LONDON OFFICE POLICY REVIEW 2017

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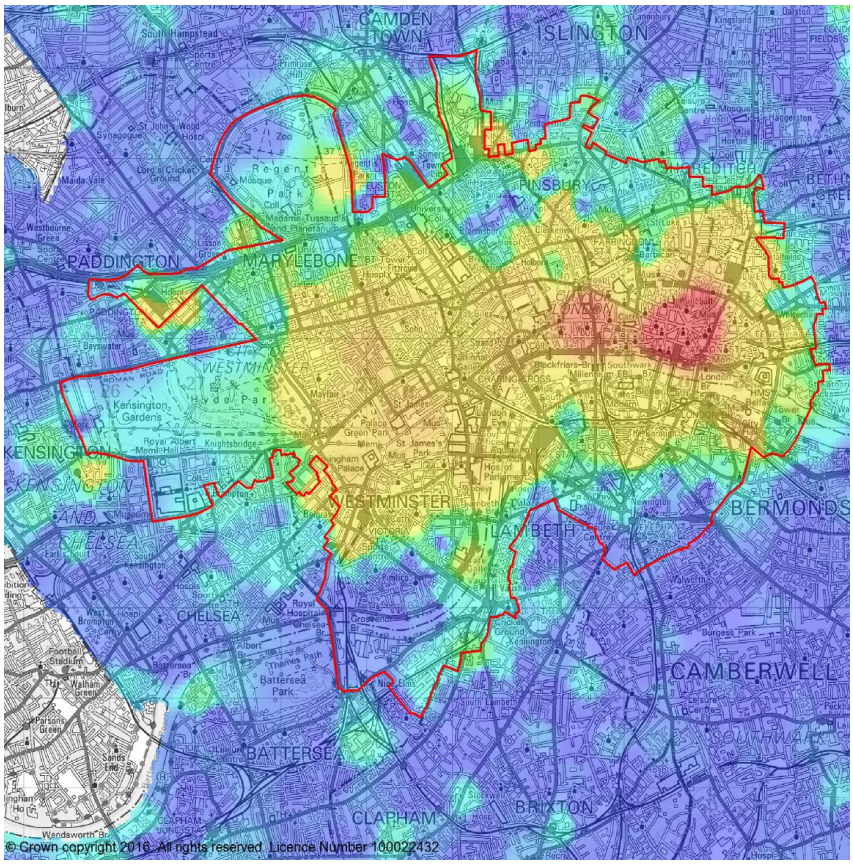

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Greater London Authority

London Office Policy Review 2017

A report by Ramidus Consulting Limited
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Management Summary

Context ….

Ensuring that there is sufficient capacity to accommodate office-based activities is an important London and national concern. The LOPR series provides a regular monitor to ensure that London Plan policies are focused on achieving the Mayor's objectives in this area. LOPR provides an independent review of market trends and associated time series data to illustrate key themes and their bearing on policy. LOPR 2017 will inform a full review of the London Plan and the preparation of Local Plans/Opportunity Area Planning Frameworks.

Forces of change The London office market has changed significantly since the previous LOPR of 2012. It is probably true to say that the changes listed below together ensure that it is facing a period of uncertainty as great as any in the past.

- **Brexit ….** the June 2016 Referendum outcome took most observers by surprise, causing great uncertainty over long-term outlook for London offices.
- **Workstyles ….** have continued to evolve: London's café culture has never been busier; and serviced offices have become mainstream.
- **Firm restructuring ….** has continued with the city's SME population growing by almost one-quarter, to over one million firms for the first time.
- **New forms of occupation ….** have evolved. Co-work provider WeWork opened in London in 2014 and is now one of its largest occupiers.
- **Continued spatial restructuring** …. with further concentration in Central London and retrenchment in Outer London.
- **Permitted Development Rights ….** despite good intentions, they have led to swathes of office stock, often occupied and useful, being lost to housing.
- **Evolving Central London market dynamics ….** with fragile supply-demand dynamics, more footloose occupiers and general concern over prospects.
- **Employment change ….** is continuing apace with continued financial sector retrenchment, and the technology sector now the largest space taker.

Uncertainty in this context is not a negative term, but a reflection of the extent and degree of change that is occurring, with very few predictable outcomes. Against this uncertainty we offer forecasts of future demand for office space in London.

Employment forecasts and capacity The office employment projections suggest an increase of 619,300 jobs, from 1.98m in 2016 to 2.60m in 2041, a rise of 31%. This translates into a requirement for an additional 6.06m sq m of office space through to 2041 (employment-based forecast). Nearly 60% of this will occur in the CAZ + NIoD area. We have also produced low and high scenarios based on assumptions around this, Central projection. These scenarios range between 4.34m sq m and 7.87m sq m.

A composite projection that takes account of both employment-based projections and past trends in office floorspace stock produces a forecast increase in office floorspace stock of 4.72m sq m over the period 2016-41.

At the London level, there is sufficient potential capacity identified in the pipeline to accommodate projected growth, both in terms of increasing the density of existing office sites (the average increment to floorspace of new buildings over the past decade has been 50%), as well as developing previously non-office sites (wharves and rail land), which have supplied over 900,000 sq m over the same period. However, past performance is no guarantee of future delivery. The relatively low level of current outstanding consents has been noted, suggesting that vigilance will be needed to ensure that potential locations of office expansion are safeguarded and encouraged to come forward into the development pipeline.

There are some spatial imbalances in capacity. For example, it is relatively limited in some CAZ boroughs such as Islington and Southwark, whereas there is potential spare capacity at untested off centre locations such as Old Oak Common, Stratford and the Royals Docks in Newham.

Probably the biggest potential impact on demand for office space is through changing workstyles and further increases in homeworking, which combined with other changes in technological and organisational practices has the potential to reduce the demand for office floorspace by more than 10%. The other factor that has potentially a very large impact on the demand for new office space is the extent to which the extant stock of offices can be utilised at higher density. This may be through better utilisation of existing buildings or replacement of existing buildings with a more efficient product.

The supply and capacity question is being complicated by the effect of Permitted Development Rights (PDR), particularly for smaller occupiers who are, to some extent, dependent upon fringe locations that act as pressure valves when supply pressures build, leading to rapid rental growth. This being the case, and given that CAZ has to date been exempt from PDR, then the greatest supply issue might be in the area just beyond the CAZ boundary. This suggests that a key spatial policy response could be an extension of the CAZ, or the establishment of a transition or buffer zone between predominantly commercial and predominantly residential areas which, like the CAZ, is exempt from PDR.

Brexit ….

Six months on from the Referendum, there remains a great deal of uncertainty over the nature of the UK's withdrawal from the EU – both in terms of process and impact. The Brexit debate in London has been dominated by an overriding concern about the loss of financial jobs from the City and Canary Wharf. Several forecasts were made before the Referendum, suggesting major job losses of at least 70,000. But Brexit has implications well beyond the financial services sector. Other sectors facing potential direct threats are life sciences and higher education.

Short-term: the Referendum and immediate aftermath The most obvious post-Referendum indicators were the reactions of the stock and money markets, with the FTSE and sterling both falling sharply. The Stock Market recovered quickly, and the FTSE 100 has since broken 7,000. By contrast, sterling's fall has been sustained.

Workforce jobs, unemployment, retail sales, house prices, service sector output and other economic indicators seem to have generally continued with their pre-Referendum trends, while manufacturing and exports have been assisted by a weaker pound. Business confidence surveys generally fell after the Referendum, but showed distinct recovery from August 2016 onwards. Due to a raft of relatively benign data (thus far), we have not witnessed anything like the existential crisis that gripped the banking sector in the wake of the collapse of Lehman Brothers in 2008. It is also important to acknowledge that the UK more widely has benefited from a number of post-Referendum, overseas investment decisions.

While relatively benign indicators do not mean that Brexit no longer poses a threat to the London office market (or wider London economy), they do illustrate a broader picture that is sometimes missed with the focus on the City's financial sector – important though that is. At the same time, we are entering a period of uncertainty which could have a negative impact on the office market over the medium-term.

Medium-term: Article 50 and the negotiations It is during this period when the relatively benign indicators discussed above could make a major about turn. For a prolonged period, market uncertainty will prevail with a constant 'drip-drip' of so-called news about the negotiations. The overall impact might be to heighten caution and severely dampen activity.

