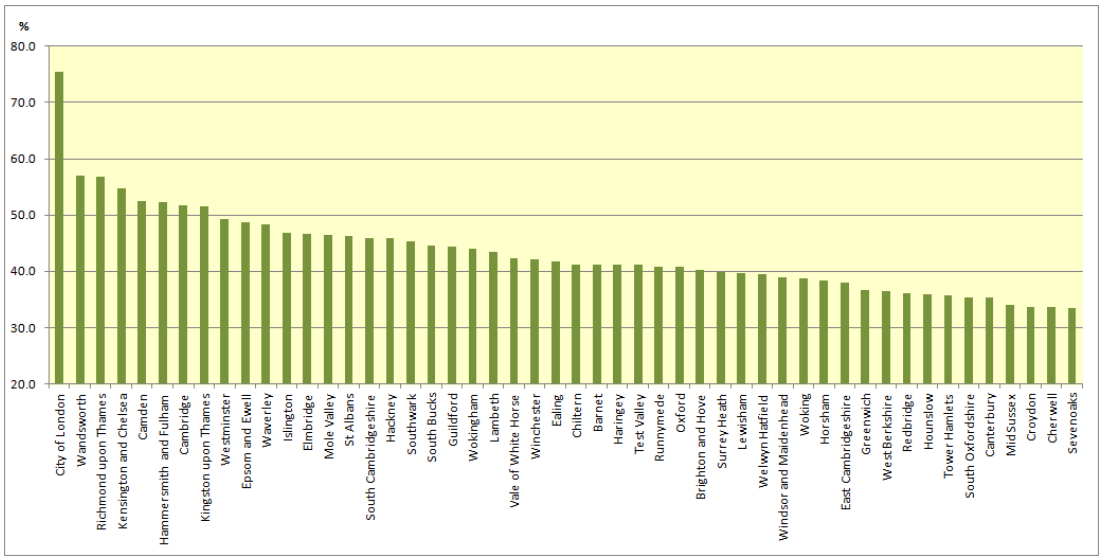
Figure 4.25 Economic activity rates – the lowest 25



Source: Centre for International Competitiveness (2010) *op cit*

4.6.19 **Percentage of working age with NVQ4+** Figure 4.26 shows that the top fifty includes 20 London boroughs. London captures all top six slots, and eight of the top ten. This does suggest something of a competitive advantage for the capital and, perhaps, confirms what might be expected given the city's economic profile.

Figure 4.26 Working age with NVQ4+



Source: Centre for International Competitiveness (2010) *op cit*

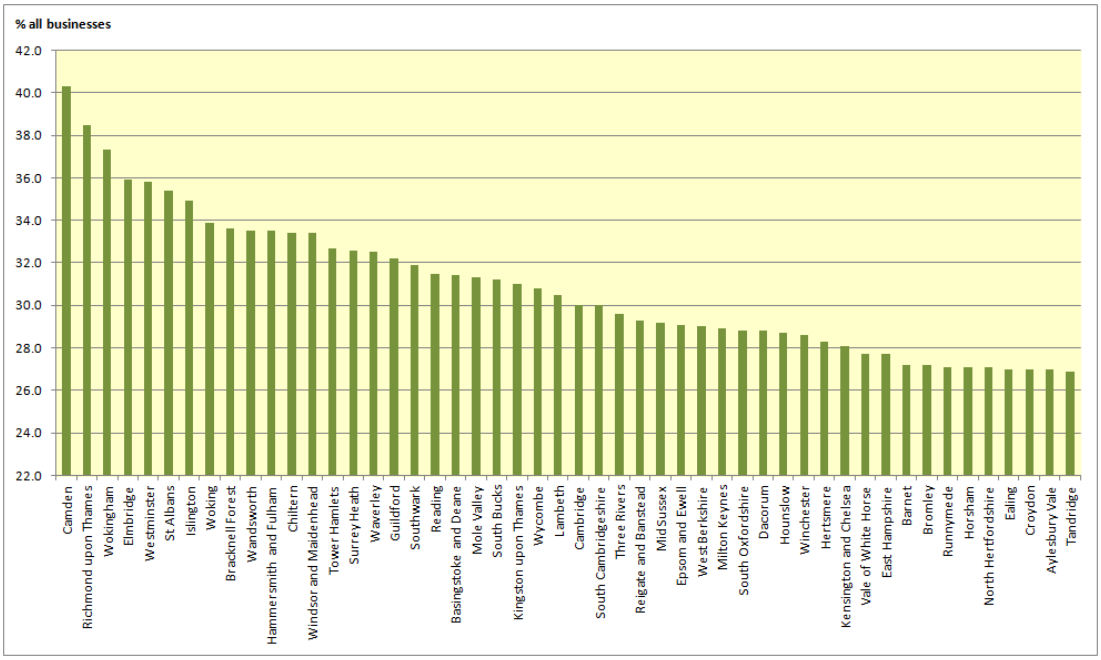
4.6.20 **Knowledge-based businesses** Figure 4.27 shows the percentage of all businesses within each district that are classed as knowledge-based.[81] The City (with a score of 62.9) has been excluded as an outlier. Half of the top ten are London boroughs, but only 16 of the top 50 are. This latter statistic is perhaps a little lower than preconception might suggest.

4.6.21 The Centre for Cities notes that:

> *cities that have a greater proportion of knowledge jobs have tended to be more sheltered from increases in the claimant count. Moreover longer term economic trends, such as globalisation and technological change, mean that these higher-value jobs and businesses are likely to further concentrate in certain cities that offer access to specialist skills and knowledge, and proximity to key markets and suppliers*.

4.6.22 An alternative measure of the strength of a knowledge economy is the number of patents per head of population and on this measure Cambridge stands out. It had more patents per 100,000 residents than the next six cities combined. Oxford was fourth by this measure, of the 64 cities monitored and Reading tenth.[82]

Figure 4.27 Knowledge-based businesses



Source: Centre for International Competitiveness (2010) *op cit*

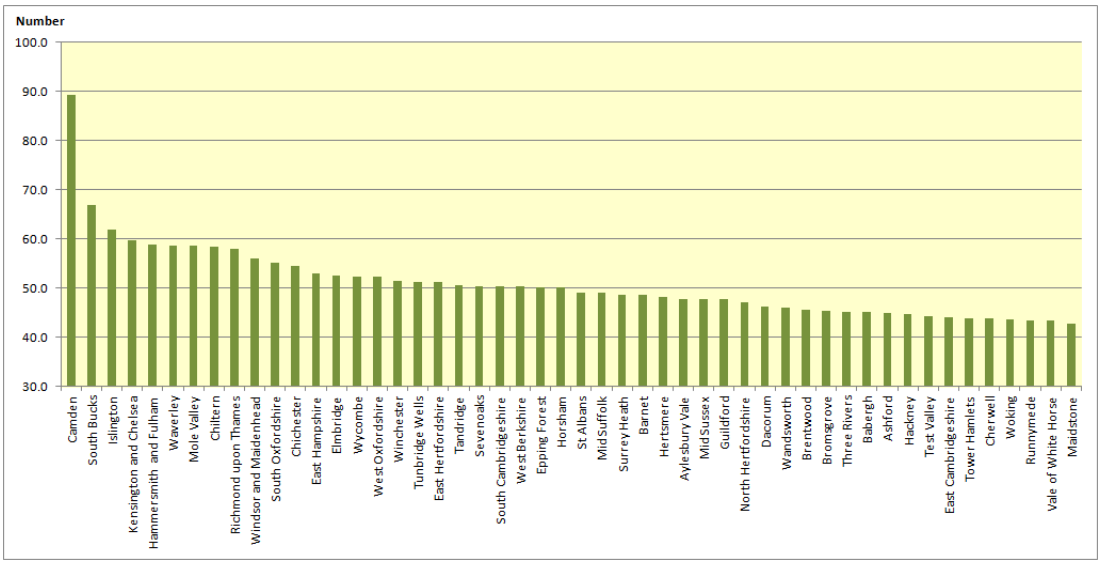
4.6.23 **Businesses registrations per 1,000 inhabitants** The annual number of business registrations is, in some senses, a measure of economic vitality, since it reflects density of businesses and the dynamism of a local

[81] Various studies have defined knowledge-based businesses in different ways, but generally they are defined as those businesses involved in financial services, business services, high tech and communication services, and health and education services.

[82] Centre for Cities (2012) *op cit*

authority. Figure 4.28 excludes the City and Westminster as very significant out riders, but then captures five of the top ten slots. It can be seen that 15 of the top fifty performers are London boroughs.

Figure 4.28 Business registrations per 1,000 inhabitants



Source: Centre for International Competitiveness (2010) *op cit*

4.6.24 The significance of knowledge workers and business start ups in creating growth is highlighted by the Centre for Cities in its Cities Outlook 2011.[83]

> *Some cities such as London, Aberdeen and Milton Keynes are well placed to support the creation of the jobs and growth that will address the UK's unemployment challenge. This is because of their high numbers of business start-ups, high percentage of knowledge workers and more innovative economies.*

4.6.25 The implication for London is that London does not have the equivalent of a university-led technology sector, such as the one that has developed around Cambridge in the past 20 years. London has the centres of excellence in its universities, but has not, in the past, been able to provide suitable start up premises for high technology and science businesses. This is perhaps being addressed in plans for part of East London, and the proposals for new university campuses in East London (UCL) and near to White City (Imperial) may provide important opportunities in these areas.

4.6.26 It should be noted however that Cambridge's strong performance in these areas is not necessarily being driven by an office-led economy, but by high tech science park environments. It is important to provide opportunities for this type of occupation and this is examined in Chapter 9.0. This will reflect the high level of service activity throughout the region, as well as the clusters of technology and related industries throughout the Thames Valley, in Oxfordshire and Cambridgeshire, and key centres elsewhere.

[83] Centre for Cities (2012) *op cit*

4.6.27 **Overview** This section shows that the relative economic and property market performance of London, the South East and East of England varies greatly at the level of individual centres. The disparities in economic performance that exist within London make comparisons at the regional level unreliable. There are clearly some centres in the South East and East of England that have enjoyed strong growth and these may be dominant within their regions. Cambridge is a good example.

4.6.28 The issue for London is not its performance at a regional level but the impact of a large number of boroughs that do not perform well on several economic measures. London suffers from wide disparities in the performance of individual centres – a fact that is evident in the analysis of Outer London in the earlier sections of this Chapter.

4.6.29 In property market terms, the provision of suitable business space is a significant barrier to economic development and so although rental values might be high, the potential to accommodate business expansion is limited. In these cases it is supply constraints that support rental value growth. Examples of this are Maidenhead, Windsor and Richmond. None of these offer adequate opportunities to create new, high quality business stock.

4.7 Office centres: overview

4.7.1 We have compared Inner and Outer London and found, as we expected, that a growing number of centres are suffering decline in their office markets. There has been very little construction in recent years, and vacancy rates are high, and it is our view that underutilisation is disguising higher vacancy rates in many of these centres.

4.7.2 The dismal picture is not universal. There are centres, notably in West and South West London, that are still flourishing but they are few. Richmond is one, where supply constraints ensure that it cannot satisfy demand and its rents are supported. Chiswick is a highly successful office market driven by its urban business park, where rents are comparable with Inner London.

4.7.3 We compared London with its neighbouring regions and found that a regional comparison of London with the South East and East of England suggested that London had weakened in comparison, but that this was not borne out at borough level. Indeed, the Inner London boroughs outperform almost all centres in the wider area on almost all measures. The regional comparison disguised widely differing performances at borough level.

4.7.4 We conclude from this analysis that the success and strength of Central London on a national and global scale has an influence over a wide hinterland and causes the comparative weakness in centres in Outer London and across the South East and East of England. In other words, it is not competition from outside London that causes underperformance in parts of London but from its own heart. It seems that London's office economy cannot support office centres throughout the whole London region but there are opportunities for symbiotic relationships as long as centres develop their own place and role in the greater ecology of the city.

5.0 Work styles and occupation densities

5.0.1 One of the fundamental roles of the LOPR series is to assess the strategic direction of the London office market, thereby allowing informed commentary about the on-going efficacy of the London Plan's spatial policies as they relate to the office market.

5.0.2 Within this important role, there is a clear focus on forecasting future demand based on employment projections. And a basic building block to this analysis is occupancy density, i.e., the ratio of workers to square metres. In early LOPRs this was a non-issue, because there was a standard ratio employed, that most observers accepted as being "reasonably accurate". However, this is no longer the case.

5.0.3 The twin forces of corporate change and enabling technologies have begun to radically alter the way in which space is occupied. In short, higher densities are being employed (to reduce inefficient use of space), and utilisation rates are increasing (as work styles change). The notion of every worker "owns" a desk, is beginning to break down as the norm.

5.0.4 Because density is such an important influence on the calculation of future demand for office space, LOPR 12 dedicates a chapter to assessing the changes taking place, in order to provide an evidence base for the figures used for forecasting demand in Chapter 7.0.

5.1 Organisational demand change

5.1.1 Property is a derived market. As organisations and their goods and services change, so the environments in which they are supported must change. As long as organisations are adapting to new circumstances their workplace demands will change. In these terms, buildings are simply *resources,* and cannot be divorced from the business agenda, processes and operations of their occupiers.

5.1.2 This has never been more so than with the truly transformational impact of the revolution in information and communications technology: personal computers, the internet, mobile devices, email and more recently social media. These transforming forces have brought with them the opportunity to organise work, and the physical environments in which it takes place, differently.

5.1.3 Trends affecting business today are well known: they focus on methods for becoming more agile, leaner, more efficient and more competitive. Skills shortages and labour costs have, until very recently, provided a quality counterweight to the cost drive but the overall emphasis remains business agility. The drive for agility is being enabled by technology that allows work to be conducted differently.

5.1.4 Flatter and more agile organisations, with horizontal networks replacing vertical hierarchies; and group-based knowledge workers replacing clerical, departmentalised information processors are key drivers. Workforce demographics have also changed, with more women and more part-timers: a trend which is forecast to continue.

5.1.5 The full-time, eight-hour day, five-day week form of employment is being challenged with the spread of flexible working; and a 'core and periphery' workforce has become established as cost pressures have encouraged outsourcing. Organisations are also becoming more highly networked with complex arrays of external relationships, rather than everything taking place within the single monolithic structure. The implications of these changes for the workplace are profound.

5.2 Flexible work styles

5.2.1 The introduction of flexible work styles (FWS) often forms part of wider corporate change programmes, in which an organisation's structure, culture, processes and use of space are all refreshed. Other times, FWS is introduced as part of a more limited cost containment exercise.

5.2.2 In the more progressive organisations, the practice of a permanent place of work with a fixed, dedicated workstation is no longer a given for every worker. And whereas previously a person's office space reflected their status, today space allocation is more closely aligned with tasks and how they are best accomplished, almost universally in open plan.

5.2.3 Unlike the sterile open plan office environments of the 1970s, the new environments are supplemented with break out space, private study rooms, collaborative space, and far more sophisticated meeting space. Whereas in the past the average space budget might have had about 10% of space allocated to meeting rooms, a dynamic office environment has perhaps 30% or more allocated to "social space".

5.2.4 Across the open plan areas, desk sharing is now common, recognising that, in most traditional office environments, over half of the desks are empty at any point in time. In many organisations an "eight-to-ten" rule applies whereby there are eight desks for every ten people. Applied to "villages" or "communities" (departments, functions and so on), this ratio might get higher or lower, depending on the pattern of work.

5.2.5 Of course these new working patterns are enabled by a fast evolving technology infrastructure. For example, IP telephony is in the process of killing the telephone exchange, as well as the fixed desk phone itself. At the same time, PCs are yielding to laptops and tablets. Such trends are changing communication, so that the phone and email are directed to a person, not a piece of furniture. Communication is becoming focused on the person, not the furniture at which they sometimes sit.

5.2.6 The underlying theme of these developments is the redundancy of "fixed" technology and the importance of mobile technologies. Ultimately these trends all enable greater flexibility in the use of the workplace by eliminating 'fixes' that make physical change more difficult and expensive to achieve.

5.2.7 They also allow an organisation to adapt and evolve without having to make fresh commitments to new real estate, a concept known as *spaceless growth*. Organisations can now grow without a balancing increase in real estate because the one-to-one relationship between worker and desk has been broken, permanently.

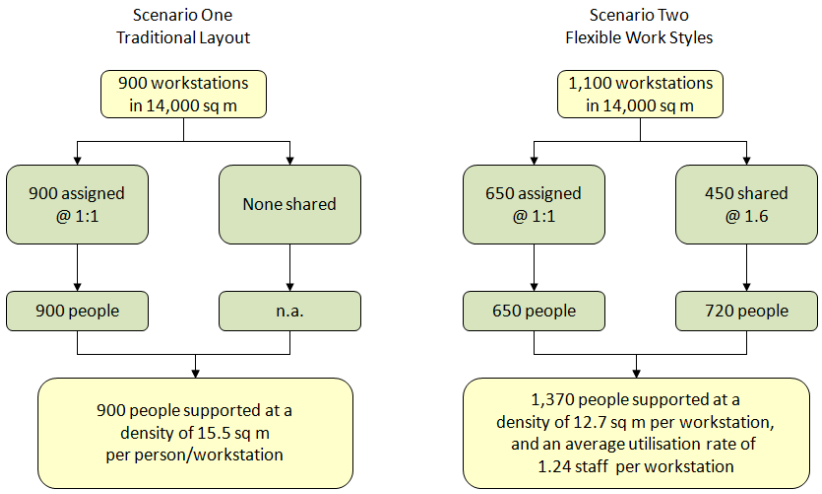
5.3 Density and utilisation

5.3.1 There are two principal means of achieving more intensive use of space. First, space allocations per person are reduced. For employees in open plan, there is simply less space around their workstations; while for others there is less enclosed space and more open plan, allowing higher densities. Increased density does, of course, have limitations imposed by building regulations relating to fire escapes, sanitary provision, and so on.

5.3.2 The second step is to manage the work environment more dynamically. It is well known that traditional office layouts are, typically, half empty for most of the time due to people being out of the office, and many organisations have introduced FWS as a means of improving their use of space.[84] Such initiatives allow a building to support more people in the same amount of space. The impact can be dramatic, often reducing an organisation's appetite for space by around 20%-30%.

5.3.3 Figure 5.1 shows the difference between a traditional, fixed workstation environment and one with FWS. In the traditional layout all 900 employees "own" their own desks, and the building is planned at a simple ratio of one workstation per 15.5 sq m of net internal area (NIA) per desk. In the flexible work scenario, 650 people retain assigned desks, while the remaining desks support 1.6 workers each (those retaining owned desks are typically administrative staff; and those requiring greater security).

Figure 5.1 The impact of flexible working on building utilisation



5.3.4 The headline impact is a 50% increase in the total headcount supported, with a relatively small impact on density. This increase includes the provision of new environments for meeting, collaboration and break out space. Whereas in the first scenario the desks are actually occupied at a typical 50-60% (due to absenteeism, working away from the office, training, etc), in the latter, desk utilisation is pushed higher. In this example the building utilisation rate is 1:1.24 (i.e. 1 desk per 1.24 people).

[84] See for example: Allen T, Bell A, Graham R, Hardy B & Swaffer F (2004) *Working Without Walls* OGC, London; NAO (2006) *Getting the Best from Public Sector Office Accommodation* NAO, London; Harrison A, Wheeler P & Whitehead C (2004) *The Distributed Workplace* Spon Press, London; Worthington J (2005) *Reinventing the Workplace* (2nd Edition) Architectural Press, Oxford

5.3.5 The evidence base for higher densities and utilisation is growing rapidly as the list of organisations that are known to have implemented at least some degree of FWS lengthens.

5.3.6 Figure 5.2 shows a wide sample of organisations – public and private; financial and creative, and large and small, that have introduced FWS programmes and achieved higher densities and utilisation. The adoption of FWS is not the preserve of technology-based companies; it is now deeply embedded in a wide variety of organisations. Further, the period of economic growth through to 2007 demonstrated that the adoption of FWS is not simply a knee-jerk reaction to economic restraint, but a more positive choice.

Figure 5.2 Sample of organisations adopting FWS

Sector	Organisation
Financial	Abbey National, ABN Amro, Capital One, Deutsche Bank, Morgan Stanley, Nationwide, Prudential
Technology	BT, Cisco, DEC, Fujitsu, Hewlett Packard, IBM, ICL, Motorola, Nokia, Sun Microsystems
Local Government	Hampshire CC, Hertfordshire CC, LB Ealing, LB Islington, LB Newham, Suffolk CC, Surrey CC
Central Government	Child Benefit Agency, DEFRA, BIS, GCHQ
Business Services	Deloitte, E&Y, KPMG, PWC
Other	BA, BAA, BP, Centrica, Marks & Spencer

5.3.7 The qualitative evidence clearly points to changes in the way buildings and offices are being occupied today and in the future.

5.4 Terminology in employment densities

5.4.1 For the LOPR demand forecasts two primary variables are needed to estimate employment densities: floorspace, expressed in square metres and number of workers.

5.4.2 Commercial floorspace is measured in three main ways, as follows.

- **Net internal area** (NIA): the lettable area, excluding common areas such as stairways, corridors, lifts and toilets, boiler rooms, plant rooms, etc.
- **Gross internal area** (GIA): the entire enclosed area of a building, including the common parts.
- **Gross external area** (GEA): the GIA plus the thickness of external walls.[85]

5.4.3 For the demand forecasts, there is a need to convert empirical evidence, which is typically presented in NIA, into GIA, which is used for planning (see 5.6.1. and 5.6.2). According to property agents' rule of thumb, office NIA is typically 80 to 85% of GIA, although it depends on building design and layout.

5.4.4 There is not a single measure of density either. The BCO study of 2009 identifies three types of density estimates, as shown below.

[85] See VOA: *A Summary of Valuation Office Agency Code of Measuring Practice Definitions for Rating Purposes* http://www.voa.gov.uk/business_rates/comp/index.htm

- **Workplace density** NIA divided by number of desks.
- **Population density** NIA divided by number of workers. This varies from workplace density depending on use of FWP and occupancy levels.
- **Effective density** NIA divided by a function of workplace density and utilisation. At a 100% utilisation rate, the effective density and workplace density are equal. However, empirical evidence shows that desks are typically occupied at 50-60%, which means that the effective density is increasing relative to the workplace density (see Section 5.3).

5.5 Employment density estimates

5.5.1 In this section we review the quantitative estimates of employment densities, published empirical evidence and the different ways in which densities are measured. The employment density assumptions in LOPR are population density estimates based on empirical evidence.

5.5.2 Published articles about FWS are more often descriptive than quantitative, and so hard evidence of its impact is difficult to find. The qualitative evidence points to changes in the way buildings and offices are being occupied today and in the future. One study that did provide some numbers was produced by the National Audit Office.[86] This report cited a number of case studies, which are shown in Figure 5.3. The overall utilisation achieved is 1:1.3, with 5,376 people sharing desks.

Figure 5.3 Flexible working styles and desk ratios

Organisation	People	Desks	People: Desk
Adult Learning Inspectorate	282	151	1.9
BAA	540	459	1.2
BP	4,445	3,799	1.2
DTI	2,590	2,070	1.2
Ernst & Young	4,200	3,164	1.3
GCHQ	4,900	4,149	1.2
Hertfordshire County Council	1,000	770	1.3
IBM	1,473	765	1.9
Norfolk County Council	163	145	1.1
PricewaterhouseCoopers	1,750	670	2.6
Suffolk County Council	1,150	975	1.2
Total	**22,493**	**17,117**	**1.3**

Source: adapted from NAO, *op cit*

5.5.3 The main empirical studies of employment densities in the UK are presented in Figure 5.4. There are relatively few and there is significant variation in the results as well as in the way in which densities are measured and so the data are not directly comparable. A short description of each study can be found in Appendix A8.

[86] NAO (2006) *Getting the Best from Public Sector Office Accommodation* NAO, London

Figure 5.4 Empirical evidence of employment densities

Source	Office employment density ratios (sq m)							
	CAZ	Inner	Outer	London	National/out of London	Floorspace	Per	Info
National Audit Office (2012) *Improving the Efficiency of Central Government Office Property*					13.2	NIA	FTE	The study found that densities have reduced from 17.1 sq m per FTE when monitoring began in 2006 to 13.2 sq m per FTE in Dec 2011
HCA (2010) *Employment Density Guide* (2nd Edition)					11.9 (In town) 11.4 (Out of town)	NIA	FTE	Measures population density. Density range 8-47 sq m per FTE depending of office type (call centre to IT/data centre). Densities vary by age of building (Pre 1945: 15.6 sq m; 1945 to 1984: 12.5 sq m; 1985 to 2000: 10.3 sq m 2001 to present:11.5 sq m)
BCO (2009) *The Occupier Density Study*				12.0	11.8	NIA	Desk	Measures desk density. Range from 5-20.9 sq m per desk, depending on sector (5%: 5-7sq m per desk; 77%: 8-18 sq m per desk; 18%: 14-38 sq m per desk)
RTP Ramidus King Sturge (2006) *The use of business space in London*	14.4	14.7	20.6	16.2		NIA	Worker	Measures population density
DTZ (2004) *Use of Business Space and Changing Working Practices in the South East*					18.3	NIA	Worker	
EP (2001) *Employment Density Guide*					19.0 (16.2 net)*	GIA	Desk	Measures workplace density A density range from 13 to 20 sq m per desk depending on office type
Roger Tym and Partners (1997) *The Use of Business Space: Employment Densities and Working Practices in SE England*					17.9	NIA	Worker	

5.5.4 One of the most thorough of these studies, in so far as it involved the actual measurement of space, was published by the BCO in 2009.[87] The study sampled 88 organisations detailing occupancy levels in 249 UK properties. The buildings totalled over two million square metres (NIA), and accommodated 173,000 workstations.

5.5.5 Over the whole sample, the mean overall density was 11.8 sq m NIA per workstation. The median value was 10.6 sq m NIA, with a wide range and a standard deviation of 4.6. The distribution of the sample indicates that 77% of the sampled properties have an occupancy density of 8-13 sq m NIA per workstation, and 5% have a density in the 5-7 sq m NIA range (a total of 82% at less than 13 sq m). 18% of the sampled properties lie within the 14-38 sq m per workstation bands.

5.5.6 The higher densities are closely grouped around the mean. Two properties were occupied more densely than 6.0 sq m NIA per workstation. The next nearest was 7.7 sq m NIA per workstation. Overall, 25% of properties were occupied more densely than 9.2 sq m NIA.

5.5.7 The lowest density recorded was 37.8 sq m NIA. The lower densities are less closely grouped around the mean – the graph has a long tail. 25% of properties were occupied less densely than 12.6 sq m NIA per workstation.

5.5.8 The study also revealed how different sectors occupied their buildings (Figure 5.5). This shows that the legal and manufacturing sectors occupy far less densely than the norm. The table clearly shows that the public sector has also begun to improve the efficiency of its use of space. The data show central government averaging 11.9 sq m and local government achieving 10.1 sq m.

Figure 5.5 Office occupancy densities by sector

Sector	Mean Density
Finance	11.0
Insurance	13.0
Manufacturing (regional and head offices)	16.0
Accountancy/Management Consulting	11.1
Legal	20.9
Other Professional Services	10.5
Real Estate	9.9
Central Government	11.9
Local Government	10.1
Media	11.0
IT	10.0

Source: BCO, *op cit*

5.5.9 The evidence from the empirical studies above is converted into a common measure of population density by applying the following assumptions.

[87] British Council for Offices (2009) *Occupier Density Study Summary Report* BCO, London

- To convert floorspace per FTE to floorspace per worker. We assume that 20% of the work force is employed on a part-time basis as shown by the Annual Population Survey data for 2011. We also assume that these part-time workers on average work 50% of full-time hours (i.e. the ratio of 2:1 part-time to FTE jobs). This provides a ratio of total jobs to FTE jobs of 111.1%.
- To convert floorspace per desk to floorspace per worker. We use a benchmark desk ratio of 1.2, i.e. 1.2 workers per desk.

Figure 5.6 Employment densities per worker: empirical evidence

Source	Unit of measure	Employment density		Revised unit of measure	Estimate per worker
		GIA	NIA		
NAO (2012)	Sq m/FTE	-	13.2	Sq m/worker	12.0
HCA (2010)	Sq m/FTE	-	11.9	Sq m/worker	10.7
BCO (2009)	Sq m/desk	-	11.8	Sq m/worker	9.8
RTP/Ramidus (2006)	Sq m/worker	-	16.2	Sq m/worker	16.2
DTZ (2004)	Sq m/worker	-	18.3	Sq m/worker	18.3
EP (2001)	Sq m/desk	19	16.2	Sq m/worker	13.5
SERPLAN (1997)	Sq m/worker	-	17.9	Sq m/worker	17.9

5.5.10 The evidence presented in Figure 5.6 shows that there is significant variation in the estimates of employment densities from 9.8 to 18.3 sq m per worker, but there is a clear progression over time with the newer studies supporting the view that employment densities are rising, especially in new stock. We therefore focus on the most recent evidence of employment densities for LOPR, which are the NAO 2012, HCA 2010 and BCO 2009 studies. These provide an employment density range of 9.8 sq m per worker to 12.0 sq m per worker or an average employment density of 10.8 sq m per worker.

5.5.11 Employment density estimates have a profound impact on floorspace demand forecasts, and we believe that there is a strategic need for large-scale and wide ranging empirical study to provide further clarity and confidence around the numbers adopted for the forecasts.

5.5.12 As part of the sensitivity tests we undertake for LOPR, we create three density scenarios as shown in Figure 5.7 and described below.

- **Low scenario** 12.1 sq m NIA per worker, based on NAO 2012 evidence.
- **Central scenario** 10.9 sq m NIA per worker, based on the average density of the three latest empirical studies.
- **High scenario** 9.8 sq m NIA per worker, based on BCO 2009 evidence.

5.5.13 Our central scenario of 10.9 sq m per worker is higher than the employment densities used in LOPR 09 (12 sq m per worker) – a position supported by the empirical evidence. There might be support for using the high scenario (9.8 sq m per worker) as the empirical evidence relates to employment densities at the time these studies were undertaken. For LOPR, the employment densities are applied to new office developments which are

more likely to employ flexible working practices and promote more efficient uses of office spaces.

Figure 5.7 Employment density scenarios

Employment densities	Sq m NIA per worker	Gross sq m per worker (21% conversion rate)	Scenario
NAO (2012)	12.0	15.2	Low
HCA (2010)	10.7	13.5	
BCO (2009)	9.8	12.4	High
Average	**10.8**	**13.7**	**Central**

5.6 Applied employment densities

5.6.1 The employment densities are applied to the office demand forecasts in order to forecast future demand for space across London. However, in order to do this we must convert the NIA densities discussed above into GIA densities so that they compare directly with other floorspace estimates provided in GIA.

5.6.2 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%. If we apply this to the central scenario of 10.9 sq m per worker we get a gross employment density of 13.8 sq m per worker (Figure 5.7). This employment density forms the base case for our demand forecasts in LOPR 12.

5.7 Work styles and densities: overview

5.7.1 It is clear that growing numbers of organisations are changing the way in which they occupy their office buildings. Expanses of largely sterile (and largely under-occupied), production line-style office space are yielding to more dynamic work environments in which team work, collaboration and meeting space occupy far greater proportions of space. Part of the drive is economic as organisations respond to competitive pressures. Part of the drive is organisational as they transform their work processes to respond to fluid business environments. Technology is acting as a key enabler, and the environmental/sustainability agenda is also playing a role.

5.7.2 There are major implications arising from these changes for spatial policy in London. Projections of future demand must be sensitive to these structural changes. Recent trends in densities do not reflect a knee jerk response to economic circumstances, nor will they lead to mass disaffection by workers: organisations are only too aware of their need to retain highly skilled staff, and they are providing staff with a richer palette of work settings and greater choice in where and how they work. The use of offices is changing and spatial policies must reflect that change.

6.0 London's mega schemes

6.0.1 The previous edition of the London Office Policy Review (LOPR 09) drew attention to what we referred to as "*London's mega schemes*". Such schemes were defined as large, integrated developments, normally under single ownership/management, with office content in excess of 100,000 sq m. All of the schemes included a large element of public realm, and a high retail and leisure content; most were focused on transport hubs.

6.0.2 The "first generation" schemes were listed as including London Bridge City, Broadgate and Canary Wharf. These were followed by Regent's Place, Chiswick Park, Paddington and More London. "Second generation" schemes, at planning stage included: Brent Cross/Cricklewood, Earl's Court, Euston, Greenwich Peninsula, King's Cross, Paddington, Stratford City, White City and Wood Wharf.

6.0.3 The purpose of the commentary was to highlight the relationship between the scale and nature of growth in demand for office space over the previous two development cycles with the emergence of the mega schemes; and to speculate whether a similar pattern might continue into the future.

6.0.4 We drew a number of important conclusions from the LOPR 09 analysis, including the following.

- *There is nearly twice the space in the mega scheme pipeline as there was delivered [by the first generation schemes].*
- *The proposals represent 44 years of supply at the completion rates [of the first generation schemes].*
- *The [first generation schemes accompanied] major economic structural change which is unlikely to be repeated in the future. On the contrary, there is credible evidence to suggest that this will not be the case.*
- *If a generally more efficient approach to space management is added to the mix, future take-up levels could be quite different to historic trends.*
- *Not all the mega schemes can succeed.*
- *The mega schemes might depress development viability, and could further weaken prospects for Outer London office markets.*

6.0.5 The central question that we posed was: *what will provide the engine of growth to replicate the historic expansion of the office economy over the next twenty-five years?*

6.0.6 For LOPR 12 there are two important questions to answer. The first of these is whether, from a supply/demand perspective, the scale of the proposed mega schemes is in keeping with forecasts for employment growth which are generally weaker than over the past 20 years. We examine this issue, summarising the implications for office development within CAZ, its fringes and beyond, especially in terms of the Strategic Outer London Development Centre concept proposed in the 2011 Plan, and its wider town centre and office location policy.

6.0.7 The second question relates to planning policy. This is whether the GLA's "*economically liberal*" approach to strategic office policy in London remains the right one. Has the liberal approach been too flexible? Should policy exercise greater control over office development? Would a more prescriptive approach lead to foregoing and/or losing office development, and the associated jobs, to the wider South East and beyond?

6.0.8 One of the reasons that these policy issues are so important is that the business geography of London has been changing, and mega schemes are one of the principal causes. London has, over the past few development cycles become a truly polycentric office market. The Central London office market, traditionally, comprised the City and West End, with a tertiary market for the Mandarins in Victoria. This has now changed, and it has become a polycentric market. Canary Wharf is the outstanding example, but mega schemes are underpinning "mini CBDs" elsewhere in the capital.

6.0.9 London's polycentric character is also being driven by public sector intervention, perhaps most strategically in terms of East and West London. Traditionally West London (at the head of the Thames Valley) has been a major force in London's office market, particularly in terms of demand from the TMT sector. Now, investment in infrastructure in the East is presenting, in essence, a challenge to the market in the West. This challenge is being reinforced by Crossrail, which will create a strong East-West axis, anchored by the two Westfield shopping malls at White City and Stratford.

6.0.10 The strong East-West axis will be reinforced by mega schemes such as King's Cross and Paddington, supported again perhaps by intensification of office activity around key nodes such as Tottenham Court Road and Farringdon. This emerging geography of office activity is likely to further marginalise previously established office centres in Outer London, particularly to the North and South. It is unlikely that Thameslink will have the same impact on, say, Croydon or Cricklewood.

6.1 The rise of the office economy

6.1.1 It is important to understand the economic context of London's mega schemes in order to appreciate the role that they have fulfilled. In short, the history of London's office market over the past quarter century mirrors the profound change in the wider economy over that period: the replacement of the industrial base by a service base, and the transformation of the UK into an "*office economy*". Particularly in London, of course, this transformation reflects the growth of Financial and Business Services, and London's emergence as one of the pre-eminent global cities.

6.1.2 Since the mid-1980s, the amount of office floorspace, nationally, has doubled, to just over 100 million sq m. Over the same period, the number of FBS jobs has more than doubled to six-and-a-half million.

6.1.3 As we noted in LOPR 09, the extraordinary development of the TMT sector was a key factor in this growth. Another key factor was the deregulation of financial services in 1986. These changes also drove a fundamental shift in what occupiers expected from offices, creating a market for an entirely

novel product type – large open floors, high specification and superior quality. Crucially, much of the existing stock could not meet this demand. A significant proportion of the new buildings were 100% net additions to stock, being developed on railway lands, former industrial sites and disused docks.

6.1.4 It was this explosive growth of the office economy that drove demand for office space over the past thirty years and, ultimately, which created the conditions for the rise of the mega schemes.

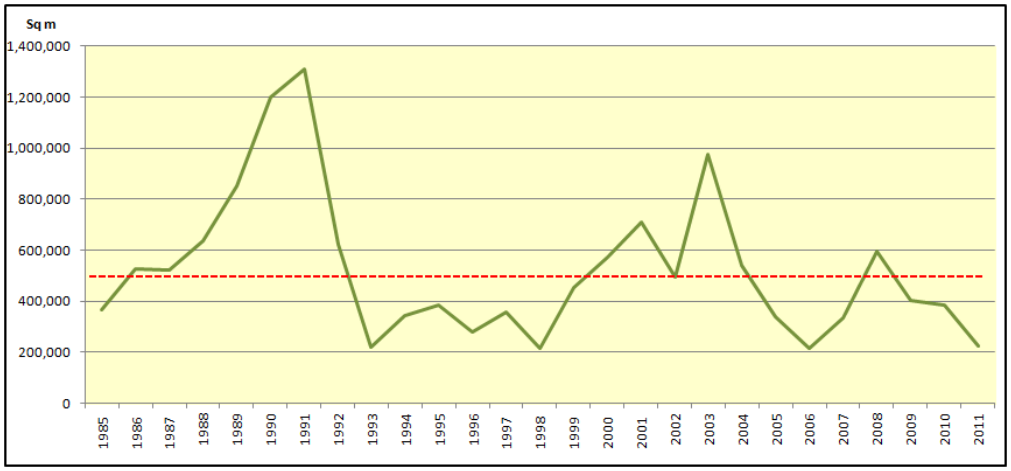
6.2 Historic pattern of mega scheme development

6.2.1 For the purposes of this exercise, our period of analysis stretches from the period immediately prior to the mid-1980s boom, when the prospect of financial deregulation led to the design of the first modern mega schemes. Figure 6.1 shows all Central London development completions, between 1985 and 2011. The long-term pattern of sharp peaks and troughs can be clearly seen, with the annual average running at 521,500 sq m.

6.2.2 In terms of the mega schemes specifically, over the period shown, the schemes evolved in a gradual manner, although contributing a significant proportion of annual Central London completions.

6.2.3 London Bridge City (first building completed 1986) dovetailed with Broadgate (first building completed 1986); which overlapped with Canary Wharf (first building completed 1991). Then came Regent's Place (first building completed 1997); Chiswick Park (first building completed 2000); followed by Paddington (first building completed 2002) and More London (first building completed 2002).