Perhaps the greatest threat to London-based financial jobs is the prospect that the UK will lose its 'financial services passporting' rights. More widely, there is the question of the UK's access to the single market. The implication of Brexit is that the UK would no longer be a *member* of the single market; but the crucial question is: under what terms could the UK have *access*? There is then the question of free movement of labour, which the EU is expected make a 'red line' issue, not least because of the potential knock-on effect if the UK is given exceptional treatment.

One of the many issues that remains unclear at this stage is whether or not there will be a gradual transition out of the single market; or whether there will be a clean and abrupt break in current trade agreements. Obviously the former would allow for a period of adjustment, and would be likely to calm investor nerves.

There are also a number of factors that will influence London's economy, and the performance of its office market in the medium-term, irrespective of Brexit. The French and German elections during 2017; the European elections in June 2019; the on-going Greek debt crisis and the Italian banking crisis are some of the more important. Germany's insurance industry is suffering major structural issues; its iconic Deutsche Bank has seen its share price slashed, and Commerzbank has announced almost 10,000 job losses. Meanwhile unemployment remains stubbornly very high in southern European states.

Ironically, some of these factors might reinforce London's traditional 'safe haven' role, perhaps even helping it to continue as a key destination for new capital investment from both the eurozone and elsewhere.

Longer term change Central London is a classic economic cluster, in which strong supply-chain relationships reinforce the benefits of agglomeration. Within this there is the financial services cluster, but there are also strong professional services, creative, technology and life science clusters. These are woven together by complex supply chain relationships, many of which straddle specific clusters. Together they underpin London's number one status in the Global Financial Centres Index.

For London to fall from its current top spot to, say, 10th, within a decade or so would imply a seismic economic adjustment for a major city on a scale that has no historical precedence. Even a fall to, say, somewhere between 5th and 10th would imply an enormous shift in activities, not only for London, but also for, say, Frankfurt, a moderately-sized city, which would have to invest heavily in physical and business infrastructure to absorb major growth in the longer term.

It is perfectly possible that the UK economy and the London office market could, during the longer term, continue to operate in the *relatively* normal way that has prevailed since 24th June 2016 (especially with a five year transition period). But this will be strongly influenced by the quality and nature of the news that emerges during exit negotiations. It could, equally, be characterised by prolonged uncertainty.

The long-term outlook for London's office market rests largely on the terms under which the UK leaves the EU; the degree to which it is able to establish trading agreements with countries in the rest of the world, and the wider global economic outlook, risks and uncertainties. However, it is difficult to envisage the physical relocation of many tens of thousands of jobs over the coming decade. Probably more likely is a gradual shift in the relative dominance of London within Europe in terms of financial services, as cities in the EU take up the bulk of future growth.

In reality, the true impact of Brexit will be extremely difficult to measure in isolation because it will happen over an extended period during which many other factors will influence employment in London and the way employment translates into demand for office space. One of the most critical of these factors is changing workstyles.

Changing workstyles ….

Organisations, workstyles and workplaces are changing rapidly. The role of the office is evolving into one for enabling workers to interact and collaborate, by providing a range of settings in which individuals and groups work in more dynamic ways compared with the past. With regard to our central LOPR question – how much office space will London require in the long-term – the answer is likely to be '*more, but different'*.

On the one hand, and on current worker numbers, continuing efficiencies in the use of space could result in a reduction in stock requirement of nearly three million

square metres. On the other hand, projections suggest that the London office workforce will grow by almost 620,000 through from 2016 to 2041, suggesting demand for around six million square metres of additional office space (employment-based method – see Section 9.0).

On balance, it is likely that headcount growth will outpace savings achieved by greater efficiency, leading to net growth in demand. But other factors could impact this conclusion. In terms of 'known unknowns', we isolate at least three factors.

- First, agile working could spread further and deeper than anticipated, resulting in a far greater suppression of demand than suggested above.
- Secondly, there is office automation, the impact of which might be far greater on job numbers than the efficiency and Brexit scenarios combined.
- Thirdly, there is the potential impact of Brexit, which might just mean lower jobs growth rather than a seismic adjustment. But even so, if there is a sustained transfer of business away from London, then the threat is real.

Potentially, the first two of these unknowns could dwarf any Brexit impact and could, ultimately, mean that spatial policy might be dealing with new locational preferences and building typologies. This could have implications for long term projects such as Old Oak Common and other CAZ satellites (see below).

The message for the London Plan is that we must continue to plan new capacity to cope with growth (because we cannot plan for the unknown). However, workstyles and workplaces are evolving rapidly: agile working is now 'mainstream'; the flexible space market has matured; business processes are responding to changing circumstances, and building design is innovating. The London Plan will need flexibility to respond to the shifting profile of demand.

Firm restructuring and new forms of occupation ….

Smaller occupiers are a critical component of demand for office space. Their numbers suggest that they will have a growing impact on the medium- to long-term profile of demand for office space. London currently accommodates over 90,000 SMEs in five key 'office economy' sectors: Information & Communications; Finance & Insurance; Real Estate; Professional, Scientific & Technical and Administration & Support Services. And they look set to grow significantly.

However, there is a strong market perception that occupation of Central London office space is becoming more difficult, particularly for smaller businesses looking to occupy less expensive space. While there is a dearth of hard data, rental hikes in recent times (not to mention the recent rating revaluation) are widely considered to be squeezing some businesses out of the centre. We know that rental values have more than doubled for secondary space in many what were formerly dubbed 'fringe locations' on the edge of traditional core areas. The evidence that we present here on the conversion of offices to residential use serves to underline the fact that secondary space is disappearing at a rapid rate.

Some of the pressure is being relieved by smaller occupiers being accommodated within mainstream stock, rather than in secondary, or even tertiary space. This is being achieved through a combination of landlords becoming more accepting of smaller occupiers, and the very rapid rise of the flexible space market. The recent growth of the flexible space market (particularly serviced offices and co-working spaces) has been particularly important in providing smaller occupiers with better quality space on terms that suit their needs.

Nevertheless, smaller occupiers have widely ranging cost sensitivities, and there remain large numbers of businesses for whom less expensive space remains a pre-requisite. Which raises the question of whether spatial policy should seek to 'protect' secondary space for smaller occupiers, or to ensure provision of less expensive space. It seems paradoxical that, on the one hand, central government policy should allow the wholesale loss of employment space (which is in demand as such) through PDR while, on the other hand, local planning authorities are considering a market intervention to re-provide such space at affordable rent in new schemes. What seems clear, from a spatial policy perspective, is that supply needs to be maintained and, in so doing, price increases contained.

Continued spatial restructuring ….

Mega schemes We provide an update of earlier LOPR work, looking at the on-going evolution of London's 'mega schemes' – those large, integrated developments that form a necklace of new business nodes around the edge of London's central business district.

The mega schemes have allowed the physical capacity of London's economy to grow rapidly and help maintain the capital's critically important Global City role. At the same time, they have changed the spatial structure of business: the historic duality of the tightly-defined City and West End markets has broken down; and companies are far more footloose than they ever were.

As a consequence of these trends, the Central London economy has expanded, physically. We believe that the existing boundary of the CAZ could be refined, with two specific purposes in mind. First to recognise the crucially important role of 'CAZ satellites', both existing and potential, and affording those centres the same employment space policies as the existing CAZ.

The second reason is to address the needs of smaller occupiers (see above). Such firms typically agglomerate in secondary space around the CAZ fringe, and it is in this area that the viability of such firms is being threatened by the expanding core area and by conversions from office to residential and other uses (eg hotels and leisure). At a time when London needs to be encouraging enterprise and an 'open for business' approach, such firms need to be nurtured.

We believe that the CAZ could both expand in some areas, notably to the North and East. Crucially, we believe that the CAZ could itself be polycentric. Canary Wharf is already included as a satellite. Emergent centres in Old Oak Common

and Stratford might, once they are more established, be treated similarly as 'CAZ satellites'.

Office-to-residential conversion While office-to-residential conversion is not a new phenomenon (significant losses to non-office use have been taking place for over twenty years), the temporary extension of PDR in 2013 changed the landscape, bringing housing land and employment land into much more direct conflict. The temporary extension of PDR has also now been made permanent. Further, exemptions in the CAZ, Northern Isle of Dogs, Tech City, Kensington & Chelsea and the Royal Docks Enterprise Zone, will cease in May 2019. The pervasive pressure for new residential development is unlikely to go away on any reasonably foreseeable time scale.

The impact of office-to-residential has not been uniform and property market verities remain a significant factor: it should be no surprise that the bulk of pressure has been felt in North West, West, and South West of London – some of the most affluent locales in London. Between 2013 and 2016, Croydon saw 235,000 sq m of office-to-residential approvals; Brent had more than 180,000 sq m and Hounslow 112,000 sq m; Camden, Harrow, Richmond, Sutton and Tower Hamlets all saw around 80,000-90,000 sq m of approvals; while Greenwich, Hackney, Haringey, Havering, and Newham have all seen less than 10,000 sq m.

There is little doubt that PDR has helped clear much poor quality office stock, but it is equally clear that a planning tool which is blind to the role of property values in shaping private sector decisions can have unintended consequences. Good space is lost too – not necessarily Grade A, but serving the needs of cost-conscious SMEs.

Across London, 55% of PDR schemes involve occupied buildings (40% fully-occupied and 15% partially-occupied). It is also likely that these numbers under-estimate the impact by excluding buildings where owners emptied building before a prior approval, or chose not to re-let vacant space that might have found a willing tenant. We estimate that over 30,000 jobs have been disrupted, with the overwhelming majority of these being in SMEs occupying economically-priced space which might be hard to replace, and this represents a significant disruption to the small business community.

Given the impact of PDR on the availability of secondary space, some detailed cost-benefit analysis would be prudent. This is particularly important given the cessation of exemptions in 2019. The critical issue from a policy standpoint remains, as stated in previous LOPRs, that once employment land is lost, it virtually never returns to employment use: it is, to all practical purposes, a permanent loss of capacity.

Beyond Central London The LOPR series has undertaken a high level review of centres beyond Central London since 2004, in order to assess their prospects for office development. Recent stock data from the VOA underscore observations made previously about the parlous state of Outer London office markets, with the region suffering disproportionately in terms of stock shrinkage.

In terms of percentage losses, the Inner London boroughs of Lambeth, Lewisham and Wandsworth have suffered; but the remaining large losses are all in Outer London. Bromley, Croydon, Harrow and Sutton have all suffered losses of 20-30%.

Stock shrinkage is, in part, a reflection of the low viability of office development. Indeed, with notable exceptions including Chiswick, Croydon, Hammersmith and Stratford, office development is unviable throughout most of London beyond the CAZ. There are a few centres where development is viable, but where PDR ensures an almost total lack of site availability (such as Richmond and Wimbledon).

The ultimate test of any market is its capacity to attract investment to upgrade or add to stock. However, with the exception of Stratford (little surprise), very few centres have what might be considered a significant pipeline of outstanding consents, including just Chiswick, Croydon and Hammersmith.

It is hard to escape the view that new development beyond Central London is concentrating into a small number of centres, although the dynamics for each vary somewhat. Stratford has, of course, been public-investment driven; Chiswick is very much a private sector success story, and Croydon continues to work its way out from the legacy of obsolete stock. Concentration might ultimately help the office market by concentrating value in fewer centres. In the absence of large scale public investment or direct support (such as moving government offices) it is hard to escape the conclusion that promoting large-scale office development in most other centres is running counter to structural changes, with the proviso that supply of stock suitable for SMEs should be sought in most centres.

Relationships with the Wider South East As noted above, Central London is under intense pressure to provide residential space, with knock-on effects for the supply of office space there. This raises questions about the best way to meet demand, in terms of, for example, policy for the Green Belt, the appropriate density of land use in Outer London and beyond, and the substitution of Central London jobs in the Wider South East (WSE).

One of the most important points to make about the WSE office market is that business process change and office technology mean that the region's previous role as a location for back offices has disappeared. For larger firms, while there remains a significant cost differential between Central and Outer London in terms of rent, this is far outweighed by a much shallower curve in salary costs. Thus demand for larger offices in Outer London and WSE has structurally (rather than cyclically) altered.

For SMEs: the availability of economically priced space in the WSE has diminished, and it cannot be assumed that the region could easily absorb large numbers of SMEs displaced from Central London (ignoring for a moment strong centripetal forces). As well as a shrinking supply of secondary, cheaper space in many centres across the region, land values are not high enough to make new office development viable. To take one example, Gravesham has lost much stock to PDR; replacement is unviable with values at £8.50 per sq ft, and it has seen no new offices for over 30

years. Even if development were viable, there remains the question of its affordability by SMEs.

The M25 and the B1 Use Class spawned a whole generation of new offices in the 1980s and much of that office stock is now ageing at the same time. Often this space is on out-of-town or edge-of-centre business parks. This has led to widespread oversupply of a type of space that is now of less interest to larger corporate occupiers; inappropriate for SMEs and, in any case, unviable for redevelopment as offices and attractive for conversion to residential space.

Many previously strong office centres in the WSE are finding it difficult to retain employment space in the face of market pressures from residential use; while office rental values do not support new development. The result is that low value employment space in particular is vulnerable to change of use – the very space that traditionally met the needs of many small, young or low margin businesses – and created local employment.

For these reasons, it seems unlikely in most cases that SMEs will move, literally, along the rent gradient as they are squeezed from London, and create demand in centres further from Central London. The prospects seem better for retaining local demand, or persuading local entrepreneurs to stay closer to home. There is a case for using the planning system to facilitate or encourage the provision of economical and small units, possibly in exchange for higher density in residential planning consents, but the rationale in each case must be clear.

As we have already seen, Central London can continue to absorb a substantial volume of employment growth through changing working practices, and only real pressures in this context are on cost-sensitive SMEs.

Evolving Central London market dynamics ….

Overview Since the drop in activity recorded in LOPR report in 2012, the Central London office market has staged a distinct recovery. Take-up recovered to post-2000 average levels. Demand has come from a recovering financial sector (predominantly non-bank), and above all from a vigorously expanding Tech sector.

Occupier mobility between market areas has been increasing, notably from West to East (exemplified by online delivery company Deliveroo's acquisition of 4,600 sq m at Cannon Street House, EC4), reflecting high and rising rents and a shortage of supply in the former. A change in the City's image, combined with growing flexibility by occupiers, has at least partially broken down the locational 'silos' of the Central London office market.

The supply of newly built space did not overshoot in the aftermath of the recession as it did in the previous two cycles. The increased demand from 2013 was sufficient, in the face of this restraint, to eat into upcoming supply. The outlook is for new development to peak in 2016-17, with subsequent contraction as development is restrained by declining developer optimism and increased risk aversion.

The continued impact of residential conversion of office space has reduced stock in the West End, and generally reduced the amount of secondary space everywhere, reflected in the composition of availability. However, office stock in Central London has increased, as development in other sub-markets has more than compensated for these losses.

From late-2015, however, the Central London office market cycle moved from an upswing phase (take-up rising, availability falling, rental growth positive) to gentle decline (take-up falling, availability rising, rental growth plateauing). After falling consistently from 2009, the trend in available floorspace reversed in late 2015. Falling take-up in 2016 was attributable to a mild slowdown in the London economy and increasing occupier concerns over the uncertainty around Brexit.

Consequently, take-up noticeably slowed: by 20% overall, with greater impact in core markets. While recently announced deals from major players have underlined confidence in London as a major employment centre, it remains true that leasing activity is still significantly down. Nevertheless, a wholesale retreat from the market is not anticipated at present, as enquiries are holding up; but lease negotiations are becoming sharper and more protracted, and rent free periods are increasing.

Thus, on balance, there are reasons to be optimistic about the current market weakness. Demand indicators are not uniformly weak and development supply has remained tight. So currently the outlook is that rents are not likely to come under serious pressure immediately.

Market reaction to the EU Referendum The early impact of the Referendum on property market dynamics has been quite modest. It was noted above that the market peaked in late-2015, and was in mild decline before the Referendum. Within this context, the range of leasing and investment deals post-Referendum has been significant. For example, occupational deals, led (in size terms) by Amazon, Apple and Google (at Shoreditch, Battersea and King's Cross, respectively) are significant not only for the fact that they reflect a certain level of confidence in London from three global businesses, but also for their multiplier impact in terms of supply chain activity and reinforcing London's technology cluster.