Figure 6.1 Development completions, Central London, 1985-2011



Source: DTZ data

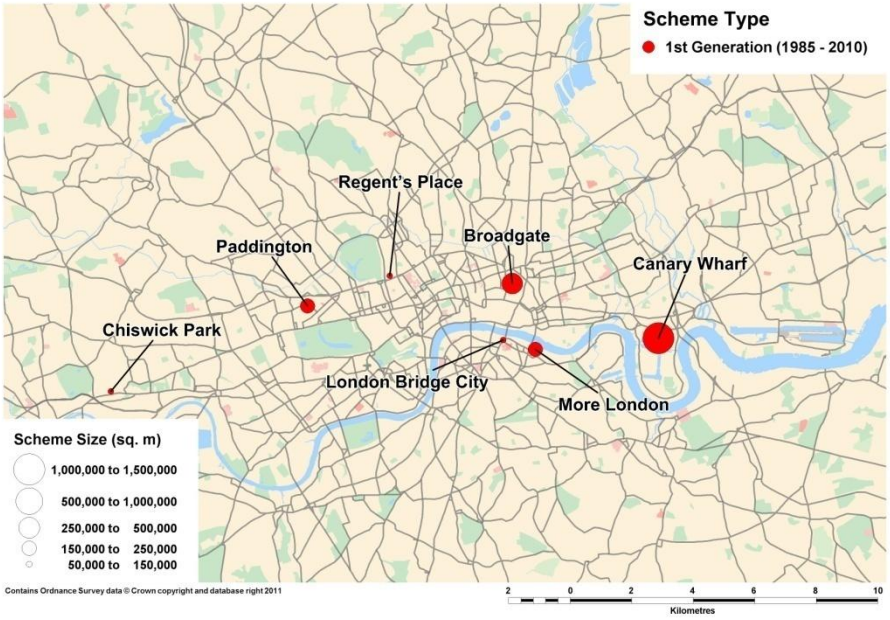
6.2.4 To recap on some key numbers from our previous analysis of mega schemes: between 1985 and the onset of the economic disruption in 2008, the seven first generation mega schemes delivered a total of 2.42 million sq m. The contribution of each scheme is shown below.

- London Bridge City: 75,000 sq m
- Broadgate: 400,000 sq m
- Canary Wharf: 1,400,000 sq m
- Regent's Place: 120,000 sq m
- Chiswick Park: 100,000 sq m
- Paddington: 150,000 sq m
- More London: 175,000 sq m
- **Total: 2.42 million sq m**

6.2.5 The first generation schemes provided, on average, a shade over 100,000 sq m per annum, around 60% of which was in Canary Wharf. This long-term contribution of the seven schemes equated to almost one-fifth of total Central London annual development completions.

6.2.6 These mega schemes established the pattern of "off-centre" developments which have come to re-define the London office market as a polycentric one (see Figure 6.2). When Broadgate was mooted in 1983, half a mile from the Bank of England, it was revolutionary. Now, building in Waterloo, King's Cross or Paddington is considered mainstream. It is accepted that it is possible to re-engineer the geography of Central London as long as access to the heart of the City and West End by public transport is good, and also that the scheme is large enough to create its own public realm and sense of place.

Figure 6.2 First generation mega schemes, 1985-2010

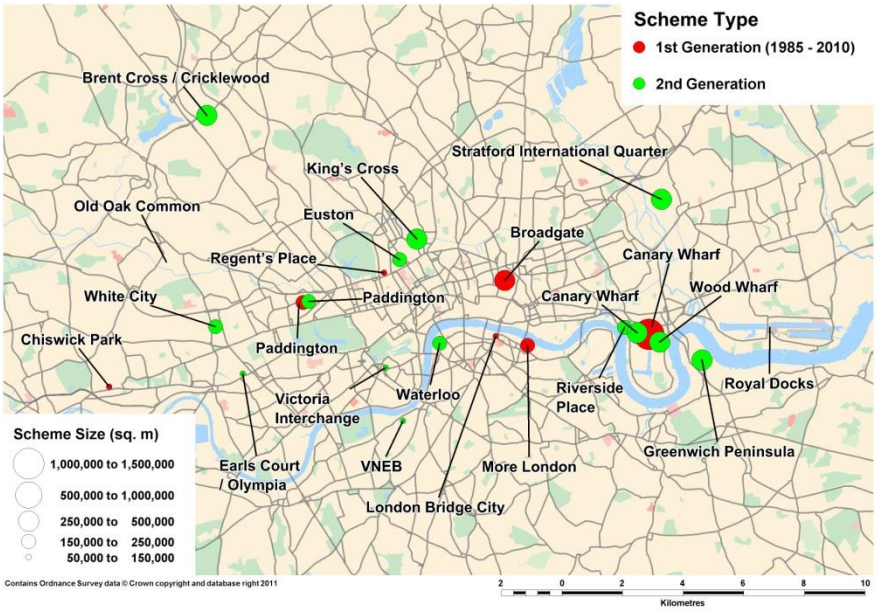


6.3 Second generation mega scheme pipeline

6.3.1 Compared to the historic pattern of supply outlined above, the current mega scheme pipeline is large, and has a wider geography. Figure 6.3 shows the

spatial pattern of both first and second generation mega schemes. The CAZ boundary is shown in red outline.

Figure 6.3 First (pre-2010) and second (post-2010) generation mega schemes



6.3.2 In addition to the established schemes, the map shows:

- Euston, King's Cross, Paddington, Vauxhall/Nine Elms/Battersea (VNEB) and Waterloo all around the CAZ boundary;
- Canary Wharf, Greenwich Peninsula, Stratford, the Royal Docks and Wood Wharf in East London, and
- Brent Cross/Cricklewood, Earl's Court/Olympia, Old Oak Common and White City in West London.

6.3.3 The pipeline schemes are at various stages of development – from inception through to delivery. In order to simplify the picture a little, we have analysed the schemes under three spatial headings: CAZ, East London and West London.

6.3.4 **Central Activities Zone** There are six second generation mega schemes planned around the CAZ boundary.

- **Euston** The 6 ha site has potential for more than 300,000 sq m of mixed use development, including 150,000 sq m of office space. This scheme is now linked to the delivery of HS2.
- **King's Cross** Up to 25 office buildings, totalling around 450,000 sq m. Recently negotiating a 75,000 sq m pre-let to Google.
- **Paddington:** there is further potential permitted development totalling 150,000 sq m.
- **Victoria Circle** Land Securities' latest scheme in Victoria could deliver 140,000 sq m.

- **VNEB** In fact a collection of projects, VNEB qualifies as a mega scheme given the proximity of the projects and the overall scale. The office content is uncertain, but assumed to be around 100,000 sq m.
- **Waterloo** Redevelopment of Elizabeth House on York Road will deliver two office towers totalling 90,000 sq m; while the Shell Centre could deliver in excess of 100,000. These two schemes have been included as a single scheme, with a total size of 200,000 sq m.

6.3.5 These schemes total over 1,340,000 sq m. Clearly, many of the proposals are at early stages of formulation; some are more certain than others, and the precise office content of each will respond to market signals. Furthermore, the timescales of the schemes will stretch over at least two decades. However, the five schemes signal a very large addition to stock.

6.3.6 **East London** One of the key issues for the East London office market is the question of where new office growth will be most highly concentrated. Apart from the myriad sites and schemes involving one or two buildings that are scattered throughout the area, there are five mega schemes lined up to deliver large amounts of office space. These are summarised below.

- **Canary Wharf** Still has 422,000 sq m of permitted development at North Quay (222,000 sq m), Heron Quays (155,000 sq m) and 25 Churchill Place (45,000 sq m), to develop.
- **Greenwich Peninsula** This Quintain scheme is set to provide around 350,000 sq m.
- **Stratford International Quarter** Includes around 400,000 sq m of office development.
- **Wood Wharf** An eastwards extension of Canary Wharf, promises to deliver over 370,000 sq m.
- **Riverside Place** Previously planned for JP Morgan HQ, this site could provide 185,000 sq m.

6.3.7 These five East London schemes could, together, deliver just over 1.7 million sq m of office space. To give a sense of scale, together they are equivalent to:

- nearly 17 HSBC towers;
- the total amount of space completed at Canary Wharf 1991-2009;
- over 70% of completed space at Broadgate, Canary Wharf, Chiswick, London Bridge City, More London and Paddington combined, or
- over 120,000 workers (at a density of 13.9 sq m per worker).

Outside of the Canary Wharf complex, East London has so far failed to attract any significant corporate occupier interest.

6.3.8 **West London** A number of large schemes have emerged beyond the Central London area, including the three mega schemes shown below.

- **Brent Cross/Cricklewood** Proposals include c400,000 sq m of offices.
- **Earl's Court/Olympia** Could include around 100,000 sq m of offices, although the precise amount remains unclear.

- **White City** The precise nature of proposals here is unclear, although the umbrella scheme, Creative London, could provide c200,000 sq m of office space.

6.3.9 While Old Oak Common is potentially a mega scheme, it is not included in our calculations here because there are no actual private sector proposals including over 100,000 sq m of office space.

6.3.10 The schemes beyond CAZ and East London total 700,000 sq m. They are highly significant in spatial policy terms because apart from Chiswick Park they are the first to test the occupational market appetite to locate beyond the immediate CAZ fringes. (Stockley Park and Bedfont Lakes could be considered mega schemes, but both cater in the main for Thames Valley occupiers, rather than the *bona fide* London office occupier).

6.4 Market supply/demand implications

6.4.1 From a supply-demand perspective, the key question is whether the mega scheme pipeline is in keeping with forecasts for employment growth, which are generally weaker than actual growth over the past 20 years. We examine this issue here, before describing, in Section 7.6, the policy implications within CAZ, its fringes and beyond, especially in terms of the Strategic Outer London Development Centre concept proposed in the 2011 London Plan, and its wider town centre and office location policy.

6.4.2 The fourteen second generation mega schemes outlined above could deliver 3.74 million square metres of office space. This is some 54% higher than that provided in the seven first generation mega-schemes over the 1984-2008 period, some 2.42 million sq m, during a period of massive expansion in the London office economy.

6.4.3 At the completion rates in mega schemes over the past 25 years (average 100,000 sq m pa), the total of 3.74 million sq m equates to 37 years of supply. It also represents over 13% of total London office stock.

6.4.4 It should be remembered that beyond the mega schemes there are many large schemes that will themselves soak up much demand. A selection of these is shown below (sizes shown are approximate). This sample of ten schemes alone could deliver around 700,000 sq m of space.

- 10 Blackfriars Road, SE1: 76,000 sq m
- 20 Blackfriars Road, SE1: 84,000 sq m
- 20 Fenchurch Street, EC3: 58,300 sq m
- 100 Bishopsgate, EC2: 87,000 sq m
- Aldgate Place E1: 71,000 sq m
- Pinnacle, EC2: 117,000 sq m
- Principal Place, EC2: 55,000 sq m
- Shard and London Bridge Place, SE1: 93,400 sq m
- Walbrook Square, EC4: 83,000 sq m

6.4.5 At this point a note of caution should be emphasised. The timescales of mega-schemes are measured in decades in terms of securing ownership

and/or development agreements, masterplanning, providing infrastructure, the phased construction of buildings, letting and selling, and management and place-making. Timing is crucial. Some schemes which have "missed" or "failed" in one cycle have "hit" or "succeeded" subsequently. Others have fallen by the wayside, it seems, even where a start has been made and an anchor occupier found.

6.4.6 While the current mega scheme pipeline looks large against the historic context, we recognise that, in reality, market signals will determine how much is actually built, and that the office components of individual schemes will respond to changing demand circumstances, including the shifting profile of employment and new jobs.

6.4.7 However, given the most recent and more subdued forecasts for office employment, there are important issues for the London Plan.

6.4.8 **Office employment forecasts** As we have seen, the mega schemes up to around 2008 were driven largely by the extraordinary growth in Financial and Business Services, associated with the deregulation in global finance, and the explosion in ICT technologies.

6.4.9 Future prospects for office employment are therefore critical to understanding the level of demand that forthcoming mega schemes will be catering for. The latest employment forecasts for London were published in late-2011.[88] It is instructive to review these in conjunction with the historic pattern of employment growth, data for which were also published in late-2011.[89]

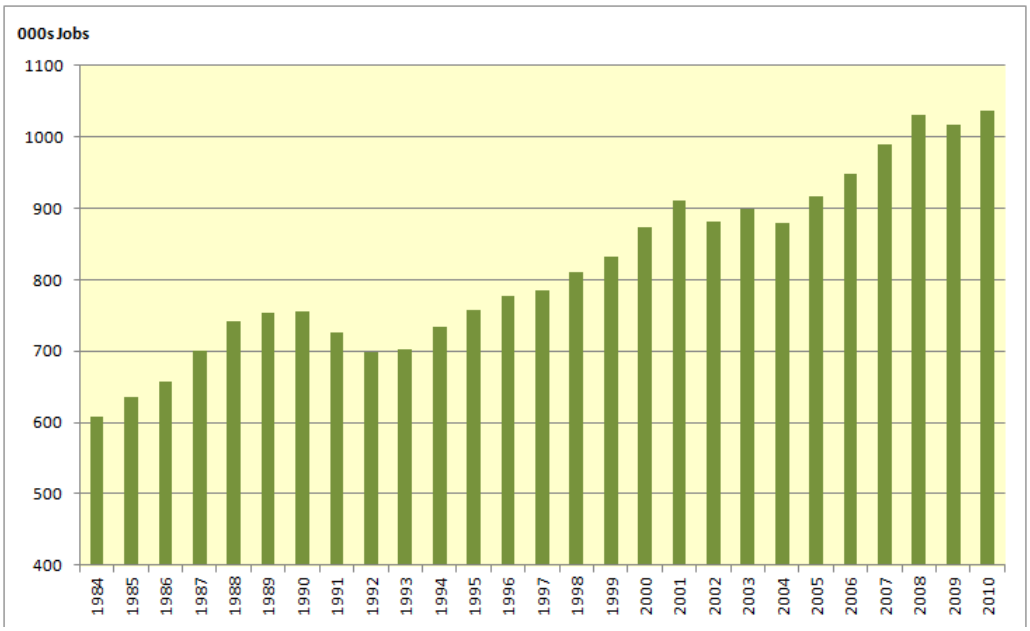
6.4.10 In taking these two data sources we have concentrated on the key sectors of Financial & Insurance (*financial services*) and Real Estate, Professional, Scientific & Technical (*business services*). These two sectors are critical to prospects for the office market given the nature of the work that takes place within them.

6.4.11 Figure 6.4 shows the historic pattern of growth for these sectors in London, between 1984 and 2010. Overall the two sectors grew by 70%, a simple acceleration of 2.7% per annum. Behind this statistic sits a further dynamic. While financial services grew by a modest 27%, businesses services doubled in size, with a 109% growth.

6.4.12 Figure 6.4 clearly shows the bubbles around Big Bang in the late-1980s and the Dotcom Boom leading up to 2001, both of which were followed by real estate slumps. These aside, there was clearly a fairly consistent growth of office jobs over the quarter century covered, from around 600,000 to over one million.

[88] GLAE (2011) *Employment Projections for London by Sector and Trend-based Projections by Borough* Working Paper 51
[89] GLAE (2011) *London's Jobs History* Working Paper 52

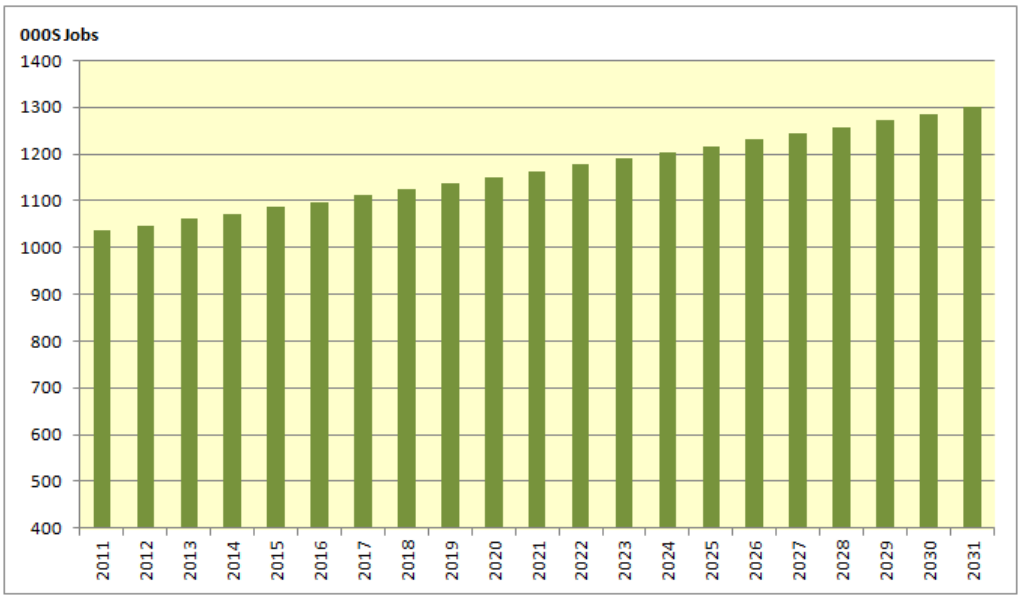
Figure 6.4 Financial and Business Services jobs, London 1984-2010



Source: see footnote 88

6.4.13 Turning from past performance to the future, Figure 6.5 shows the most recent forecasts for the same two sectors, from 2011 to 2031. The slowdown in growth is immediately apparent, but the internal dynamic is again very interesting. The data show an overall growth of 25% - far slower than the historic pattern – with a simple growth of 1.25%, or less than half the previous period. Another way of looking at this is 12,000 jobs per annum, compared with 16,000 jobs per annum in the past.

Figure 6.5 Forecast Financial and Business Services jobs, London 2011-2031



Source: see footnote 89

6.4.14 Within this overall pattern, business services are expected to increase by some 44% - twice the level of the two sectors combined. This means that financial services have a very different prospect: an overall decline in employment of 9%. In fact, the data show that financial services are expected to decline slightly in every year of the forecast period.

6.4.15 In summary, forecasts for a key indicator of overall demand for offices (financial and business services) are showing a growth rate over the coming period of less than half the preceding period. Given that the fourteen mega schemes outlined here could produce 54% more space than that provided in the seven first generation mega-schemes over the 1984-2008 period, and that the forecast growth in demand is half the level of historic growth, there would appear to be a mismatch between supply side expectations and demand side reality.

6.5 Spatial policy implications

6.5.1 The second major question to be addressed here relates to spatial policy. This is whether the GLA's "*economically liberal*" approach to strategic office policy in London remains the right one. Has the liberal approach been too flexible? Should policy exercise greater control over development? Would a more prescriptive approach mean foregoing and/or losing development?

6.5.2 The five mega schemes in East London will, inevitably, compete with one another. The key spatial issues are as follows.

- Beyond Canary Wharf, East London is an untried office market in terms of attracting corporate office occupiers, and there remain significant questions over the area's ability to reverse this history.
- Despite transport advantages Stratford currently lacks critical mass, in office terms. But it has huge public investment and profile. It will need to create an identity and a compelling case in order to compete successfully with its more established competition to the South (i.e. Canary Wharf and Wood Wharf).
- Related to the previous point, there is the question of whether the established and mature office centre of Canary Wharf provides Wood Wharf with an unassailable advantage over Greenwich and Stratford.

6.5.3 There is little doubt that the East London schemes will be competing with the other mega schemes planned elsewhere; the key spatial issues are unchanged from our observations in LOPR 09.

- What is the compelling offer in East London that will break down strong allegiances, and the practicalities of agglomeration economics, to encourage a West-East drift of large occupiers?
- Given that Stratford might already be struggling to compete with future phases of Canary Wharf and Wood Wharf, will it also struggle to compete with King's Cross, which has many of the transport advantages boasted by Stratford?
- Is it possible that, in a zero sum game, the competition will dilute occupational demand to the detriment of the market overall?

6.5.4 The necklace of mega schemes around the CAZ boundary has grown in recent years, and there are now multiple schemes in West London (Brent Cross, Earl's Court and White City). A spatial policy question here is whether their emergence will in the end defeat the prospects of mega schemes in East London by allowing demand to maintain the benefits of agglomeration in the West.

6.5.5 There can be little doubt that the GLA's economically liberal approach to strategic office policy has provided the context for the growth of mega schemes, particularly the second generation. However, it is another leap altogether to draw the conclusion that the policy was the wrong one.

6.5.6 The property development market will respond to market signals and adjust its behaviour accordingly. It is much better informed than twenty years ago, and it is a noticeable fact that when the financial crisis hit in 2008, there did not follow a huge wall of over-building as has been the pattern in the past. It is highly unlikely the GLA's liberal approach will directly lead to oversupply. Greater control over office development overall would be unlikely to lead to a "better" market outcome.

6.5.7 The key spatial policy question remains that over "East versus West". There was clearly a strong desire by the GLA to promote office development in the East to help underpin regeneration and jobs growth there. Whether this is achievable while continuing to allow expansion of mega schemes around CAZ and in West London, is another issue.

6.5.8 Growth in the East would, over the past decade at least, have almost certainly had to come at the expense of growth in the West or within CAZ. This would have only been possible by restricting growth in the West and even then, it is highly questionable whether a supply squeeze in the West would have resulted in a demand bulge in the East.

6.5.9 Given the comments above, especially those referring to competition among mega schemes, it is worth concluding this section with a reference to Strategic Outer London Development Centres (*The London Plan*, p67, Table 2.1). The Plan identifies three office SOLDCs – Brent Cross/Cricklewood (subject to demand), Croydon and Stratford. The first and last of these we have identified as mega schemes.

6.5.10 Brent Cross/Cricklewood will have to compete for office demand with strong proposals for Earl's Court, White City and elsewhere. Croydon's office market has been struggling for some considerable time and is likely to suffer from the Outer London issues we have identified in Section 4.1. Stratford is an untested market but will have to compete with established centres for occupiers in a zero sum game.

6.5.11 Given these competitive pressures, the SOLDCs will need to differentiate themselves (a tricky problem given the patchworks of ownerships in two of them), and given the potential supply of office space in established mega schemes already being delivered.

6.6 Mega schemes: overview

6.6.1 As we noted in LOPR 09, comparing one period's mega schemes with those of a subsequent, future period is not a very "scientific" method of looking at the development pipeline. However it provides a useful and graphic baseline against which to view the scale of proposed development in London compared to historic and forecast growth in office jobs.

6.6.2 We have also emphasised the long-term nature of delivery within mega schemes (twenty year projects), and the fact that the full allocation of offices within some mega schemes might never be delivered. With these caveats, there remain important market and spatial policy implications.

6.6.3 The fourteen second generation mega schemes discussed have potential capacity of 3.74 million square metres of office space – half as much again as that provided in the seven first generation mega-schemes. The latter were delivered during a period of massive expansion in the London office economy. At first generation completion rates, the total of 3.74 million sq m equates to 37 years of supply.

6.6.4 In terms of demand, we appear to be moving into an era of more modest growth. Forecasts for employment in financial and business services suggest a growth rate over the coming period of less than half the preceding period.

6.6.5 Given these supply/demand dynamics, and accepting the caveats given above, there would appear to be a mismatch between supply side capacity and demand side reality. However, it is very unlikely that this mismatch will result in oversupply. The development industry will respond to market signals and, for the foreseeable future, the signals suggest caution.

6.6.6 Rather, the key question remains a spatial policy one rather than a market one. More specifically, whether the GLA's liberal approach to strategic office policy in London remains the right one, and whether policy should exercise greater control over office development. The fact is that there is so much development capacity, as shown by our figures here, that greater control is unlikely to be effective. The GLA has ensured that London Global City has capacity to grow and accommodate international business.

6.6.7 In spatial policy terms, there is at least the possibility that allocations of office capacity in West London schemes and in East London schemes have over-estimated the long-term scale of demand for offices. It might be the case that in an era of slower growth in the office economy, growth will concentrate on established locations and central locations. Given this observation, and given that the mega scheme pipeline is a fact and therefore beyond any policy control (setting aside whether such control is desirable), spatial policy will need to address reasonably generous supply conditions for the foreseeable future.

6.6.8 The first is likely to be the "Crossrail effect". The necklace of mega schemes around Central London is likely to be complemented by those opportunities closest to the Heathrow-Stratford axis (e.g. Tottenham Court

Road and Farringdon), and it is likely that this will have less positive implications for locations further away from this axis, such as Croydon and Brent Cross/Cricklewood. Such areas are likely to find it even harder to compete for occupiers than is already the case. LOPR 09 expressed some scepticism that the office content at Brent Cross/Cricklewood would be developed, and we would suggest that any pragmatism shown there by the developer should be backed by spatial policy that encourages a planning response that looks beyond a traditional B1a solution. The same is true in Croydon and other South London markets.

6.6.9 Another possible effect of the volume of potential supply might be to encourage the provision of more innovative space types and styles. Put simply, not everything can be Grade A institutional prime property. We anticipate more development that takes areas such as Park Royal as an inspiration. At Park Royal much space is occupied in non-traditional manners as occupiers leverage cost savings: an inventive and flexible market-led solution. The proposal for "pavilion space" at the Royal Docks may be another indicator of the kind of innovative thinking that will be needed to leverage development success. Spatial policy should encourage such thinking, using all of the flexibility that the B1 Use Class permits.

6.6.10 LOPR 09 noted concern at the number of apparently competing schemes in East London and, in particular, Wood Wharf, Stratford and Greenwich Peninsula. Modest progress at Greenwich since LOPR 09 has seen thoughts of “first mover advantage" recede, but concern remains that a very high level of provision in the pipeline is in East London. From a spatial policy viewpoint there is little that can be done, given that consents are in place, but it is essential to closely monitor the situation, and to ensure that new, markedly "off-pitch" proposals are robustly tested before large new consents are granted. The main area of testing should be around viability in the context of supply/demand dynamics.

6.6.11 Given the volume in the pipeline there is little that spatial policy can do to affect values in a way to foster development (again, setting aside whether this would be a proper policy aim). The 'economically liberal' approach is the way forward for the immediate future; although this must come with the caveat that there is a difference between on the one hand a liberal policy approach toward a private sector desire to build and, on the other, this combined with public sector promotion of development in targeted areas.

6.6.12 The most appropriate response is to ensure that a robust and accurate collection of market intelligence is maintained to ensure that no-one is caught off guard by sudden shifts in market sentiment leading to excessive construction. To an extent the market provides a self-correcting mechanism, but propensity to boom-bust needs to be heeded as a matter of efficient resource allocation.

7.0 Employment and floorspace need forecasts

7.0.1 This Chapter sets out office employment forecasts for London. The forecasts are disaggregated to borough level and converted into demand for office floorspace through the application of employment density ratios. Forecast demand for floorspace by borough is then compared against the pipeline of office supply identified through the planning system.

7.0.2 The method for producing the forecasts is set out in this Chapter, with changes in input data and assumptions being compared with those used to inform LOPR 09.

7.0.3 The office employment floorspace projections that informed LOPR 09 were based on the GLA triangulated employment projections set out in GLA Economics *Working Paper 39*[90] and the London sector employment forecasts set out in GLA Economics *Working Paper 38*.[91] The triangulated employment projections are based on three elements.

- Trend projections produced by GLA Economics.
- Capacity projections based on the LESD compiled by RTP.
- Accessibility projections based on assessment by SKM Colin Buchanan.

7.0.4 Only one leg of this triangulated data has been updated since LOPR 09. The trend forecasts were recently updated and the results are published in GLA Economics *Working Paper 51.*[92] On its own it would be inadvisable to use the new trend borough forecasts as the basis of new projections. We therefore first prepare an update of the triangulated projections and then use these to prepare office demand forecasts.

7.0.5 The steps we have undertaken to produce the forecasts are as follows.

- **London sector forecasts** From GLA Economics WP51.
- **Borough forecasts – trend** Based on GLA Economics WP51, scaled up for self-employed.
- **Borough sector forecasts** By reconciliation of borough and London sector trend forecasts.
- **Borough sector forecasts – triangulated** Update existing triangulated.
- **Capacity update** Partial update of the LESD.
- **Update triangulated forecasts** Update with new capacity data.
- **Office employment forecasts** Apportioning GLA forecast sectors to 'Office' sectors.
- **Floorspace forecasts** Apply employment density ratios.

7.0.6 We have not updated the accessibility leg of the triangulation model but have reviewed the existing scheme assumptions with TfL to ascertain

[90] Hoffman J (2009) *Borough Employment Projections to 2031* GLAE, Working Paper 39
[91] Hoffman J, Ram J & Smart E (2009) *Employment Projections for London by Sector and Trend-based Projections by Borough* GLAE, Working Paper 38
[92] Hoffman J, Ram J & Smart E (2011) *Employment Projections for London by Sector and Trend-based Employment Projections by Borough* GLA Economics Working Paper 51

whether there are any major changes from the previous model.[93] The biggest potential new scheme is HS2, which might impact on the relative accessibility towards the end of the Plan period, but at this stage there is no sufficiently robust data to amend the accessibility projections.

7.0.7 We set out each of the forecast steps in the remainder of this Chapter.

7.1 Forecast approach

7.1.1 **London sector forecasts** The GLA's latest forecasts for London set out in Working Paper 51 show a projected growth of 590,000 jobs over the period 2011-31, an increase of 12.3%. This compares with a projected increase of 655,000, or 13.7%, in the projections set out in Working Paper 39. When the new projections are extended forward to 2036, they show a growth of 749,000, or 15.6%, over a twenty-five year period (Figure 7.1).

Figure 7.1 London sector forecasts

Sector	2011 N°	2031 N°	2036 N°	11-31 N°	11-31 %	11-36 N°	11-36 %
Primary & Utilities	27,000	13,000	11,000	-14,000	-51.9	-16,000	-59.3
Manufacturing	123,000	42,000	32,000	-81,000	-65.9	-91,000	-74.0
Construction	248,000	240,000	236,000	-8,000	-3.2	-12,000	-4.8
Wholesale	175,000	121,000	109,000	-54,000	-30.9	-66,000	-37.7
Retail	397,000	408,000	407,000	11,000	2.8	10,000	2.5
Transport & Storage	256,000	199,000	186,000	-57,000	-22.3	-70,000	-27.3
Accommodation & Food	323,000	423,000	448,000	100,000	31.0	125,000	38.7
Information & Communication	361,000	491,000	526,000	130,000	36.0	165,000	45.7
Financial & Insurance	360,000	327,000	317,000	-33,000	-9.2	-43,000	-11.9
Professional, Scientific, Technical & Real Estate	676,000	973,000	1,056,000	297,000	43.9	380,000	56.2
Administrative & Support Service	492,000	671,000	719,000	179,000	36.4	227,000	46.1
Public Admin & Defence	252,000	212,000	201,000	-40,000	-15.9	-51,000	-20.2
Education	339,000	386,000	395,000	47,000	13.9	56,000	16.5
Health	469,000	511,000	518,000	42,000	9.0	49,000	10.4
Arts, Ent'ment & Recreation	167,000	201,000	209,000	34,000	20.4	42,000	25.1
Other Services	137,000	175,000	184,000	38,000	27.7	47,000	34.3
All Sectors	**4,803,000**	**5,393,000**	**5,552,000**	**590,000**	**12.3**	**749,000**	**15.6**

Source: GLA Economics, *op cit*

[93] Details of scheme assumptions are set on in GLA Economics Working Paper 39.

7.1.2 The fastest growing sector, both in absolute and percentage terms, is projected to be Professional, Scientific, Technical and Real Estate, where jobs are projected to grow by 297,000, or 43.9%, over the period 2011-31. Administrative and Support Services are projected to grow by 227,000 and Information and Communication by 165,000. These are the three sectors projected to have the highest employment growth in the GLA forecasts and all are predominantly office-based sectors.

7.1.3 Two other sectors with high levels of office employment are forecast to decline: Financial and Insurance by 33,000, or 9.2%, between 2011 and 2031, and Public Administration by 40,000, or 15.9%.

7.1.4 **Borough forecasts - trend** In the current GLA borough projections the forecasts are for employees only and do not include the self-employed. Working Paper 51 states that, "*This is because we have doubts about the usefulness of a workplace-based measure of self-employed at the borough level*". Even if this is true in London, there are many workers who are technically self-employed but who occupy office space. Therefore we need an estimate that includes self-employed.

7.1.5 Estimates of workplace self-employment are derived from the Annual Population Survey (APS).[94] These are reconciled with the London sector totals in the GLA Economics forecasts.

7.1.6 Figure 7.2 summarises the GLA trend employment projections by borough (after adjusting for self-employed). Over the period 2011-31, London as a whole is projected to grow by 590,000 jobs, or 12.3%.

7.1.7 These trend projections show Tower Hamlets as overwhelmingly the fastest growing borough in London, owing to the "Canary Wharf effect". Recognising that the borough's historic growth came from a very low base, on these trend projections Tower Hamlets accounts for 30% of all the growth in London, twice as much as the next highest borough, Southwark. There are seven other boroughs where employment growth is projected to be above the London average: all Central and West London boroughs.

7.1.8 The two largest employment boroughs, City and Westminster, are projected to be among the larger employment growth boroughs in absolute terms, but in percentage terms are projected to grow at well below London's average.

7.1.9 There are seven boroughs that, on the trend projections, are forecast to experience a loss in employment over the period 2011-31. The largest trend losses are projected for Barking & Dagenham, Croydon and Brent.

[94] Because of fluctuations due to sample size we use the average rate of self-employment by borough over eight years.

Figure 7.2 Borough trend employment projections adjusted for self-employed

Borough	2011 Nº	2031 Nº	2011-31 Nº	2011-31 %
Tower Hamlets	232,637	407,399	174,763	75.1
Southwark	231,518	333,459	101,941	44.0
Islington	208,300	273,294	64,994	31.2
Hammersmith & Fulham	138,270	177,597	39,327	28.4
Hillingdon	200,281	238,811	38,530	19.2
Kensington & Chelsea	131,980	153,601	21,622	16.4
Richmond upon Thames	86,192	97,696	11,504	13.3
Camden	315,596	355,440	39,844	12.6
London	**4,803,000**	**5,393,000**	**590,000**	**12.3**
Bromley	124,979	139,635	14,657	11.7
Wandsworth	126,353	141,170	14,818	11.7
Hounslow	139,032	155,144	16,112	11.6
Merton	78,635	86,014	7,379	9.4
Newham	83,994	91,047	7,054	8.4
City	360,150	387,701	27,551	7.6
Barnet	141,936	152,392	10,456	7.4
Bexley	75,167	80,079	4,912	6.5
Harrow	77,796	82,805	5,009	6.4
Waltham Forest	66,128	69,989	3,861	5.8
Havering	84,799	89,750	4,951	5.8
Kingston upon Thames	90,351	95,299	4,948	5.5
Sutton	73,636	77,294	3,658	5.0
Redbridge	79,486	83,322	3,836	4.8
Westminster	653,726	682,298	28,572	4.4
Lambeth	146,810	150,654	3,844	2.6
Greenwich	81,856	83,283	1,426	1.7
Hackney	99,330	100,768	1,438	1.4
Lewisham	73,452	72,401	-1,051	-1.4
Enfield	109,501	105,072	-4,429	-4.0
Haringey	74,549	70,948	-3,601	-4.8
Ealing	122,952	111,540	-11,411	-9.3
Brent	108,820	94,880	-13,940	-12.8
Croydon	137,454	119,446	-18,008	-13.1
Barking & Dagenham	47,335	32,771	-14,564	-30.8

Source: GLA Economics/RTP

7.1.10 In order to understand what impact these new trend projections might have on the borough level office employment forecasts, we have compared the trend projections from Working Paper 51 with the trend projections from Working Paper 39 (Figure 7.3). As Working Paper 51 excludes self-employed (included in Working Paper 39) we compare the two projections in terms of growth between 2011 and 2031.

7.1.11 While for London as a whole the two projections are broadly similar, with a growth of 12.1% in Working Paper 51 compared with a growth of 13.7% in Working Paper 39, there are considerable differences at the borough level.

Figure 7.3 Comparison of trend forecasts, by borough, from WP39 and WP51

Borough	WP51 2011-31	WP39 2011-31	WP51-WP39
	% change		
Barking & Dagenham	-31.0	-3.9	-27.0
Barnet	7.1	18.1	-11.0
Bexley	6.3	0.0	6.3
Brent	-13.0	-3.7	-9.3
Bromley	11.4	6.0	5.4
Camden	12.3	12.7	-0.3
City	7.4	14.8	-7.4
Croydon	-13.3	-12.2	-1.1
Ealing	-9.5	-7.9	-1.7
Enfield	-4.3	1.8	-6.1
Greenwich	1.5	10.7	-9.2
Hackney	1.2	11.5	-10.3
Hammersmith & Fulham	28.1	39.0	-10.9
Haringey	-5.1	3.4	-8.5
Harrow	6.2	9.5	-3.4
Havering	5.6	11.6	-6.1
Hillingdon	18.9	28.6	-9.7
Hounslow	11.3	-1.6	12.8
Islington	30.9	31.5	-0.7
Kensington & Chelsea	16.1	24.8	-8.7
Kingston upon Thames	5.2	10.1	-4.9
Lambeth	2.3	-8.9	11.2
Lewisham	-1.7	19.2	-20.9
Merton	9.1	3.7	5.4
Newham	8.1	4.7	3.5
Redbridge	4.5	0.0	4.5
Richmond upon Thames	13.0	23.2	-10.2
Southwark	43.6	25.3	18.3
Sutton	4.7	8.1	-3.4
Tower Hamlets	74.7	53.8	20.9
Waltham Forest	5.6	-6.9	12.5
Wandsworth	11.4	11.5	-0.1
Westminster	4.1	11.8	-7.7
London	**12.1**	**13.7**	**-1.6**

7.1.12 For Barking & Dagenham, a projected loss of 3.9% is now a projected loss of 31.0%. For Lewisham, a projected increase of 19.2% is turned into a projected loss of 1.7%. The two largest employment boroughs, City and Westminster, also see a scaling back of their growth. For the City, projected growth in Working Paper 51 is 7.4%, half that in Working Paper 39. For Westminster, growth is scaled back from 11.8% to 4.1%.

7.1.13 Conversely there are other boroughs where the trend projections under Working Paper 51 are much higher than in Working Paper 39. Tower Hamlets is projected to rise by 74.7% compared to 53.8% previously, and Southwark is projected to rise by 43.6% compared to 25.3%.

7.1.14 These levels of change can be expected to feed through into significant spatial differences in terms of office employment forecasts.

7.1.15 **Borough sector forecasts – triangulated** GLA Economics produces the borough level workplace employment projections using a method which combines projections made on the basis of the following:

- **Historic trends** historical distribution of employment across London.
- **Site capacity** development pipeline of business space across London.
- **Accessibility** relative transport accessibility of boroughs, a factor attracting or repelling businesses.

7.1.16 The rules setting out how these three different projections are combined to produce a single unified or triangulated set of employment projections are most recently set out in GLA Economics Working Paper 39.[95]

7.1.17 **Capacity update** A partial update of the London Employment Sites Database (LESD) has been carried out. The detail behind this exercise is set out in Appendix A9.

7.1.18 The updated LESD is compared with the version used to inform LOPR 09. Overall, an additional 1.5 million sq m of capacity has been identified, an increase of 18% (Figure 7.4). The largest increases in capacity are found in Hammersmith & Fulham (new schemes at Earl's Court, White City and Old Oak Common); Lambeth (new schemes at Waterloo); Tower Hamlets (further large schemes at Canary Wharf), and Westminster.