Investment deals have also been completing since June, and overseas interest has been particularly strong. While a small number of deals were reported to have been postponed after the Referendum, most are now back on track: both 22 Bishopsgate and 1 Undershaft are proceeding. In terms of newly-announced projects, developer Stanhope and Mitsui Fudosan announced a £1bn 'science hub' adjacent St Pancras in Camden, with the potential for up to 65,000 sq m of commercial space; while Chinese developer ABP has started a 440,000 sq m business park in the Royal Docks, to act as a focus for Chinese firms moving to the UK.

London's property market had passed the peak of its current cycle *before* the Referendum, and it is important to distinguish 'business as usual' indicators from Brexit-specific indicators. At the time of writing, the state of the market is driven mostly by the former, and relatively little by the latter. This position could, of course,

change quickly and profoundly, particularly as we move towards greater clarity on the likely terms of the UK's exit from the EU.

There is little question that early, post-Referendum indicators have proved more positive than was generally anticipated. Following an initial shock, most economic indicators, and the property market, have recovered. Whether this generally positive picture simply proves the robustness of London's inherent strengths (agglomeration, language, ease of business, social/cultural attractions, etc); or whether it suggests a false sense of security that will become more negative in the medium-term, once Brexit negotiations begin, is difficult to say with precision at the time of writing.

Benchmarking the Central London office market ….

There are six benchmarks which LOPR uses to aid implementation of a robust policy for office development. Benchmark 1 states that planning permissions should be at least three times the average rate of starts. This measure is showing an amber warning: rising development intensity has outstripped replenishment by new permissions, and the ratio has decreased below the threshold. Looking forward, the expected reduction in development starts can be expected to prompt an uplift in the ratio as long as fresh applications for planning permission continue to come forward.

The current level of permissions looks to be too low to provide adequate development supply, to judge by past performance. This suggests that policy attention should be directed to examining the potential of sites not yet with permission, or those where permissions have lapsed. It should also focus attention on the use class for which permissions are sought, to avoid an undue shortage of office capacity in the pipeline.

The 8% floorspace availability threshold of Benchmark 2 has not been exceeded since 2011. The threshold indicates the onset of positive rental growth: prime rents turned positive at 7% availability in the West End and 9% in the City, both in 2009. At 2.5%, availability was undoubtedly very short at the end of 2015, but now we are on upward trajectory of availability this constraint for occupiers, of limited choice, will become more relaxed.

Benchmark 3 is concerned that pre-let and owner-occupier development starts do not comprise too high a proportion of total starts. The 50% threshold has in fact been rarely breached and, while on a rising trend in the recovery period, averaged only about a quarter of total starts 2013-15. It should not be an indicator of concern.

Since 2010, rental levels have been rising everywhere, and in the districts around the City, prime rents have converged with the core prime rent. Here, and in the West End, the 50% threshold in Benchmark 4 has been significantly exceeded for some time. This partially reflects the 'flattening out' of Central London in terms of occupier locational flexibility, and in the City, the rise of Tech occupiers. This flattening of the rental value gradient also reinforces our concerns over capacity of low cost space – in what were originally secondary locations.

Benchmark 5 measures the adequacy of new office supply in terms of ability to meet demand. This has remained comfortable: at 9.5 years of average take-up it is very like the ratios reported in previous reports. However, reflecting a structural shortage in supply, ratios are lowest in the West End and Midtown sub-markets.

Benchmark 6 measures rental volatility. The annual rate of change in rental growth has ameliorated since 2011, remaining within a +/-10% metric. So, at present, the indicator is untroubling, and will remain so as long as the factors putting downward pressure on the market do not become aggravatingly strong. This is however an overview and does not preclude uncomfortable rates of growth in areas undergoing material change, such as many around the City fringe.

The policy tools at the disposal of policymakers are permissive and protective: they can facilitate the granting of planning permissions and curb the ability of developers to sap office capacity through office-to-residential conversions. Such levers could ensure that capacity is not constrained over the property cycle. But it is difficult to see how these tools can mitigate the extremes of the property cycle in terms of rental growth and even availability of space, given the formers inherent volatility.

1.0 Context

1.0.1 This section sets out the background to the *London Office Policy Review* (LOPR) series, re-states the key objectives for LOPR 2017, and introduces the team that will undertake the work if we are appointed. The work will be framed within the wider policy context of the London Plan and the Government's National Planning Policy Framework; and it will inform a full review of the London Plan and the preparation of Local Plans/OAPFs, and support the co-ordination of office policy with the Wider South East.

1.1 Background to the London Office Policy Review

1.1.1 Ensuring that there is sufficient capacity to accommodate office-based activities is an important London and national concern. The LOPR series provides a regular monitor to ensure that London Plan policies are focused on achieving the Mayor's objectives in this area. The previous LOPR was published in 2012.[1]

1.1.2 The LOPR feeds in to the London Plan, which seeks to provide policy that is designed to be both informed by, and responsive to, changes in demand for, and supply of, office space. LOPR achieves this by providing an independent review of market trends, involving robust monitoring benchmarks and associated time series data to illustrate key themes, market relationships and their bearing on policy.

1.1.3 The LOPR series is framed within the wider policy context of the London Plan and the Government's National Planning Policy Framework. LOPR 2017 will inform a full review of the London Plan and the preparation of Local Plans/Opportunity Area Planning Frameworks and support the co-ordination of office policy with the Wider South East.

1.1.4 The LOPR 2017 project specification issued by the GLA on the 7th July 2016, identified three main workstreams, as follows.

- Part A: Review of office market trends and benchmarking.
- Part B: Office employment and floorspace demand projections.
- Part C: Future prospects for office development in viable locations outside Central London and relationships with the Wider South East of England.

1.2 The key objectives of LOPR 2017

1.2.1 The LOPR series has provided periodic, independent reviews of market trends, including Monitoring Benchmarks, associated time series data to illustrate supply and demand dynamics, employment forecasts and key themes and their bearing upon office policy. Previous LOPRs have also explored a number of key issues confronting the London office market at the time of each review. LOPR 2017 will continue with this format.

[1] Ramidus Consulting (2012) *London Office Policy Review 2012* Greater London Authority

1.2.2 The project specification set the following objectives for the study.

- Undertake a review of office market trends and assess short-, medium- and long-term office supply/demand dynamics in Inner and Outer London.
- Assess the impact of office-to-residential Permitted Development Rights.
- Review the changing nature of work and workspace and to consider the implications for the London office market and broader metropolitan economy of the Chancellor's Productivity Plan and recent legislation.
- Provide projections of office employment and office floorspace demand to 2041, including premises of different sizes.
- Assess the future prospects for office development in viable locations outside Central London and to consider relationships with the Wider South East.

1.2.3 It is worth emphasising at this point that the London office market has changed significantly since the previous LOPR of 2012. Some of the more important are listed below.

- **Brexit ….** the June 2016 Referendum outcome took most observers by surprise, causing great uncertainty over long-term outlook for London offices.
- **Workstyles ….** have continued to evolve: London's café culture has never been busier; and serviced offices have become mainstream.
- **Firm restructuring ….** has continued with the city's SME population growing by almost one-quarter, to over one million firms for the first time.
- **New forms of occupation ….** have evolved. Co-work provider WeWork opened in London in 2014 and is now one of its largest occupiers.
- **Continued spatial restructuring ….** with further concentration in Central London and retrenchment in Outer London.
- **Permitted Development Rights ….** despite good intentions, they have led to swathes of office stock, often occupied and useful, being lost to housing.
- **Evolving Central London market dynamics ….** with fragile supply-demand dynamics, more footloose occupiers and general concern over prospects.
- **Employment change ….** is continuing apace with continued financial sector retrenchment, and the technology sector now the largest space taker.

1.2.4 It is probably correct to state that these changes, in combination, mean that the London office market is facing a phase of uncertainty as great as any it has faced in the past. Moreover, the degree of change underscores the importance of regular monitoring of the office market in order to ensure that spatial policy is informed to respond to changing circumstances.

1.3 Acknowledgements

1.3.1 This project was overseen by a GLA Steering Group, chaired by Gerard Burgess and including: Mike Hope, Levent Kerimol, John Lett and Jennifer Peters from the GLA and David Jowsey from TfL. We would like to thank them for their help and guidance. We would also like to acknowledge the help of Jonathan Brooker for the preparation of LDD data.

1.3.2 We would like to thank Cushman & Wakefield, and Elaine Rossall in particular, for their assistance in providing the base data to underpin our market commentary in Section 3.0.

1.3.3 We would also like to thank the City Property Association and the Westminster Property Association for their combined input at a specially-convened workshop organised by Charles Begley.

1.3.4 We are also indebted to a large number of individuals who attended four workshops to examine the relationship between the London property market and those of the Wider South East. A list of everyone who attended can be found in Appendix One.

1.3.5 Figure 1.1 lists those individuals to whom we wish to extend our gratitude for their time and insights into our various workstreams while preparing this report.

Figure 1.1 Acknowledgements

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Barry Smith, City of Westminster
Sue Terpilowski, Federation of Small Business
Felix Reed Tsochas, Oxford Said Business School
Joe Valente, JP Morgan

1.3.6 The authors of this report were Rob Harris, Ian Cundell, Martin Davis and Sandra Jones of Ramidus Consulting, and Dave Lawrence of CAG Consulting. We take full responsibility for the views and facts expressed in the report and do not attach any responsibility to those listed above.

2.0 Brexit and the response of the office market

2.0.1 In this section, we address the question of the 23rd June EU Referendum and the immediate response of the capital's office market. First, we examine the early evidence on the potential implications of the Referendum in the short-, medium- and long-term. This report is published even before Brexit negotiations have begun, so our analysis is necessarily tentative. Secondly, we look at the response of the office market in the six months since the Referendum, with a focus on occupier and investment activity, to reflect confidence levels.

2.1 Weighing the potential impact of Brexit on London

2.1.1 We begin by stressing the long-term nature of our perspective in LOPR 2017, and summarising the scale of threat to the property market suggested by some observers. We then analyse reactions and scenarios against three timescales.

- **Short-term** From the 24th June to the point at which Article 50 is invoked. While adding up to a short-term perspective, events in this period provide clues about longer-term events; but it must be stressed that most of these are 'straws in the wind'.

- **Medium-term** The period between triggering Article 50 and the signing of the UK's exit terms, likely to be a two-year process. It is at the end of this this period that the precise nature of the UK's future trading relationship with Europe will be apparent. The danger presented by this prolonged period is that there will be a steady 'drip, drip' of news that will add to uncertainty but not to our understanding of the final deal

- **Long-term** The decades following the act of Brexit, when many observers expect the chill winds of independence from the EU trading bloc. It will be over this time scale, so the thinking goes, when key European centres build the infrastructure that will allow jobs to migrate from London to mainland Europe. It will also be the period in which the UK's changed relationship with other major economies outside the EU will become apparent.

2.1.2 There is little doubt that the result of the Referendum on the on 23rd June 2016 was a major surprise to the business community generally. A palpable sense of shock pervaded conversations – formal and informal – in its immediate aftermath.

2.1.3 As this report goes to publication, nine months on from the decision, there remains a great deal of uncertainty over the nature of the nation's detachment from the EU – both in terms of the process and the impact. We know for example that the potentially two-year long negotiations will begin in late-March 2017, but have no indication whether they will result in a 'soft Brexit' in which the UK retains full access to the single market, or in a 'hard Brexit', in which the terms of the separation are much less favourable to UK business.

2.1.4 Before presenting our analysis, we offer three caveats.

- LOPR is, intrinsically, a long-term perspective on the London office market, and we have sought to reflect this in our analysis. At the time of writing, the burgeoning commentary on Brexit reflects a *decision* and not an *act*, and so much commentary is speculative (albeit informed) rather than fact-based.
- The proliferation of articles and commentaries on the impact of Brexit since the Referendum has been such that it is possible to unconsciously sift the messages in a subtle exercise of confirmation bias. Here we have sought to select sources carefully to refer not only to facts, but contextualised facts.
- The discussion is focused on London, because we are assessing the prospects for the capital's office market; but we fully recognise that there are both similar and different implications for other parts of the country.

2.1.5 **The threats** The Brexit debate has been dominated by an overriding concern about the impact on London's financial sector, and the potential loss of jobs and office demand in the City and Canary Wharf. These concerns were reinforced in the run-up to the Referendum by reports that Deutsche Bank, HSBC and JP Morgan, among others, were reviewing options for their London offices in the context of the Referendum.

2.1.6 The following forecasts of potential job losses illustrate the level of concern. The estimated losses are not limited to the City and Canary Wharf, although the implication in each is that the great majority would be from there.

- US-based real estate advisors Green Street[2] suggested that under a 'full Brexit scenario' there might be a reduction of around 4% in Central London's workforce - some 75,000 jobs (compared to around 3% following the global financial crisis). This would mean around one million square metres (10 m sq ft) feet of occupied office space would shift to other eurozone cities.
- As early as April, PwC forecast that the UK could suffer the short-term shock of losing 70,000 to 100,000 financial services jobs by 2020, relative to the base case of the UK remaining in the EU.[3] The upper end of this estimate equates to around 1.3m sq m (13m sq ft).
- In mid-July, London and Berlin-based data analytics firm DealX suggested that if passporting rights for London-based firms were revoked, over 1,900 firms would review their office requirements and that "*26 million sq ft of office space is at risk of vacancy*".[4]

2.1.7 To place these numbers into context, the City of London and Canary Wharf have a combined stock of around ten million square metres, so the projected losses are very significant indeed.

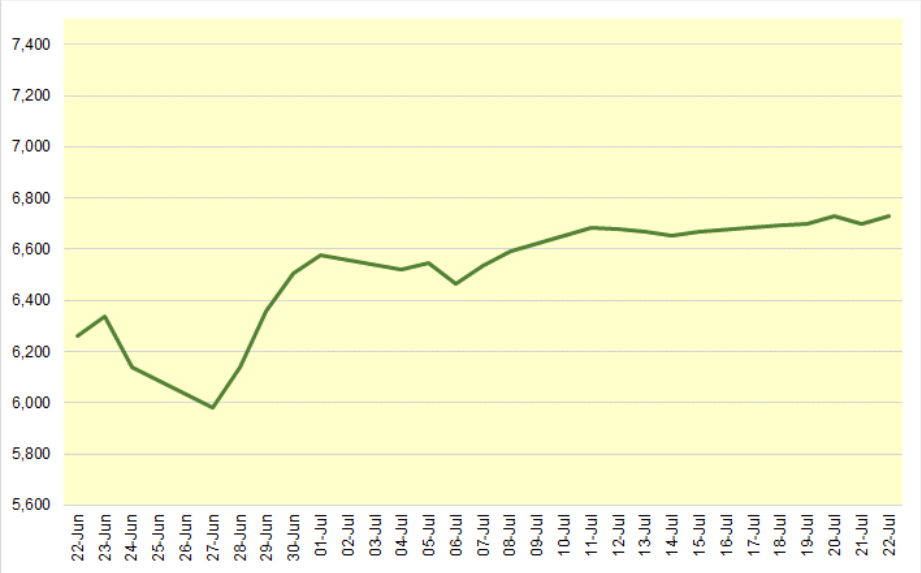
[2] Green Street Advisors (2016) *Brexit Reaction* 29th June
[3] PWC (2016) *Leaving the EU: Implications for the UK Financial Services Sector*
[4] DealX (2016) Brexit Vacancy Risk for 26 million sq ft of London Office Space could be a Big Win for Dublin *DealX Press Release 18th* July

2.1.8 Short-term: the Referendum and immediate aftermath

2.1.9 The sense of post-Referendum shock referred to above was reflected in short-term, negative reactions; but these were also balanced to some degree by a series of announcements suggesting a continuing confidence in the UK economy.