7.1.19 The biggest reduction is found in Southwark: a fact that can be explained by recent development completions.

[95] Hoffman J (2009) *op cit*

Figure 7.4 Office floorspace, LESD 2009 and LESD 2012 compared

Borough	LESD 2009 gross sq m	LESD 2012 gross sq m	2012 as % of 2009
Barking & Dagenham	90,615	70,739	78
Barnet	442,440	585,870	132
Bexley	38,774	31,118	80
Brent	171,050	286,241	167
Bromley	28,835	23,474	81
Camden	621,694	727,762	117
City	1,064,950	974,615	92
Croydon	155,063	105,605	68
Ealing	96,175	79,890	83
Enfield	31,127	37,702	121
Greenwich	474,664	384,398	81
Hackney	92,529	197,144	213
Hammersmith & Fulham	274,491	455,716	166
Haringey	87,221	19,819	23
Harrow	11,542	11,001	95
Havering	107,872	11,449	11
Hillingdon	62,345	171,278	275
Hounslow	202,767	347,884	172
Islington	139,385	237,506	170
Kensington & Chelsea	56,899	169,537	298
Kingston upon Thames	31,503	30,285	96
Lambeth	270,168	513,688	190
Lewisham	99,529	103,277	104
Merton	3,327	13,140	395
Newham	850,023	674,920	79
Redbridge	3,601	6,491	180
Richmond upon Thames	2,636	6,057	230
Southwark	429,179	252,026	59
Sutton	12,885	30,943	240
Tower Hamlets	1,669,396	1,959,312	117
Waltham Forest	8,053	9,046	112
Wandsworth	192,573	344,771	179
Westminster	239,237	651,422	272
London	**8,062,550**	**9,524,127**	**118**

7.1.20 **Updated triangulated forecasts** The sites floorspace data feed into the triangulated forecasts by updating the capacity leg of the forecasts.

7.1.21 Having calculated trend, capacity and accessibility-based estimates of workplace employment for all boroughs for 2011, 2016, 2021, 2026, 2031 and 2036, we then combine them into a single set of projections for each borough. This is done by using the GLA Economics' triangulation rules, also set out in GLA Economics Working Paper 39.[96] A comparison of the trend and triangulated projections is set out in Figure 7.5.

[96] Detail on the method used is set out in Appendix A7.

Figure 7.5 Triangulated borough employment projections[97]

Borough	Trend 2011	Trend 2031	Trend 2011-31	Tri 2011	Tri 2031	Tri 2011-31	Tri-trend
Barking & Dagenham	47,335	32,771	-14,564	50,255	55,062	4,807	19,371
Barnet	141,936	152,392	10,456	135,475	146,832	11,357	901
Bexley	75,167	80,079	4,912	73,257	77,494	4,238	-674
Brent	108,820	94,880	-13,940	111,390	121,340	9,950	23,890
Bromley	124,979	139,635	14,657	125,451	134,596	9,144	-5,512
Camden	315,596	355,440	39,844	316,457	369,414	52,957	13,112
City	360,150	387,701	27,551	362,749	439,564	76,815	49,265
Croydon	137,454	119,446	-18,008	140,461	151,348	10,887	28,895
Ealing	122,952	111,540	-11,411	125,790	135,213	9,423	20,835
Enfield	109,501	105,072	-4,429	108,380	117,617	9,237	13,665
Greenwich	81,856	83,283	1,426	79,278	85,652	6,374	4,947
Hackney	99,330	100,768	1,438	94,331	110,124	15,793	14,355
Hammersmith & Fulham	138,270	177,597	39,327	138,612	174,974	36,363	-2,965
Haringey	74,549	70,948	-3,601	76,831	81,187	4,357	7,958
Harrow	77,796	82,805	5,009	78,841	86,671	7,831	2,822
Havering	84,799	89,750	4,951	82,288	87,691	5,403	452
Hillingdon	200,281	238,811	38,530	199,700	213,110	13,410	-25,120
Hounslow	139,032	155,144	16,112	129,454	135,615	6,161	-9,950
Islington	208,300	273,294	64,994	208,816	250,037	41,222	-23,772
Kensington & Chelsea	131,980	153,601	21,622	139,489	158,306	18,817	-2,804
Kingston upon Thames	90,351	95,299	4,948	84,295	87,691	3,396	-1,553
Lambeth	146,810	150,654	3,844	147,620	166,001	18,382	14,538
Lewisham	73,452	72,401	-1,051	74,439	81,573	7,134	8,185
Merton	78,635	86,014	7,379	82,288	89,730	7,442	63
Newham	83,994	91,047	7,054	87,306	105,025	17,719	10,666
Redbridge	79,486	83,322	3,836	73,257	79,534	6,277	2,441
Richmond upon Thames	86,192	97,696	11,504	89,313	92,789	3,476	-8,027
Southwark	231,518	333,459	101,941	232,091	269,191	37,101	-64,840
Sutton	73,636	77,294	3,658	71,250	75,455	4,205	547
Tower Hamlets	232,637	407,399	174,763	233,212	294,989	61,777	-112,986
Waltham Forest	66,128	69,989	3,861	67,016	71,376	4,360	499
Wandsworth	126,353	141,170	14,818	125,440	133,576	8,136	-6,681
Westminster	653,726	682,298	28,572	658,170	714,221	56,051	27,479
London	**4,803,000**	**5,393,000**	**590,000**	**4,803,000**	**5,393,000**	**590,000**	

[97] These projections follow the GLA's existing triangulation model, but we believe that there is a scaling factor which disproportionately favours boroughs that have high employment numbers but low projected growth.

7.1.22 There are considerable differences between the two projections. In general, the triangulation has the effect of levelling out the extreme differences in the trend projections. The range between highest and lowest growth is reduced from 193,000 to 73,000. For example, under the trend projections, seven boroughs are projected to have negative growth, whereas under the triangulated projections all boroughs have positive growth. For the borough with the highest trend growth, Tower Hamlets, the projection is reduced from 175,000 to 62,000. Under the triangulated projections, the City has the highest forecast growth with 77,000 over the period 2011-31, up from 28,000 under the trend growth projection.

7.2 Office forecasts by sector

7.2.1 The GLA does not produce sector forecasts at the borough level. To generate borough sector forecasts we combine the sector forecast at the London level with the borough forecasts in order that both totals are reconciled. These sector forecasts then form the basis for estimating office employment.

7.2.2 **Sectoral definition of office employment** LOPR 09 used a definition of office employment drawn from the SIC 2003 categorisation. Current statistics and the GLA's Working Paper 51 employment projections use the new SIC 2007 categorisation. In general SIC 2007 is more useful as it groups categories of activity together that better reflect the nature of office activity with the introduction of categories such as Information and Communication and Administrative and Support Services.

7.2.3 Our approach, as previously, is to review the most disaggregate level of activity and assess whether this is likely to be primarily an office-based sector.[98] The proportion of employment in each borough that is in office sectors is then calculated in terms of each of the GLA's 16 forecast sectors. For many of these sectors that proportion will be zero[99] (Figure 7.6).

Figure 7.6 Proportion of London employment in each sector in offices

Sector	% office
Information & Communication	85.0
Financial & Insurance Activities	100.0
Professional, Scientific, Technical & Real Estate	94.1
Administrative & Support Service Activities	23.4
Public Administration & Defence	60.4
Other Services	46.5

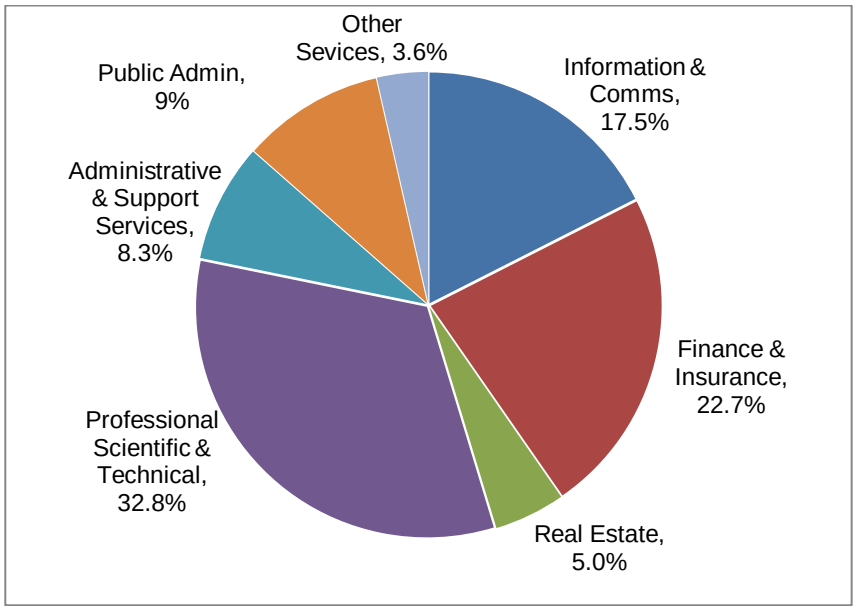
7.2.4 The profile of "office" employment in each of the above sectors varies by borough, and borough-specific proportions have therefore been applied. We review the nature of office employment by borough further below.

[98] A full schedule of the selected sectors is set out in the Appendix.
[99] We assume typical sectors. Thus all manufacturing sectors are allocated zero office employment although in reality there will be some activity in manufacturing sectors that occupy office premises

7.2.5 Such matches are not perfect, and as we discuss later, London's employment workspace is occupied by activities that do not necessarily conform to neat traditional categorisations. In the non CAZ area in particular we suspect that a proportion of employment in these 'office activity sectors' will not be occupying office floorspace. They will incorporate a combination of firms that seek cheaper accommodation and are not prepared to pay standard office rents, and of self-employed workers who are working from home. Thus in Outer London the effective demand for office space will be less than the number of people working in office sectors.

7.2.6 Figure 7.7 shows the composition of office employment by sector for London as a whole. The largest office employment sector is Professional Scientific and Technical. This accounts for 33% of all London's office employment. Finance and Insurance accounts for 23%; Information & Communication for 18%; and Administrative and Support Services for 8%.

Figure 7.7 Composition of office employment in London by sector



7.2.7 **Office segments by borough** The make-up of office activity varies considerably by borough. Looking at the proportion of total office employment in each borough that derives from each sector helps to illustrate the nature of the role of the office market better.

7.2.8 Finance and Insurance is very concentrated in the City and, to a lesser extent, in Tower Hamlets: 46% of all London's employment in the Finance and Insurance sector is located in the City, with a further 18% in Tower Hamlets, and 12% in Westminster. Between them these three boroughs account for three-quarters of all London's employment in this sector.

7.2.9 If we look at how important the sector is to office employment in each borough, a similar pattern is evident (Figure 7.8). The sector accounts for just over half of all office employment in the City and in Tower Hamlets.

For London as a whole the sector accounts for 23% of office employment and the only other boroughs that exceed this average are Havering and Bromley. The GLA projections show an overall decline for this sector, which might impact on the office growth prospects for these boroughs. For many boroughs this is not a particularly important sector; representation is especially low in Lambeth and Hammersmith.

7.2.10 Professional Scientific and Technical is the largest office employment sector across London, accounting for 33% of office employment, with half of this (49.9%) in Camden, City and Westminster (Figure 7.9).

7.2.11 The sector is most prominent in Central and West London boroughs. It accounts for over 40% of all office employment in the large Central London office markets of Camden and Southwark, and also in Richmond. There are thirteen London Boroughs where it accounts for more than a third of all office employment. There is much lower representation in the East with all East London boroughs having below the London average representation.

7.2.12 This is the sector that is projected to have the highest growth in the GLA forecasts, hence implying that Central and West London boroughs might be key locations for future office growth.

7.2.13 The Information and Communication sector is similarly concentrated, and in this case the concentrations occur in Hammersmith, Hounslow and Lambeth (Figure 7.10). The national television centres of the BBC, Sky and Thames TV go a large way to driving these clusters. For London as a whole these activities account for 18% of all office employment but there is a noticeable East-West divide, with representation on the whole much lower in East London boroughs.

Figure 7.8 Borough office employment in Finance and Insurance

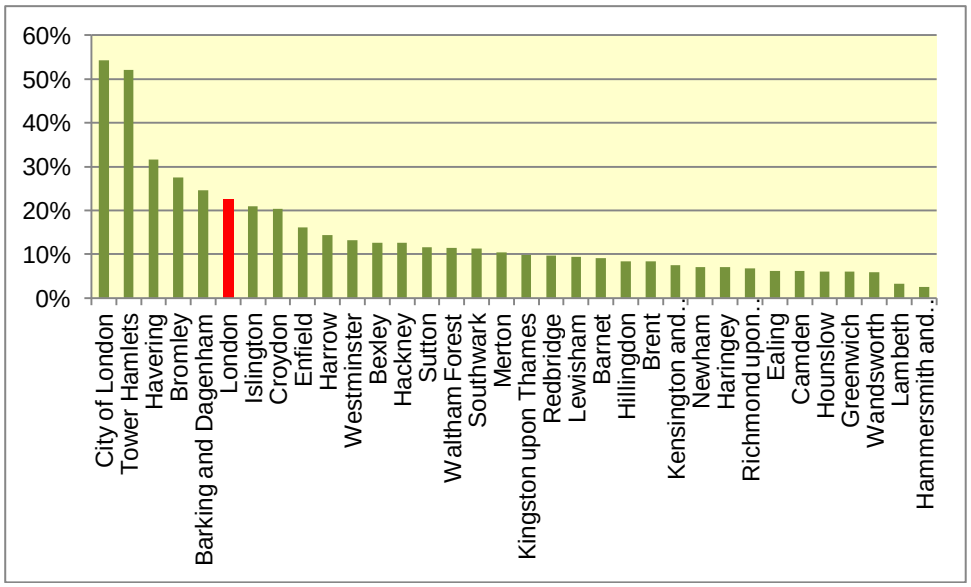


Figure 7.9 Borough office employment in Professional, Scientific and Technical

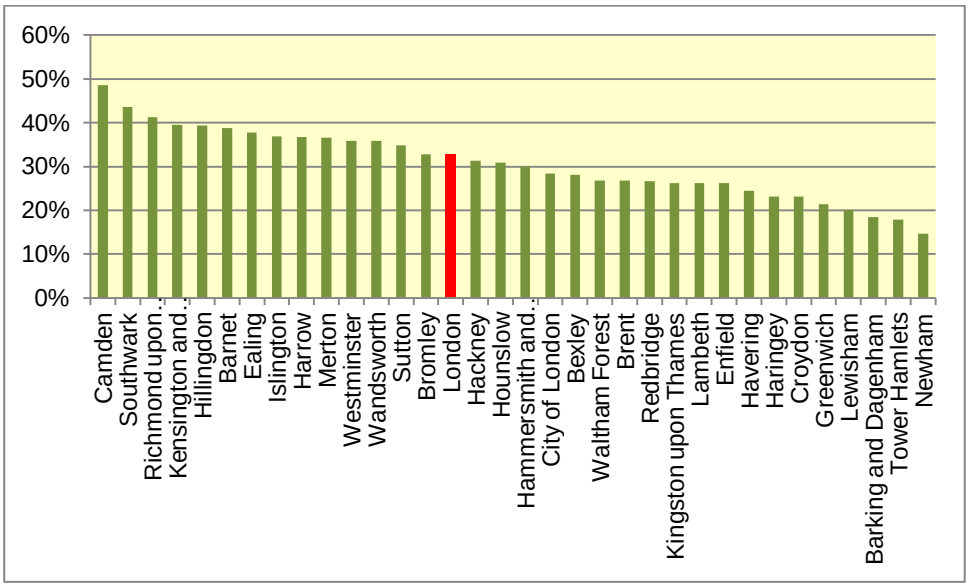
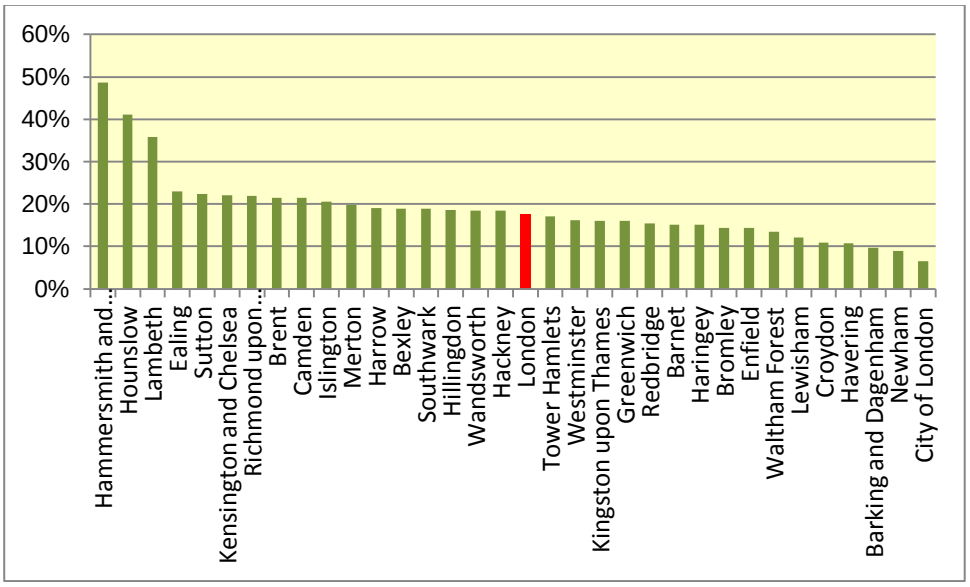


Figure 7.10 Borough office employment in Information & Communication



7.2.14 Recent requirements from some large employers in this sector (paragraphs 1.8.17-19) suggest a shifting preference in this sector, a trend that will be interesting to watch.

7.2.15 Real Estate is a smaller sector accounting for just over 5% of all office employment in London as a whole (Figure 7.11). In the GLA's forecast sectors Real Estate has been included with Professional, Scientific and Technical. It accounts for more than 10% of office employment in Haringey, Kensington, Newham and Wandsworth.

7.2.16 Administrative and Support Services account for 8% of office employment across London as a whole (Figure 7.12), with most boroughs falling in the 5-10% range. The sector accounts for a below average share in some of the larger office employment boroughs such as, Camden, City and Tower Hamlets. It accounts for the highest share of office employment in the South West London boroughs of Kingston, Merton and Richmond.

Figure 7.11 Borough office employment in Real Estate

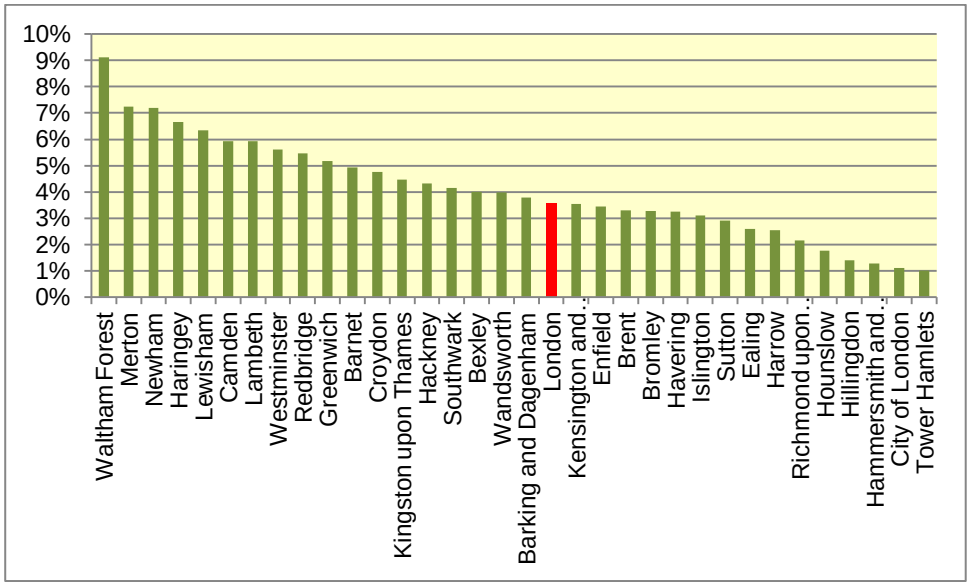
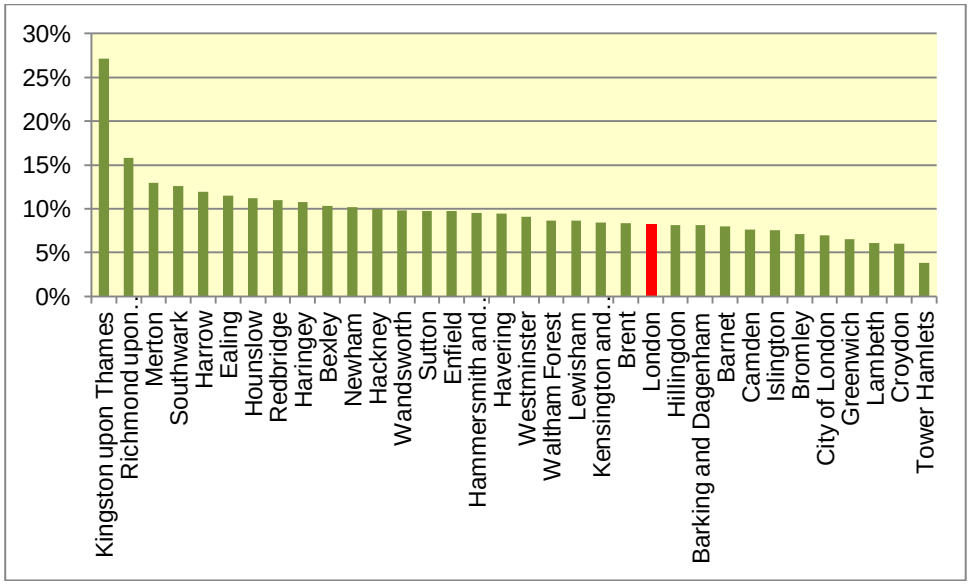


Figure 7.12 Borough office employment in Admin and Support Services



7.2.17 Public Administration also exhibits a mixed pattern. For London as a whole it accounts for less than 10% of office employment, but for eleven boroughs it is more than double that figure. In Greenwich, Lewisham and Newham it accounts for more than 35% of office employment and in Croydon it

accounts for more than 30% (Figure 7.13). Public Administration is projected to decline and hence these boroughs might be vulnerable.

7.2.18 Other Services only accounts for a small proportion of office employment. For London as a whole it represents just 3.6% of office employment and it forms its highest share in Waltham Forest with just over 9% (Figure 7.14).

Fig 7.13 Borough office employment in Public Administration

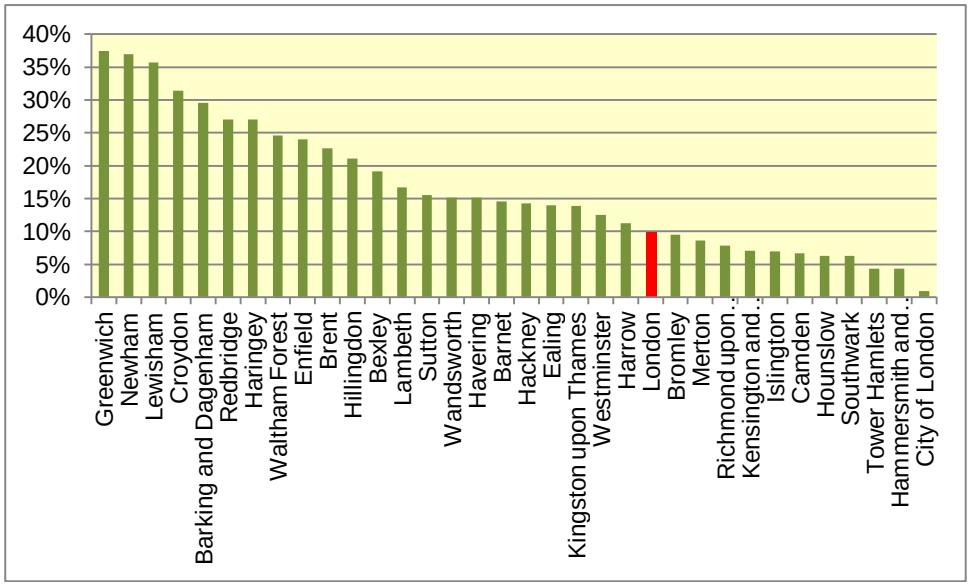
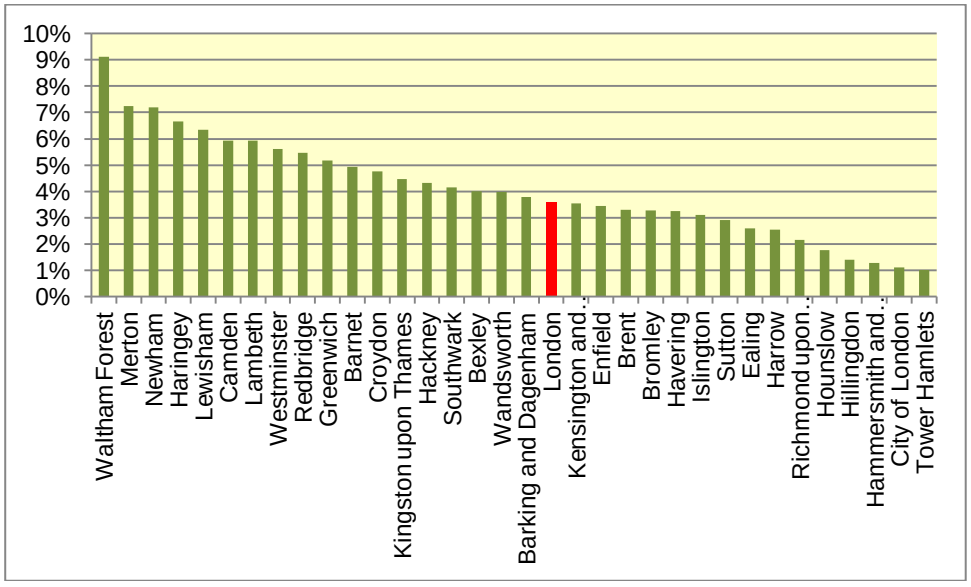


Fig 7.14 Borough office employment in Other Services



7.3 Office forecasts by borough

7.3.1 Each borough's office share of the higher SIC level sector is held constant going forward. The results of the office employment forecasts by borough are set out in Figure 7.15.

Figure 7.15 Office employment projections by borough

Borough	2011 (N°)	2031 (N°)	2036 (N°)	11-31 (N°)	11-31 (%)	11-36 (N°)	11-36 (%)
City	287,801	345,602	353,607	57,802	20.1	65,806	22.9
Westminster	301,329	349,148	363,171	47,819	15.9	61,842	20.5
Camden	126,779	169,412	182,242	42,633	33.6	55,462	43.7
Tower Hamlets	122,516	154,642	160,910	32,126	26.2	38,394	31.3
Islington	91,271	116,660	122,870	25,390	27.8	31,600	34.6
Southwark	90,772	115,973	123,066	25,201	27.8	32,295	35.6
Hammersmith & Fulham	52,684	76,065	81,182	23,381	44.4	28,498	54.1
Hillingdon	30,337	40,593	44,356	10,257	33.8	14,020	46.2
Lambeth	35,782	45,336	48,420	9,554	26.7	12,638	35.3
Kensington & Chelsea	35,020	44,548	47,421	9,528	27.2	12,400	35.4
Hounslow	36,230	45,175	48,636	8,944	24.7	12,406	34.2
Hackney	28,901	37,487	39,903	8,586	29.7	11,002	38.1
Ealing	23,140	30,545	32,665	7,405	32.0	9,525	41.2
Barnet	26,992	33,724	36,283	6,731	24.9	9,290	34.4
Wandsworth	26,814	33,135	35,673	6,321	23.6	8,859	33.0
Brent	15,677	20,636	22,331	4,959	31.6	6,654	42.4
Harrow	17,642	22,405	24,095	4,763	27.0	6,453	36.6
Croydon	38,549	43,222	44,552	4,673	12.1	6,002	15.6
Merton	16,604	21,164	22,169	4,560	27.5	5,565	33.5
Richmond upon Thames	27,154	31,672	33,767	4,518	16.6	6,614	24.4
Bromley	24,321	28,381	30,203	4,059	16.7	5,882	24.2
Newham	13,441	17,433	18,450	3,992	29.7	5,009	37.3
Enfield	14,843	17,977	18,810	3,134	21.1	3,967	26.7
Kingston upon Thames	20,167	23,192	24,690	3,025	15.0	4,523	22.4
Redbridge	13,065	15,650	16,680	2,584	19.8	3,614	27.7
Haringey	12,664	15,158	15,980	2,494	19.7	3,317	26.2
Sutton	12,088	14,529	15,573	2,441	20.2	3,485	28.8
Bexley	8,558	10,792	11,658	2,234	26.1	3,101	36.2
Lewisham	11,819	13,806	14,615	1,987	16.8	2,796	23.7
Greenwich	11,839	13,779	14,582	1,940	16.4	2,744	23.2
Havering	10,334	11,999	12,787	1,665	16.1	2,452	23.7
Waltham Forest	7,446	8,985	9,621	1,539	20.7	2,175	29.2
Barking & Dagenham	5,428	6,740	7,185	1,311	24.2	1,757	32.4
London	**1,598,008**	**1,975,564**	**2,078,153**	**377,555**	**23.6**	**480,145**	**30.0**

7.3.2 The forecasts by CAZ, Inner London and Outer London are shown in Figure 7.16, with the resulting floorspace demand shown in Figure 7.17.[100]

Figure 7.16 Employment forecasts by area, 2011-2036

Area	2011	2016	2021	2026	2031	2036	2011-31	%
CAZ	961,729	1,019,219	1,087,369	1,142,461	1,191,002	1,243,989	229,273	23.8
Inner	275,038	293,285	308,405	323,317	342,024	362,123	66,986	24.4
Outer	361,241	376,045	386,852	412,349	442,537	472,041	81,296	22.5
London	1,598,008	1,688,548	1,782,626	1,878,127	1,975,564	2,078,153	377,555	23.6

Figure 7.17 Floorspace demand by area, 2011-2031

Central Scenario	Employment	Sq m NIA (central scenario 10.8)	Sq m GIA (central scenario 13.7)
CAZ	229,273	2,476,151	3,141,043
Inner	66,986	723,446	917,704
Outer	81,296	878,002	1,113,762
London	377,555	4,077,599	5,172,509

7.3.3 For the period 2011-31, London as a whole is projected to see office employment increase by 378,000, or 23.6%. If the projection period is carried forward to 2036, office employment is projected to grow by 480,000.

7.3.4 Growth is concentrated in the Central London boroughs as might be expected, with seven boroughs each growing by more than 20,000 jobs in the period 2011-31.

- City 58,000
- Westminster 48,000
- Camden 43,000
- Tower Hamlets 32,000
- Islington 25,000
- Southwark 25,000
- Hammersmith & Fulham 23,000

The seven boroughs together account for 67% of the total projected jobs growth in London.

7.3.5 **Floorspace forecasts** Office employment forecasts are converted into forecast of net additional demand for floorspace by application of employment density ratios. A discussion of trends in these ratios was set out in Chapter 5.0. For our central scenario we use an employment density ratio of 10.8 sq m NIA per worker and 13.7 sq m GIA per worker. (LOPR

[100] Note that Canary Wharf is included in CAZ, not in Inner London

09 used a central employment density ratio of 12 sq m NIA per worker, and 13.8 sq m GIA). As per Para 5.6.2, we assume a net-to-gross ratio of 79%.

7.3.6 Applying the central employment density assumption to the forecast change in employment generates the net change in demand for office floorspace (Figure 7.18).

Figure 7.18 Projected office floorspace demand by borough

Borough	2011-31 floorspace (NIA)	2011-31 floorspace (GIA)	2011-36 floorspace (NIA)	2011-36 floorspace (GIA)
Barking & Dagenham	14,164	17,967	18,970	24,064
Barnet	72,696	92,216	100,334	127,276
Bexley	24,129	30,608	33,487	42,479
Brent	53,560	67,942	71,862	91,159
Bromley	43,838	55,610	63,524	80,582
Camden	460,435	584,071	598,995	759,836
City	624,256	791,881	710,704	901,541
Croydon	50,466	64,017	64,826	82,233
Ealing	79,977	101,452	102,868	130,490
Enfield	33,846	42,934	42,840	54,344
Greenwich	20,950	26,576	29,631	37,588
Hackney	92,731	117,631	118,819	150,724
Hammersmith & Fulham	252,515	320,320	307,783	390,428
Haringey	26,937	34,170	35,818	45,436
Harrow	51,438	65,250	69,694	88,408
Havering	17,977	22,804	26,484	33,595
Hillingdon	110,772	140,516	151,413	192,070
Hounslow	96,598	122,537	133,982	169,959
Islington	274,208	347,838	341,279	432,918
Kensington & Chelsea	102,900	130,530	133,923	169,884
Kingston upon Thames	32,671	41,443	48,850	61,967
Lambeth	103,183	130,890	136,489	173,138
Lewisham	21,461	27,224	30,195	38,303
Merton	49,250	62,475	60,104	76,243
Newham	43,111	54,687	54,098	68,625
Redbridge	27,910	35,404	39,033	49,514
Richmond upon Thames	48,798	61,901	71,426	90,605
Southwark	272,175	345,259	348,782	442,437
Sutton	26,359	33,437	37,634	47,739
Tower Hamlets	346,958	440,123	414,651	525,992
Waltham Forest	16,616	21,078	23,486	29,792
Wandsworth	68,269	86,600	95,680	121,372
Westminster	516,443	655,118	667,896	847,238
London	**4,077,599**	**5,172,509**	**5,185,562**	**6,577,981**

7.3.7 Following discussions at the London Plan EiP it was agreed to add 8% to the LOPR 09 floorspace forecast to account for an optimal vacancy factor. This would be appropriate if the equilibrium starting point had an 8%

vacancy. If at 2011 there is a lower than 8% vacancy rate, then more should be added; if it is higher than 8% then less should be added. Unfortunately there are no comprehensive statistics on vacancy rates at the borough level across London as a whole in order to incorporate this vacancy factor into this table.

7.3.8 Rather, the guidance should be that when using these projections to plan for office floorspace, boroughs should take account of existing vacancy rates with the objective of achieving an 8% vacancy rate at the end of the Plan period. In a borough where the current vacancy rate is high, the floorspace demand in Figure 7.16 is likely to be adjusted down after taking account of the vacancy rate at 2011.

7.3.9 Compared to that generated for LOPR 09, the overall forecast for office employment at the London level is 12% higher in terms of NIA, or an extra 437,000 sq m. This is driven primarily by the forecast growth in Professional, Technical and Scientific Services set out in Figure 7.1.

7.3.10 But for certain boroughs there is a very considerable difference. This is driven by primarily by the revised borough trend projections as illustrated in Figure 7.3.

7.3.11 Compared with LOPR 09, the floorspace projections for the City and Tower Hamlets are much lower. This is driven in part by the concentration of financial services in these boroughs and the projected decline in that sector. In reality we might expect some partial substitution to occur with these boroughs re-positioning their product to capture the higher projected growth in Professional, Scientific and Technical sectors.

7.3.12 **Supply and demand comparison** Figure 7.19 provides a comparison of the forecast demand for office floorspace over the period 2011-31 with the identified pipeline capacity.

7.3.13 Overall the London supply exceeds demand by 84%. There is potentially large over-supply in Greenwich, Newham and Tower Hamlets in particular.

7.3.14 But the supply side data includes schemes that have not been market tested and not all of it will come forward. Neither are the demand projections inevitable, and will be subject to market realities over time.

7.3.15 In interpreting these projections it is important to understand that what we are forecasting is the net change in floorspace stock. This will usually be less than the amount of new floorspace developed as there will also be losses to stock through redevelopment. A level of gross new completions is also compatible with a net loss in stock. Both these factors are illustrated through an analysis of the change in floorspace stock and gross new completions over the period 2000-08 (Figure 7.20).

Figure 7.19 Comparison of forecast demand with pipeline capacity

Borough	Supply pipeline (Sq m GIA)	2011-31 demand (Sq m GIA)	Supply/ demand (%)
Barking & Dagenham	70,739	17,967	394
Barnet	585,870	92,216	635
Bexley	31,118	30,608	102
Brent	286,241	67,942	421
Bromley	23,474	55,610	42
Camden	727,762	584,071	125
City	974,615	791,881	123
Croydon	105,605	64,017	165
Ealing	79,890	101,452	79
Enfield	37,702	42,934	88
Greenwich	384,398	26,576	1,446
Hackney	197,144	117,631	168
Hammersmith & Fulham	455,716	320,320	142
Haringey	19,819	34,170	58
Harrow	11,001	65,250	17
Havering	11,449	22,804	50
Hillingdon	171,278	140,516	122
Hounslow	347,884	122,537	284
Islington	237,506	347,838	68
Kensington & Chelsea	169,537	130,530	130
Kingston upon Thames	30,285	41,443	73
Lambeth	513,688	130,890	392
Lewisham	103,277	27,224	379
Merton	13,140	62,475	21
Newham	674,920	54,687	1,234
Redbridge	6,491	35,404	18
Richmond upon Thames	6,057	61,901	10
Southwark	252,026	345,259	73
Sutton	30,943	33,437	93
Tower Hamlets	1,959,312	440,123	445
Waltham Forest	9,046	21,078	43
Wandsworth	344,771	86,600	398
Westminster	651,422	655,118	99
London	**9,524,127**	**5,172,509**	**184**

Source: RTP

Figure 7.20 Office completions and change in stock, sq m, 2000-2008

Borough	Net change, floorspace 2000-08	Gross completions 2000-08	Ratio completions /stock change	Annual average completions (% 2000 stock)
Barking & Dagenham	-3,000	11,185	-3.7	1.4
Barnet	62,000	41,442	0.7	1.6
Bexley	16,000	9,147	0.6	0.9
Brent	15,000	33,677	2.2	1.7
Bromley	-33,000	14,175	-0.4	0.5
Camden	133,000	296,930	2.2	2.0
City	351,000	2,286,099	6.5	7.0
Croydon	-77,000	13,584	-0.2	0.2
Ealing	22,000	48,450	2.2	1.4
Enfield	10,000	11,079	1.1	0.7
Greenwich	4,000	13,055	3.3	1.2
Hackney	61,000	189,164	3.1	5.3
Hammersmith & Fulham	124,000	82,014	0.7	1.6
Haringey	-3,000	1,372	-0.5	0.1
Harrow	-95,000	3,832	0.0	0.1
Havering	-9,000	16,655	-1.9	1.3
Hillingdon	-9,000	62,741	-7.0	1.1
Hounslow	166,000	144,885	0.9	3.0
Islington	86,000	229,903	2.7	2.3
Kensington & Chelsea	-7,000	47,255	-6.8	1.2
Kingston upon Thames	-17,000	0	0.0	0.0
Lambeth	-20,000	44,807	-2.2	0.9
Lewisham	13,000	29,938	2.3	2.6
Merton	4,000	26,570	6.6	1.3
Newham	38,000	52,375	1.4	3.8
Redbridge	-29,000	1,425	0.0	0.1
Richmond upon Thames	43,000	25,640	0.6	1.2
Southwark	139,000	447,517	3.2	5.4
Sutton	-26,000	3,200	-0.1	0.2
Tower Hamlets	831,000	249,869	0.3	2.1
Waltham Forest	2,000	1,012	0.5	0.1
Wandsworth	-7,000	51,129	-7.3	1.9
Westminster	-120,000	976,466	-8.1	2.3
London	**1,664,000**	**5,466,592**	**3.3**	**2.9**

Source: VOA, GLA, RTP

7.3.16 Due to differing data sets the time periods may not exactly coincide and hence we urge a note of caution in interpreting this data especially at the borough level.