2.1.10 The most obvious post-Referendum indicators were the reactions of the stock and money markets, with the FTSE and sterling both falling sharply. Figure 2.1 shows the reaction of the FTSE 100, in the month following the Referendum, to illustrate the point.[5] The market fell sharply in the week following the decision, but recovered quickly thereafter. By late-July, the market had reached its highest point for a year, and continued its general upward trend through to the Autumn. During October, the FTSE 100 broke through 7,000; and at the time of writing, it was fluctuating around 7,100. The FTSE 250 (more representative of the UK economy) fell from around 18,700 immediately before the Referendum, to a low of just under 15,000, since rallying to its pre-Referendum level.

Figure 2.1 FTSE 100 Index, June to August



Source: *Financial Times* (see footnote)

2.1.11 By contrast, sterling's fall following the Referendum has been sustained. It had been trading against the Dollar during May and early-June in the mid-$1.40s. Then, more or less overnight, it plunged to a 30-year low, and by early-July was trading at around $1.30. It has since fallen further, to a three-decade low, of around $1.23 (providing a short-term fillip for exports and tourism), and remains under $1.30 at the time of writing. The sterling-euro rate has reflected a similar depreciation.

[5] *Financial Times FTSE 100 Index* http://markets.ft.com/data/indices/tearsheet/historical?s=FTSE:FSI Accessed: 19th Aug 2016

2.1.12 Workforce jobs, unemployment, retail sales, house prices, service sector output and other economic indicators seem to have generally continued with their pre-Referendum trends, while manufacturing and exports have been assisted by a weaker pound. Business surveys generally fell after the Referendum, but showed distinct recovery from August onwards. For example, the monthly Purchasing Managers' Index (PMI) witnessed its worst drop on record in July, followed by a record jump in August. Also in September, the Treasury's latest short-term growth forecasts showed that Brexit would not affect national growth in 2017 (in a significant change from its view in the immediate aftermath of the Referendum).

2.1.13 Due to a raft of relatively benign data (thus far), we have not witnessed anything like the existential crisis that gripped the banking sector in the wake of the collapse of Lehman Brothers in 2008. Things might have been different if the Referendum had been followed by prolonged political uncertainty as, at one point, it seemed that it might. But the seamless replacement of Prime Minister Cameron (and the intervention of the Bank of England) helped to steady a potentially destabilising period of uncertainty.

2.1.14 This was helped on the 7th July, when the Treasury issued a statement co-signed by senior figures from Bank of America, Goldman Sachs, JP Morgan, Morgan Stanley and Standard Chartered, in which all parties pledged to co-operate to help London maintain its financial centre role. The statement cited several of London's strengths, including its stable legal system, its skilled workforce and the scale of its capital markets. It also cited London's role as a global hub for renminbi, rupee, Islamic finance, green finance and the emerging Fintech sector.

2.1.15 The co-signatories are mainly American (i.e. none are European) and they only pledged to help secure London's role (not remain in London whatever). But, compared to pre-Referendum positioning, the statement was taken as a positive one. The stance was also reinforced a few months later, in November, when the Chief Executive and Chairman of Barclays Bank and UBS, respectively, were quoted as saying that they were not planning any moves from London.[6]

2.1.16 It should also be recognised that large investment banks were rationalising their London real estate well in advance of the Brexit vote. Several have been busy 'near shoring' staff to regional cities. For example, Credit Suisse sub-let around 30,000 sq m of its Canary Wharf facility to Thomson Reuters, having previously announced its intention to relocate 1,800 jobs to less expensive centres. Deutsche Bank is one of the largest occupiers in Birmingham and Merrill Lynch has a 1,000-person operation in Chester. Barclays Bank has also sub-let around 30,000 sq m of its Canary Wharf headquarters.

2.1.17 Nevertheless, warnings of the potentially damaging impact of Brexit continued. In October, lobby group The CityUK suggested that between 3,000 and 70,000 financial and related jobs could be lost, depending upon the nature of the UK's exit terms. The worst-case scenario here involves the UK moving "*to a third*

[6] Brexit Won't Break the City's Grip *The Daily Telegraph* 17th November 2016

country status with the EU without any regulatory equivalence", with severe restrictions "*placed on the EU-related business that can be transacted by UK-based firms*" and where the UK's relationship with the EU rests largely on World Trade Organisation obligations. In other words, a very hard Brexit.[7]

2.1.18 Of course, Brexit has implications well beyond the financial services sector and the City of London. Other sectors identified as facing potential direct threats from Brexit are life sciences and higher education, both of which rely heavily on their ability to recruit experts with international reputations and on finances from EU funding sources. In July, *The Guardian* ran an article in which it quoted Joe Gorman, a senior scientist at Sintef, Norway's leading research institute, saying that he believed UK industry and universities would see "*a fairly drastic and immediate reduction in the number of invitations to join consortiums*".[8]

2.1.19 In higher education, there is great concern over access to funding. For example, many small businesses in the science sector access finance from the EU's Horizon 2020 fund which, when it ends in 2020, will be replaced by successor funds. The UK is one of the main beneficiaries of the Horizon 2020 funding because of the strength of its universities. Participants must meet certain criteria to qualify, and there are concerns in the science community that the UK will not qualify once it leaves the EU. There is an option for Associate membership, currently enjoyed by Turkey and Israel, and that might be a model for the UK to follow which means continued access is not ruled out; but it is another source of uncertainty.

2.1.20 While respecting these concerns, it is important to acknowledge that the UK has benefited from a number of post-Referendum, overseas investment decisions. A selection of these is shown in Figure 2.2.

2.1.21 There have also been positive moves in London beyond the financial sector. These are covered more fully in Section 2.2, but they include Apple and Google both pre-leasing very large facilities at Battersea and King's Cross, respectively. In addition, Chinese developer ASF is one of three bidders for the £1bn redevelopment of the Albert Dock Development Area, just to the East of the Royal Docks.

2.1.22 In the retail sector, there have been several announcements of overseas firms setting up in London for the first time. These include, Swedish footwear specialist Axel Arigato; Polish cosmetics retailer Inglot; Australian beauty group Jurlique, and French interior design specialist Silvera. Also, UK electronics firm Dyson opened its first UK 'store' to showcase its products on Oxford Street.

2.1.23 In November, Airwair International (the Dr Martens brand) announced plans for a new European HQ at Market Tech's Stables Market in Camden. The new 2,500 sq m facility will include a concept store and showroom, and will entail the consolidation of three offices in Camden Town.

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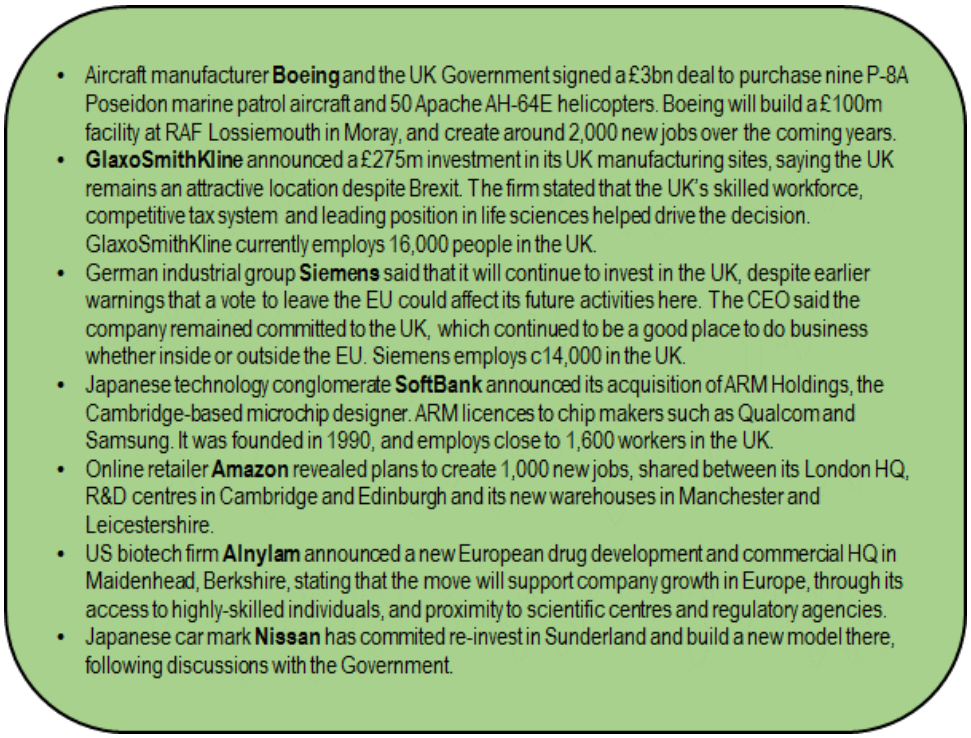
[7] Oliver Wyman (2016) *The Impact of the UK's Exit from the EU on the UK-based Financial Services Sector*

[8] UK Scientists Dropped from EU Projects Because of Post-Brexit Funding Fears *The Guardian* 12th July 2016

Figure 2.2 Post-Referendum, inward investment decisions



Source: Ramidus Consulting

2.1.24 Indeed, London's retailers have been major beneficiaries of the fall in sterling in the immediate aftermath of the Referendum, with overseas visitors taking advantage of increased buying power.