7.3.17 For London as a whole the quantity of office floorspace completed between 2000 and 2008 was 3.3 times higher than the net addition to office stock (Figure 7.21). The ratio of completions to net stock change is particularly high in the City where most new activity consists of redevelopment.

7.3.18 The table also shows average annual completions as a proportion of total stock at 2000. For London as a whole, annual completions represent 2.9% of stock. For the City, the proportion was 7%.

Figure 7.21 Office completions and employment change 2000-08

Area	Net change, floorspace 2000-08	Gross completions 2000-08	Ratio completions/ stock change	Annual average completions (% 2000 stock)	Change in office employment 2000-08
Outer	39,000	470,071	12.1	1.0	-144
Inner	1,395,000	1,733,956	1.2	2.5	97,154
Central	231,000	3,262,565	14.1	4.4	-2,669
London	1,664,000	5,466,592	3.3	2.9	94,340

7.3.19 If we look at this in terms of Inner Outer and Central London, a striking pattern emerges, especially when we also look at change in office employment over that period. These can be usefully compared with our comments on the under-performance of Outer London in Section 4.1.

- Outer London experienced very little change in total office stock and office employment was virtually static (falling marginally). But gross new office completions continued at a rate of 1% a year of total stock. This left the ratio of completions to stock change high at 12:1. The new stock being built was either lying vacant or there were redevelopments of existing stock to other uses.
- Inner London (including CAZ fringe and Canary Wharf) saw a net increase in office stock of 1.4 million sq m. It also accounted for all the net increase in office employment. Most of the office completions represented net additions to the office stock. Office activity has expanded beyond the central core to colonise new locations.
- Central London (defined here as City and Westminster) experienced a net loss of office employment and only a small addition to office stock. Yet gross completions over this period totalled 3.3 million sq m and represented an annual average of 4.4% of stock.

7.4 Sensitivity tests

7.4.1 We have set out a central set of projections, though clearly there are a range of possible outcomes. There are two particular forms of sensitivity analysis that we consider forecast demand and occupational densities.

7.4.2 **Forecast demand** The GLA Economics forecast provides the central forecast. We compare this with an alternative forecast to assess what impact this may have. The Oxford Economics projections prepared for the City of London Corporation were published in January 2011.

7.4.3 Over the period 2008-20 Oxford Economics forecast growth of 464,000 jobs in London, an increase of 0.8% per year. This is higher than that projected by the GLA. Of this, 450,000 jobs are projected in the Financial and Business Services sector. If a similar rate of growth was projected for the remainder of the Plan period then the forecast demand for office employment would be substantially higher than under the GLA projections.

7.4.4 **Risk** Alternative forecasts take a different view of the central projection. Outside of this there is also a range of uncertainty in the way certain factors impact on London. Many of these factors have been discussed in Chapter 4.0. We do not attempt to quantify each of these potential factors, but much of the upside or downside risks relate to the role of London as a global financial services centre. For example, there is an upside scenario where London continues to grow as a financial services centre on the back of expansion of the BRIC economies.

7.4.5 **Occupancy densities** A detailed discussion of occupancy densities is set out in Chapter 5.0. In order to test the implications of varying the density assumptions we look at the effect of applying a high and a low assumption (Figure 7.22). Varying these assumptions illustrates the sensitivity of the floorspace density assumptions as in terms of GIA it shows a range from 4.3 million sq m to 6.0 million sq m.

Figure 7.22 Densities: applying high and low assumptions to 2031 employment forecasts

Floorspace NIA and GIA	NIA:GIA (%)	Demand based on 377,555 jobs at different densities (sq m)		
		10.8	9.8	12.0
Floorspace NIA		4,077,599	3,700,043	4,530,665
Floorspace GIA	85	4,794,954	4,341,887	5,323,532
Floorspace GIA	79	5,172,509	4,681,687	5,738,843
Floorspace GIA	75	5,436,798	4,945,976	6,040,887

7.4.6 We have applied the density ratios that are higher than the observed average on the basis that the new premises will be occupied at new more efficient space standards. If more efficient occupational densities are applied to existing stock in the future then the demand for net additional floorspace stock will be reduced still further. For example, if instead of being occupied at an average of around 18 sq m per worker[101], this average was to fall to 15 sq m per worker at 2031, then there would be no

[101] Source: RTP/VOA

net additional demand to office stock at 2031. The implications, given contemporary approaches to workplace planning, are significant.

7.5 Employment and floorspace: overview

7.5.1 Our central forecast is that there will be 377,000 new jobs in office sectors over the period 2011-31 which will generate demand for an additional 4.1 million sq m NIA (5.2m sq m GIA) of office stock in London. For the 25 year period 2011-36 the forecast number of office jobs is 480,000 generating a demand for an additional 6.6 million sq m GIA of office floorspace. This increase in demand is more than covered by the 9.5 million sq m GIA of potential floorspace that has been identified in various office schemes throughout London, although not all of this may realistically be viable.

7.5.2 These calculations are in terms of net additions to stock. The emergence of the mega schemes discussed in the previous Chapter and residential conversions discussed in the next Chapter suggest that there will be a replacement of existing stock with premises better suited to a 21st century global city economy. Gross new development will need to be substantially more than 6.6 million sq m to accommodate this churn. Past data suggest that the London level gross development completions have been three times net stock change.

7.5.3 Whilst balanced at the London level there are some significant mismatches at the borough level. The bulk of the office demand is projected to be for the central London boroughs constituting the CAZ area. There may be some spreading of the CAZ boundaries in order to accommodate this demand. The question is how far will demand hop over the CAZ boundary to create new office centres? White City and Earl's Court in Hammersmith form a relatively short hop.

7.5.4 There is potentially a large supply in Newham at Stratford and the Royals, and the question is whether demand can leap this far from the CAZ core to establish a new office destination.

7.5.5 The other factor that may impact on the balance between supply and demand is the sectoral mix of growth. The Financial Services sector is very concentrated in the City and to a lesser extent in Tower Hamlets. Projections suggest a decline in growth for Financial Services with more of the growth coming in professional activities. If this is the case it would either require the City and Canary Wharf to re-orient their offer to some extent or there may be a shift towards the western CAZ office market.

7.5.6 Finally it should be noted that such projections are of course subject to a range of possibilities. We would particularly urge a close monitoring of trends in occupational densities. There is probably greater sensitivity in terms of impact on demand for floorspace with regard to assumptions made about occupational density assumptions than in the actual demand for office employment.

8.0 Office to residential conversion

8.0.1 In April 2011 the Coalition Government issued a consultation document to facilitate the change of use from commercial, including office, to residential.[102] According to the Consultation document this was because,

> *A key barrier to increasing housing supply is the lack of land available for residential development. The changes proposed in this consultation document offer an opportunity to contribute to reducing that shortage by recognising the scope for allowing as permitted development the change of use from commercial to residential. The proposals will also promote regeneration of commercial land, and help bring empty commercial buildings back into productive use*.

8.0.2 The Consultation document cited data from Land Use Change statistics, showing that, for London, an annual average of 2,910 residential dwellings came about from change of use. Of these 831, or 29%, had been converted from B1 use.

8.0.3 In this section of the report we explore the scale of office conversions to residential, both recently completed and those in the planning pipeline, using data from the London Development Database (LDD) provided by the GLA, and a consultation exercise with a sample of London boroughs. The LDD provides the baseline data for this analysis. Using the database we identify sites with a proposed net loss of B1 space and gain in residential.

8.0.4 The analysis only applies to sites where there has been/is a proposed loss of B1 space as well as a residential gain.

- There are cases of B1 losses with no residential gains. These sites are not included in the analysis.
- Some of sites analysed will experience employment floorspace losses of non-B1 Use Classes. We do not account for this here. Therefore the figures in this report can be seen as a maximum in terms of the residential gain to office losses.
- Equally, some of the B1 losses might be absorbed by other non-residential uses.

8.1 Potential for conversion

8.1.1 The LDD shows that there are a total of 767 sites in London completed between April 2009 to February 2012 with a loss of B1 space and a net gain in residential units. This equates to a loss of 505,000 sq m of B1 space and a net gain of 11,400 residential units. There are currently 379 sites around London that are under conversion from B1 to residential, equating to a loss of 515,100 sq m of B1 space and a gain of 13,200 residential units. Figure 8.1 summarises the data.[103]

[102] DCLG (2011) *Relaxation of Planning Rules for Change of Use from Commercial to Residential*
[103] Note that all sq m figures given in this chapter refer to GIA.

Figure 8.1 B1 floorspace losses, 2009-2012

Stage	Number of sites	B1 floorspace losses (sq m)	Residential units
Completed	767	-505,800	11,400
Started	379	-515,100	13,200
Not started	1,019	-654,700	14,400
Total	**2,165**	**-1,675,600**	**39,000**

Source LDD/ RTP

8.1.2 The data presented above suggest that there is indeed capacity for conversion from office to residential in London. The consultations confirm there are examples of conversions in most London boroughs and there is pressure to convert employment floorspace to residential, particularly where the employment infrastructure is dated.

8.1.3 The consultations also indicate that there is a varied policy approach by boroughs. In each borough there are protective policies for employment land and there is a needs-based assessment for the release of any employment floorspace. In general boroughs aim to achieve a balance between housing need and employment land protection. In Tower Hamlets for example there are very strong pressures for new housing developments in a high growth area. Housing is a key political priority and there are protective policies for employment land in town centres and strategic employment areas, but less protection for sites in residential areas for example. Croydon borough has no policy constraint on change of use - the borough has up to 30% vacancy rates on commercial floorspace. In Wandsworth, the strategy is to minimise employment floorspace losses, therefore a multifaceted approach is taken to assess the need, viability and appropriateness of an application prior to granting permission.

8.1.4 In terms of the future, the LDD data show that there are planning permissions in the pipeline for the proposed loss of 654,700 sq m of B1 floorspace and a gain of 14,400 residential units.

8.1.5 Many of the boroughs are currently reviewing their policies on employment floorspace losses in light of the recently released National Planning Policy Framework. For example, Wandsworth is in early discussions with developers regarding the provision of commercial floorspace and affordable housing and has undertaken in-house research on this key issue; Croydon has prepared a research document on conversions for their OAPF – to be published in 2012; and Camden has also recently published a report on conversions.[104]

8.2 Types of conversions

8.2.1 By interrogating the descriptive text of each LDD site we were able to classify the sites into two categories of B1 floorspace losses: first those

[104] http://democracy.camden.gov.uk/documents/s19087/2012-05-10DCSpecialCommittee-lossofemploymentfloorspace-housing.pdf

relating to a change of use of the existing infrastructure and, secondly, those relating to demolition and redevelopment (Figure 8.2). Note that there are some sites which were not allocated to either category.[105]

Figure 8.2 Change of use and redevelopment, 2009-2012

Details	Change of use	Redevelopment	Not allocated	Total
Number of sites				
Completed	553	158	56	**767**
Started	204	126	49	**379**
Not started	702	237	80	**1,019**
Total	**1,459**	**521**	**185**	**2,165**
B1 floorspace loss (sq m GIA)				
Completed	-242,200	-203,500	-60,200	**-505,800**
Started	-164,300	-296,100	-54,600	**-515,100**
Not started	-289,500	-266,100	-99,000	**-654,700**
Total	**-696,000**	**-765,800**	**-213,800**	**-1,675,600**
Number of new residential units				
Completed	2,600	6,800	2,000	11,400
Started	2,300	8,700	2,200	13,200
Not started	3,100	8,900	2,300	14,400
Total	**7,900**	**24,500**	**6,600**	**39,000**

Source: LDD/RTP

8.2.2 Change of use conversions are much more common than redevelopment conversions, with over four times as many completed conversions identified. The change of use conversions are more likely to occur on a small-scale, and the cumulative loss of B1 floorspace is not far off the B1 floorspace losses from redevelopment projects. The LDD data show that there were 553 completed change of use sites between 2009 and 2012, accounting for a loss of 242,000 sq m of B1 floorspace. On the other hand there were 158 completed redevelopment conversions and a total loss of 203,500 sq m of B1 floorspace. An explanation probably lies in the fact that pure change of use conversions are not economic on larger buildings. For larger schemes it is more likely that an existing office building would be demolished and replaced with new build residential. This is confirmed by the consultations with the boroughs.

8.2.3 An important distinction between the change of use conversions and the redevelopment conversions lies in the residential gains. Figure 8.2 shows that there was a net gain of 2,600 units from completed change of use conversions, compared to 6,800 units from completed redevelopments. We look at this in greater detail in Figure 8.3.

[105] We undertake a standardised key word search that allocates sites to each category. Where none of these key words was identified the site is not allocated to either category.

Figure 8.3 B1 floorspace losses per residential unit, 2009-2012

Stage	Sq m per unit			
	Change of use	Redevelopment	Not allocated	Total
Completed	-94	-30	-30	-44
Started	-73	-34	-24	-39
Not started	-94	-30	-43	-46
Total	**-88**	**-31**	**-32**	**-43**

Source: LDD/RTP

8.2.4 If measured in terms of B1 floorspace loss per residential unit, change of use conversions result in a much higher loss of B1 floorspace per residential unit compared to redevelopments – the data on completed conversions show a loss of 94 sq m of B1 floorspace per unit on average for change of use sites, compared to a loss of 30 sq m per unit for redevelopments.[106]

8.2.5 A similar pattern emerges for the identified sites that are under construction and those in the planning pipeline: there are more change of use conversions than redevelopments under construction and in the pipeline; change of use conversions are of a smaller scale in terms of B1 floorspace losses per site and residential gains per site.

8.3 Market appetite for conversions

8.3.1 The LDD data analysed above show that office-to-residential conversions are occurring in London. The consultations suggest that the key driver of this trend is land values. It is well known that residential land values in London are some of the highest in the country: as one of our consultees put it "*developers will develop what has the most value and highest return. And in London this is generally residential*".

8.3.2 In the maps below we present data on office and housing land values. We do not have comprehensive data on office land values but the VOA data on rateable values act as a good proxy. House prices are available from the Land Registry data.

8.3.3 It is clearly visible from Figure 8.4 that CAZ has some of the highest office values. The map also shows how values fall away with distance from the centre, but there is a corridor to the South West where values hold up better. A strong East-West dimension is also apparent with much higher values in West London compared to East London.

8.3.4 The spatial correlation coefficient between the office rateable value and house price data sets is reasonably high at 0.7. As can be seen from a comparison with relative house prices the pattern of values is very similar to office values across London (Figure 8.5). It is only around Heathrow where

[106] Note that these figures should be read as maxima, as there might be other uses absorbed by the B1 losses, and equally the sites with B1 losses might also have lost floorspace from other use classes.

office values are comparatively high and residential values are comparatively low.

Figure 8.4 Office rateable values

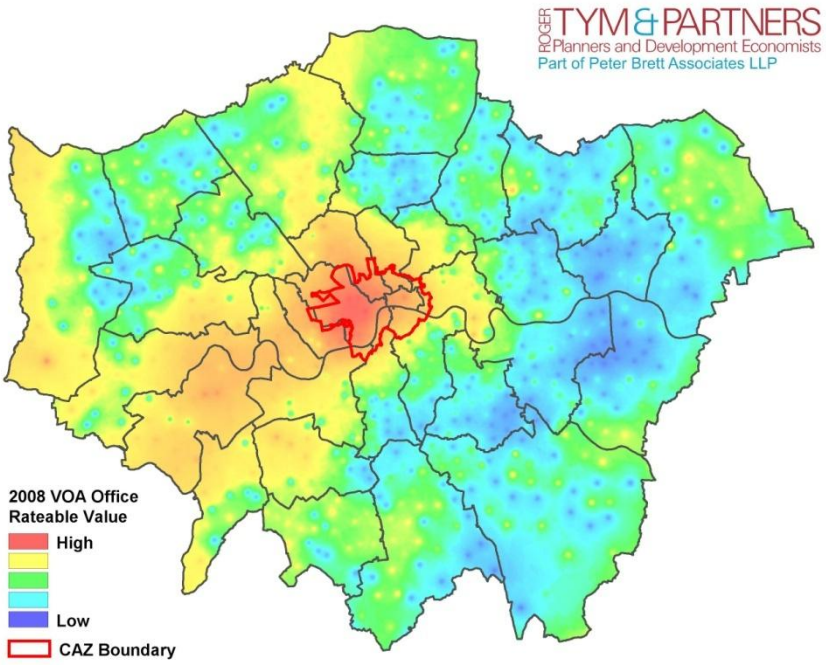
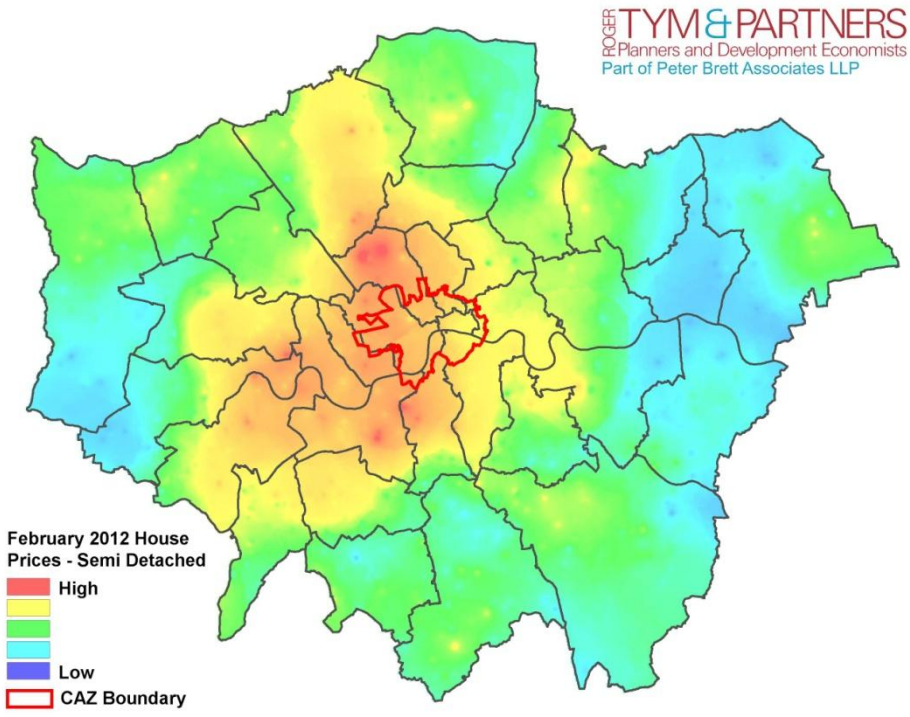


Figure 8.5 House prices



8.3.5 In the recently published CIL evidence paper the GLA found "*higher house prices are a good indicator of higher residual land values(…), and we will later show that house prices have a positive correlation with office and retail rents*".[107] A correlation coefficient of 0.71 is reported.

8.3.6 A review of house prices and B1 conversions shows no strong link between the loss of B1 floorspace and house prices (a correlation coefficient of 0.4 for completed conversions) or between the number of B1 conversions and house prices (a correlation coefficient of 0.6 for completed conversions). Equally there is no clear evidence of a correlation between change of use conversions and house prices (a correlation coefficient of 0.6).

8.4 Trends at the local level

8.4.1 At the local level there is significant variation in the scale of B1 conversions (Figure 8.6). The evidence suggests that there are a number of boroughs that are more attractive to office to residential conversions than others. Westminster had the largest number of completed conversions in London (18% of all completed conversions).

8.4.2 Other boroughs with a large number of completed conversions are Camden, Croydon, Hackney and Islington. The conversions completed to date and planned in the future are primarily in CAZ and Inner London boroughs, while there are very few conversions identified in Outer London boroughs. The exception is Croydon which has a relatively large number of existing and planned conversions. Croydon has a high vacancy rate on commercial property and has no policy constraint on change of use conversions.

8.4.3 The distribution of developments under construction with B1 losses and residential gains exhibits a similar trend to completions, with the majority of sites with B1 losses located in Camden, Islington and Westminster. The planning permissions in the pipeline show, to an extent, a continuation of the current trends with the largest number of proposed conversions in Camden, Wandsworth and Westminster.

8.4.4 The evidence raises a number of questions regarding the correlation between the conversions and existing office stock; between conversions and planning policy and between conversions and the residential market. We will look at the evidence below. Note that this is primarily a desk-based exercise, and within the scope of the study we are unable to undertake any detailed policy and market research.

[107] Proposals for a Mayoral Community Infrastructure Levy Draft Charging Schedule August 2011

Figure 8.6 Borough breakdown, office-to-housing conversion sites, 2009-2012

Borough	% and number of sites			
	Completed	Started	Not started	Total
Westminster	18%	19%	18%	396
Camden	6%	11%	9%	177
Islington	6%	7%	5%	131
Wandsworth	5%	3%	6%	111
Croydon	6%	4%	5%	106
Tower Hamlets	4%	5%	5%	98
Hackney	7%	3%	3%	92
Hammersmith & Fulham	4%	1%	5%	88
Kensington & Chelsea	4%	6%	2%	78
Southwark	3%	5%	3%	71
Richmond upon Thames	3%	3%	3%	64
Ealing	4%	2%	3%	63
Lambeth	3%	2%	3%	57
Lewisham	2%	4%	2%	51
Bromley	2%	3%	2%	50
Haringey	1%	2%	3%	48
Barnet	1%	1%	3%	46
City	1%	1%	3%	44
Waltham Forest	3%	2%	1%	42
Sutton	1%	1%	2%	33
Hounslow	2%	1%	2%	32
Harrow	2%	1%	1%	31
Bexley	2%	2%	1%	30
Kingston upon Thames	1%	1%	2%	29
Brent	2%	1%	1%	28
Greenwich	1%	1%	1%	27
Newham	1%	1%	1%	26
Hillingdon	1%	2%	1%	25
Redbridge	1%	1%	1%	24
Enfield	1%	1%	1%	22
Merton	1%	1%	1%	21
Havering	0%	1%	1%	15
Barking & Dagenham	1%	0%	0%	9
London	**767**	**379**	**1,019**	**2,165**

Source: LDD/RTP

8.5 B1 floorspace losses at the local level

8.5.1 The evidence above indicates that the majority of conversions are in CAZ and Inner London boroughs. The data presented in Figure 8.7 show the scale of B1 floorspace losses by borough. The majority of the B1 floorspace losses are in Central and Inner London boroughs, again with some exceptions, including Croydon, Ealing and Hounslow.

Figure 8.7 B1 floorspace losses by borough, 2009-2012

Borough	B1 floorspace losses			Total (sq m)
	Completed	Started	Not started	
Westminster	31%	19%	16%	-361,500
Tower Hamlets	7%	5%	12%	-138,200
Croydon	8%	8%	4%	-104,600
City	2%	2%	9%	-82,700
Lambeth	4%	8%	3%	-77,700
Kensington & Chelsea	2%	11%	2%	-77,200
Camden	5%	5%	4%	-76,600
Islington	3%	4%	6%	-73,000
Southwark	2%	3%	7%	-69,500
Hammersmith & Fulham	3%	1%	6%	-62,500
Ealing	1%	5%	4%	-62,500
Hounslow	8%	1%	2%	-58,900
Wandsworth	2%	3%	4%	-52,100
Hillingdon	2%	5%	1%	-47,000
Hackney	3%	2%	1%	-32,400
Bromley	2%	1%	2%	-30,400
Harrow	2%	2%	1%	-26,100
Sutton	1%	2%	2%	-24,900
Haringey	1%	1%	2%	-22,900
Redbridge	0%	3%	1%	-21,500
Lewisham	1%	2%	1%	-18,800
Barnet	1%	0%	2%	-18,300
Merton	0%	0%	2%	-17,700
Richmond upon Thames	0%	1%	1%	-17,000
Brent	2%	0%	1%	-16,500
Havering	0%	3%	0%	-15,900
Enfield	1%	2%	0%	-13,800
Waltham Forest	1%	1%	1%	-13,500
Bexley	1%	1%	0%	-12,000
Newham	1%	1%	1%	-11,200
Kingston upon Thames	0%	0%	1%	-7,600
Greenwich	0%	0%	0%	-7,100
Barking & Dagenham	0%	0%	0%	-4,000
London	**-505,800**	**-515,100**	**-654,700**	**-1,675,600**

Source: LDD/RTP

8.5.2 Westminster experienced the largest level of B1 floorspace losses due to conversions (31% of the London total of completed conversions), however

the borough's share of B1 floorspace losses is set to decline in relative terms, as it contains only 16% of the B1 losses in the pipeline.

8.5.3 Some of the largest losses recorded to date are in boroughs that have a positive approach to conversions. For example, in Tower Hamlets there is much pressure on housing provision, and providing new housing is a key political priority. Equally Croydon has no policy constraints on change of use. Note that in both cases there are protective policies for employment land and it is the balance between housing need and employment protection that ultimately drives the approach.

8.5.4 Interestingly the consultation with Greenwich suggested that because the borough has a large number of big sites, most notably at Greenwich Peninsula, the borough has experienced very little pressure on B1 conversions to residential. The majority of new residential development in the borough has been on previously industrial sites or brownfield sites. This might be one of the reasons behind the low levels of loss of B1 to residential experienced in Barking, Bexley, Dagenham and Newham, all of which have many brownfield sites.

8.6 Types of B1 to residential conversions

8.6.1 The evidence indicates a variation in the scale of B1 conversions with boroughs like Hackney and Islington having a large number of sites, but a relatively low loss of B1 floorspace, while Hounslow for example experienced a relatively small number of large scale office conversions between 2009 and 2012 (Figure 8.8).

8.6.2 A review of the types of B1 losses in terms on change of use/redevelopments shows no clear pattern, with boroughs such as Camden, Hounslow and Westminster having a greater proportion of B1 floorspace lost due to change of use conversions. On the other hand, the majority of completed conversions (in for example Croydon; Lambeth and Tower Hamlets), were due to redevelopments.

8.6.3 The evidence of conversions under construction and completed conversions are presented in Appendix A9. This evidence continues to show that there are a variety of types of conversion by borough and, interestingly, the types of conversions under construction and in the planning pipeline are of a similar type as those completed. For example, in Westminster the majority of the B1 floorspace losses are due to change of use conversions (51%); equally, 72% of conversions currently in the pipeline are change of use conversions.

Figure 8.8 Completed B1 floorspace losses by type of conversion, 2009-2012

Borough	Completed conversions			
	Change of use (%)	Redevelopment (%)	No allocation (%)	Total B1 loss (sq m)
Westminster	58	36	6	-158,700
Hounslow	98	2	0	-42,700
Croydon	24	66	10	-40,700
Tower Hamlets	8	70	22	-35,800
Camden	80	19	1	-27,400
Lambeth	11	87	3	-20,200
Hammersmith &Fulham	16	2	81	-17,200
Hackney	29	69	2	-15,100
Islington	50	48	3	-13,000
Hillingdon	4	15	81	-12,200
Wandsworth	57	43	0	-11,700
Harrow	29	70	0	-11,300
City	100	0	0	-10,300
Kensington & Chelsea	90	10	0	-9,900
Bromley	17	39	44	-9,500
Southwark	37	59	5	-9,500
Brent	33	61	7	-7,900
Ealing	29	70	1	-7,600
Barnet	74	26	0	-6,800
Waltham Forest	36	16	48	-6,700
Bexley	17	82	1	-4,200
Newham	18	81	1	-4,000
Lewisham	19	28	54	-3,500
Haringey	20	72	8	-3,300
Sutton	55	45	0	-3,000
Enfield	22	60	18	-2,700
Richmond upon Thames	92	6	2	-2,400
Redbridge	75	0	25	-2,300
Greenwich	60	40	0	-2,100
Merton	18	2	79	-1,700
Kingston upon Thames	29	71	0	-1,100
Barking & Dagenham	47	53	0	-700
Havering	48	52	0	-600
Total	**48**	**40**	**12**	**-505,800**

Source: LDD/RTP

8.7 B1 floorspace losses and B1 stock

8.7.1 The level of B1 floorspace lost might purely reflect the relative size of the B1 stock in different boroughs rather than a higher probability of office stock transferring due to policy or market appetite. Figure 8.9 shows B1 floorspace losses as a proportion of B1 stock across all boroughs.

Figure 8.9 B1 floorspace losses as a proportion of B1 stock, 2009-2012

Borough	B1 floorspace loss (LDD completions 2009-12)	VOA 2008 & LESD 2012	% loss of office stock
Hounslow	-42,700	786,000	-5
Croydon	-40,700	753,000	-5
Waltham Forest	-6,700	136,000	-5
Harrow	-11,300	270,000	-4
Wandsworth	-11,700	378,000	-3
Lambeth	-20,200	663,000	-3
Bromley	-9,500	334,000	-3
Westminster	-158,700	5,713,000	-3
Hackney	-15,100	545,000	-3
Bexley	-4,200	176,000	-2
Brent	-7,900	391,000	-2
Hammersmith & Fulham	-17,200	861,000	-2
Lewisham	-3,500	185,000	-2
Kensington & Chelsea	-9,900	597,000	-2
Ealing	-7,600	458,000	-2
Sutton	-3,000	192,000	-2
Tower Hamlets	-35,800	2,378,000	-2
Barnet	-6,800	453,000	-2
Newham	-4,000	302,000	-1
Haringey	-3,300	246,000	-1
Camden	-27,400	2,233,000	-1
Redbridge	-2,300	195,000	-1
Enfield	-2,700	257,000	-1
Islington	-13,000	1,391,000	-1
Hillingdon	-12,200	1,348,000	-1
Greenwich	-2,100	253,000	-1
Southwark	-9,500	1,328,000	-1
Richmond upon Thames	-2,400	379,000	-1
Merton	-1,700	284,000	-1
Barking & Dagenham	-700	130,000	-1
Havering	-600	181,000	0
Kingston upon Thames	-1,100	335,000	0
City	-10,300	5,052,000	0
Total	**-505,800**	**28,388,000**	**-1.8**

Source: LDD/RTP

8.7.2 In order to assess this we compare the B1 floorspace losses from completed conversions with B1 floorspace stock data from the Valuation Office Agency (VOA). The latest VOA B1 floorspace data available relate to 2008. To update the 2008 VOA data we add office floorspace completions data (2009-2012) from the London Employment Sites Database (LESD) to the VOA 2008 B1 stock data. The LESD identifies an additional 791,600 sq m of B1 floorspace in total for London.

8.7.3 Overall in London, the data indicate that there has been a 2% loss of office stock from 2009 to early-2012. The biggest relative losses of B1 space are found in Croydon, Harrow, Hounslow and Waltham Forest, all with losses between 4% and 5% of existing office stock. The lowest losses are in Barking & Dagenham, City, Havering and Kingston. The City is an exceptional case as it contains the least number of households and has the second largest B1 stock in London.

8.7.4 There is some evidence of a correlation between B1 stock and the B1 floorspace losses. The correlation coefficient between B1 losses and B1 stock is 0.73. As a sensitivity test we check this correlation by taking out two London boroughs: City and Westminster. The City has some of London's largest office stock and the lowest proportion of households. The data show that the bulk of conversions are in Westminster, a borough which has a large office stock. We exclude the two to check whether and how they bias the data in this sensitivity test. This shows that the correlation coefficient falls to 0.65, suggesting a weak correlation between office floorspace losses and office floorspace stock.

8.8 B1 losses and residential gains by borough

8.8.1 The number of housing units gained on previously B1 sites[108] is presented in Figure 8.10, by borough, for 2009-12. The table shows that the boroughs with the largest number of completed developments are Croydon, Hackney, Hounslow, Islington, Tower Hamlets and Westminster. In terms of future pipeline, Croydon, Islington, Southwark, Tower Hamlets, Wandsworth and Westminster have the largest number of proposed housing units from conversions. The data suggest that, in the medium-term (developments in the pipeline), an additional 27,500 housing units should emerge from office conversions.

8.8.2 Figure 8.11 shows B1 floorspace losses per new residential unit, by borough, for 2009-12. Some boroughs have a very low loss per unit, perhaps because the sites involved losses of other uses, or because they include very high density developments: most likely the former.

[108] Note sites may be mixed use sites with B1 losses.

Figure 8.10 Housing units gained on previously B1 sites, 2009-2012

Borough	Number of residential units			
	Completed	Started	Not started	Total
Barking & Dagenham	13	6	68	87
Barnet	266	13	428	707
Bexley	133	222	42	397
Brent	139	103	311	553
Bromley	224	142	181	547
Camden	399	269	290	958
City	120	109	378	607
Croydon	724	981	757	2,462
Ealing	170	1,051	318	1,539
Enfield	170	260	36	466
Greenwich	45	29	58	132
Hackney	905	402	600	1,907
Hammersmith & Fulham	504	100	472	1,076
Haringey	60	135	385	580
Harrow	352	938	136	1,426
Havering	13	247	22	282
Hillingdon	191	493	280	964
Hounslow	879	323	409	1,611
Islington	1,173	773	1,965	3,911
Kensington & Chelsea	96	602	126	824
Kingston upon Thames	19	3	100	122
Lambeth	472	652	514	1,638
Lewisham	52	549	111	712
Merton	197	7	332	536
Newham	332	709	79	1,120
Redbridge	73	229	169	471
Richmond upon Thames	51	236	190	477
Southwark	460	662	1,108	2,230
Sutton	47	194	197	438
Tower Hamlets	1,558	1,903	1,996	5,457
Waltham Forest	378	113	120	611
Wandsworth	432	200	1,326	1,958
Westminster	797	532	859	2,188
London	**11,444**	**13,187**	**14,363**	**38,994**

Figure 8.11
B1 floorspace loss per residential unit - LDD developments, 2009-2012

Borough	Completed developments, sq m per unit			
	Change of Use	Redev-elopment	No allocation	Total
Westminster	-294	-190	-52	-199
Kensington & Chelsea	-101	-128	0	-103
City	-86	0	0	-86
Camden	-138	-22	-153	-69
Lewisham	-59	-38	-116	-66
Hillingdon	-86	-75	-62	-64
Sutton	-70	-56	0	-63
Kingston upon Thames	-42	-73	0	-60
Brent	-66	-51	-106	-57
Croydon	-62	-57	-42	-56
Haringey	-54	-60	-30	-54
Barking & Dagenham	-47	-62	0	-54
Havering	-103	-34	0	-50
Hounslow	-50	-22	0	-49
Greenwich	-67	-33	0	-47
Richmond upon Thames	-47	-49	-21	-46
Ealing	-59	-40	-95	-45
Lambeth	-73	-41	-39	-43
Bromley	-54	-24	-95	-42
Hammersmith & Fulham	-69	-43	-31	-34
Harrow	-84	-32	-1	-32
Bexley	-64	-28	-60	-32
Redbridge	-28	0	-50	-31
Wandsworth	-80	-14	-41	-27
Barnet	-174	-7	0	-26
Tower Hamlets	-53	-24	-16	-23
Southwark	-95	-14	-20	-21
Waltham Forest	-44	-19	-12	-18
Hackney	-68	-12	-51	-17
Enfield	-61	-11	-61	-16
Newham	-55	-10	-30	-12
Islington	-58	-6	-43	-11
Merton	-31	-3	-8	-8
London	**-2,522**	**-1,278**	**-1,235**	**-1,561**

Source: LDD/RTP

8.8.3 For the majority of boroughs the loss of B1 space is higher for housing units resulting from a change of use compared to those resulting from a redevelopment. The exceptions are Barking & Dagenham, Haringey, Kensington & Chelsea, Kingston and Richmond. With the exception of Kensington & Chelsea, all these boroughs have a very small sample of converted sites and/or only a small loss of B1 floorspace.

8.9 Loss of B1 space to other residential uses

8.9.1 In addition to the B1 floorspace losses presented above there are also B1 floorspace losses to other residential uses including C1 (boarding and guest houses), C2 (residential institutions including student accommodation and nursing homes) and SG (hostel). These are shown in Figure 8.12.

Figure 8.12 B1 floorspace loss per residential unit - LDD developments and pipeline, 2009-2012

Borough	B1 floorspace losses (sq m)			Other residential gains (bedrooms)		
	Completed	Started	Not started	Completed	Started	Not started
Brent			-5,410			661
Camden	-769	-1,682	-5,503	54	114	389
City	-1,572	-1,862		54	176	
Croydon		-642			3	
Ealing	-918			28		
Hackney	-698	-1,455		20	673	
Harrow			-736			60
Havering			-123			50
Hillingdon	-540		-825	85		16
Hounslow		-1,286	-799		200	597
Islington	-632	-6,791		17	644	0
Kingston upon Thames	-822		-1,513	130		64
Lambeth			-2,067			92
Southwark		-1,692	-11,436		23	792
Sutton			-7,729			80
Tower Hamlets			-3,030			619
Wandsworth		-792			21	
Westminster	-1,505		-3,367	67		69
London	**-7,456**	**-16,202**	**-42,538**	**455**	**1,854**	**3,489**

8.9.2 Note that as stated in the text above, the conversions are allocated in their totals to B1 losses and residential gains (i.e. we do not take into account other existing uses or other proposed uses). Therefore if a proposed or completed development is included in the analysis above we do not count that B1 loss or residential gain in the data presented below.

8.9.3 The data show that, 2009-2012, there has been a relatively low level of conversions from B1 to other residential units: the LDD data indicate a loss of 7,500 sq m of B1 floorspace to these uses. Note that this period also coincides with the recession; hence the data might underestimate the potential scale of these conversions. As a result of these conversions there have been an additional 460 bedrooms of other residential units.

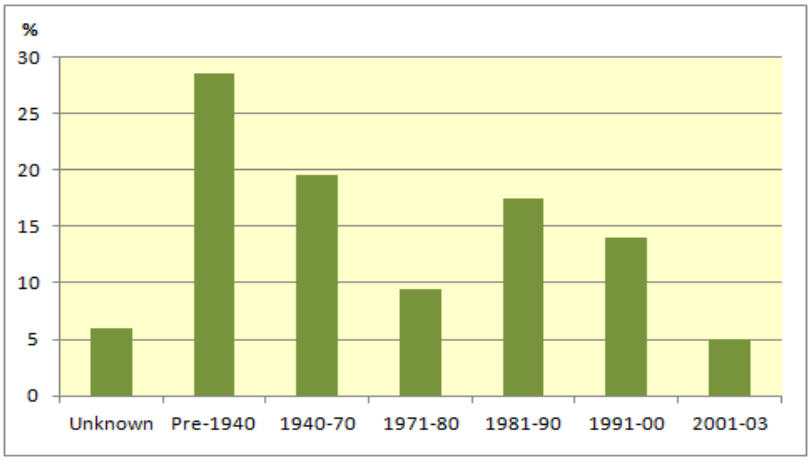
8.9.4 In terms of conversions under construction, the data indicate a proposed loss of 16,200 sq m of B1 with a net gain of 1,900 "other residential" bedrooms uses. This is significantly more than the completions over the past three years and is likely to reflect the development stalemate of the current economic climate. There is currently a proposed loss of 42,500 sq m of B1 in the planning pipeline amounting to a net gain of 3,500 "other residential" bedrooms.

8.9.5 Overall, there has been only a small loss of B1 space to other residential uses, and while there is evidence of future conversions, the relative scale of the B1 losses remains small in comparison to losses to residential units.

8.10 Age of office stock and conversion to residential

8.10.1 One factor that will determine the propensity of office stock to convert to residential is its age and by extension its suitability for modern occupiers. The most recent comprehensive data on office stock age dates back to 2005, however it provides a snapshot of the stock at that time. For London as a whole in 2005, roughly two-thirds of the stock was built pre-1980 and one third post-1980. Figure 8.13 shows the distribution.

Figure 8.13 London office stock, by age, 2005



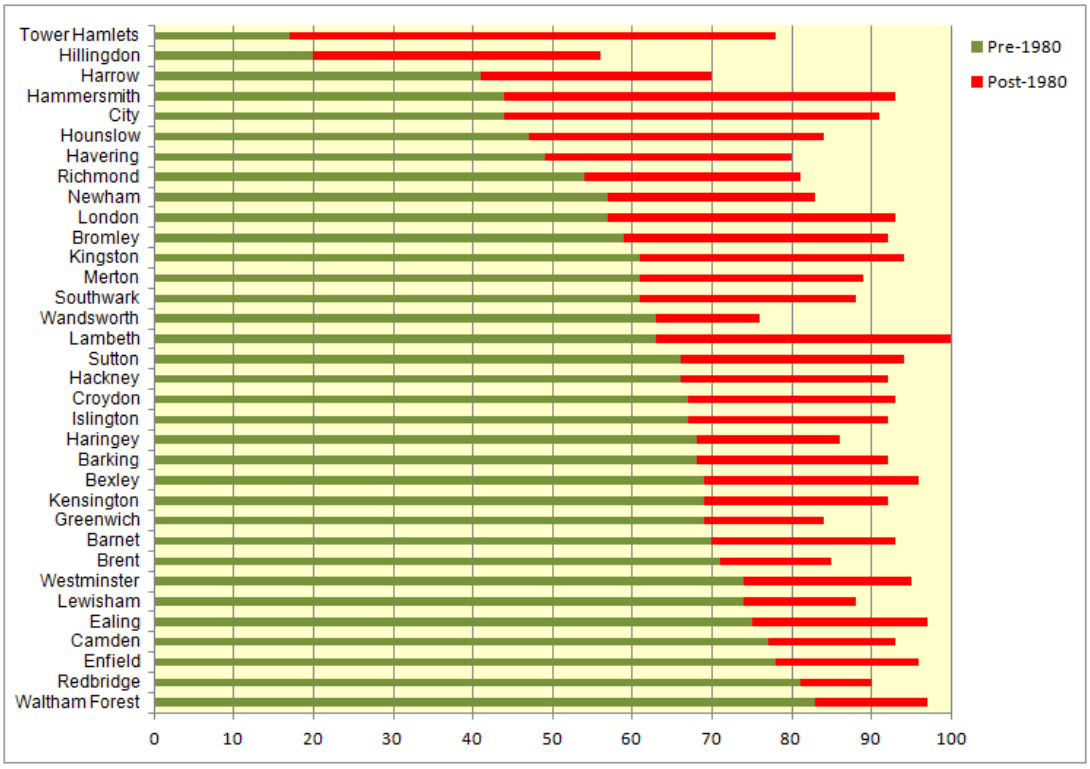
Source: VOA

8.10.2 For some boroughs the proportion of pre-1980s stock was much higher. The boroughs with the highest level of old stock include Outer London boroughs such as Enfield, Redbridge and Waltham Forest, where there has been low demand for offices. But it also includes certain Central London

boroughs such as Camden and Westminster, which as noted at Figure 8.6, have experienced the highest number of office to residential conversions.

8.10.3 The proportions of pre- and post-1980s stock by borough are shown in Figure 8.14. Note that the data here do not sum to 100% due to suppressed or unavailable data.

Figure 8.14 Borough office stock, by age, 2005



Source: VOA

8.11 Office to residential: overview

8.11.1 The research presented in this Chapter shows some interesting findings regarding the conversion of office floorspace to residential. It also raises a number of questions and issues that require further investigation.

8.11.2 An overall finding is that there are indeed a notable number of completed B1 to residential conversions in London either due to change of use conversion or due to redevelopment of office buildings. London-wide, 505,800 sq m of B1 space was lost to residential over the past three years, equivalent to 2% of the total London office stock. This suggests that there is capacity for conversion of surplus office space to residential. There are also developments under construction and in the planning pipeline with residential gains and office losses of 515,100 sq m and 654,700 sq m, respectively, suggesting that current trends will continue.

8.11.3 The residential returns (i.e. housing units/site or /sq m) from the change of use conversions are significantly lower than the residential gains from

redevelopment conversions. This suggests that it might be more efficient to encourage redevelopment rather than conversion.

8.11.4 This is to be expected due to scale - change of use conversions tend to be of a much smaller scale compared to redevelopment projects where infrastructure is demolished and rebuilt generally at higher residential densities. The key issue is that the majority of the office floorspace losses in London to date are a result of change of use conversions (242,200 sq m); however the residential gains from these are far smaller than redevelopments. The LDD evidence shows a loss of 94 sq m of office floorspace per residential unit for change of use conversions compared to a loss of 30 sq m of B1 space per unit for redevelopment conversions.

8.11.5 The question is also whether the reported losses are in fact within a healthy margin at borough level and at lower geographic levels. The consultations with boroughs suggest that there is some concern regarding the types of office floorspace lost in the boroughs to residential or other uses and the new office floorspace created. The small units lost, which we have shown are cumulatively substantial, may be targeted at very different office markets compared to the new office space developed. And while the office floorspace losses at borough level might be within a healthy margin, at the local level the office market may lack opportunities as well as diversity.

8.11.6 As noted in the Draft Housing Capacity SPG, "*A careful local balance will have to be struck to sustain viable existing provision; enable housing-led, mixed use office re-development to consolidate and modernise part of the office stock; and to realise the significant potential increment to housing capacity represented by genuinely surplus offices (Policy 2.7 Outer London – Economy). A downturn in the office market, accelerating release of surplus office capacity, coupled with opportunities for investment in affordable homes (see London Housing Strategy) may provide particular opportunities to facilitate this process of mixed use, largely town centre based, renewal.*"

8.11.7 There are areas of this research that could be refined in much greater detail particularly in terms of how mixed use sites are dealt with. In this research the focus is purely on B1 and residential, ignoring other existing and proposed uses. In addition the research bulks all B1 use classes in the same category, however there are likely to be significant differences in the different types of offices. Recent research undertaken by RTP in 2011 in Camden shows that the demand for B1a and B1c space is very different as are the potential for conversions of these spaces.

8.11.8 The concern is that the small units that are being lost form part of a stock of premises that support local SMEs in comparatively low cost accommodation. This stock of premises is not being replaced and hence even if the quantum of office floorspace is maintained there is a loss in the diversity of the stock and small local businesses in particular are disadvantaged. This concern cross references with our analysis of hybrid office/industrial activities in Chapter 9.0.

8.11.9 As finally published we do not believe that the NPPF in itself will fundamentally alter the trend to residential conversions as there is a qualifying test on economic rationale: *"...[Local authorities] should normally approve planning applications for change to residential use and any associated development from commercial buildings (currently in the B use classes) where there is an identified need for additional housing in that area, provided that there are not strong economic reasons why such development would be inappropriate".*

9.0 Hybrid office/industrial activity

9.0.1 Elsewhere in this report we have drawn attention to the dynamics of the core London office market, and in particular the Central London office market. We have also highlighted some of the factors that might cause the rate of growth in certain key demand sectors to slow down. In so doing, we have suggested that spatial planning policy should, in simple terms, become more pragmatic and consider how it might support quasi office activities, and related commercial activities, in a wider sense.

9.0.2 In this Chapter we consider those businesses that typically undertake hybrid office/industrial activities and, as a consequence, occupy a range of premises types. Many such companies (but by no means all) provide support services and products to major businesses, often in the central area of London. We refer to this activity as *servicing the services*.

9.1 Servicing the services

9.1.1 The central area of London is an extraordinarily vibrant business area. The financial and business services sectors are fundamental to the capital's role as a global city, but London also has great strengths in the creative and media industries, medicine, education, technology and many other sectors. In addition, there is the backdrop of cultural and entertainment industries, including museums, galleries, theatres; and then there is the tourist sector, creating many thousands of jobs in shops, restaurants and hotels.

9.1.2 This great weight of activity itself draws upon a very wide range of support activities. Just consider the diverse range of services and products consumed by the average office building: catering; cleaning; furniture; maintenance and fit out; office equipment and supplies; print and copy; security; waste disposal, and many others. Multiplied across the city economy, the demands for supporting activity begin to become evident.

9.1.3 Much of this support activity is located away from the central area, often clustered around the edge of CAZ and in Outer London. This is more a statement of the obvious than an empirically observed fact, just to make the point that there are spatial differences between these activities and the kind of activities and property that form the backbone of LOPR analysis. Often the activity is "low key", but is vital to the efficient functioning of the city and in supporting its global role. While it has no official status, we refer to this vital sub-sector of London's economy as "*servicing the services*".

9.1.4 The obvious focus for LOPR is what is generally referred to as Grade A, institutional property of the kind seen in the central area; typically occupied by larger, corporate businesses. Such property commands premium rent and, certainly in the case of new supply, is built to a high specification.

9.1.5 Given the crucial role of servicing the services, and the role of the LOPR series, the question here is whether spatial policy adequately responds to the accommodation needs of those business involved in hybrid office/industrial activities. In other words: does spatial policy ensure the availability of suitable premises? In this section we seek to outline the

characteristics of such activities and their accommodation needs, and conclude with some spatial policy implications.

9.2 The spatial question

9.2.1 *Servicing the services* is, in some respects, quite a nebulous concept. There are no hard and fast definitions of specific activities that are included and, as a consequence there are no neat data sets quantifying the activities and describing their spatial distribution. Hybrid office/industrial activities cannot be tightly defined as those within B1c of the Use Classes Order: our empirical work has shown great diversity of activities.

9.2.2 In policy terms, there are many Strategic Industrial Locations (SILs) and Locally Significant Industrial Sites (LSISs) scattered throughout London where servicing the services activities locate. A recent report by URS quantified industrial land stock, total industrial land uses and all non-industrial land uses within allocated SILs and LSISs as well as industrial land uses not located within SILs or LSISs.[109] The study showed that across London in 2010 there were 4,951 ha of built-on 'core' industrial land, and 1,938 ha of 'wider' definition industrial land. There were a further 767 ha of non-industrial uses within SILs and LSISs. The three boroughs with the largest amount of built-on total industrial land were Ealing (512 ha), Hounslow (465 ha) and Barking & Dagenham (463 ha) respectively. The West sub-region had the largest amount of built-on total industrial land (2,042 ha), while the North sub-region has the smallest (921 ha).

9.2.3 Such land as that included within the URS study is likely to form the core market for servicing the services; though it must be recognised that such activities are also distributed across the plethora of smaller non-designated sites, and in single properties, including those on high streets and town centres generally.

9.2.4 Such an extensive and varied spatial distribution as that described above does not make for simple spatial policy responses. By their nature, hybrid office/industrial activities might fall without policies aimed either at office or industrial uses. One thing that is clear is that policies which address the question of the loss of industrial land should bear in mind that the conversion of such land to, say, residential uses, will often involve the loss of land that is economically advantageous to hybrid office/industrial activities. Industrial spatial policy could therefore be more explicit about the *kinds of activities,* rather than simply the type of land use, that it is seeking to protect or release.

9.2.5 Similarly, office policies tend to assume a B1a activity, on the basis that anything with a traditionally non-office component will slip into B1c. But in some senses there is a significant grey area. Perhaps one critical area for policy consideration is how hybrid uses might be more simply integrated into high streets (where access is better than industrial estates). This could be particularly important for Outer London where (as shown in Chapter 4.0), there are particular issues relating to the structural decline of traditional office activities.

[109] URS & DTZ (2010) *London's Industrial Land Baseline* For LDA and GLA

9.2.6 Empirical evidence suggests, albeit on a very partial basis, that employment densities in hybrid activities tend to be higher than those in traditional industrial sites, and that the profile of workers is different (more clerical, admin and professional, and less manual). There are implications here for travel to work patterns, particularly use of private cars, and the provision of car parking. A quick tour around a sample of London's industrial estates will soon reveal the typical mismatch between car travel and parking provision. This raises the question of whether spatial policy could be more directive in encouraging hybrid uses into sites better served by public transport.

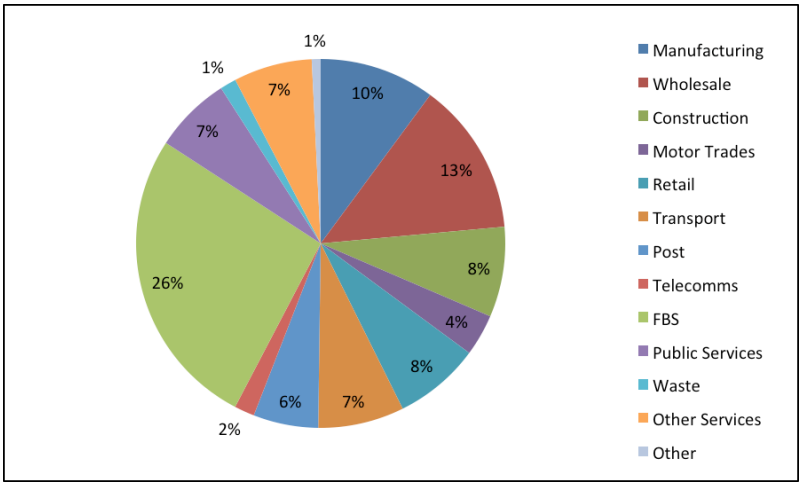
9.3 The property question

9.3.1 Simple laws of urban economics dictate that Grade A space is not occupied by the sub-economy which we are highlighting here. Instead, these companies seek lower specification, lower cost premises in what is referred to by the property industry as secondary and tertiary locations.

9.3.2 Many occupy office buildings that no longer boast the specification offered by new space, and many also occupy properties that are "industrial" premises, or "sheds". There are countless industrial estates scattered throughout London providing economic space to such occupiers. The fundamental issue, however, is that many companies involved in servicing the services are undertaking "clean" activities (i.e., their activities cannot accurately be described as industrial) in buildings that have been designed and managed for industrial activity. This confluence of clean activities in industrial sheds forms the core of hybrid office/industrial activity.

9.3.3 The *Industrial Land Demand and Release* study[110] noted a wide variety of sectors occupying industrial land probably because this provides available accommodation in the right place at the right price (Figure 9.1).

Figure 9.1 Distribution of occupier types on industrial land



[110] Roger Tym & Partners (2011) *Industrial Land Demand and Release Benchmarks in London*

9.3.4 And the property question that emanates from this is whether the property typically available to such companies is suitable for their needs.

9.3.5 During the mid-1980s there was some innovation in providing for hybrid office/industrial occupiers, but it was overtaken by events. The first phase of Stockley Park, near Heathrow, was designed as "mixed use" buildings, which blended office space with production space, in a flexible shell; all provided with an economic rent in a managed environment. However, in 1986, the Use Classes Order was revised and the business park was born: Stockley Park became an office location with premium rents.

9.3.6 Over the past couple of decades there has been relatively little innovation in shed design, beyond the specific case of the logistics market. In terms of traditional sheds, little has changed in terms of the nature of the product.

9.3.7 One reason for this lack of innovation is building economics – in that there is perceived to be limited scope to create a higher cost product. Another possible reason is the standard model of the UK institutional lease, which can be slow to respond to shifts in market demand.

9.3.8 At the same time, market supply currently shows a bias in development towards large sheds for single occupiers. However, research undertaken by Ramidus Consulting, and based on interviews with occupiers of sheds in West London, concluded that there are:

> *significant gaps between the nature and demands of the businesses and the property that is generally available to them. This presents a very significant opportunity to those developers and investors willing to consider more attractive product offerings*.[111]

In the following paragraphs we outline the nature of demand and its accommodation requirements. Much of the evidence base was gathered during the research referred to above.

9.4 The nature of demand

9.4.1 Servicing the services involves a very diverse range of activities. Our original research suggested that not only are many hybrid office/industrial occupiers unlikely to be "industrial" companies, but that they also have enormously varied use profiles. Figure 9.2 shows the variety of business types interviewed during the research. Even within the relatively modest sample – 17 businesses – the range of activities is notable.

9.4.2 Figure 9.3 illustrates two typical shed estates, where the actual occupation belies what accepted wisdom in the property industry might expect. The letting boards show occupiers involved in film production, interior design, computer systems and support, and clothing.

[111] Ramidus Consulting Limited (2007) *Operational Demand for Sheds in West London*

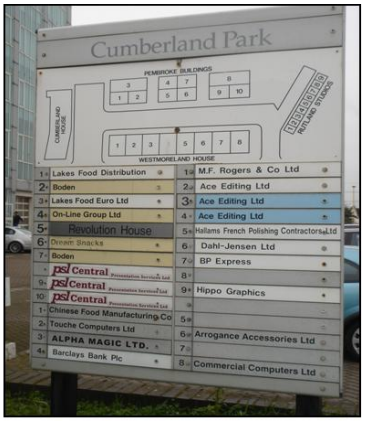
Figure 9.2 Sample of shed occupiers

Occupier types	
Audio-visual equipment	Maintenance contractor
Cash and carry	Manufacturer of sweets
Design and manufacture of art	Oriental food supplier
E-trading	Recording equipment repair
Event catering	Short-run digital printing
Freight forwarding	Specialist gift wrapping
Graphic design	Wine importer

Figure 9.3 Diverse uses in shed buildings

Film production
High tech printing
Interior design
Mail management
Music instrument hire
Packaging
Photography

Audio visual equipment hire
Clothing and fashion
Computer systems and support
Electrical services
Film editing
Food production
Garage retail
Graphic design
Mail order



9.4.3 Such a wide variety of uses contradicts the premises description of *industrial estate*, and introduces the concept of hybrid office/industrial activities.

9.4.4 Indeed, it suggests that the activities and the accommodation are somehow mismatched. This suggestion was borne out during the interviews that we undertook with a sample of occupiers.

9.4.5 Several of the interviewees in our research were occupying space which they found inappropriate, and to which they had made substantial alterations. The construction of mezzanines, sub-division of space and enhanced specification were all typical of such alterations, to accommodate

a wide range of activities. Such modifications were essential to accommodate the different activities being undertaken.

9.4.6 The adaptations were also in response to the profile of staff employed. Several of the businesses employed a high proportion of professional, skilled and technical staff. In one case, 60% of the staff had previously worked in offices in Central London. This was an unexpected finding. Figure 9.4 indicates the breadth of skills and job types to be found.

Figure 9.4 Activities in shed buildings

Production	Support
Assembly	Management and administration
Craftwork	Goods dispatch/receipt
Customisation	Customer support (call centre)
Design	Customer consultation
Engineering	Demonstration
Food preparation	Retail & wholesale sales
Graphic design	Sales & marketing
Maintenance	Technology
Packing	Training
Printing	Software development
Repair	Showroom
Storage & consolidation	Entertainment and hospitality

9.4.7 It was widely reported among the sample companies that such staff have higher expectations of their workplace than perhaps is the case with the generally perceived staff profile of a traditional industrial estate. Figure 9.5 shows the spread of skills found in the buildings visited.

Figure 9.5 Skills employed in shed buildings

Executive	Craft	Manual
Administration	Art and design	Deliveries
Customer support	Display/demonstration	Food preparation
Finance & Legal	Electronics	Machine operation
Management	Engineering	Till operation
Sales & marketing	Food design	Security
Software development	Technical support	Storage

9.4.8 The sample comprised a very diverse base of occupiers for whom the traditional shed is an inappropriate product from which to be operating. This is because many of them are involved in “clean” processes, have different servicing demands and employ staff for whom a typical shed environment is inappropriate.

9.4.9 What is clear from all of our research is that the actual use of many sheds is in fact quite different to general property industry perceptions. Many businesses are occupying functionally inappropriate buildings, and this is partly related to a lack of appropriate supply at an affordable price. This

raises the question of how the economics of development for hybrid office/industrial activity "stack up", a question beyond our scope here.

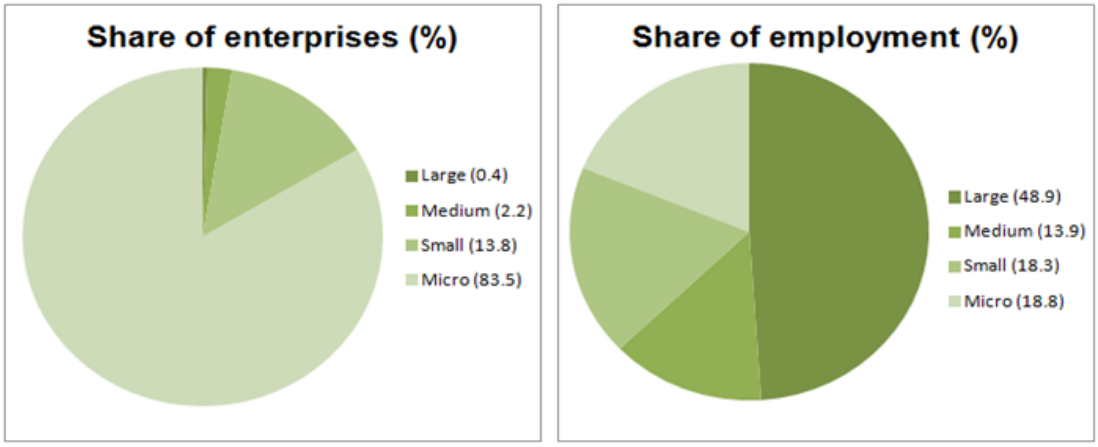
9.4.10 The bulk of companies occupying hybrid office/industrial space are SMEs, often owner managed. These companies, many of which provide support services to other companies, are part of a dynamic sector of the economy, and are the focus of government initiatives to pump prime economic growth. More specifically, given the office property market conditions in large parts of Outer London (see Chapter 4.0), providing appropriate physical infrastructure for this integral part of the economy could become more important.

9.5 The importance of SMEs

9.5.1 There are c4.5 million private sector businesses in the UK according to the Enterprise Directorate. According to Brinkley[112], nearly 75% of these have no employees. There are just over 1.2 million enterprises that employ at least one employee (average of eight), and over 99% are classified as SMEs (less than 250 employees). Further, just fewer than 84% are 'micro' enterprises employing fewer than 10 employees (Figure 9.6). In contrast, just 0.4% of all enterprises were classified as large, employing at least 250.

9.5.2 Employment is more evenly distributed. Just under 40% of employees are in small/micro firms, employing less than 50 employees, with another 14% in medium-sized firms (between 50 and 249 employees). About 49% are in large firms (employing 250 or more).

Figure 9.6 SME share of enterprises and employment, UK



Source: Brinkley (2008) *op cit*

9.5.3 Similar dynamics are seen in the London SME market. Figure 9.7 shows the structure of firm size in London in 2009. The table also distinguishes Financial Intermediation, and Real Estate, Renting and Business Activities, as potential surrogates of demand for office space. These two sectors comprise around half of enterprises and a third of employment.

[112] Brinkley I (2008) *Knowledge Economy and Enterprise* The Work Foundation

9.5.4 The SME sector is an important indicator of economic dynamism. Perhaps equally important is the self-employed sector. According to Oxford Economics[113], an important "*knock-on benefit of London's strong business culture, networks of talent and international outlook is a positive environment for entrepreneurship*". The report goes on to note that a range of measures of entrepreneurship "*reveal an environment more conducive towards starting and growing a business in London than anywhere else in the UK*". In 2009, for example, "*the proportion of people expecting to start a business in the next three years was twice as high in London as anywhere else*".

Figure 9.7 SMEs in London, 2009

No of employees	Enterprises	Employment	Of which ...			
			Financial Intermediation		Real Estate & Business Activities	
			Enterprises	Employment	Enterprises	Employment
0-1	687,100	745,000	18,695	24,000	203,945	219,000
2-4	90,230	257,000	2,260	6,000	37,100	100,000
5-9	32,130	217,000	1,125	7,000	11,130	75,000
10-19	16,175	222,000	710	10,000	5,525	75,000
20-49	6,755	211,000	430	13,000	1,985	63,000
50+	5,215	2,470,000	530	331,000	1,710	590,000
All	837,605	4,122,000	23,750	391,000	261,395	1,122,000

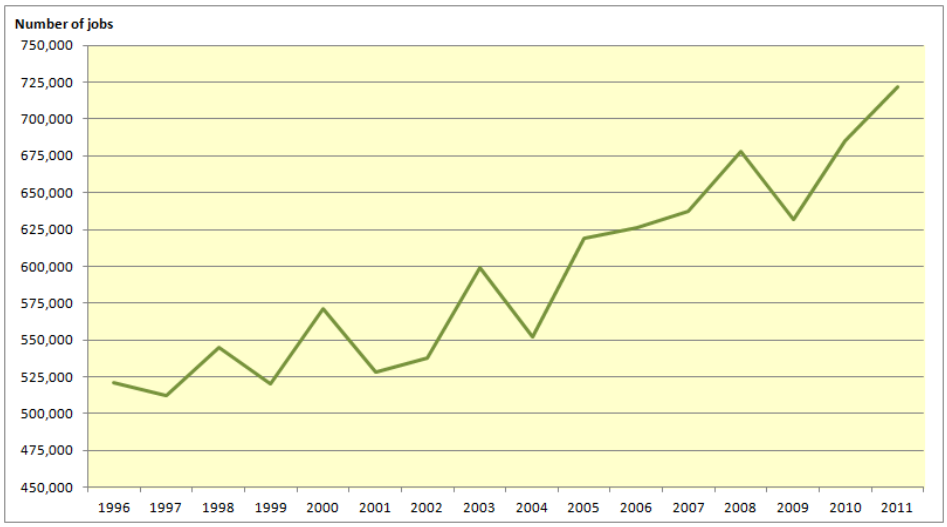
Source: www.stats.berr.gov.uk/ed/sme

9.5.5 Figure 9.8 shows a parallel example of the dynamic nature of the London employment market. The chart shows a strong, long-term growth in London's self-employed workforce, from 521,000 in 1996 to 722,000 in 2011. Overall there has been a 39% growth over the 15 year period.

9.5.6 Figure 9.9 also shows growth in self-employed jobs, but for a sub-set of all jobs, including: Information & Communication; Financial & Insurance; Real Estate and Professional, Scientific & Technical. Growth within this sub-set has been even stronger than for all self-employed jobs, at 46%.

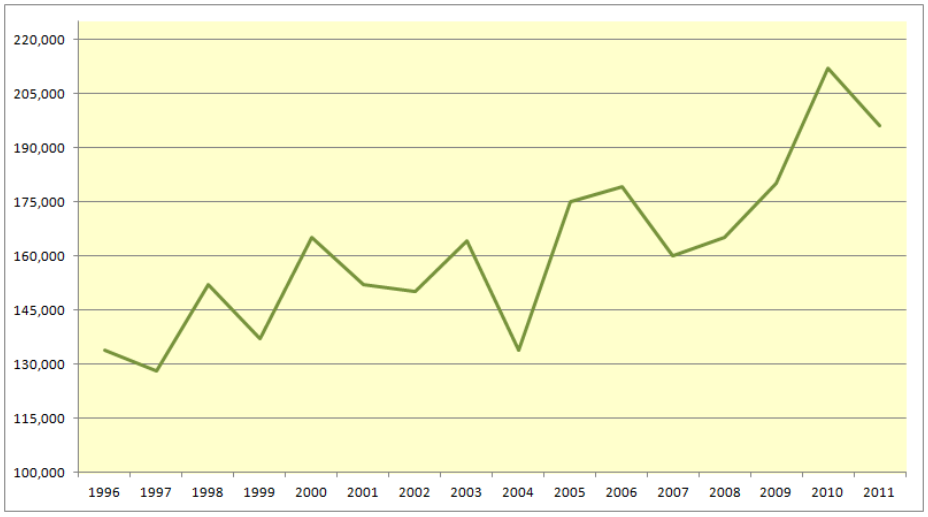
[113] Oxford Economics (2011) *London's competitive place in the UK and global economies* City of London Corporation

Figure 9.8 All self-employed jobs in London, 1996-2011



Source: Nomis Regional Workforce Jobs series, 14th March 2012

Figure 9.9 Professional self-employed jobs in London, 1996-2011



Source: Nomis Regional Workforce Jobs series, 14th March 2012

9.5.7 While we recognise the relationship between recession and self-employment (as evidenced in the sharp upturn since 2008), the message is clear: the SME sector in London is very dynamic. This is a factor that will boost economic flexibility, contribute towards London's recovery from the recession, and help sustain its global economic role.

9.6 Defining premises needs for hybrid office/industrial activity

9.6.1 It is helpful to have a descriptive term for the type of space that hybrid office/industrial activities occupy, or perhaps, should occupy. There is great diversity in demand, and potential to provide a range of different products. However, for illustrative purposes, we highlight one such product: the "*smart shed*". Using the word "shed" underlines that we are

not talking about an office building by another name. And using the word "smart" underlines that the accommodation is (a) of a higher quality than traditional sheds and (b) has a greater functionality.

9.6.2 It is important now to turn to a description of what a smart shed should look like. Based on our earlier research, we propose four generic demand functions, each reflecting a slightly different use profile and specification requirements, although the management regime is likely to be common to all – more intensive than normal for sheds, with greater emphasis on customers and value adding (or cash generating) services.

9.6.3 The four generic types are not exhaustive, but illustrative of a principle, and can overlap within a single occupation. The proportions of each type of space will vary according to the occupier, emphasising the need for building flexibility, and for a sympathetic ownership/management approach.

9.6.4 Figure 9.10 illustrates the four categories. All four require space that is flexible and easy to adapt. A depth of 13-18m is adequate to cater for most needs, allowing reasonably deep open plan areas, while also giving sufficient depth to allow different configurations of sub-division.

Figure 9.10 Smart sheds: four generic functions

Production	Client facing	Workshop	Goods handling
Occupier Priorities			
Power supply	Quality image	Natural light	Eaves height
Fire protection	Comfort	Comfort	Loading bays
24 hour	Accessibility	Security	Column free
Security	Security	Car parking	Secure yard
Retail trade	Car parking	Local amenities	Turning space
Car parking	Local amenities	Power supply	
Access			

9.6.5 Figure 9.11 summarises the main features of a smart shed. Ideally, a mix of single and double height space would also permit different kinds of uses. Proportions will vary, but for generic guidance, perhaps two-thirds of the space at 4.5m high, and a third at 6-8m for storage, studios, production, and so on. The higher dimensions allow pallets to be racked six high.

Figure 9.11 Basic features of a smart shed

Space that combines economy and quality
A basic, low specification that can be upgraded
A fit out that allows adaptation to specific needs
The ability to erect and dismantle partitions to suit changing needs
Better designed environmental control systems
A menu of options available over fit out
A management regime sensitive to business dynamics

9.6.6 Building security, access and parking are, unsurprisingly, all important issues. Attention to detail in these areas would make a very significant impact on a building's attractiveness to potential occupiers.

9.6.7 The overriding concern of the types of companies we are referring to here is to find space that combines economy and quality. While office rents and specification are not needed, a step up from poor quality shed environments is certainly in demand. A basic (low specification) fit out that allows occupiers to adapt to their specific requirements is the basic need.

9.6.8 The ability to erect and dismantle partitions to suit changing needs as product lines and volumes change is an obvious solution. Better designed temperature control systems and protection from the elements would make a major improvement (and reduce the environmental impact) to most buildings. While partitions and temperature control systems are often in conflict, the key is a creative solution to the configuration of single and double height space.

9.6.9 Lighting is generally less of an issue – provided that natural lighting is good. Again, a basic lighting system can be inexpensively supplemented by the occupier to suit specific needs.

9.6.10 The key to a more appropriate fit out solution would appear to be a menu of options available over the shell and core provision, allowing occupiers to meet budgetary constraints, whilst securing a solution that suits need.

9.6.11 Once the basic shell and fit out are determined, there remains the broader management context into which the building fits. This encompasses the physical environment and landlord services.

9.6.12 We believe that a wider range of issues could be considered by providers of smart sheds that are currently generally neglected. These are summarised in Figure 9.12.

Figure 9.12 Priority management considerations for providers of smart sheds

Issue	Consideration
Central facilities bureau	A central bureau on an estate where tenants can hire central services such as a fork lift truck with driver, recycling, book a courier, visit a nurse or dentist, perhaps even a dog walking service.
Estate amenities	Create a more attractive setting for sheds through landscaping, a less hostile environment – 'a high-tech park with a sense of place'.
Security	Create a greater sense of security with lighting, barriers and cameras.
Security force	Where appropriate, consider an estate security force that patrols and pays regular visits to participating businesses that share the cost.
Car parking	Provide communal visitor parking bays or areas.
Financial support	Small businesses find the cost of removals punitive. Consider making a financial contribution or off-setting the costs of removal/initial occupation. There may also be scope for flexibility over dilapidations.
Community co-operation	Encourage occupiers to share facilities amongst themselves – perhaps car sharing schemes to reduce congestion and parking problems, or shared deliveries between sympathetic businesses to reduce the burden of congestion charge.
Occupier forum	Set up an occupier forum where occupiers can share opinions and ideas for improvement.
Partnership	Be a genuine business partner to your tenants. Consider ways to offset their risk and thereby reduce your exposure to covenant. Offer venture capital? There is a much greater reliance on personal relationships with customers and suppliers than is often appreciated.
24 hour working	Many small businesses seek to improve margins by working 24 hour operations – promote this as an asset for units without restrictions. It makes better use of assets while reducing parking and congestion.
Negotiations	Speed up the process of negotiating a letting and communicate effectively with the prospective tenant.
Waste management	This issue is of growing importance given increasing legislation on responsibilities. Improved estate management solutions to waste management will grow as a differentiator for occupiers.

9.7 Hybrid office/industrial activity: overview

9.7.1 To summarise, hybrid office/industrial activity is a very significant but poorly recognised sector of the commercial property market. Often to be found away from the central area, where prices are lower and property less densely provided, such activities often support the wider business community of London with a very wide range of support activities.

9.7.2 Often the activity is "low key", but is vital to the efficient functioning of the city and in supporting its global role, referred to here as "*servicing the services*".

9.7.3 Of course the policy question being addressed here is whether this diverse sector of economic activity is being provided with the right kinds of property in the right locations. We have presented some empirical evidence here to suggest that there is plenty of scope to improve the offer to such occupiers.

9.7.4 We have also presented a range of data showing the quantitative importance of SMEs in London, which form the back bone of the companies involved in servicing the services. Small companies are immensely important to the wider functioning of the city, and evidence suggests that they might become more important rather than less so.

9.7.5 Our fieldwork suggests unequivocally that there does exist within the shed market an unsatisfied demand for a more attractive product offering: the *smart shed*. Among traditional shed occupiers there is considerable dissatisfaction with their current properties and a sense that something better could be provided. There is, therefore, a significant opportunity to look at alternative approaches to shed design and provision, focusing on the following.

- An internal environment appropriate to clean processes, white collar work, and customer visits.
- An external environment that is attractive to service-based rather than industrial or production businesses.
- A management regime that is of a higher quality than on the traditional shed estate.

9.7.6 The spatial planning implications suggest the need for a more creative approach to demand planning. The NPPF recently suggested the need for a sharper focus on the right *kind of property*, as well as the right place and right time. The foregoing should suggest less of a default to B1a in employment land planning and a greater appreciation of the breadth and depth of occupiers of “secondary” property.

9.7.7 In particular, more work could be undertaken to understand how spatial policy can support this key area, and the GLA and boroughs could together explore how to encourage how some such activities might support regeneration of town centre locations.

10.0 Other issues

10.1 Climate change considerations

10.1.1 The need to adapt to and mitigate the effects of climate change in the London office markets was addressed in some detail in LOPR 07 and LOPR 09. Since then, it has remained high on the economic social and political agendas and is an important Mayoral concern.

10.1.2 It is generally accepted that climate change will cause the UK's weather to become more extreme, with hotter and drier summers and warmer and wetter winters. As a consequence, it will be more prone to flooding, drought and overheating. The 2009 UK Climate Projections are outlined in Appendix A10 where we also list the key legislation, regulation and advice.

10.1.3 In short, there are requirements to reduce greenhouse gas and carbon dioxide emissions; increase the use of low carbon and renewable energy and to meet minimum energy efficiency targets in privately rented building stock.

10.1.4 In this section of LOPR 12, we reflect on the significance of the climate change legislation and regulation to the London office market and the extent to which it has begun to influence occupier preferences and investment decisions and we also consider in what ways it is likely to impact on the design and value of office property.

10.1.5 There is also rising awareness of a wider sustainability agenda recognizing the impact of the built environment on social and economic as well as environmental sustainability. This is considered to be increasingly important to the younger generation and a growing number of employers acknowledge its impact on recruitment and retention of staff, as well as reputation amongst consumers. This is not dealt with in LOPR 12, but should be considered for inclusion in future updates.

10.1.6 The measure that has prompted the loudest response from the property industry is the Energy Performance Certificate and requirement for all private rented property to meet a minimum standard of rating E by April 2018.[114] There is a view that this could render a large number of commercial properties unlettable and non-compliant after this date where refurbishment is not a financially viable option. It has been estimated that 18% of the UK's office stock could be affected. This is based on the proportion of office space built before 1986 when requirements for better thermal performance began to be introduced.[115]

10.1.7 This estimate is supported by Andrew Renshaw of Jones Lang LaSalle: "*Nearly two-thirds of the non-domestic property sector is privately rented and around 18% of those with an EPC have the lowest rating of F or G.*"[116] In London the proportion is likely to be lower because higher capital and

[114] DECC website: www.decc.gov.uk/en/content/cms/tackling/green_deal/gd_industry/private_rented
[115] EGi.com *Market failing to drive green real estate Nick Whitten* 8th March 2012
[116] Interview with Andrew Renshaw of Jones Lang LaSalle May 2012

rental values are more likely to support the cost of bringing properties up to standard, together with the greater sophistication of the occupier market. Nevertheless there is likely to be stock, particularly in Outer London, where the additional costs will tip the balance in favour of alternative uses such as residential.

10.1.8 The Part L building regulations already ensure that new buildings or refurbishments meet minimum standards and the cost of this regulation has been absorbed into the development viability equation.

10.1.9 Of just as much interest however, is the growing trend in the industry to make discretionary changes in recognition of the importance of protecting the planet from the effects of climate change.

10.1.10 There are several interest and lobby groups. Among the more widely recognised is the Better Buildings Partnership (BBP), an alliance of major London property owners and related bodies, supported by the GLA and the Mayor (See Appendix A10).