2.1.25 In September, London & Partners reported the findings of a survey showing that London had received six times more investment from US tech firm backers than any other European city, *since the Brexit vote*.[9] Tech investment in London by US venture capitalists totalled $425m (£325m) across 33 deals between 23rd June and 15th September. This compared to just $64m (£49m) heading for second-placed Dublin and $37m (£28m) destined for third-placed Paris.

2.1.26 It is important to highlight these examples not least because there is a tendency in 'Brexit commentary' to focus on financial services which, in employment terms, accounts for a relatively small and declining share of London's total office employment. While the positive announcements do not mean that Brexit no longer poses a threat to the London office market (or wider London economy), they do

[9] London & Partners Press release '*London Europe's Number One Business Hub Say Leading US Tech Execs*' http://www.londonandpartners.com/media-centre/press-releases/2016/20160919-london-europes-number-one-business-hub-say-leading-us-tech-execs Accessed: 21st Sept 2016

illustrate a broader picture that is sometimes missed with the focus on the City's financial sector – important though that is.

2.1.27 To emphasise this fact, threats to the financial sector have continued to surface. In September alone, three high profile warnings were given.

- The Japanese government warned that Japanese firms in the UK (estimated at 10,000, employing 140,000 people) might transfer their European headquarters functions to continental Europe if the UK lost its trading status with the EU.
- Swiss bank UBS again stated that London would lose out if the Brexit terms were unfavourable to the City. It stated that one in three of its c5,000 London jobs could be relocated to mainland Europe.
- The chairman of Lloyd's of London warned that the market could move some of its operations to other parts of the EU if it lost access to the single market. The CEO was quoted as saying that access to the EU's single market was fundamental, and that without this the market would need to transact business onshore in the EU.

2.1.28 In summary, short-term economic indicators proved more positive than feared before the Referendum, albeit balanced with major concerns remaining over the longer term picture. At the same time, it should be recognised that we are entering a period of political manoeuvring and lobbying. Most apparent are those with overt 'Remain' and 'Brexit' agendas. But many other parties are vying to influence the negotiating process. There can be a significant difference between positions take and actual outcomes.

2.1.29 **Medium-term: Article 50 and the negotiations**

2.1.30 In Spring 2017, the UK and the EU will begin Brexit negotiations – a process that could easily take two years. And it is during this period when the relatively benign indicators discussed above could make a major turnaround. There are many threats to the stability of the UK economy and the London office market during this period, but there is one general and four specific points that we wish to highlight here. The general point is about uncertainty, and the four specific factors to be considered are passporting; access to the single market, EU 'on-shoring' and visas. We conclude our overview with a consideration of 'non-Brexit' factors.

2.1.31 **Potential uncertainty** The general point is that, for a very prolonged period, market uncertainty will prevail with a constant 'drip-drip' of so-called news about the negotiations. Most will be speculation, some will be based on leaks and no doubt some will result from misinformation. There is also the combination of the cross-cutting intentionality of the various parties involved, the bureaucratic thickets to be unravelled, and the perhaps inevitability of unanticipated technical difficulties. However, whatever the cause, the overall impact might be to heighten uncertainty and insecurity, thereby encouraging caution (in the form of postponed/cancelled deals, projects, investments), and severely dampened activity.

2.1.32 It can also encourage activity. The simple fact of having to make contingency plans can point out new possibilities for businesses and prompt a change of direction that might otherwise have not been considered. The other significant risk during a prolonged period of uncertainty is that businesses and organisations decide not to wait for certainty and make decisions to leave or change strategy – in other words they might choose a firm plan that assumes the worst-case scenario, over the inability to make any firm plan.

2.1.33 Uncertainty also presents a threat to the culture of the city and we have heard anecdotal evidence that some overseas nationals feel less comfortable living and working in London. We stress that this is no more than anecdotal evidence at this stage, but it raises concerns about the ability to recruit and retain international labour. Some employers gain edge in competitive employment markets by offering the opportunity to work across EU while employed in London. That could change. We were given one example of two Italian employees in the advertising sector who had decided to leave their employment at an agency in London, citing 'feeling unwelcome' as a reason for their decision. There have been similar concerns expressed in the media, again anecdotal. For instance:

> *London's clutch on creative seems a little less certain now. Jason Goodman, founder of Albion [a … agency] confesses he's begun to worry about the city holding on to smart people in the wake of Brexit. The referendum is a reminder that we're one great city amongst many; not indestructible, not the default choice. Now there's a generation thinking about where else they would like to work. People under 30 have an international make-up; they might not hang around. That's the city's biggest existential threat.*[10]

2.1.34 There is a danger that there will be a constant focus on whether negotiators are working towards a hard Brexit or a soft Brexit. This could reverberate not only throughout the UK economy in the form of declining output and general economic malaise, but around the globe. As with our short-term analysis, precious few facts will emerge during negotiations. And so it is during this period that the economic downturn predicted for the aftermath of the Referendum could become a reality.

2.1.35 In October, the IMF forecast that while the UK economy might outpace the remainder of the G7 group in 2016, with growth of 1.8%, in 2017 its economy would grow more slowly, at just 1.1%. According to the forecast, the UK's 2017 growth will be lower than Canada, France, Germany and the USA. The IMF also cut its medium-term growth forecast for the UK from 2.1% to 1.9% as a result of expected barriers to trade, migration and capital flow.

2.1.36 **Passporting** Perhaps the greatest threat to London-based financial jobs is the prospect that the UK will lose its 'financial services passporting' rights. These are granted by the Financial Services & Markets Act 2000 and allow financial firms (banks, insurers, accountants, etc) authorised in one European Economic Area (EEA) state to operate in all other member states of the trading bloc.

[10] *Courier* Issue 12 August/September 2016 p20

2.1.37 Obviously, if passporting rights for the UK are revoked, then the results could be enormous for the City of London. It is estimated that 5,500 UK-registered companies rely on passporting rights (with 8,000 based in the EEA relying on passports to undertake business in the UK).[11]

2.1.38 In mid-September, rating agency Moody's announced that the impact of Brexit in the form of the loss of passporting rights, "*would likely be manageable for most UK-based financial firms (including branches and subsidiaries of non-EU firms), as well as for EU firms with a presence in London*".[12] The firm argued that if passporting rights were revoked, then firms "*would need to move sales, trading and middle office staff to the EU, along with capital, liquid assets and IT infrastructure*". However, it argued that while the costs associated with "*moving operations would likely be manageable*", it was unlikely that all passporting rights would be lost. In this context, it cited MiFID II, in which EU law "*already provides for limited recognition of non-EU regulatory regimes for … investment and banking business*".

2.1.39 MiFID (Markets in Financial Instruments Directive) is a long-awaited and complex instrument that has its origins in the Global Financial Crisis. It was agreed in 2014, but technical issues have delayed its implementation, due now in January 2018. MiFID eases the path for non-EEA countries but with similar governance regimes, or equivalence, to trade with EU nations.

2.1.40 However, MiFID does not cover all activities; it is limited mainly to investment banking, and does not cover, for example, asset management or deposit-taking. Moreover, equivalence is in fact a permission, rather than a legal structure, given by the EU, and which can be withdrawn at any time. Thus, the UK would have to maintain the standards that it has established to comply with MiFID in the first place, and would be dependent upon the EU continuing to accept that the UK is an 'equivalent' nation (some EU officials have already said that UK assurances that it would operate equivalent regulations might not be adequate).