10.1.11 There has also been a concerted effort to measure the impact on building value and it is this kind of initiative that will ultimately ensure that measures are absorbed into mainstream investment decisions. The IPD Sustainable Property Index (ISPI) monitors the relationship between environmental performance and financial returns on sustainable properties in the UK. In a recent statement, IPD noted: "*the sustainability characteristics of properties are now beginning to impact asset value and investment performance*". However, in the description of ISPI on its website, IPD says: "*Sustainability is not yet priced into commercial property valuations in the UK, but when it is, the ISPI Monitor should show sustainability impacts on returns*". Evidence from Australia supports this assertion.[117] Early in 2012 IPD and RICS jointly launched the Eco-Portfolio Analysis Service (EcoPAS), which sets out 20 questions for valuers to consider when undertaking site appraisals, and is designed to encourage greater awareness.

10.1.12 IPD is currently working on two studies that will add to the understanding of the likely impact of sustainability on the commercial property market. The first for DECC is examining the impact of EPCs[118] and the second, on behalf of the BCO, looks at the role of sustainability, amongst other factors, in obsolescence. This is due for publication shortly.[119]

10.1.13 Many leading figures in the industry still think the shift towards sustainability is moving too slowly and that greater incentives are needed to effect change at an appropriate pace. Adrian Wyatt, Chief Executive of Quintain, said recently that "*the sustainable agenda around buildings is being led by the major occupiers such as Google, Microsoft and Cisco*".[120]

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[117] IPD *Australian Green Property Index* December 2011
[118] DECC *EPCs and their impact on rental and capital values of the UK commercial property market* Research in progress at IPD
[119] IPD and Lambert Smith Hampton (2012) *Obsolescence – change for the good. The practical implications of obsolescence for the UK office market* Forthcoming BCO, June 2012
[120] Propertyweek.com *Ecobuild: The writing's on the wall for the property industry* 21st March 2012

10.1.14 There is rising pressure from business occupiers which is a powerful force in effecting change. Global companies such as Unilever, Google, Coca-Cola and IBM are making significant changes to their operations to cut their carbon footprints in order to reduce operational costs; gain competitive advantage and better resonate with a younger generation of customers.[121]

10.1.15 Francis Salway, British Property Federation's sustainability committee chairman, speaking at industry conference 'Ecobuild' in March 2012, called for a tougher mechanism for promoting change than the requirement to obtain a minimum EPC rating of E by 2018. "*I think operators in the property industry are now doing more than is financially rational. A number of us are making decisions based on reputation. There is only so far that can go*."[122]

10.1.16 Salway advocated the introduction of differentials in business rates to encourage the industry to hit the ambitious carbon reduction targets.[123]

10.1.17 Earlier he had blamed the lack of investment in sustainability on an imbalance in the landlord and tenant relationship, whereby the owner pays for building improvements but the tenant receives the benefits of lower energy bills.[124]

10.1.18 **The London response** London is one of the most vulnerable parts of the UK to climate change because of population size and density; its ageing infrastructure; its sensitivity to the global economy, its reliance on importing resources and location in the hotter drier South East and situation on former estuarial marsh land.[125] Thus the impact of London of climate change is exacerbated and one key concern is the 'Urban Heat Island' (UHI) effect associated with large cities (see Appendix A10).

10.1.19 This has implications for building design since overheating of commercial buildings can be especially acute in modern highly insulated, lightweight and highly glazed buildings. The risk of overheating in buildings is likely to increase as outdoor temperatures increase.[126]

10.1.20 The Mayor first published an Energy Strategy in 2004 and it has been high on the mayoral agenda ever since. The Mayor acknowledges that the city's infrastructure, buildings and services must be resilient and that this applies to the existing building stock as well as new construction. Thus retrofitting buildings to be energy efficient, water efficient and climate resilient, is a key policy challenge.

10.1.21 **The London Plan** Published in 2011, the London Plan addresses climate change considerations in Chapter 5.0, primarily through policies on: new building design and construction and moves towards more sustainable energy sources but, as the Plan states: "*the biggest challenge for London is*

[121] Propertyweek.com *Corporates aspire to green dream* 16th March 2012
[122] Propertyweek.com *Ecobuild*: *Sustainability sinking into the alphabet soup* 20th March 2012
[123] Propertyweek.com *Property needs to "up the pace" to hit carbon targets* 22nd March 2012
[124] Propertyweek.com *Salway slams green proposals* 16th March 2012
[125] Climate UK (2012) *A summary of climate change risks for London*
[126] Climate UK (2012) *op cit*

to improve the contribution of the existing building stock (80 per cent of which will be still standing in 2050) to mitigating and adapting to climate change".

10.1.22 The Mayor has published a strategy for Climate Change Adaptation (October 2011) and a strategy for Climate Change Mitigation and Energy (November 2011). Key measures from the Plan and from these two strategy documents are highlighted in Appendix A10.

10.1.23 Issues that will influence the office market include the following.

- The stated desire for resilient infrastructure systems.
- The plan to reduce London's carbon dioxide emissions by 60% (below 1990 levels) by 2025.
- That all new commercial buildings should be zero carbon by 2019, and meet strict improvement targets between now and then. These are summarised in Appendix A10.
- All major development proposals to include a detailed energy assessment and use decentralised energy sources where feasible.
- Development proposals should meet supplementary planning guidance on Sustainable Design and Construction and maximise opportunities to orientate buildings and streets to minimise summer and maximise winter solar gain; use trees and other shading; increase green areas in the envelope of a building, including its roof and environs; maximise natural ventilation; expand green networks across London and where possible incorporate a range of public and/or private outdoor green spaces.
- Boroughs are encouraged to develop policies and proposals for retro-fitting existing building stock.
- Encourage sustainable energy infrastructure.
- 25% of the heat and power used in London to be generated though localised decentralised energy systems by 2025.
- Increase the amount of surface area greened in CAZ by at least 5% by 2030 and a further 5% by 2050.

10.1.24 **The London Climate Change Partnership** Set up to disseminate information and help businesses and individuals understand and prepare for the impacts of climate change. LOPR 09 included its outline of the potential cost, value and legal implications of not adapting to climate change, for London's commercial building stock.

What does it mean for the London property market?

10.1.25 Climate change considerations have moved further up the property market agenda. There are issues of compliance with legislation and planning

policy and, increasingly, a recognition that the failure to respond to climate change could have a detrimental effect on the desirability of a building to an occupier and ultimately on its rental and investment value. Building owners also have their own CSR priorities to meet.

10.1.26 The impact on building value and investment performance will become more transparent over time, particularly with the establishment of standardised investment measurement tools such as the ISPI. This means that the sustainability credentials of a building are increasingly likely to affect its value.

10.1.27 At present sustainability credentials of a building are not formally recognised in rent or investment values but there is mounting evidence that occupiers are expressing preferences and some of the major landlords are taking responsibility for introducing sustainability measures into their own portfolios above and beyond basic requirements. This suggests that in future there may be a premium for sustainability.

10.1.28 The green technologies are growth sector and, with support from the Mayor, London could benefit from establishing a cluster. While much of the demand would be expressed in the industrial market, it could also create demand for office space. Access to venture capital via London's financial services sector would help to attract innovators and entrepreneurs. In March 2009, Ernst & Young reported on research undertaken for the LDA in a publication entitled *Prospectus for London, the Low Carbon Capital.* In it they examine how well London is placed to capture investment in low carbon projects and to become a 'low carbon capital'. The report concludes that London has the potential to become a leading centre of expertise in the low carbon economy. There is also a view that the shock of the Fukushima accident in 2011 and announcement that Germany will abandon its nuclear power programme, will focus even more attention on the renewable sector.

10.1.29 The prospect of significant new occupier demand derived from carbon trading is uncertain. At present the market is immature and small and its future size is unclear. There have, for instance, been problems with fraud in the EU Emissions Trading Scheme and uncertainties over legislative requirements in the US[127] which could restrict its growth, but there is considerable potential for growth should carbon trading become a global system. In the current market, London has emerged as a leading centre for trading and investment according to CityUK, who said: "*Alongside the dominant position of ECX in the EU ETS and the prominent role of energy brokers, the UK remains the leading investor in project-based transactions with 26% of CDM purchases. It is also a key centre for raising finance, with 115 LSE-listed cleantech companies having raised £10bn in equity issues*."

10.1.30 The planning requirement for onsite energy production and urban greening will have an impact on the design of new construction, particularly large scale developments, as will lifestyle changes such as the rising popularity of cycling in London and the consequential demand for secure cycle

[127] CityUK *UK leading centre for trading and investment in carbon markets* July 2011

storage in the workplace. Government is also consulting on sustainable urban drainage standards for surface water flooding which would have implications for space and the cost of construction.

10.1.31 Analysis by DECC released in November, estimated that energy and climate policies, such as the CRC Energy Efficiency Scheme, will on average add 19% onto the bill of a UK business with a medium-sized energy consumption by 2020 – and 28% by 2030. The costs of running office buildings in London are expected to be disproportionately affected by climate change because of the more extreme weather conditions in the capital and the heat island effect.

Overview

10.1.32 The message from this array of initiatives, legislation and policy is that climate change is being taken very seriously and is becoming an accepted component of decision-making for occupiers and owners. Over time it is likely to have a quantifiable impact on rent and capital values, and the mechanisms are emerging for this to be standardised in the investment valuation process. It also presents opportunity for an expanding employment sector in the capital.

10.1.33 With the legislative and regulatory requirements in place or all new construction and refurbishment, as well as incentives to undertake discretionary measures to make property more sustainable, it seems inevitable that sustainable property will, over the course of time, become the norm for the commercial building stock in London.

10.1.34 At present however, there is no measurable premium for sustainable buildings, so any additional cost is borne by the landlord but the commitment of major corporate occupiers to sustainability suggests that this will change as their preferences are expressed in the letting market. In fact this may already have changed but not been quantified.

10.1.35 In the meantime however, the question is whether a significant dichotomy will emerge between ‘green’ and ‘non-green’ and to what extent this will be reflected in differential values. In new building stock it will be difficult to separate the pricing effect of ‘green’ from the pricing effect of Grade A because, since no building more than five years old and not refurbished can generally be regarded as Grade A, there will be no control data set (i.e. Grade A, non-green). It may be however that going ‘beyond the basic requirements’ will attract a premium from occupiers keen to operate sustainably.

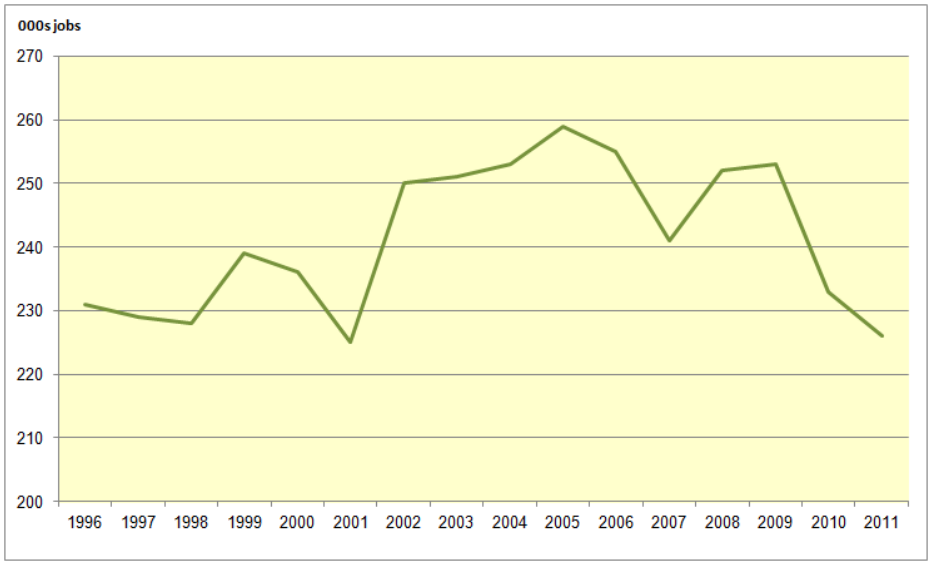
10.1.36 If there is a differential value, it will presumably accelerate the retrofitting or renewal process by making it more financially viable, or essential. It is possible that it could leave an underclass of office stock where upgrading cannot be justified but only where office use is low value in which case alternative uses are probably more appropriate.

10.2 Public sector trends

10.2.1 The public sector is a major employer in London. As Figure 10.1 shows, since 1996, employment in the more narrowly defined Public Admin & Defence sector has been maintained at between 225,000 and 260,000 jobs. When the Education and the Health sectors are added to these numbers, the scale and importance of the public sector in employment terms can be appreciated.

10.2.2 Figure 10.1 also shows that since 2009[128], following the credit crunch and ensuing austerity measures, there has been a noticeable contraction in Public Admin employment. Between 2009 and 2011, the number of jobs fell by nearly 11%, from 253,000 to 226,000. It is to be expected that this trend will continue into 2012 and possibly also 2013. Furthermore, data provided in Chapter 7.0 forecast Public Admin employment in London to shrink by almost 16% between 2011 and 2031.

Figure 10.1 Public Admin & Defence jobs in London



Source: ONS (2012) *Workforce jobs by region and industry*

10.2.3 As is widely known, the public sector is facing a prolonged period of austerity and direct cuts to budgets. In some areas, such as the police, political sensitivity is such that front line resources are being ring fenced, which means that the severest efficiencies are sought in support functions. Invariably, there is a sharp focus on office space.

10.2.4 Setting aside schools, universities, hospitals, police stations and a plethora of other "operational" property, the public sector is also a considerable user of office property in London. Perhaps the greatest users of commercial office property are: central government, local government and the police force. Central Government occupies 2,452,266 sq m[129], while the

[128] All years relate to Q4, except 2011 where most recent data relate to Q2
[129] GPU (2011) *The State of the Estate 2010*

Metropolitan Police Force occupies around one million square metres[130]. Composite data for local authorities are not available.

10.2.5 We set out below the main implications of trends in the public sector for London's office market. The implications are perhaps greatest in Outer London where there is generally a higher proportion of public administration functions and which, as discussed in Chapter 4.0, is already suffering stagnant office market conditions.

10.2.6 **Central Government** The Government's relocation and rationalisation programme is well known (and was reported in LOPR 09). The government reports on progress with its property rationalisation programme, and the latest results were published in 2011.[131] Among the results, it was reported that the Central Civil Estate (CCE) in London had shrunk by 17% between January 2009 and January 2011: a reduction of nearly 425,000 sq m over just two years. Pressure to further reduce the size of the estate remains strong.

10.2.7 The Government Property Unit (GPU) is taking an increasingly tough stance with Departments over their use of space, and has put in place National Property Controls which set down strict occupancy standards. These entail binding Departments to the following rules.

- Cabinet Office and Treasury approval for spending over £100,000 on the signing of new leases, renewal of existing leases and non-exercise of break options.

- A space standard of eight square metres NIA per FTE, and a ratio of seven workstations for every ten FTEs.

10.2.8 These density and utilisation targets are demanding when compared to the figures used in this report (see Chapter 7.0) to forecast future demand for property (11.9 sq m and 8:10, respectively).

10.2.9 The Government is increasingly working towards a model whereby departments share space in order to improve efficiency, rather than default to separate tenancies to meet demand. For example, having achieved its density and utilisation targets, the Treasury's building on Whitehall is currently being occupied by non-Treasury functions on exactly this model.

10.2.10 It is to be expected that central government's demand for space in London will continue to fall for the foreseeable future. In Outer London, Croydon has witnessed the impact that such relocations can have.

10.2.11 **Health Service** In February 2012, the Government announced the creation of a government-owned property company to manage the Primary Care Trust (PCT) estate. NHS Property Services, it was said, would take ownership of, and manage, that part of the PCT estate that does not

[130] MPA (2010) *The MPA/MPS estate strategy 2010-2014*
[131] GPU (2011) *op cit*

provide specialist services. A large part of this sprawling estate is office space, although reliable data are not available.

10.2.12 The establishment of the new property company shows the Government's determination to extend its efficiency agenda beyond the CCE and to tighten its grip on the management of the wider public sector estate.

10.2.13 On 10th February 2012, Strategic Health Authority Chief Executives were informed by the Department of Health (DH) of the new, centralised approach to asset management. The DH paper contained a number of direct instructions about how Health sector admin buildings should be managed in the future, all around the theme of achieving efficiencies. The paper referred to the "*pressing need to ensure that current and future property requirements are met in ways that will deliver optimum value for money across the whole system*".

10.2.14 Among its most relevant comments in the context of LOPR, the paper stated that, henceforth, the GPU's National Property Controls will "*apply to all DH and ALB [Arms Length Body] property decisions*". The paper repeated the two principal controls outlined above (second bullet point, para 10.2.7) as the key guidelines for future property decisions.

10.2.15 The precise impact of these controls in London is difficult even to estimate, not least because there are no reliable data showing how large the extant Health Service estate actually is. However, even if they led to a 20% reduction (which would seem perfectly achievable given results in the CCE and local government estates), then there will be much aged office stock that becomes surplus to requirements.

10.2.16 **Metropolitan Police** Across the country, police forces are planning major efficiency programmes. Thirty-two London boroughs are policed by the Metropolitan Police Authority (in addition there is the City of London force). As stated above, the MPA's strategic property plan states that the force's estate comprises around one million square metres, and this includes around 900 properties.

10.2.17 As with all other public sector bodies, and police forces across the country, the MPA will be seeking efficiencies within its estate, and there is almost certain to be a reduction in demand for office accommodation across the capital. There are as yet, however, no published data or targets for implementation.

10.2.18 **Local government** As we have seen, local government is a major employer in London. While large numbers of employees are involved in delivering frontline services in schools, libraries, and so on, many also occupy commercial office space.

10.2.19 A number of London boroughs have been at the forefront of implementing corporate change programmes, and introducing flexible work styles. In doing so they have rationalised their admin office estates, often shedding large amounts of space. The boroughs of Ealing, Greenwich, Islington,

Newham and Southwark are all known to have introduced change programmes and efficiency savings.

10.2.20 To take just one illustrative example, LB Southwark recently consolidated its back office functions, and in so doing reduced its estate from 20 buildings scattered across the borough to just one building. The project delivered annual savings of £3m, and delivered capital receipts of c£39m.

10.2.21 Other local authorities are working together to achieve efficiency savings through sharing functions. Three London boroughs (Hammersmith & Fulham, Kensington & Chelsea and Westminster) are planning a tri-partite venture to share service delivery. This will lead to major efficiency savings, not least in real estate across the three boroughs.

10.2.22 **Overview** While it is difficult to get reliable, aggregate data, there is no doubt that the public sector is working hard to achieve efficiencies in its use of real estate. In CAZ and areas of Inner London, the direct impact will be less important in terms of creating structural vacancy as other uses are likely to emerge; but will be more important in terms of reducing the sector's historic contribution to on-going demand.

10.2.23 In Outer London, the effects could be felt more keenly. We have already mentioned Croydon, but there are many centres where office markets are structurally weak (see Chapter 4.0), and the release of significant amounts of (generally) secondary properties could have a further depressing impact on market prospects.

10.3 Transport infrastructure and improvements

10.3.1 Transport investment is critical to shaping the geography of any city and London's transport is benefitting from its biggest investment in 70 years.[132] The upgrade of the Underground between 2003 and 2020 for instance, will add 30% to the network's capacity. This is being achieved through a combination of new signalling, which allows more trains to run more frequently, and larger, longer trains.

10.3.2 Recent and current improvements include the completion of the London Overground; extension of the DLR; Thameslink; Crossrail and substantial improvement to or renewal of several London stations including London Bridge and Blackfriars. Improvements to the national rail system will also benefit London, such as HS1 and HS2 and the electrification of the Great Western line. There are also on-going discussions about the best way to increase the capacity of London's airports.

10.3.3 Here we provide a summary of the main transport infrastructure projects and proposals, which we consider to be sufficiently strategic to have a potential long-term impact on the London office market. In this section we update some of the proposals mentioned in LOPR 09, which have since progressed, and we outline proposals that have emerged more recently.

[132] Central London Forward (2011) *Prospectus*

The implications of these projects on the geography and office markets of London are highlighted and summarised in the conclusion to the section.

10.3.4 **Crossrail** Construction officially began on Crossrail in December 2008, although the main construction works through the central section did not start until in 2010, and tunneling began in March 2012. The first services are expected to commence on the central section from 2018.

10.3.5 It will run from Maidenhead and Heathrow in the West, through Central London, and on to Whitechapel, Canary Wharf, Woolwich, Abbey Wood and Shenfield in the East, serving 37 stations in total (Figure 10.2).

Figure 10.2 Crossrail route

10.3.6 New stations will be constructed at Paddington, Tottenham Court Road, Bond Street, Farringdon, Liverpool Street, Whitechapel and Canary Wharf. It will link with the Underground network, Thameslink, National Rail, DLR, London Overground and, should it be built, HS2.

10.3.7 Crossrail will enhance connectivity and shorten journey times in many London locations, creating opportunities for investment and development. The key impacts on office markets are as follows.

- To regenerate and enhance land value in the immediate vicinity of the new stations.
- To relieve congestion across London's public transport network: an issue that is widely acknowledged as a threat to the attractiveness of London to business.
- To create greatly enhanced accessibility for Outer London centres to the East and West of Central London.
- To focus economic benefit on London's West-East axis and further disadvantage parts of Outer London to the North and South of the centre.

10.3.8 In Central London, Tottenham Court Road and Farringdon are the two stations likely to benefit most from added value. The area around Tottenham Court Road, including the eastern end of Oxford Street and the area around Centre Point has been run down. The prospect of a new underground station linking Crossrail with the Northern and Central lines has helped to focus interest in this area and values are expected to rise.

10.3.9 Farringdon is where Crossrail interchanges with Thames Link and the underground network. It will become a major transport hub and will have direct access to Heathrow, Gatwick and Luton airports. It is likely to be the focus of considerable developer and investor interest.

10.3.10 Centres such as Romford, Ilford and Ealing will all benefit from greatly improved connectivity. Ealing should be particularly well placed to exploit this with its already well-established retail and office markets.

10.3.11 Crossrail will create a direct public transport link between Canary Wharf and Heathrow for the first time and a journey time of 40 minutes. It also reduces the journey times to Central London. Canary Wharf is already an established part of the London office market but these improvements to its connectivity will reinforce its strategic position and could narrow the rental differential further between Canary Wharf and the City.

10.3.12 There is an interchange proposed with HS2 at Old Oak Common near Harlesden in West London, that would also link to the tube and overground and which could be the catalyst for a major regeneration project. While this is probably of more value as a residential or mixed use location, there is likely to be scope for workspace because of its proximity to Park Royal.

10.3.13 Kensington & Chelsea is campaigning for an additional Crossrail station in North Kensington, known as: Kensal Crossrail. The case was set out in a report by Regeneris in February 2012 and the Council has committed to underwrite the £33 million construction costs. It would most likely be a residential or mixed use location.

10.3.14 **Crossrail 2** The Secretary of State for Transport has safeguarded a route from Hackney to Chelsea for a possible future underground line from South West to North East London (also known as the *Chelsney* or *Hacksea* line). The plans have gained more importance with the emergence of Euston as the preferred London terminus of HS2, since it would bring an estimated 20,000 passengers onto the congested Northern and Victoria lines at Euston. If HS2 is approved, Transport for London (TfL) plans to change the safeguarded route in the tunnels between Tottenham Court Road and King's Cross St Pancras so that a new station can be built at Euston. Capacity at Euston would become a critical issue should HS2 be extended beyond Birmingham. If HS2 is built, this scheme would enhance the value of the area around Euston as an office location.

10.3.15 **Thameslink** This improves capacity, frequency and journey times on the North-South cross-London route from St Pancras/Farringdon to Blackfriars and extending beyond London from Bedford to Brighton. Enhancements include: longer trains; more frequent services and the upgrading of three stations. By 2018, it will have the capability to run 24 trains per hour in each direction between St Pancras and Blackfriars.

10.3.16 The Thameslink route opened in May 2012 for travel across Central London and journeys from Bedford to Brighton. A full Thameslink Programme of services, with a train through Central London every 2-3 minutes, will not run until 2018.

10.3.17 The scheme will benefit the King's Cross-Farringdon area, reinforcing the impact of Crossrail and High Speed One, and enhancing the area's overall strength as an office location.

10.3.18 The new Blackfriars station will open in mid 2012. It will benefit from the extension to the Thameslink network and it is reasonable to expect office values in the area to increase.

10.3.19 The latest **DLR extension** opened in 2011 with a high frequency service, seven days a week, between Stratford International and Woolwich Arsenal via Canning Town during peak hours, and via Canning Town to Beckton outside of peak hours. Trains on the new route run approximately every eight minutes to Woolwich Arsenal and Beckton.

10.3.20 An extension to Dagenham Dock has also been identified as part of the Barking residential development area. Possibilities have also been identified to improve the DLR's connectivity to Central London through for example a westward extension from Bank to Victoria.

10.3.21 **Northern Line extension** This proposal for Battersea, with stations at Nine Elms and Battersea Power Station, would connect the area into the underground network. The US Embassy will be relocated to Nine Elms and with an underground connection it would have potential as an office location. TfL is seeking to raise private sector funds for the extension. A connection into the underground network would help to increase property values in the area.

10.3.22 **Bus and Tramlink proposals** Bus network and infrastructure proposals are being developed to support growth in areas and corridors across London. For instance, the second phase of East London Transit will provide a fast bus service between Ilford, Barking town centre and Dagenham Dock, via Barking Riverside, due to commence services in 2013. In the longer term, extensions to Tramlink have been considered, to improve Croydon's connectivity North to Central London and to other parts of Outer London.

10.3.23 **High Speed One** Eurostar services currently run non-stop from St Pancras International to the Channel Tunnel (or make one intermediate stop at Ebbsfleet or Ashford). A relaxation of competition rules in the EU in 2010 could attract more international high speed services running to London from a wider array of mainland European destinations and lead to the greater use of Stratford International to avoid congestion at St Pancras and serve Canary Wharf and other East London locations. This would support office land values around Stratford although it remains very much a secondary office location for the moment.

10.3.24 **High Speed 2** Proposals for a high speed line from London to Birmingham enabling journey times of 49 minutes have been widely debated and controversial because of fears that countryside along the route would be adversely affected as well as reservations about the cost and economic benefit. There are also proposals to extend the line beyond Birmingham in a Y-shape, to Leeds and Manchester, which would make journey times of 75 minutes possible between these two cities and London.

10.3.25 The current preferred location for a London terminal is Euston. There is also a proposal for a West London interchange at Old Oak Common. In both cases, these create opportunities for regeneration around the stations. In West London, the area around the proposed station is in decline and could benefit from substantial uplift.

10.3.26 At present the proposed connection to Heathrow is via a spur and is in phase two of HS2. Lobbying has begun to consider the Heathrow Hub as an alternative and to give it greater priority to improve connectivity and passenger experience at Heathrow (see Heathrow Hub below).

10.3.27 **London Overground** is a suburban network of rail services that passes through 20 of the 33 London boroughs and creates an orbital railway. Once complete, it will mean that 30% of London's population lives within 15 minutes' walk of a station. Improvements have been made to connect the East London and North London lines.

10.3.28 The line now extends from Highbury & Islington in the North to New Cross, Crystal Palace and West Croydon in the South, via the City at Shoreditch High Street station. There is also an improved interchange at Canada Water to the Jubilee line for Canary Wharf. An extension from Dalston Junction to Clapham Junction, via Surrey Quays will be completed in late 2012 and will link South West and South East London. This will complete London's orbital railway. The line will help to unlock the potential of Bishopsgate Goods Yard, which it crosses, and access between Croydon and the City and E14 will improve.

10.3.29 **Heathrow Hub** is a proposed new airport entry point to the North of Heathrow, with a major intermodal interchange on the Great Western Main Line (GWML), Crossrail and the M25, (a short distance North of its junction with the M4), less than 4km from Heathrow Terminal 5. It would provide direct and seamless access to check-in facilities above the station platforms, and an airside transit journey time of only 3.5 minutes to Terminal 5 or six minutes to Terminal 2.

10.3.30 The Government's current consultation proposal includes the Hub as one of three alternative sites, for a Heathrow interchange on a spur from HS2 (the others being West of T5, and North of the airport close to Bath Road). Of these, only the Hub provides the potential for seamless connectivity between HS2, Heathrow, the rail network and the UK motorway network.

10.3.31 **Airport capacity** The Government began a consultation process on aviation in March 2012. The Department for Transport is planning to publish an aviation paper – "a call for evidence" – about how to preserve the UK as a leading global aviation hub.

10.3.32 Passenger demand for London's airports is forecast to increase from 140 million a year in 2010 to 400 million passengers a year by 2050, pointing to the real need for substantial additional airport capacity. The rising demand for air travel and the debate over how it is met through increased capacity is a very current one, with many dimensions that go beyond the remit of this study. However, in terms of London's offices, the various options for

increasing airport capacity in London, the South East and nationally will need to consider the costs and benefits for the office market, and its business occupiers, particularly with respect to the implications for Outer London.

10.3.33 **Stalled schemes** There are a number of transport schemes that have gained support but been postponed or shelved due to lack of resources but some of these are worth monitoring because they would, if progressed, have strategic importance for London. Two are listed here.

10.3.34 **AirTrack** a major initiative which would have connected Heathrow Airport Terminal 5 to London Waterloo, stations in South London and centres beyond, such as Guildford, Woking and Reading was shelved in 2011. BAA announced that it would withdraw its application after it was unable to resolve concerns over level crossings and also due to a lack of funds.

10.3.35 **Cross River Tram** This proposal for a tram link from Brixton and Peckham to Camden and King's Cross via Euston and Waterloo was put on hold in 2008 due to lack of funding although it is still promoted by the boroughs that would benefit such as Lambeth.

10.3.36 **Overview** From this brief review of new transport infrastructure, there are clearly a number of initiatives that will bring significant potential benefits to London's office market.

10.3.37 Much of the infrastructure investment serves the primary purpose of relieving congestion on the London's over-burdened public transport network. This is repeatedly identified as a threat to London's attractiveness as a global city and the additional capacity provided in Central London by schemes such as Crossrail and Thameslink is critical in securing London's competitive position.

10.3.38 The other major benefit is in opening up new areas of the city, creating land value and development potential in locations beyond the central area. East London has been a particular beneficiary of this in the past 20 years, with Canary Wharf standing testament and looks likely to reap the greatest rewards from the current investment programme too. Stations along the Crossrail route to the East and West all stand to gain connectivity and accessibility but the area around Stratford International Station has the additional benefits of HS1 and the focus on the Olympic Park.

10.3.39 Transport investment will create value on a more local scale in the immediate vicinity of stations such as Tottenham Court Road, Farringdon, London Bridge and, if HS2 is built, Euston. In the long-term there is potential for regeneration around Kensal station if it is progressed; Old Oak Common and Battersea.

10.4 "Other" other issues

10.4.1 The project specification for LOPR 12 indicated a requirement to update a number of "Other Issues" addressed in LOPR 09, which are not dealt with

within Sections 10.1 to 10.3. These issues have been dealt with elsewhere, and we indicate below where this has happened.

10.4.2 **Investment market sentiment** See Chapter 3.0, *The impact of recent economic events.* Section 3.5 summarises changing investment market sentiment.

10.4.3 **Construction** In LOPR 09 it was considered that structural issues within the construction industry were having a constraining impact on supply. This is not currently an issue and has not been updated.

10.4.4 **Conversion of surplus office space** This is dealt with thoroughly within Chapter 8.0, *Office to residential conversion*.

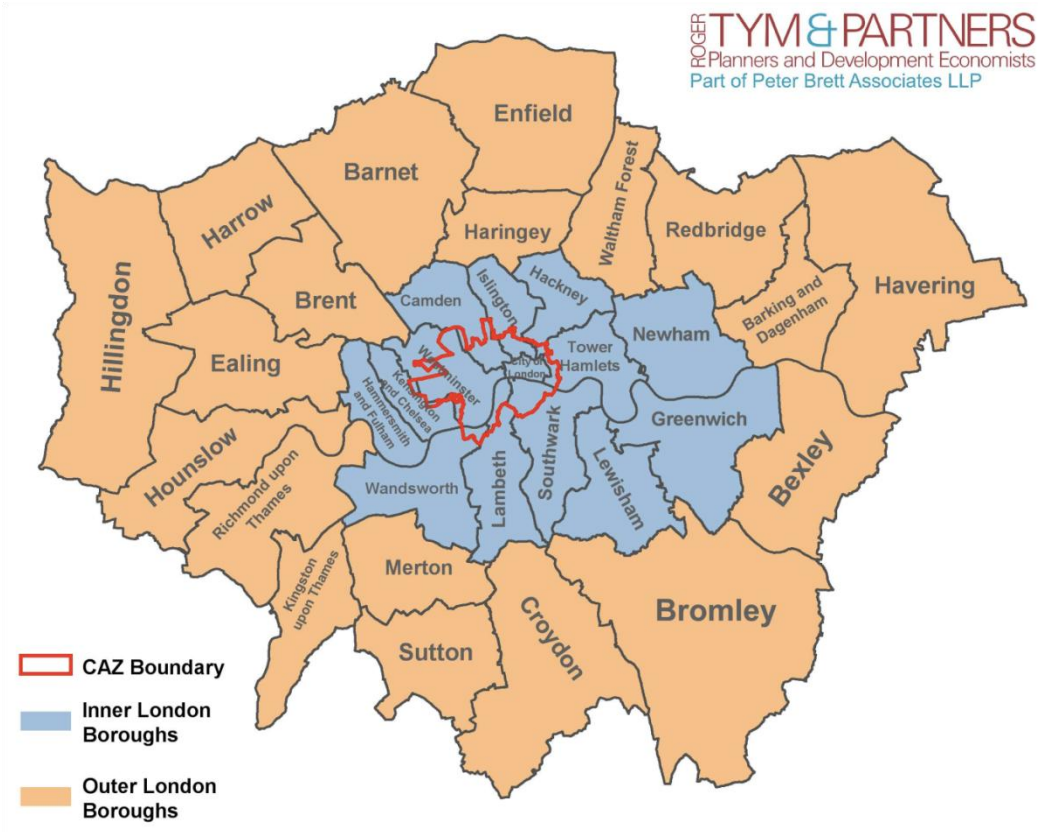
10.4.5 **Relocation, off-shoring and globalisation** This is picked up in a number of places, notably in Chapter 3.0, and to a lesser degree in Chapter 4.0, Prospects for non-CAZ office centres.

10.4.6 **Options for mixed-use policy** This is picked up at various points within Chapter 1.0, Supply and demand in central London, Chapter 4.0 and Chapter 8.0, Office to residential conversion.

10.4.7 **The effectiveness of London-wide office policy** This has been dealt with throughout the current report, particularly in chapter overviews.

Appendices

Appendix A1
Map showing London boroughs, CAZ, Inner London and Outer London



Appendix A2
Office lettings and sales, >5,000 sq m, Central London, 2011

Address	Occupier	Sq m	Type
25 Churchill Place, E14	European Medicines Evaluation Agency	23,592	Under construction
122 Leadenhall Street, EC3	Aon	17,836	Under construction
Central Saint Giles, WC2	Google UK	14,409	New
North East Quadrant Regent's Place, NW1	Debenham	13,471	Under construction
King's Cross Central, 3 Pancras Square, NW1	Camden Council	11,782	Pre-let
Central Saint Giles, WC2	NBC Universal	10,405	New
3 Bunhill Row, EC1	Trowers & Hamlins	9,385	Second-hand Grade A
Murray House 1 Royal Mint Court, EC3	Deloitte	8,134	Second-hand Grade B
160 Great Portland Street, W1	Double Negative	8,036	Pre-let
The Angel Building, St John Street, EC1	Expedia.com	7,549	Refurbishment
191 Marsh Wall, E14	*Undisclosed letting*	6,941	Second-hand Grade A
6 Harbour Exchange Square, E14	Telecityredbus	6,294	Second-hand Grade B
Marcol House, Margaret Street, W1	Savills	6,105	Under construction
4 Harbour Exchange Square, E14	British American Tobacco	5,433	Second-hand Grade A
2 Kingdom Street Paddington Central, W2	Nokia	5,422	New
11 Baker Street, W1	Pimco Europe	5,314	New

Source: EGI London Offices database

Appendix A3
Take-up by location and quality in 2011, and change on 2010 (sq m)

Post code/sub-market	New & refurbished	Good second hand	Poor second hand	Total	% change on 2010
EC1	40,805	28,661	32,986	102,452	56.9
EC2	48,035	51,590	14,175	113,801	-62.0
EC3	41,583	34,975	13,179	89,737	20.9
EC4	34,608	37,219	5,060	76,888	4.9
City	**165,031**	**152,446**	**65,401**	**382,878**	-37.8
	-56.7	-14.0	14.7	-37.8	
E14/Docklands	**23,670**	**16,993**	**6,369**	**47,033**	-77.6
	-83.7	-71.8	57.3	-77.6	
E1	2,381	9,011	6,168	17,560	-48.1
SE1	15,162	29,902	16,260	61,324	66.7
South & East Fringe	**17,543**	**38,913**	**22,429**	**78,885**	11.7
	2.1	60.0	-23.0	11.7	
WC1	5,599	10,738	9,108	25,446	-61.6
WC2	46,651	28,046	15,029	89,726	42.9
Midtown	**52,250**	**38,784**	**24,137**	**115,171**	-10.8
	25.9	-6.5	-47.7	-10.8	
W1	71,633	63,863	34,656	170,152	-3.7
SW1	9,840	39,614	8,744	58,199	-21.1
West End	**81,473**	**103,477**	**43,400**	**228,351**	-8.8
	7.9	28.2	-53.9	-8.8	
NW1	29,124	11,192	3,298	43,615	-57.1
SW3	161	1,772	2,857	4,789	-22.9
SW7	0	419	43	462	-86.1
W2	7,858	9,637	2,503	19,999	-12.1
North & West Fringe	**37,143**	**23,021**	**8,701**	**68,865**	-34.6
	-14.9	-52.0	-36.3	-34.6	
Central London	**377,110**	**373,634**	**170,437**	**921,182**	-34.6
	-49.3	-10.0	-31.9	-34.6	

Appendix A4
Availability by location and quality in 2011, and change on 2010 (sq m)

Post code/sub-market	New & refurbished	Good second hand	Poor second hand	Total	% change on 2010
EC1	63,253	24,912	16,003	104,169	-29.3
EC2	83,140	106,353	9,860	199,353	7.6
EC3	54,452	52,542	9,825	116,820	-17.7
EC4	108,017	67,200	4,985	180,202	4.9
City	**308,863**	**251,008**	**40,673**	**600,543**	-7.1
	-1.5	5.6	-57.2	-7.1	
E14/Docklands	**40,207**	**71,647**	**13,551**	**125,405**	1.7
	-3.3	-1.6	51.5	1.7	
E1	18,586	16,633	19,463	54,682	-20.2
SE1	70,629	22,899	16,716	110,244	51.3
South & East Fringe	**89,215**	**39,532**	**36,178**	**164,926**	16.7
	305.1	-44.7	-24.5	16.7	
WC1	10,359	22,908	12,045	45,311	-6.6
WC2	21,419	15,275	15,119	51,814	-33.1
Midtown	**31,778**	**38,183**	**27,164**	**97,125**	-22.9
	4.9	-30.2	-33.7	-22.9	
W1	57,597	57,458	43,952	159,008	-22.9
SW1	31,886	40,965	24,675	97,526	-7.6
West End	**89,484**	**98,424**	**68,627**	**256,534**	-15.8
	28.5	-24.5	-34.5	-15.8	
NW1	10,872	3,116	11,074	25,061	-23.7
SW3	433	6,199	804	7,435	-25.1
SW7	86	45	50	181	-75.5
W2	17,682	2,491	484	20,658	-40.7
North & West Fringe	**29,073**	**11,850**	**12,412**	**53,335**	-31.9
	-14.9	-52.0	-36.3	-31.9	
Central London	**588,619**	**510,644**	**198,605**	**1,297,868**	-8.6
	15.1	-13.7	-37.4	-8.6	

Appendix A5
Office developments starts, >500 sq m NIA, Central London, 2011

Address	Sq m	Pre-let	Type
Camden			
North East Quadrant (NEQ), Hampstead Road, Drummond Street, NW1	31,587	13,471	New Build
MTV Studios, 17-29 Hawley Crescent, NW1	7,522		Refurb
Chichester House, 278-282 High Holborn, WC1	5,850		New Build
King's Cross Central - Western Transit Shed, Coal Street, NW1	4,310		Refurb
Denning House, 90 Chancery Lane, WC2	3,109		New Build
City			
The Walkie Talkie, 20 Fenchurch Street, EC3	58,274		New Build
Leadenhall Building (Cheesegrater), 122 Leadenhall Street, EC3	54,614	17,836	New Build
Sixty London, 60 Holborn Viaduct, EC1	19,230		New Build
Finsbury Circus House, 12-15 Finsbury Circus, EC2	15,708		Refurb
Cannon Street House, 110 Cannon Street, EC4	6,120		Refurb
St Paul's House, 8-12 Warwick Lane, EC4	4,008		Refurb
5-7 Giltspur Street, EC1	3,711		New Build
18-20 Cannon Street, EC4	3,442		Refurb
40-43 Fleet Street, EC4	1,750		Refurb
Midtown			
Oldebourne House , 46-47, Chancery Lane, WC2	1,084		Refurb
Hackney			
Kingsland Wharves, 305 Kingsland Road, E8	4,082		New Build
Reliance Wharf (Former Raglan Wharf), 2-10 Hertford Road, N1	1,748		New Build
102-108 Clifton Street, EC2	862		New Build
Islington			
Woodbridge House, 30 Aylesbury Street, EC1	7,822		Refurb
Finwell House, 26 Finsbury Square, EC2	7,640		Refurb
Glasshouse, 26-28 Glasshouse Yard, EC1A 4JU	4,559		Refurb
24 Britton Street, EC1M 5UA	4,536		Refurb
Regent Quarter - The Residences (Block D), 57-63 Wharfdale Road And Railway Street, N1 9SD	4,351		New Build
2-12 Pentonville Road, N1 9HF	2,374		Refurb
City Central Estate, 89-93 Central Street, EC1V 3PA	2,353		New Build
Ermin Apartments, 251-279, Goswell Road, EC1V 7JQ	2,346		New Build
189-219 Isledon Road, N7 7JR	1,302		New Build
1&3 Elwood Street and 14a Conewood Street, N5 1EB	1,196		New Build
117-119 Seven Sisters Road, N7 7QG	626		New Build

Southwark			
The Harlequin Building, 65 Southwark Street, SE1 0HR	4,514		Refurb
102-107 Blackfriars Road, SE1 8HW	2,520		New Build
Merchant House, 89 Southwark Street, SE1 0HX	503	503	Refurb
Tower Hamlets			
35-37 Mile End Road, E1 4TP	1,464		New Build
Altitude Aldgate, 61-75 Alie Street, E1 8EB	925		New Build
Wandsworth			
Riverside Quarter Gardens, Point Pleasant, SW18 1NL	4,999		New Build
208-214 York Road, SW11 3SD	1,457		New Build
Westminster			
1 Howick Place, SW1P 1BH	12,922		New Build
St James's Gateway, 213-214, Piccadilly, W1J 9HH	6,284		New Build
6 Agar Street, WC2N 4HR	5,762		Refurb
Hanover Court, 5 Hanover Square, W1S 1HE	4,285		New Build
23-25 Soho Square, W1D 3QR	3,866		New Build
19-22 Rathbone Place, W1T 1HY	3,812		Refurb
Wellington House, 125-130, Strand, WC2R 0AP	3,388		Refurb
40-44 Grosvenor Hill, W1K 3QL	3,127		New Build
1-5 Poland Street, W1F 8PR	2,126		Refurb
Renoir House, 135-137 New Bond Street, W1S 2TH	1,436	762	Refurb
14 Grosvenor Street, W1K 4PS	1,201		New Build
10 Salem Road, W2 4DL	560		New Build

Appendix A6 Offices under construction, end-2011

Development	Existing size	Proposed size	Let space	Type	Local authority	Start date
Africa House 64-78 Kingsway WC2B 6BD	12,013	13,644	0	Refurb	Camden	01-Dec-10
Chichester House 278-282 High Holborn WC1V 7ER		5,867	0	New	Camden	01-Mar-11
Duchess House 18-19 Warren St W1T 5LR	933	442	0	Refurb	Camden	01-Jan-08
14-15 Mandela St NW1 0DU	528	704	0	Refurb	Camden	01-Oct-10
Triton Building Triton Square, Regent's Place, NW1 3BG		31,587	17,471	New	Camden	01-Jan-11
MTV Studios 17-29 Hawley Crescent NW1 8TT	6,870	7,522	7,522	New	Camden	01-Sep-11
2-8 Ridgemount St 6 Store Street WC1E 7AA	276	415	0	New	Camden	01-Sep-11
King's Cross Coal St, York Way NW1 1UR		4,310	3,130	Refurb	Camden	01-Apr-11
Cannon Street House 110 Cannon Street EC4N 6EU	6,067	6,235	0	Refurb	City	01-Jun-11
Broadgate Court 199 Bishopsgate EC2M 3TY	14,935	12,845	0	Refurb	City	01-Sep-11
Leadenhall Building 122 Leadenhall St EC3V 4SL	16,965	54,614	17,836	New	City	01-Mar-11
Strand House 8-10 New Fetter Lane, EC4A 1AG	9,040	8,561	0	Refurb	City	01-Nov-10
18-20 Cannon St EC4M 6XD	3,442	3,442	0	Refurb	City	01-Feb-11
St Paul's House 8-12 Warwick Lane EC4M 7BP		3,314	0	Refurb	City	01-Jul-11
The Pinnacle 24 Bishopsgate EC2N 4BQ		116,810	0	New	City	01-Mar-10
20 Fenchurch St Philpot Lane, Rood Lane, EC3M 3BY	15,617	58,274	0	New	City	01-Feb-11

Development	Existing size	Proposed size	Let space	Type	Local authority	Start date
Finsbury Circus House, 12-15 Finsbury Circus EC2M 7EB	14,391	15,708	0	Refurb	City	01-Jun-11
Sixty London 60 Holborn Viaduct EC1A 2FD	7,990	19,761	0	New	City	01-Sep-11
40-43 Fleet Street EC4Y 1BT	1,318	1,750	1,750	Refurb	City	01-Feb-11
Oldebourne House 46-47 Chancery Lane WC2A 1JE	975	1,084	0	Refurb	City	01-Jun-11
Tokenhouse Yard 8-10 Moorgate 16-16a and 17 Tokenhouse Yard EC2R 7AS		12,421	0	Refurb	City	01-Aug-10
5-7 Giltspur Street EC1A 9DE	2,953	3,711	3,711	New	City	01-Aug-11
Eagle House 159-189 City Road Westland Place EC1V 1NR	7,618	2,789	0	New	Hackney	01-Feb-08
102-108 Clifton Street, EC2A 4HW		862	0	New	Hackney	01-Aug-11
Ivy Waterside 26-36 Orsman Rd, N1 5QJ		552	0	New	Hackney	01-Oct-11
Reliance Wharf 2-10 Hertford Road N1 5SH		1,748	0	New	Hackney	01-Mar-11
Linen Court 10 East Road N1 6DG		3,901	0	New	Hackney	01-Jul-10
52 Whitmore Road N1 5AG		435	0	New	Hackney	01-Jan-11
Kingsland Wharves 305 Kingsland Rd 27-31 Downham Rd, E8 4DL		4,000	0	New	Hackney	01-Feb-11
Matchmakers Wharf, Homerton Rd Lee Conservancy Road, E9 5TR		1,834	0	New	Hackney	01-Jul-10
42-48 Whitmore Rd 56a Orsman Road N1 5QJ		465	0	New	Hackney	01-Oct-11
24 Britton Street EC1M 5UA	4,560	4,536	4,536	Refurb	Islington	01-Mar-11
Finwell House 26 Finsbury Square, EC2A 1DX	6,355	7,640	0	Refurb	Islington	01-Jan-11

Development	Existing size	Proposed size	Let space	Type	Local authority	Start date
Pinnacle Buildings 67 Wilson Street EC2A 2BB		5,350	0	Refurb	Islington	01-May-09
The Buckley Building 49 Clerkenwell Green, EC1R 0ER		7,822	0	Refurb	Islington	01-Sep-11
The Print House 32-36 Aylesbury St EC1R 0ET		1,050	1,050	Refurb	Islington	01-Sep-10
20-24 Rosebery Ave, EC1R 4SX		842	0	Refurb	Islington	01-Sep-10
City Central Estate 89-93 Central St Seward St, EC1V 3PA		2,353	0	New	Islington	01-Apr-11
117-119 Seven Sisters Rd N7 7QG		626	0	New	Islington	01-Oct-11
2-12 Pentonville Road, N1 9HF		2,072	0	Refurb	Islington	01-Jul-11
2-12 Pentonville Road, N1 9HF	2,089	3,006	0	Refurb	Islington	01-Jul-11
Regent Quarter 57-63 Wharfdale Road and Railway Street, N1 9SD		4,351	0	New	Islington	01-Jul-11
Central Square 53, 61 & 85 Central Street, Seward Street, EC1V 8AD	4,320	4,060	0	New	Islington	01-Mar-10
Ermin Apartments 251-279 Goswell Road, EC1V 7JQ		2,346	0	New	Islington	01-Mar-11
189-219 Isledon Road, N7 7JR		1,302	0	New	Islington	01-Jun-11
1 & 3 Elwood Street and 14a Conewood Street N5 1EB	702	1,196	0	New	Islington	01-Mar-11
The Place 25 London Bridge St, SE1 9SG	18,048	39,963	0	New	Southwark	01-Jan-11
New City Court 20 St Thomas Street, SE1 9RS	975	1,240	0	Refurb	Southwark	01-Aug-11
Shard of Glass 32 London Bridge St, SE1 9SG	19,510	53,885	0	New	Southwark	16-Mar-09
Merchant House 89 Southwark Street, SE1 0HX		502	502	Refurb	Southwark	01-Mar-11
The Harlequin Building	3,630	4,514	0	Refurb	Southwark	01-Feb-11

London Office Policy Review 2012

Development	Existing size	Proposed size	Let space	Type	Local authority	Start date
65 Southwark Street, SE1 0HR						
102-107 Blackfriars Rd, SE1 8HW		2,520	0	New	Southwark	01-Sep-11
69-91 Camberwell Station Road & 92-106 Warner Road, SE5 9JZ		1,330	0	New	Southwark	01-Jun-09
Aldgate East Station 1 Commercial St E1 7PT	Stopped	-		New	Tower Hamlets	01-Mar-08
Altitude, 61-75 Alie Street, E1 8EB		925		New	Tower Hamlets	01-Oct-11
Riverside South Westferry Road E14 8RL		-		New	Tower Hamlets	01-Nov-07
35-37 Mile End Road, E1 4TP	102	1,464		New	Tower Hamlets	01-Jan-11
Suttons Wharf North, 1 Palmers Road, E2 0SF		524		New	Tower Hamlets	01-Sep-10
Tote House, 74 Upper Richmond Rd, SW15 2SU		472	0	Refurb	Wandsworth	01-Feb-11
Riverside Quarter Point Pleasant SW18 1NL		4,999	0	New	Wandsworth	01-May-11
The Regent 6-28 Gwynne Road SW11 3UW	1,008	1,261	0	New	Wandsworth	01-Nov-10
208-214 York Road Chatfield Road SW11 3SD		1,457	0	New	Wandsworth	01-Feb-11
1 Howick Place 1-28 Spencer Place, SW1P 1BH		12,922	0	New	Westminster	01-Feb-11
Wellington House 125-130 Strand WC2R 0AP		3,388	0	Refurb	Westminster	01-Oct-11
1-5 Poland Street W1F 8PR	2,108	2,126	0	Refurb	Westminster	01-Jun-11
Park House 116 Park Street W1K 6NR	14,118	17,668	0	New	Westminster	01-May-10
23-25 Soho Square W1D 3QR	4,265	3,866	0	New	Westminster	01-Jun-11
Ashdown House 123 Victoria Street SW1E 6RB	21,507	18,409	0	Refurb	Westminster	01-Dec-10
Marcol House 289-293 Regent St W1B 2HJ	7,202	10,623	6,105	New	Westminster	01-Jun-10

Development	Existing size	Proposed size	Let space	Type	Local authority	Start date
2-16 Baker Street 8 Baker Street W1U 3BT	6,782	11,613	0	New	Westminster	01-Nov-10
Selborne House 54-60 Victoria St Buckingham Gate SW1E 6QW	13,564	30,361	0	New	Westminster	01-Aug-10
Hanover Court 5 Hanover Square W1S 1HE		4,285	0	New	Westminster	01-Jan-11
Renoir House 135-137 New Bond Street, W1S 2TH		1,436	1,436	Refurb	Westminster	01-Feb-11
St James's Gateway 213-214 Piccadilly W1J 9HH		6,284	0	New	Westminster	01-Jul-11
19-22 Rathbone Place, W1T 1HY	3,914	3,812	1,837	Refurb	Westminster	01-Apr-11
40-44 Grosvenor Hill, W1K 3QL	3,244	3,127	0	New	Westminster	01-Feb-11
6 Agar Street 6 Bedford Street WC2N 4HR	5,370	5,305	0	Refurb	Westminster	01-Jul-11
10 Salem Road W2 4DL	640	560	0	New	Westminster	01-Jan-11
14 Grosvenor Street, W1K 4PS	1,124	1,201	0	New	Westminster	01-Sep-11
79-97 Wigmore Street 21-35 Duke Street, W1U 1QG	6,790	7,959	0	New	Westminster	01-Feb-10

Appendix A7
Office permissions >5,000 sq m NIA, Central London, end 2011

Address	Date	Borough	Development type	Existing (sq m)	Proposed (sq m)
King's Cross Central - Office Master, York Way, NW1 1UR	09-Mar-06	Camden	New Build		228,239
80-84 Charlotte Street, W1T 4QP	19-May-11	Camden	Refurbishment	17,094	22,297
Euston House,132-142,Hampstead Road, NW1 2PS	15-Dec-10	Camden	New Build		21,600
High Holborn House, 52-54 High Holborn, WC1V 6JQ	03-Jun-09	Camden	New Build		17,322
Clifton House, 101 Euston Road, NW1 2BB	24-Jun-10	Camden	Change of Use		3,430
Baird House, 15-17 St Cross Street, EC1N 8UW	23-Sep-10	Camden	New Build	2,718	3,014
6 Erskine Road, NW3 3AJ	15-Dec-10	Camden	Refurbishment	1,954	2,898
Gretton House,28-30,Kirby Street, EC1N 8TE	09-Jun-11	Camden	Refurbishment	1,850	2,237
The Lighthouse (Block A), Pentonville Road, WC1H 8BG	02-Apr-09	Camden	New Build	1,340	2,019
294-295 High Holborn, WC1V 7JG	31-Mar-09	Camden	New Build	511	1,830
Former Mercedes Benz Garage, Blackburn Road, NW6 1RZ	30-Sep-10	Camden	New Build		1,688
21-27 Lamb's Conduit Street, WC1N 3NL	20-Dec-10	Camden	New Build	1,359	1,567
Whittington House, 19-30 Alfred Place, WC1E 7EA	11-Aug-11	Camden	Refurbishment		1,100
John Kirk House 31-32 John Street, WC1N 2AT	24-Nov-11	Camden	Refurbishment	1,039	1,090
Rosediamond House, 11 Hatton Garden, EC1N 8AH	19-Mar-09	Camden	Refurbishment		734
28 Gray's Inn Road, WC1X 8HP	17-Nov-09	Camden	New Build		639
Trinity 1,2,3,15-16 Minories, EC3N 1AX	11-Dec-07	City	New Build	21,925	91,082
5 Broadgate, EC2M 2QS	19-Apr-11	City	New Build		86,570
Walbrook Square, Bucklersbury, EC4N 8EL	17-Jul-07	City	New Build	27,871	81,741
100 Bishopsgate, EC3A 7BH	06-Sep-11	City	New Build	7,399	75,715

Address	Date	Borough	Development type	Existing (sq m)	Proposed (sq m)
London Wall Place (Former St Alphage East & West), 121-123 London Wall, EC2Y 5DA	27-Jun-11	City	New Build		54,252
Fleet Building, 70 Farringdon Street, EC4A 4AP	10-Mar-11	City	New Build	33,166	45,333
30 Old Bailey, EC4M 7HS	02-Jun-11	City	New Build	29,769	44,529
Angel Court Tower, 1 Angel Court, EC2R 7EQ	19-Apr-11	City	New Build	27,720	33,897
Land Bounded by 120 Fenchurch Street, EC3M 5BA	16-Sep-08	City	New Build		32,414
Plumtree Court, 42 Shoe Lane, EC4A 4HT	24-Feb-11	City	New Build	23,467	31,728
Can of Ham (Development Site), 60-70 St Mary Axe, EC3A 8JQ	09-Dec-08	City	New Build	10,166	30,256
76 Shoe Lane, EC4A 3JB	04-Oct-11	City	New Build	18,056	30,062
International House, 26-28 Creechurch Lane, EC3A 5EH	01-Feb-11	City	New Build	2,229	29,724
72 Fore Street, EC2Y 5DA	18-Jan-08	City	New Build	9,422	24,856
Sugar Quay, Lower Thames Street, EC3R 6LA	14-Dec-10	City	New Build		23,841
76-86 Fenchurch Street, EC3M 4BT	09-Dec-08	City	New Build		21,556
70 Mark Lane, 64-66 Mark Lane, EC3R 7ND	15-May-07	City	New Build	6,000	16,884
12-14 New Fetter Lane, EC4A 1AG	13-Jan-09	City	New Build	5,096	15,697
Alexander Forbes House, 6 Bevis Marks, EC3A 7AF	30-Sep-09	City	New Build	8,075	14,891
Seal House, 1 Swan Lane, EC4R 3TN	24-Mar-09	City	New Build	6,503	14,671
Carmelite, 50 Victoria Embankment, EC4Y 0DX	25-Aug-11	City	New behind facade		14,124
Becket House ,81-90 Cheapside, EC2V 6EB	12-Dec-06	City	New Build	4,181	11,761
Lonsdale Chambers, 25-32 Chancery Lane, WC2A 1PA	13-Dec-11	City	New behind facade	8,112	11,258
11-15 Monument Street, EC3R 8JU	20-Nov-07	City	New Build	5,616	11,086
Fur Trade House, Queensbridge House &	08-Dec-06	City	New Build	12,448	10,972

Address	Date	Borough	Development type	Existing (sq m)	Proposed (sq m)
Ocean House, 25 & 10-12, Little Trinity Lane, EC4V 2AA					
United Dominions House, 51 Eastcheap, EC3M 1JP	06-Sep-11	City	New Build	10,270	10,660
40-43 Chancery Lane, WC2A 1JQ	26-Feb-08	City	New Build		10,513
120 Moorgate, EC2M 6TS	19-Jul-11	City	New Build		10,192
100 Cheapside, EC2V 6DY	06-Sep-11	City	New Build		9,243
67 Lombard Street, EC3V 9LJ	27-Feb-07	City	New behind facade	10,844	8,687
5 Cheapside, EC2V 6AA	28-Jul-09	City	New Build	3,228	7,987
Centurion House, 24 Monument Street, EC3R 8AJ	06-Sep-11	City	New Build	7,360	7,920
St Marys Court, 20 St Mary At Hill, EC3R 8EE	22-May-08	City	New Build	3,372	7,160
Roman House, Wood Street, EC2Y 5HH	13-Jan-09	City	New Build	6,251	6,984
119-121 Bishopsgate, EC2M 3TH	13-Dec-11	City	New Build	3,192	6,800
The Printer's Devil Public House, 98 Fetter Lane, EC4A 1EP	11-May-11	City	New Build	4,627	6,183
St Clements House, 27-28 Clements Lane, EC4N 7AP	24-Jul-08	City	Refurbishment	5,007	5,567
Salters Hall, 4 Fore Street, EC2Y 5DE	19-Feb-09	City	Refurbishment	4,746	5,304
Buchanan House, 24-30 Holborn, EC1N 2HS	31-Aug-11	City	Refurbishment	4,530	5,193
St Andrew's House, 20 St Andrew Street, EC4A 3AE	18-Nov-10	City	New Build	4,665	5,004
15 Bishopsgate, EC2N 3BA	11-Sep-09	City	New Build		4,935
Broad Street House, 55 Old Broad Street, EC2M 1LJ	08-Sep-11	City	Refurbishment	4,347	4,324
4 St Dunstan's Hill, EC3R 8UL	28-Oct-10	City	Refurbishment	2,485	2,535
5-7 St Helen's Place, EC3A 6AU	15-Mar-11	City	New behind facade	2,213	2,526
10 Arthur Street, EC4R 9AY	09-Dec-10	City	Refurbishment	1,166	1,357
184 Fleet Street, EC4A 2HF	10-Nov-10	City	Refurbishment		761
107 Leadenhall Street, EC3A 4AF	13-Oct-09	City	Refurbishment		720
Principal Place, 1	06-Jul-11	Hackney	New Build		52,875

Address	Date	Borough	Development type	Existing (sq m)	Proposed (sq m)
Norton Folgate, E1 6PJ					
Sun Street Island Site Redevelopment - Crown Place, 5-29 Sun Street, EC2M 2PT	09-Dec-10	Hackney	New Build		42,623
12-20 Paul Street, EC2A 4JH	02-Nov-11	Hackney	New Build		4,320
Nathan House, 74 Rivington Street, EC2A 3AY	10-Jan-11	Hackney	New Build	926	3,632
Interglobe House 76-80 Great Eastern Street, EC2A 3RS	02-Nov-11	Hackney	Refurbishment	3,032	2,612
Woodberry Down Estate - Master Plan Woodberry Down Estate, N4 2NN	16-Oct-08	Hackney	New Build		2,515
Lincoln House, 33-35 Hoxton Square, N1 6NN	03-Dec-08	Hackney	New Build		1,862
22 Micawber Street, N1 7EQ	01-Sep-10	Hackney	New Build		1,853
Cordy House, 87-95 Curtain Road, EC2A 3BS	01-Jul-09	Hackney	New Build		1,811
Foundry, 84-88 Great Eastern Street, EC2A 3JL	03-Feb-10	Hackney	New Build	624	1,188
141-145 Curtain Road, EC2A 3QJ	21-Sep-11	Hackney	Refurbishment	883	937
James Taylor Building, Collent Street, Inner London, E9 6SG	03-Sep-08	Hackney	New Build		920
Colville Estate, Penn Street, Bridport Place, Whitmore Road, N1 5DL	18-Jul-11	Hackney	New Build		912
Former Gaumont Cinema, 55 Pitfield Street, N1 6BU	06-May-09	Hackney	New behind facade		815
Rosemary Works,7-14 Branch Place, N1 5PH	18-Jul-11	Hackney	New Build		800
Brewery Site, Wenlock Road, N1 7SL	02-Sep-09	Hackney	New Build		770
21 Curtain Road, EC2A 3LT	06-Apr-11	Hackney	Refurbishment	836	692
Rentokil Site, 1-3 Wenlock Road, N1 7LS	02-Sep-09	Hackney	New Build		644
120-132 East Road, N1 6AA	06-Oct-10	Hackney	New Build		608
Noble House, 2 Shelford Place, N16 9HS	16-Feb-10	Hackney	New Build		560
10 Andre Street, E8 2AA	21-Jan-10	Hackney	New Build		508

Address	Date	Borough	Development type	Existing (sq m)	Proposed (sq m)
Hammersmith & City LT Station Car Park Site, Hammersmith Grove, W6 0EA	09-Mar-11	Hammersmith & Fulham	New Build		26,843
BBC Media Village - White City, Wood Lane, W12 8LE	07-Oct-01	Hammersmith & Fulham	New Build		14,441
King Street Regeneration, Nigel Playfair Avenue, W6 9JY	30-Nov-11	Hammersmith & Fulham	New Build		6,520
Riverbank House, 1 Putney Bridge Approach, SW6 3JD	24-Oct-11	Hammersmith & Fulham	Refurbishment	2,678	2,678
Brackenbury Road, W6 0BA	27-Oct-10	Hammersmith & Fulham	New Build		1,982
Latymer House, 2 Ravenscourt Road, W6 0UX	06-Aug-09	Hammersmith & Fulham	New Build		1,284
6 Gorleston Street, W14 8XS	16-Dec-09	Hammersmith & Fulham	New Build		673
Oxford & Cambridge Public House, 70-72 Hammersmith Bridge Road, W6 9DB	25-Jan-05	Hammersmith & Fulham	New Build		604
2-14,Shortlands, W6 8DJ	21-Sep-10	Hammersmith & Fulham	Refurbishment	434	582
70-100 City Road, EC1Y 2BJ	10-Oct-11	Islington	New Build		21,600
Caxton House, 2 Farringdon Road, EC1M 3HN	08-Dec-08	Islington	New Build		18,576
3-10 Finsbury Square, EC2A 1LN	05-Jul-11	Islington	New Build	8,928	13,617
City Forum, 250 City Road, EC1V 2PU	30-Jun-09	Islington	New Build	12,658	8,656
BSG House, 226-236 City Road, EC1V 2TT	08-Sep-09	Islington	Refurbishment	4,861	7,202
Aberdeen House, Aberdeen Lodge & Aberdeen Studios, 22-24 Highbury Grove, N5 2EA	11-Oct-10	Islington	New Build		6,813
Units A-F, 18-42 Wharf Road, N1 7RL	06-May-09	Islington	New Build		6,297
33-41 Dallington Street, EC1V 0BB	07-Jan-10	Islington	Refurbishment	6,078	6,256
The Turnmill, 63 Clerkenwell Road, EC1M 5NP	01-Sep-11	Islington	New Build		5,467
62-66 York Way, N1 9AG	22-Oct-08	Islington	New Build		4,723
London Studio Centre, 42-50 York Way, N1	10-Oct-11	Islington	Refurbishment		3,865

Address	Date	Borough	Development type	Existing (sq m)	Proposed (sq m)
9AB					
Myddelton House, 115-123 Pentonville Road, N1 9LZ	11-Oct-10	Islington	Refurbishment	2,102	3,702
Texaco Petrol Station, 96-100 Clerkenwell Road, EC1M 5RJ	01-Sep-11	Islington	New Build		2,115
18-30 Leonard Street, EC2A 4NG	17-Jul-06	Islington	New Build		1,790
City North Islington Trading Estate, 8-10 Goodwin Street, N4 3HH	30-Mar-10	Islington	New Build		1,737
20,Garrett Street, EC1Y 0TW	27-Apr-10	Islington	Refurbishment	1,444	1,594
Palmerston House, 80-86 Old Street, EC1V 9AX	17-Aug-11	Islington	Refurbishment	2,880	1,428
3-4,Hardwick Street, EC1R 4RB	26-Nov-08	Islington	Refurbishment	1,043	1,232
Henry Thomas House, 5-11, Worship Street, EC2A 2BH	12-May-11	Islington	New Build	1,024	1,008
Swallow House, 11-21 Northdown Street, N1 9BN	08-Jun-09	Islington	Refurbishment		976
Land Adjacent to 40-44 Holloway Road, N7 8JL	12-May-11	Islington	New Build		948
Carronade Court, Eden Grove, N7 8EP	06-May-09	Islington	Refurbishment		887
Klamath House, 18-19 Clerkenwell Green, EC1R 0QE	07-Mar-11	Islington	Refurbishment	1,214	876
Fmr Royal Mail Sorting Office, 128-130, Upper Street, N1 1TA	22-Apr-10	Islington	New Build		687
Ruth Pitter House, 20-25 Glasshouse Yard, EC1A 4JS	23-Mar-10	Islington	Refurbishment		654
The Courtyard Theatre, 10-18, (Including 16 - Noah's Yard) York Way, N1 9AA	09-Apr-10	Islington	Refurbishment		580
Mallet & Porter House, 465a Caledonian Road, N7 9BA	24-Nov-10	Islington	New Build		513
189 Freston Road, W10	21-Sep-10	Kensington & Chelsea	New Build	410	5,568
91-111 Freston Road, W11 4BD	16-Mar-10	Kensington & Chelsea	New Build		5,492
137-139 Freston Road, W10 6TH	10-Mar-09	Kensington & Chelsea	New Build		4,868
MacMillan House, 96 Kensington High Street,	22-Feb-11	Kensington & Chelsea	New Build	3,754	4,147

Address	Date	Borough	Development type	Existing (sq m)	Proposed (sq m)
W8 4SG					
Portobello Square (Fmr Wornington Green Estate), Wornington Road, W10 5YB	02-Mar-10	Kensington & Chelsea	New Build		2,163
Becket House, 1 Lambeth Palace Road, SE1 7EU	23-May-08	Lambeth	New Build		35,678
Clapham North Business Centre, 26-32 Voltaire Road, SW4 6DH	16-Jul-09	Lambeth	New Build	3,917	6,231
Westminster Business Square, 1-45 Durham Street, SE11 5JH	07-Apr-09	Lambeth	New Build		5,392
Vauxhall Sky Gardens, 143-161, Wandsworth Road, SW8 2LT	16-Mar-10	Lambeth	New Build		4,722
Doon Street Development - Office, Upper Ground, Cornwall Road and Doon Street, SE1 9PX	28-Aug-07	Lambeth	New Build		4,332
Kennington Park Business Centre, 1-3 Brixton Road, SW9 6DE	12-Apr-11	Lambeth	New Build		2,837
Clapham Park Estate - Boreal Gardens, Headlam Road, Clarence Avenue, SW4 8HE	27-Mar-06	Lambeth	New Build		2,310
25-33 Macaulay Road, SW4 0QP	05-Jul-11	Lambeth	New Build		2,198
The Quadrant, 15 Stockwell Green, SW9 9HF	27-Sep-11	Lambeth	New Build		1,778
81 Black Prince Road, SE1 7SZ	15-Sep-09	Lambeth	New Build		1,416
373 Kennington Road, SE11 4PT	10-Jan-06	Lambeth	New Build		875
Union Point, 342-344 Clapham Road, SW4 6JP	12-Dec-06	Lambeth	New Build		770
Kings Reach Tower, Stamford Street, SE1 9LS	19-Jul-11	Southwark	Refurbishment	30,266	27,903
240 Blackfriars Road, SE1		Southwark	New		23,358
Sea Containers House, 20 Upper Ground, SE1 9PD	11-Oct-11	Southwark	New Build	29,518	22,298
20 Blackfriars Road, SE1 8NY	25-Mar-09	Southwark	New Build		20,615

Address	Date	Borough	Development type	Existing (sq m)	Proposed (sq m)
Wedge House, 30-40 Blackfriars Road, SE1 8PB	06-Sep-11	Southwark	New Build	4,174	7,748
The National Art Collections Centre, 7-14 Mandela Way, SE1 5SR	12-Oct-10	Southwark	New Build		6,028
Bermondsey Spa Master, Jamaica Road, SE16 4PW	13-Jul-04	Southwark	New Build		4,000
Century House, 82-84 Tanner Street, SE1 3PH	29-Sep-10	Southwark	New Build		2,944
246-250, Waterloo Road, SE1 8RD	07-Dec-10	Southwark	Refurbishment	2,136	2,705
Union Square (Hundred House), 100 Union Street, SE1 0NL	14-Nov-05	Southwark	New Build		2,113
Costain House, 111 Westminster Bridge Road, SE1 7JD	27-Oct-10	Southwark	New Build		2,066
Surrey Quays Leisure Site, Redriff Road, SE16 7LL	19-Jan-10	Southwark	New Build		2,000
Octavia House, 235-241 Union Street, SE1 0LR	30-Jun-09	Southwark	New Build	1,308	1,723
Unit 2, Valmar Trading Estate, SE5 9NW	19-Jul-11	Southwark	New Build	1,122	1,500
38-40 Glasshill Street, SE1 0QR	01-Sep-08	Southwark	New behind facade		1,338
237 Walworth Road, SE17 1RL	09-Mar-11	Southwark	New Build		700
54-58 Great Suffolk Street, SE1 0BL	22-May-09	Southwark	New Build		694
24-28 Wilds Rents, SE1 4QG	17-Dec-08	Southwark	New Build		620
166-176 Camberwell Road, SE5 0EE	01-Mar-11	Southwark	New Build		613
Duthy Hall, Great Guildford Street, SE1 0ES	21-Jan-09	Southwark	New Build		574
27-31 Blue Anchor Lane, SE16 3UL	17-May-05	Southwark	New Build		546
Canada Water (Site C) - Waterside View, Surrey Quays Road, SE16 2XU	19-Jan-10	Southwark	New Build		515
Neobrand Tower, 89-93 Newington Causeway, SE1 6BN	07-Jun-11	Southwark	New Build		334
Wood Wharf (Wood Wharf Business Park), Preston's Road, Cartier Circle, E14 9SF	09-Oct-08	Tower Hamlets	New Build		368,691
North Quay (Formerly Shed 35), Aspen Way, E14 9	14-Jul-05	Tower Hamlets	New Build		222,036

Address	Date	Borough	Development type	Existing (sq m)	Proposed (sq m)
Riverside South, Westferry Circus, Canary Wharf, E14		Tower Hamlets	New Build		185,283
Heron Quays West, Heron Quays, E14 4JB	13-Mar-08	Tower Hamlets	New Build		154,540
1 Park Place, E14 4HJ	27-Aug-08	Tower Hamlets	New Build		95,754
Aldgate Union - Aldgate Place, Buckle Street, E1 8NN	13-May-09	Tower Hamlets	New Build		74,712
News International, 1 Pennington Street, E1 9XN	10-Nov-09	Tower Hamlets	Refurbishment	41,660	68,659
25 Churchill Place, E14		Tower Hamlets	New Build		46,451
Aldgate Union - Aldgate Tower, Whitechapel High Street, E1 8DX	20-Jan-04	Tower Hamlets	New Build		29,383
Columbus Tower, Hertsmere Road, E14 4AJ	07-Oct-09	Tower Hamlets	New Build		24,387
Maersk House, 1 Braham Street, E1 8EP	20-Apr-10	Tower Hamlets	New Build		18,728
Nicholls & Clarke site, 3-10, Shoreditch High Street, Norton Folgate, E1 6PE	04-Aug-11	Tower Hamlets	New Build	5,548	14,164
Block C - Old Trumans Brewery, 91 Brick Lane, E1 6QL	03-Sep-10	Tower Hamlets	Refurbishment		6,311
Pura Site, 30 Orchard Place, E14 0JH	10-Mar-11	Tower Hamlets	New Build		6,278
Northern & Shell Tower, 4 Selsdon Way, E14 9GL	10-Jan-11	Tower Hamlets	Refurbishment	5,311	5,064
Former Bow Enterprise Park, Devons Road, E3 3QX	07-Mar-11	Tower Hamlets	New Build		4,976
63-69 Manilla Street, E14 8LG	01-May-07	Tower Hamlets	New Build		4,410
153-157 Commercial Road, E1 2EB	23-Oct-08	Tower Hamlets	Refurbishment	3,397	2,877
Gem House, 122-126 Back Church Lane, E1 1ND	01-Jul-10	Tower Hamlets	New Build		2,540
Fabbrica, 33-35 Commercial Road, E1 1LD	16-Mar-10	Tower Hamlets	New Build		2,514
Universal House, 88-94 Wentworth Street, E1 7SA	23-Aug-04	Tower Hamlets	Refurbishment	1,365	1,638
2-12 Cambridge Heath Road, E1 5QH	26-Nov-09	Tower Hamlets	Refurbishment	567	1,010

Address	Date	Borough	Development type	Existing (sq m)	Proposed (sq m)
40 Marsh Wall, E14 9TP	18-Sep-10	Tower Hamlets	New Build	3,043	934
Holland Estate, Denning Point, Commercial Street, E1 6DH	13-May-09	Tower Hamlets	New Build		862
Summit House, 84 St Katharine's Way, E1W 1LP	01-Aug-11	Tower Hamlets	New Build	674	861
DLR Site, Royal Mint Street, E1 8LG	08-Dec-11	Tower Hamlets	New Build		811
Telford's Yard, 6-8 The Highway, E1W 2BS	05-Apr-11	Tower Hamlets	Refurbishment	876	770
Discovery Dock West - Office & Retail, South Quay Square, E14 9FT	07-Jan-09	Tower Hamlets	New Build		662
57-59 Whitechapel Road, E1 1DU	09-Mar-11	Tower Hamlets	New Build	1,348	540
Bow Trinity - Part 2, Burdett Road, Treby Street, E3 4TE	15-Dec-09	Tower Hamlets	New Build		493
Battersea Power Station, Battersea Park Road, SW8 5BW	11-Nov-10	Wandsworth	New Build		157,777
New US Embassy, Nine Elms Lane, SW8 5BA	16-Sep-09	Wandsworth	New Build		41,480
The Campus, 3-9 Broomhill Road, SW18 4JQ	10-Feb-11	Wandsworth	New Build		8,400
IPSUS 04, 113-123 Upper Richmond Road, SW15 2TL	22-May-08	Wandsworth	New Build		3,788
8-10 Ingate Place, SW8 3NS	14-Feb-11	Wandsworth	New Build		3,306
Tileman House, 131-133 Upper Richmond Road, SW15 2TR	17-Mar-11	Wandsworth	New Build		1,280
Lindner House, 317-325 Putney Bridge Road, SW15 2PN	17-Mar-11	Wandsworth	Refurbishment	1,164	1,105
Putney Place, 84-88 Upper Richmond Road, SW15 2ST	17-Nov-11	Wandsworth	New Build		972
Victoria Circle, Terminus Place, Wilton Road, SW1V 1JR	05-Feb-09	Westminster	New Build		52,522
Arundel Great Court, 2 Arundel Street, WC2R 3AZ	13-Nov-09	Westminster	New Build	32,094	37,090
Derwent Valley Scheme, 55-65 North Wharf Road, W2 1LA	10-Jan-08	Westminster	New Build		25,522
Kingsgate House, 66-74 Victoria Street, SW1E 5JL	03-Nov-11	Westminster	New Build	16,624	22,371

Address	Date	Borough	Development type	Existing (sq m)	Proposed (sq m)
18 Hanover Square, W1S 1HX	19-May-11	Westminster	New Build	15,934	18,384
Merchant Square 2 - Topaz (Building B), Harbet Road, W2 1JU	19-May-11	Westminster	New Build		16,620
10-11 Babmaes Street, SW1Y 6HD	15-Nov-10	Westminster	New Build		14,078
Sceptre House, 169-173 Regent Street, W1B 4JH	29-Jul-10	Westminster	Refurbishment		13,935
The Quadrant - Scheme 2, 84-90 Regent Street, 27-29 Glasshouse Street, W1B 5RR	13-Dec-07	Westminster	New behind facade		12,484
153-167, Regent Street, W1B 4JE	24-Jun-10	Westminster	Refurbishment	6,260	11,347
Victoria Circle, Terminus Place, Wilton Road, SW1V 1JR	05-Feb-09	Westminster	New Build		11,075
Paddington Central, 4 & 5 Kingdom Street, W2 6BA	07-Jan-10	Westminster	New Build		10,534
Paddington Basin-North Westminster Community School, North Wharf Road, W2 1LF	07-Jul-11	Westminster	New Build		10,346
Clarges Estate - Warnford Block, 82-84 Piccadilly, W1J 8JB	07-Apr-11	Westminster	New Build	13,715	9,666
Broadway House, 40 Broadway, SW1H 0BU	12-Mar-09	Westminster	New Build		8,700
130,Shaftesbury Avenue, W1D 5ET	13-Oct-10	Westminster	New Build	7,796	8,591
Marble Arch House, 66-68 Seymour Street, W1H 5AF	18-Mar-10	Westminster	Refurbishment		8,141
8,St James's Square, SW1Y 4JU	26-Aug-11	Westminster	New Build	8,264	7,775
Fenton House, 55-57 Great Marlborough Street, W1F 7JX	14-Jul-11	Westminster	New Build		6,775
8 Grafton Street, W1S 4EN	03-Apr-08	Westminster	New Build	5,316	6,350
1 Welbeck Street, W1G 0AA	13-Aug-09	Westminster	New behind facade	4,428	4,117
18 Grosvenor Street, W1K 4QQ	24-Sep-10	Westminster	New Build	3,400	4,100
17-23 Bentinck Street, W1U 2ES	13-Jan-11	Westminster	New behind facade	3,014	3,642
29-37 Davies Street, W1K 4LS	24-Jun-10	Westminster	New Build		3,244
Windsor House, 55-56 St James's Street,	14-Jul-10	Westminster	New Build	2,531	2,916

Address	Date	Borough	Development type	Existing (sq m)	Proposed (sq m)
SW1A 1LA					
The Hanover Executive Centre, 8 Hanover Street, W1S 1YG	18-Jun-09	Westminster	New Build	2,226	2,815
25-30 North Row, W1K 6DJ	13-Oct-11	Westminster	Refurbishment	2,536	2,774
5-7 Vere Street, W1G 0DJ	23-Jun-11	Westminster	Refurbishment	2,964	2,724
36-38 Queen Anne's Gate, SW1H 9AB	16-Jun-11	Westminster	Refurbishment		2,298
Victoria Circle, Terminus Place, Wilton Road, SW1V 1JR	05-Feb-09	Westminster	New Build		2,263
36 Bruton Street, W1J 6QZ	24-Sep-09	Westminster	New Build		1,536
2 St James's Street and 2 Pickering Place, SW1A 1EF	26-Aug-11	Westminster	Refurbishment	1,045	1,286
31-33 Maddox Street, W1S 2PB	04-Aug-11	Westminster	New behind facade	905	1,256
40 Beak Street, W1F 9RQ	15-Feb-11	Westminster	New Build	465	1,247
76-88 Wardour Street, W1F 0UU	23-Jun-11	Westminster	Refurbishment	1,140	1,188
Buckingham Court, 75-83 Buckingham Gate, SW1E 6PD	01-Aug-11	Westminster	Refurbishment		1,115
77 South Audley Street, W1K 1JG	07-Dec-10	Westminster	New Build		1,037
17a Curzon Street, W1J 5HS	25-Jun-09	Westminster	New Build		915
London Film School, 24-26 Shelton Street, WC2H 9UB	18-Jun-10	Westminster	Refurbishment		730
14 Cavendish Square, W1G 9DD	23-Mar-11	Westminster	Refurbishment	737	704
Castle House, 23-25 Castlereagh Street, W1H 5YR	21-Sep-10	Westminster	New Build	562	673
Duke of York's Theatre, 104 St Martin's Lane, WC2N 4BG	11-Feb-10	Westminster	Refurbishment		637

Appendix A8
Employment density empirical studies

HCA (2010) *Employment Densities Guide* **English Partnerships (2001) *Employment Density Guide***	The *Employment Densities Guide* was first published by English Partnerships in 2001 and more recently updated and published by the HCA in 2010. Office employment densities have "*increased significantly since the publication of the first edition"*. The first edition is based on secondary evidence citing 13 reference documents, of which just six relate to office densities; of these six studies four are about London and/or the South East. Most of the studies referred to data from the 1990s and some from the 1980s, so the evidence in the Guide is more out of date than its publication date suggests. The 2010 densities guide, like its predecessor, is based on secondary evidence from a number of studies, primarily employment land reviews (ELRs) including examples produced by RTP. There is no detail of the method used in the publication therefore it is difficult to accurately comment on the robustness of the estimates. However we do note that there is a strong risk of circular referencing as most ELRs are based on secondary employment density estimates including the evidence from the 1st edition of the densities guide. It is unclear how this evidence was applied to the 2nd edition and how the new estimates have been reached particularly since the first edition was based on density per workspace, while the second edition is based on density per FTE.
The British Council for Offices (2009) *The Occupier Density Study*	The British Council for Offices (BCO) study is the largest study based on direct measured evidence. It uses a sample of 249 UK properties constituting over 2,000,000 sq m (NIA) in a variety of tenancy arrangements, and containing over 173,000 desks. The BCO report indicated that 77% of the sample of two million square metres had an occupancy density of 8-13 sq m NIA per workstation. Over the whole sample the mean density was 11.8 sq m per workstation, while the median value was 10.6 sq m. There is however a considerable range. The study presents some interesting findings showing that for London the density ratio is lower than out of London, 12.0 and 10.6 sq m per workspace respectively. In addition the study also finds that densities vary significantly by office employment sector (the legal sector has the lowest employment density in the group of sectors covered); by town centre and out of town centre location (12.0 and 10.6 sq m per workspace respectively); for properties where sharing workspaces occur (11.4 sq m per workspace compared to 10.2 sq m per workspace where there are no sharing arrangements).

	The BCO study is the most authoritative piece of work as it is based on directly measured evidence on a large scale. However details of the sampling method are not provided, so we cannot tell if it is a representative sample, and if so for what geographical area and type of occupier. But, since the sample is formed of BCO members, it seems likely that it was biased towards the larger and more professional occupiers and those which are especially interested in using space efficiently.
RTP, Ramidus & King Sturge (2006) ***The Use of Business Space in London***	The RTP/Ramidus study of employment densities estimates the London-wide density ratio is 16.2 sq m per head. The study is based on a large-scale regional survey of office occupiers. At the time of this study it was also found that there were only a minority of firms implementing space saving initiatives and hence no measurable impact on average office densities was found at that time.
National Audit Office (2007) ***Improving the Efficiency of Central Government's Office Property*** **Session 2007 08, HC 8**	Since the RTP/Ramidus study there has been movement in the implementation of space saving practices. The recent NAO report shows that across the government office estate employment densities have reduced from 17.1 sq m per FTE when monitoring began in 2006, to 13.2 sq m per FTE in December 2011. This is as a result of a concerted effort to improve the efficiency of the office estate "*by moving from traditional cellular offices to open plan offices and increasing 'hot desking'*". This improvement is nonetheless below the NAO recommended occupation levels of 12 sq m per worker and still below the 2009 HM Treasury Operational Efficiency Programme recommendation of 10 sq m per person.
DTZ (2004) ***Use of business space and changing working practices in the South East*** **Roger Tym and Partners (1997)** ***The Use of Business Space: Employment Densities and Working Practices in South East England***	Other key empirical studies of employment densities include the 2004 DTZ study and the RTP SERPLAN study of 1997. Both these studies are based on large-scale surveys of office occupiers, over 1,000 firms in the DTZ study and 1,400 firms in the RTP SERPLAN study. Both studies find office employment densities of 18 sq m per worker.

Appendix A9
Office forecast method

Update trend leg of triangulation model: ***triangulation methodology*** GLA Economics Working Paper 39 also sets out the latest set of *triangulated* borough level employment projections.

However in December 2011 GLA Economics published both a new set of London wide employment projections broken down by sector in GLA Economics Working Paper 51[133], and a new historical employment data set for London in GLA Economics Working Paper 52[134]. Working Paper 51 also included a set of trend-based borough level employment projections, but not a set of triangulated borough level projections. In addition, these borough level trend-based employment projections covered only employees and not employment as a whole including the self-employed. This is because the new London jobs data published in Working Paper 52 only includes employees at the borough level.

For LOPR 12 we have produced a set of borough level employment projections using a methodology as close as possible to the triangulation approach as it is possible to get. Our approach to doing this was as follows.

Firstly, we developed a set of trend-based borough level projections including the self-employed. The sum of the boroughs for these projections will be equal to the total London job figures given by Working Paper 51, for example, 4,944,000 for 2016.

Secondly, capacity-based numbers were created as follows. First, each borough's share of the total London wide increase in site capacity-based jobs for the period 2007-11 was calculated based on the figures set out in Table 3 of the November 2009 Working Paper 39. For example, Camden was calculated as accounting for 11% of this 2007-11 change. Using 2009 as the base year for our projections we calculated the change in employment between 2009 and the 2011 projection for London as a whole taken from the new Working Paper 51. Each borough's percentage share of change calculated from Working Paper 39, as detailed above, was then applied to this London wide figure in order to calculate each borough's increase in capacity-based jobs. Thus, for example, Camden was allocated 11% of the London wide 2009-11 change. These job change figures for 2009-11 were then added to the 2009 job levels data we had calculated (to include the self-employed) to give a capacity-based estimate of the number of jobs in each borough for 2011. This approach was repeated for the five year periods 2011-16, 2016-21, 2021-26 and 2026-31, giving capacity-based figures for the number of jobs, by borough in 2016, 2021, 2026 and 2031.

Working Paper 39 does not provide capacity-based figures for 2036. Hence for the final five year period 2031-36 we assumed that each borough's share of the change in capacity-based employment was the same as for 2026-31. Using this assumption, and the same approach as for the other years as described, we produced a capacity-based estimate of the number of jobs in each borough for 2036. Overall this approach attempts to mimic the approach taken by GLA Economics to produce capacity-based employment projections as closely as possible. This is why it utilises each borough's

[133] Hoffman J, Ram J and Smart E (2011) *Employment projections for London by sector and trend-based employment projections by borough* GLA Economics Working Paper 51
[134] Knight T (2011) *London's jobs history – a technical paper* GLA Economics Working Paper 52

share of employment change rather than shares of employment levels. This attempts to mirror GLA Economics' methodology which adds on estimates of capacity-based employment change onto an initial base year's level of employment for each borough.

Thirdly, accessibility-based employment projections were created as follows. First, each borough's share of London accessibility-based employment was calculated for 2011, 2016, 2021, 2026 and 2031 based on the figures set out in Table 5 Working Paper 39. For example, in 2011, Hillingdon accounted for 4% of London's accessibility-based estimate of jobs. These borough shares were then applied to the relevant year's London wide employment projections as given by Working Paper 51.

So for example, in 2011 Hillingdon was allocated 4% of London's total employment level. This process produces accessibility-based employment projections for each borough for the years 2011, 2016, 2021, 2026 and 2031. Working Paper 39 does not provide accessibility-based figures for 2036. Hence for this final year we assumed that each borough's share of accessibility-based employment was the same as in 2031. Using this assumption, and the same approach as for the other years as described, we produced an accessibility-based estimate of the number of jobs in each borough for 2036. Overall this approach attempts to mimic the approach taken by GLA Economics to produce accessibility-based employment projections as closely as possible by allocating employment to a borough in line with its share of total accessibility-based employment for London as a whole.

Estimating office employment capacity for London The LESD is a site specific database detailing employment sites in London, providing an estimate of employment capacity by use class including office employment capacity. The LESD feeds into the triangulated employment forecasts for each London borough providing a forecast of employment capacity in each London borough. The employment capacity of each site in the LESD is estimated based on planned floorspace by use class or site area. Standard employment densities and plot ratios are used to estimate employment.

The current LESD was published in 2009 and identifies over 1,140 sites in London with a capacity for 718,000 jobs including 505,000 office jobs. The LESD is a static database identifying employment capacity at a specific point in time. However the development pipeline is dynamic and ever changing hence the sites identified will have changed and evolved rendering the detailed data in the LESD 2009 incomplete.

A full update of the LESD is not possible due to time and resource constraints for this study. However given the length of time since the LESD 2009 was published, a partial update of the database is necessary. Below we present the method used to produce the updated LESD 2012.

Updating LESD 2009 The starting point for the update exercise is the LESD 2009. There are two key stages presented below. The first is updating the sites within the database and the second is updating the assumptions used to estimate employment capacity on each site in the database. We review each of these in turn below.

Stage 1: updating the LESD sites The LESD 2009 is built on sites data from the data sources presented below.

LESD data sources

Source	Description
London Development Database (LDD)	The LDD records the progress of planning permissions in the London boroughs. It contains information including location, floorspace, planning status, site description amongst other fields. LDD contains information on all planning permissions granted in London since 1 April 2004 that propose: ▪ a loss or gain or new build of any residential units; ▪ 10 new bedrooms for hotels, hostels or residential homes; ▪ 1,000 sq m of new floor space in any other use class, or ▪ a loss or gain of open space. The LDD is a quality assured database which is updated quarterly by the boroughs and GIS information exists for some sites. In total there were 1,322 employment sites fed into the 2009 database. **New LDD data was collected for the LOPR LESD update. In total 727 sites have fed into the updated LESD.**
London Brownfield Sites Review (LBSR)	The Brownfield Sites Review was produced by the London Development Agency (LDA) replacing the previous years' National Land Use database (NLUD). The database found a significantly greater number of brownfield sites compared to NLUD and removed a large number of NLUD sites that have now come forward. In total there were 1,386 employment sites that are fed into the database. All site boundaries are digitised. **In line with the cessation of the LDA, the London Brownfield Sites Database has been withdrawn from its current web address and archived. Therefore for the current update we continue to use the sites in the original LESD 2009. However, the office element of a large number of the LBSR sites has been updated in 2011, through consultation with borough councils as part of a different RTP commission[135]. We use this data in the current study.**
Unitary Development Plans (UDP)	The UDPs provide employment site allocations for existing sites and also provide proposals maps for future. UDPs or successor LDFs) are of varying age and were validated through the borough consultations. The UDP site allocations were all digitised.
Emap's Glenigan information system	Glenigan tracks construction and civil engineering projects and planning applications. RTP receive weekly updates regarding new developments including those in London. This data source picks up on any of the latest developments not included in LDD. In total there were 234 sites that fed into the LESD 2009.
The Canary Wharf Group	We also consulted with key stakeholders from the Canary Wharf Group and received information from then regarding the progress of their major sites in 2009.

[135] Earl's Court Opportunity Area, 2011

The updated LESD 2012 data is constructed from the above sources in line with LESD 2009. The main changes to the LESD 2012 data sources are as follows.

- Up to date LDD data is used replacing the LDD data in the previous LESD 2009. The data were provided in February 2012 including all sites that are currently not started or started, plus anything completed since 01/04/2009.
- Updates to the LBSR data based on consultations with borough councils in 2011 as part of an RTP study for Earls Court OA. This provided new/updated floorspace figures for office uses for Barnet, Brent, Camden, Ealing, Hammersmith & Fulham, Hillingdon, Hounslow, Islington, Lambeth, Kensington & Chelsea, Wandsworth and Westminster.
- Consultations with GLA London Plan team. The aim is to review the data for the major sites, identify new sites and review the progress within London's opportunity areas and areas of intensification.

The data from the above sources are inserted into a database and for each site, where available, the following information is sought.

Site specific information in the database

Field	Use
RTP ID	Site ID
Data Source	Site ID
Borough Name	Location
Site Name	Location
Site Address	Location
Post Code	Location
Easting	Location
Northing	Location
Site/Project Status	Timing
Planning Status	Timing
Planning application/permission no.	Timing
End Date (2011, 2016, 2021, 2026,	Timing
Net A1 Floorspace	Scale
Net A2 Floorspace	Scale
Net A3 Floorspace	Scale
Net A4 Floorspace	Scale
Net A5 Floorspace	Scale
Net B1 Floorspace	Scale
Net B2 Floorspace	Scale
Net B8 Floorspace	Scale
Net C1 Hotel Bedrooms	Scale
Net C2 Floorspace	Scale
Net D1 Floorspace	Scale
Net D2 Floorspace	Scale
Net SG Floorspace	Scale
Total Floorspace	Scale
Site Area	Scale
Site Use	Type of employment

In addition to the above, we used GIS to assign each site to the following geographies.

- Wards
- Opportunity areas and areas of intensification
- London Transport zones (LTS)
- Sub-area (CAZ, other Inner London and Outer London)
- PTAL ratings

A verification process is undertaken to check for duplications and that the sites are all employment sites within our size thresholds. The following rules were applied to the LESD 2009 database and to the current updated database.

- Rule 1: if the site does not contain an employment element it is excluded.
- Rule 2: if B-space site is smaller than 1,000 sq m or 0.25 ha it is excluded; if a non-B-space site is smaller than 5,000 sq m it is excluded.
- Rule 3: if the site is a duplicate it is excluded, LDD data is prioritised.
- Rule 4: if the site has a gross increase but no net increase in employment it is excluded.
- Rule 5: school and hospital redevelopments are not included.
- Rule 6: some sites were excluded as a result of consultations with the boroughs.

These rules were applied to each site in the database, filtering away sites that do not meet these rules. The sites that meet the above criterion are then taken forward to the next stage which is estimating employment capacity.

Stage 2: Estimating the employment capacity In order to estimate the employment capacity of each site identified in the database there are two main methods used.

- Estimating employment using employment densities.
- Estimating employment using standard plot ratios.

The choice of method depends on the data available for a particular site. Where floorspace data is available, employment capacity is estimated by applying employment densities. This is the preferred method. Where floorspace data is unavailable we use site areas to estimate employment capacity. The employment density and plot ratio assumptions vary by London sub areas i.e. by CAZ, Inner or Outer London.

Method I: employment densities The employment density assumptions used in the updated LESD 2012 are taken from LESD 2009 and based on the following sources.

- Information from the RTP study carried out for SERPLAN in 1996.
- A review of evidence by Arup Economic and Planning for English Partnerships – *The Employment Density Guide* (2001), 1st edition (which recommended employment densities for use for different types of activity and location).
- A survey by DTZ Pieda for SEERA.
- The RTP study of 2006 (RTP, Ramidus, King Sturge) entitled *The use of business space in London*.

The employment densities used to estimate employment capacity for the LESD sites are presented below.

Employment densities used to estimate capacity

Floorspace per worker per use class	CAZ ward	Inner London	Outer London	Source
B1	14.4	14.7	20.6	*RTP, Ramidus, King Sturge (see above)*
B2	33	39	44	*LESD 2009*
B8	33	39	44	*LESD 2009*
A-class	21	21	21	*LESD 2009*
Other	45	45	45	*LESD 2009*
Mixed use	See mixed use rules below			

The employment density assumptions used vary by London sub area as shown in the table above. In general CAZ has a higher employment density for most uses.

In 2010 the Homes and Communities Agency (HCA) produced the second edition of the Employment Densities Guide. The method adopted in the guidance remains the same – no primary research was undertaken. Instead the guidance is based on secondary information. For the draft updated LESD 2012 we have not altered the employment density assumptions and continue to use the LESD 2009 density assumptions.

A large number of sites in the LESD are identified as mixed use developments including a housing element. Where the total site area or total floorspace was provided but not the distribution by use we make the following assumptions.

- A percentage of the site goes to employment uses. We estimate this percentage for sites in Inner and Outer London based on examples from the London Development Database (LDD).
- Secondly the distribution of employment is split proportionally between four uses – A class; Office, Industrial and other. The proportional distribution in based on case studies of mixed use sites.

We discuss these two assumptions in more detail below.

Assumption 1: mixed use sites - residential and non-residential assumptions Where the employment capacity of a mixed use site is estimated based on the site area, it is important to exclude the proportion of the site that is allocated to housing. In many cases however this proportion is not provided and we therefore have to make an assumption of what proportion of the mixed use site is residential and non-residential.

The London Development Database (LDD) is the most comprehensive source of site data and it includes the following site area data for each site.

- Proposed Residential Site Area

- Proposed Non Residential Site Area
- Total Area of Existing Open Space
- Greenfield Land
- Total Area of Proposed Open Space
- Total Site Area

We extract all sites from the LDD that have both a residential and non-residential element. In total there are 1,623 sites- however a large number of these are small sites less than 0.25 ha. The chart below presents the proportion of these sites allocated for Inner and Outer London.

Proportion of non-residential site area for mixed use LDD sites

Size of site (ha)	Number of sites	Inner London % of total site area to non-residential use	Outer London % of total site area to non-residential use
>0.25	171	12%	15%
<0.25	1452	34%	40%

The table shows that there are significant differences in the proportion of non-residential areas depending firstly on the size of the site and secondly on the location of the site (subareas). The sites in inner London and the larger sites have a lower proportion of proposed non-residential uses in general.

Based on this evidence we assume that 12% of the mixed use site area of Inner London sites and 15% of the mixed use site area of the Outer London sites are allocated for employment.

Assumption 2: distribution of mixed use employment Where floorspace data is unavailable for the mixed use developments we make assumptions regarding the distribution of employment uses. The assumptions used are based on case study evidence of mixed use developments in the borough of Hackney. We used Hackney as a case study for the following reasons**.**

- there are a significant number of mixed use developments, and
- the mixed use developments in the borough are a typical representative of mixed use developments in London.

Using data of the different employment and housing developments we estimated an average mixed use development.

RTP research in 2010 and 2011 for TfL and for the Earl's Court OA indicated that the mixed use assumptions provided by the Hackney case study overestimates the proportion of office development in Outer London boroughs. We therefore undertook an exercise using data for mixed use sites from LDD to estimate the distribution of employment. The results of this are presented in the chart below.

For this update of the LESD we apply the following assumptions to mixed use sites.

Mixed use assumptions

Type	Proportion of employment floorspace	
	Inner London	Outer London
A class	18%	15%
Office	63%	41%
Industrial	4%	6%
Other	15%	38%

Method II: Estimating employment using plot ratios As part of the LESD 2009 study, we analysed of the LDD dataset to examine the relevance of the plot ratio assumptions used in the LESD 2006 (chart below). The analysis showed that the plot ratio assumptions used in the 2006 LESD still hold.

Plot ratio assumptions

Plot ratios	CAZ wards	Inner wards	Outer wards	Source
B1	77,000	18,500	9,000	*LESD 2006*
B2	9,000	**6,500**	**3,800**	*LESD 2006;* ***URS Industrial Land research 2007***
B8	9,000	**6,500**	**3,800**	*LESD 2006;* ***URS Industrial Land research 2007***
Other	9,000	**6,500**	**3,800**	*LESD 2006;* ***URS Industrial Land research 2007***
Mixed	51,671	**14,030**	**5,932**	*B1, B2, B8 and other plot ratio with mixed use assumption rule 2 applied (see above)*

For consistency purposes, we have used the same assumptions as in the LESD 2006 but taking into account the findings from the 2007 London Industrial Land review.

Estimating the site timing During the consultations with the boroughs as part of the LESD 2009 study a key issue was estimating the time period a site may be expected to come forward. This showed that there is a lot of uncertainty particularly within the current economic climate. Where no end date for a site is provided we make the assumptions shown in the chart below, based on the planning status.

Timing assumptions

Period	Planning status
2011	Completed
2011-2016	Started
2016-2021	Full PP; Detailed PP
2021-2026	Outline Planning permission
2026-2031	Allocated in local plan
	Sites with no planning status

The assumptions were applied to the identified sites. The results of the employment capacity estimations are presented in the next section. The tables below present the updated LESD 2012 data.

Total employment capacity – updated LESD 2012

Borough	Sum of all employment					
	2011	2016	2021	2026	2031	Total
Barking & Dagenham	302	3,793	76	1,277	2,966	8,414
Barnet	315	540	5,204		27,087	33,146
Bexley	735	2,304	2,615		575	6,228
Brent	5,938	3,497	6,218		6,767	22,420
Bromley	35	365	340		1,558	2,298
Camden	4,862	29,974	321		12,560	47,717
City	16,257	54,234				70,491
Croydon	262	5,682	787	28	1,355	8,115
Ealing	390	3,914	2,776		2,568	9,648
Enfield	1,481	2,176	1,656	140	2,188	7,642
Greenwich	4,220	37,103	763	331	2,807	45,225
Hackney	849	13,954	27		270	15,099
Hammersmith & Fulham	3,004	8,857			12,881	24,743
Haringey		506	1,005		1,854	3,365
Harrow		454	245		855	1,555
Havering	185	781			2,786	3,753
Hillingdon	540	3,654	23	799	4,689	9,704
Hounslow	637	10,580	734		5,109	17,060
Islington	4,919	3,712	2,560		9,254	20,445
Kensington & Chelsea	423	863	5,247		4,097	10,630
Kingston upon Thames	102	419		67	2,838	3,426
Lambeth	603	13,197	438		19,011	33,249
Lewisham	155	4,362	2,227	436	4,779	11,959
Merton	136	1,089	336			1,561
Newham	6,992	23,263	26,597		10,897	67,749
Redbridge	185	380	187		404	1,156
Richmond upon Thames	247	210	253		60	770
Southwark	5,381	8,915	241		4,706	19,243
Sutton	85	990	1,312		346	2,734
Tower Hamlets	559	101,740	34,969	94	10,065	147,428
Waltham Forest	23	243		85	664	1,014
Wandsworth	748	16,731	991		11,821	30,291
Westminster	5,340	25,648	727		7,453	37,167
Total	**65,911**	**384,129**	**98,876**	**3,257**	**175,271**	**727,443**

Office employment – updated LESD 2012

Borough	Sum of office employment					
	2011	2016	2021	2026	2031	Grand Total
Barking & Dagenham	307	826	31	524	989	2,677
Barnet	340	41	4,692		19,914	24,987
Bexley	281	674	535		13	1,504
Brent	6,041	789	781		6,267	13,878
Bromley	-127	143	64		568	648
Camden	4,287	27,572	321		12,560	44,740
City	14,066	53,016	-			67,082
Croydon	191	4,473	10	-	284	4,958
Ealing	120	1,096	847		1,689	3,753
Enfield	819	223	563	-	146	1,751
Greenwich	3,600	29,018	301	59	416	33,394
Hackney	669	12,203	17		-	12,889
Hammersmith & Fulham	2,755	3,273			12,565	18,593
Haringey		257	381		369	1,007
Harrow		-7	245		235	473
Havering	65	-	-		322	388
Hillingdon	5	2,738	-64	799	4,399	7,877
Hounslow	324	7,409	263		5,109	13,105
Islington	4,562	3,098	311		7,980	15,951
Kensington & Chelsea	300	701	5,230		4,097	10,329
Kingston upon Thames	-	53		27	1,327	1,407
Lambeth	346	11,180	179		18,658	30,363
Lewisham	89	2,934	548	275	2,099	5,944
Merton	-73	346	364			638
Newham	2,241	3,296	20,765		5,732	32,035
Redbridge	-	185	14		72	271
Richmond upon Thames	22	234	-		25	281
Southwark	5,079	8,104	185		2,450	15,818
Sutton	-	502	990		7	1,499
Tower Hamlets	554	100,241	33,066	59	4,845	138,766
Waltham Forest	-	204		-	155	358
Wandsworth	351	12,221	-257		11,658	23,973
Westminster	5,041	25,748	309		7,416	38,514
Total	**52,256**	**312,791**	**70,689**	**1,743**	**132,366**	**569,846**

Appendix A10
Climate Change legislation, regulation and advice

2009 UK Climate change projections
These remain the latest set of published projections available from DEFRA. The central projections suggest that London could experience the following changes to its key climate indicators.

- **By the 2020s**: summer mean temperature increase of 1.5°C, mean summer rainfall decrease of 6% and mean winter rainfall increase of 6%.
- **By the 2050s**: mean summer temperature increase of 2.7°C, mean summer rainfall decrease of 18% & mean winter rainfall increase of 15%.
- **By the 2080s**: mean summer temperature increase of 3.9°C, mean summer rainfall decrease of 22% and mean winter rainfall increase of 20%.

The Department for Energy and Climate Change (DECC) was established in October 2008. There are two key pieces of legislation governing the area of climate change, The Energy Act 2008 and the Climate Change Act 2008 as well as various regulations and a wide array of initiatives, some of which are summarised below.

Under the **Climate Change Act 2008** the government set a target to reduce the UK's greenhouse gas emissions by 80% by 2050. The government has proposed carbon budgets as a means to work towards this UK target and expects all regional and local authorities to put policies in place to deliver the budgets on the trajectory towards 2050.

Under the **EU Climate and Energy** package, which was formally agreed in April 2009, the government has a target to derive 15% of all UK energy requirements from renewable sources by 2020. The Government's vision as to how this target will be met over the next decade is set out in the **Renewable Energy Strategy** launched in July 2009. By the end of 2010 renewable energy accounted for 3.3% of the UK's total energy consumption – an increase of 27% over a two-year period.[136] This was achieved through measures to improve financial incentives, remove barriers and encourage innovation such as the Feed In Tariff.

The **Energy Act 2011** includes provisions for the new **Green Deal,** to be launched in Autumn 2012. It is designed to reduce carbon emissions cost effectively by providing a financial mechanism that eliminates the need to pay upfront for energy efficiency measures and instead offsets the cost of the measures against the electricity bill.

The **Private Rented Sector** Regulations under the Energy Act mean that from April 2018 all private rented properties including commercial would need to be brought up to a minimum energy efficiency rating of E. The cost of upgrading a property would be funded through the Green Deal.

Energy Performance Certificates (EPCs) grade a building or part of a building by its energy efficiency on a sliding scale from 'A' (very efficient) to 'G' (least efficient). They are renewed every 10 years and must be shown on sale, letting or lease renewal.

[136] DECC (2009) First Progress Report on the Promotion and Use of Energy from renewable sources for the United Kingdom. Article 22 of the Renewable Energy Directive 2009/28/EC

Display Energy Certificates (DECs) measure actual performance based on metered energy usage. They apply to public sector buildings larger than 1,000 sq m and are renewed annually.

Part L Building Regulations were revised in 2010 to set new maximum emissions levels. The regulations apply to new buildings and refurbishment of existing buildings over 1,000 sq m. They represent on means of achieving the zero carbon target in commercial buildings by 2019.

The **Copenhagen Accord** is a document that delegates to the climate change conference in Copenhagen in December 2009 (COP15), agreed to "*take note of*". COP15 was attended by 110 world leaders and, while it did not achieve the legally binding agreement that had been hoped for, it raised awareness across the world and signalled a change in attitude in many countries.

The Green Investment Bank, intended to finance new green energy sources and develop carbon capture technology, will be capitalised with £3bn and will be able to borrow money from 2015. It should be fully operational by Autumn 2012.

The **CRC** (Carbon Reduction Commitment) is a mandatory scheme aimed at improving energy efficiency and cutting emissions in large public and private sector organisations. These organisations are responsible for around 10% of the UK's emissions.

The scheme features a range of reputational, behavioural and financial drivers, which aim to encourage organisations to develop energy management strategies that promote a better understanding of energy usage. In the 2012 budget the Chancellor suggested that he would consider replacing it with a new environmental tax in the autumn unless ways could be found to reduce the costs to businesses of administering the CRC.

The **Association of British Insurance** (ABI) has made a Statement of Principle that it will no longer guarantee to insure properties against flood risk. Under the current agreement, the ABI guarantees insurance to any building that has a flood risk of less than 1 in 75 years (according to the EA), but that guarantee will expire in 2013. There is to be a government decision on their preferred approach in spring 2012.

The Better Buildings Partnership launched in December 2007 with participation from British Land, Grosvenor, Hammerson, Hermes, Land Securities, Transport for London and the LDA, and has since been joined by Blackstone Group, Canary Wharf, GE Capital Real Estate, Legal and General, PRUPIM, Quintain and Workspace Group. The Partnership is a member of Green Property Alliance and linked to the Green 500, another LDA programme. Green Property Alliance, in turn, has linked with Greenprint Foundation – a worldwide alliance of real estate investors and other stakeholders, and which has a link with the Urban Land Institute.

The urban heat island effect Is caused by heat gain and storage of heat from the sun by the urban fabric during the day; surface water being drained away and thus not available for evaporative cooling; and heat emissions from uses such as air conditioning. In London the UHI effect on night-time temperatures can be as much as 10°C. The Tyndall Centre's ARCADIA project suggests the following.

- By the 2050s, one third of London's summer may exceed the Met Office current heat wave temperature threshold (daytime temperature of 32°C and night-time temperature of 18°C).

- A threefold increase in anthropogenic heat emissions (e.g. from air conditioning) on top of climate change would raise minimum night-time temperatures by about 0.5°C which would aggravate heat stress.

The London Plan

Climate change considerations are set out in Chapter 5 of the 2011 Plan. The key measures, as they impact on commercial property, are outlined here.

Climate change considerations fall under two broad headings – mitigation and adaptation. Mitigation covers measures designed to address the *causes* of climate change and adaptation covers measures to adapt to the *effects* of climate change. Thus mitigation policies include controls on emissions, while adaptation policies devise ways to manage the risks of flooding, overheating and drought on London and Londoners' health, economy and environment, through, for instance, building design.

The Mayor has published a strategy for Climate Change Adaptation (October 2011) and a strategy for Climate Change Mitigation and Energy (November 2011).

The Mayor's strategy for adaptation *Managing Risks and Increasing Resilience*[137] identifies four key areas in which London's economy needs to adapt.

- Ensuring that London is perceived as a safe and secure place to do business.
- Identifying segments of financial services most exposed to climate change.
- Enabling London to become an exemplar in tackling climate change.
- Enabling business to become more climate resilient.

It specifies a need to deliver a London-wide 'urban greening' campaign to increase the quality, function and connectivity of London's green spaces.

It highlights the dependence of the city on resilient infrastructure systems including a transport network that can cope effectively with drought, flooding and rising temperatures and points out that the underground is the most vulnerable transport system to flooding and overheating.

The Mayor's strategy for mitigation Delivering London's Energy Future[138], sets out the Mayor's approach to limiting further climate change. It aims to reduce London's CO_2 emissions; maximise opportunities for the transition to a low carbon capital; ensure a secure and reliable energy supply for London and meet and where possible exceed national carbon reduction targets.

The Mayor seeks to achieve an overall reduction in London's carbon dioxide emissions of 60% (below 1990 levels) by 2025. This will be achieved through initiatives to decarbonise London's energy supply and to reduce emissions from the existing

[137] Mayor of London (2011) *Managing risk and increasing resilience: the Mayor's climate change Adaptation Strategy*

[138] Mayor of London (2011) *Delivering London's energy future: the Mayor's climate change mitigation and energy strategy*

building stock and the Mayor expects all new development to fully contribute towards the reduction of carbon dioxide emissions.

New buildings In line with central government's commitment to carbon neutrality in all new commercial buildings by 2019, it is written into the London Plan that, as a minimum, all major development proposals should meet the following targets for carbon dioxide emissions reduction in buildings. These targets are expressed as minimum improvements over the Target Emission Rate (TER) outlined in the national Building Regulations (Part L) leading to zero carbon non-domestic buildings from 2019.

Non-domestic buildings	
Period	**Improvement on 2010 Building Regulations**
2010 - 2013	25%
2013 - 2016	40%
2016 - 2019	As per building regulations requirements

In addition, all major development proposals should include a detailed energy assessment to demonstrate how the minimum targets for carbon dioxide emissions reduction are to be met. Proposals should use decentralised energy sources where feasible such as district heating and cooling or CHP. Boroughs are also encouraged to require energy assessments for other development proposals where appropriate. Emissions reductions should be met on site where possible.

The Plan also acknowledges that some developments, including offices, generate significant emissions from electrical equipment and appliances, and the assessment will include advice on efficient equipment, building controls and management practices. Energy assessments should also include a design EPC for the development.

Where it is demonstrated that the specific targets for carbon dioxide emissions reduction cannot be fully achieved onsite the shortfall may be provided offsite.

Development proposals are also required to demonstrate that sustainable design standards are integral to the proposal and meet the minimum standards outlined in the Mayor's supplementary planning guidance on Sustainable Design and Construction.

In accordance with sustainable design and construction principles, development proposals should maximise opportunities to orientate buildings and streets to minimise summer and maximise winter solar gain; use trees and other shading; increase green areas in the envelope of a building, including its roof and environs; maximise natural ventilation; expand green networks across London and wherever possible incorporate a range of public and/or private outdoor green spaces.

Existing buildings Boroughs are encouraged to develop policies and proposals for retro-fitting existing building stock and the Mayor will support measures through building regulations and funding mechanisms some of which are outlined below.

Sustainable energy sources The Plan seeks to reduce the emissions of carbon dioxide by supporting the development of sustainable energy infrastructure that will produce energy more efficiently and exploit the opportunities to utilise energy from

waste. This includes the use of decentralised energy systems, low carbon and renewable energy sources where possible.

Decentralised energy networks The Mayor expects 25% of the heat and power used in London to be generated though localised decentralised energy systems by 2025. The scale of opportunity can vary from CHP systems on specific development sites, to town centre wide district energy projects such as Elephant and Castle and the Olympic Park/Village schemes, to connecting into large-scale infrastructure such as the LDA-led London Thames Gateway Heat Network.

Urban greening The Mayor seeks to increase the amount of surface area greened in CAZ by at least 5% by 2030 and a further 5% by 2050. Development proposals should integrate green infrastructure such as tree planting, green roofs and soft landscaping. Major proposals should demonstrate their contribution to the targets.

London Green Fund This £100 million fund to invest in schemes that will cut London's carbon emissions**,** was set up in October 2009 and was the first Joint European Support for Sustainable Investment in City Areas (JESSICA) holding fund in the UK. The money is available as equity, loans and/or guarantees (but not grants) via an Urban Development Fund (UDF). In this case two UDFs have been set up, one for waste and the second, with £50 million available, set up in August 2011, for energy efficiency, called the London Energy Efficiency Fund (LEEF). It is available as debt to fund retrofitting of public and voluntary sector buildings and social housing.

C40 London is a founder city in the C40 Cities Climate Leadership Group (C40) - a network of large and engaged cities from around the world committed to implementing climate-related actions locally that will help address climate change globally. It was created in 2005 by former Mayor of London Ken Livingstone, and formed a partnership in 2006 with the Cities programme of President Clinton's Climate Initiative (CCI) to reduce carbon emissions and increase energy efficiency in large cities across the world. The current chair of the C40 is New York City Mayor Michael Bloomberg, and the steering committee comprises representatives from Berlin, Hong Kong, Jakarta, Johannesburg, London, Los Angeles, New York City, Sao Paulo, Seoul and Tokyo.