2.1.41 **Access to the single market** Secondly, and more widely, there is the question of the UK's access to the single market. Article 26(3) of the Treaty on the Functioning of the European Union (TFEU) defines the single market as "*an area without internal frontiers in which the free movement of goods, persons, services and capital is ensured in accordance with the provisions of the [EU] Treaties*". The area so defined is a single regulatory market, which sets common standards, and in which tariffs and taxes on trade between countries are prohibited, while presenting a common tariff regime in relation to trade with other countries. Article 45 of TFEU also ensures the free movement of workers within the EU single market.

[11] Financial Times *Significant Brexit Risk for 5,500 UK Groups Using EU Passporting* http://www.ft.com/cms/s/0/9f0824d8-7f17-11e6-8e50-8ec15fb462f4.html?siteedition=uk#axzz4KpEY8YFK Accessed: 22nd Sept 2016

[12] Moody's Press release: *Impact of Losing "Passporting" Rights Under EU Law would be Manageable for Rated Banks* https://www.moodys.com/research/Moodys-Impact-of-losing-passporting-rights-under-EU-law-would--PR_355201 Accessed: 21st Sept 2016

2.1.42 The implication of Brexit is that the UK would no longer be a *member* of the single market; but the question is: under what terms would the UK have *access* to the single market? Will it have access on the same basis as, say, China and the USA? They are not members of the EEA and simply pay tariffs in return for selling their goods into the market.

2.1.43 One of the most important issues is free movement of labour, and the EU is expected make this a 'red line' issue, not least because of the potential knock-on effect if the UK is given exceptional treatment. The current line is that the UK will not secure tariff-free access if it places limits on movement of labour. And the UK Government is currently indicating that limits on immigration will be imposed.

2.1.44 Much has been made in political discourse about the opportunity for the UK to forge new trade deals across the globe following its exit from the EU. The UK is formally precluded from entering such negotiations before it has concluded its Brexit terms, although there will almost certainly be informal discussions. Nevertheless, it could take several years following Brexit to conclude trade deals with, say, Australia, Canada, India and the USA. This simply adds to the uncertainty surrounding Brexit.

2.1.45 **EU 'on-shoring'** Thirdly, even if passporting is maintained and the UK retains access to the single market, there remains the threat that the EU will seek to 'on-shore' certain activities which it deems to be intrinsically part of the EU. High on this list is the enormous business of clearing and settling trades in euro securities.

2.1.46 Previously, the European Central Bank sought to ensure that euro-based transactions should take place within the eurozone (i.e. Paris or Frankfurt). The move was successfully challenged by the UK in 2015 through the European Court of Justice, which rules that the European Central Bank had no right to require settlement of euro securities in the eurozone. London has particular expertise in the industry, clearing transactions in a range of other currencies including the renminbi and the dollar. However, in the run-up to the Referendum, various EU officials stated that Europe would stop the City carrying out clearing operations in euro securities, although its ability to achieve this is less than clear.

2.1.47 It might be that, even during the medium-term, preparations begin in certain EU cities (perhaps Berlin, Frankfurt and Paris) to create the legal framework and physical infrastructure for on-shoring to begin swiftly following the act of Brexit.

2.1.48 **Visas** The life sciences sector is one that depends heavily on being able to recruit renowned experts from across the globe. For example, at the Francis Crick Centre, one third of its scientists are from the EU, another third are from the UK and the remainder are non-EU overseas nations. The way the UK chooses to handle visas is critical to the recruitment and retention of these scientists and the vote to leave the EU has introduced a high degree of uncertainty. It is critical that scientists can obtain 'fast track visas' and that the government makes this clear as soon as possible. In the meantime, there is a risk of losing the ability to recruit and weakening the cluster.

2.1.49 **Non-Brexit factors** One of the many issues that remains unclear at this stage is whether or not there will be a gradual transition from full membership to independence; or whether there will be a clean and abrupt break in current trade agreements. Obviously the former would allow for a period of adjustment, and would be likely to calm investor nerves. But even if this is the case, there are a number of factors that will influence London's economy, and the performance of its office market in the medium-term, irrespective of Brexit.

2.1.50 In October, the IMF warned of global economic risk and uncertainty, including the dangers posed by the level of Chinese debt. It blamed the low interest rate environments in many countries for the continuing under-performance of many banks; and highlighted the fact that some banks in the eurozone continued to wilt under the burden of problem loans (with Italian and Portuguese banks facing particularly severe capital and profitability challenges). Its most recent Global Financial Stability report[13] makes for particularly gloomy reading. A continuing slowdown in global growth, and the expectation of financial markets that low inflation and low interest rates will continue, are leading to weakening profitability among financial institutions, which will "*undermine their ability to support growth*". Moreover,

> *A lack of income growth and a rise in inequality have opened the door for populist, inward-looking policies [which] make it even harder to tackle legacy problems, further expose economies and markets to shocks and raise the risk of a gradual slide into economic and financial stagnation.*

2.1.51 Low inflation and interest rates mean that it is even more difficult for "*companies, individuals and governments to earn their way out of debt*". The report highlights that prolonged low interest rates are threatening the "*solvency of many life insurance companies and pension funds*". A rise in populist polices and protectionism, coupled with continuing financial stagnation, "*could result in a loss of world output by about 3 percent through 2021*".

2.1.52 Within weeks of its *Stability Report*, the IMF issued the latest economic outlook report. The IMF was reported as saying that China's surge in credit "*could undermine the state's ability to contain the fallout from a crash*"; and that corporate debt and "*rapid growth in shadow banking is on an unsustainable path*". It concluded that China would need to wean itself off debt to avoid "*financial calamity*".[14]

2.1.53 The IMF drew attention to populist policies and, of course, Europe is currently experiencing some uncertainties in this respect. The French and German elections are due in May and September, respectively, in 2017, and these precede the European elections in June 2019. All of which have the potential to cause significant uncertainty.

2.1.54 As well as the elections referred to above, the Greek debt crisis continues; Italy is close to suffering a major banking crisis, and unemployment is high and

[13] International Monetary Fund (2016) *Global Financial Stability Report* October 2016
[14] Debt-fuelled China Close to Calamity, IMF Warns Reported in the *Daily Telegraph*, 10th October 2016

rising in southern European states and France. Germany's insurance industry is suffering major structural issues; in September, shares in its iconic Deutsche Bank were at their lowest for two decades, and Commerzbank announced almost 10,000 job losses.

2.1.55 Thus there are significant non-Brexit factors that are likely to impact London's prospects in the medium-term. Ironically, some of these factors might reinforce London's traditional 'safe haven' role, perhaps helping it to continue as a key destination for new capital investment from both the eurozone and elsewhere.

2.1.56 **Summary** It is perfectly possible that the UK economy and the London office market could, during the medium-term, continue to operate in the *relatively* normal way that has prevailed since 24th June. However, as we have said above, this will be strongly influenced by the quality and nature of the news that emerges during exit negotiations. The highest profile and most direct threat to the London office market during this period is likely to be the increasingly public plans that, in particular, financial services firms might begin to put into place in preparation for the act of Brexit. Relocations can take several years to initiate, plan and execute; and banks will not be wanting to wait until the 'unveiling' of an exit plan which could see their trading position compromised.

2.1.57 This issue must be understood by those involved in negotiations, and it is therefore right to expect less a 'wait and see' approach and more the outlining of a strategy, into which details will be slotted including, no doubt, a transition plan following completion of negotiations.

2.1.58 **Long-term: a new relationship with Europe**

2.1.59 So what does Brexit mean for the long-term prospects of London's office market? Thus far, London seems to have avoided the severe economic jolt forecast by many. But the situation could change in the long-term. The threat of London losing access to the single market and/or its passporting rights are two of the most important long-term issues for London, wrapped together with the EU's 'red line' position on free movement of labour.

2.1.60 We can say little with any certainty about the long-term, but we can look at the long-term scenarios, a number of which have been suggested for a post-Brexit London. Here we refer to two that are helpful in terms of setting out a range of potential scenarios, each with a defined set of outcomes.

2.1.61 First, in an article in the *Financial Times*, Charles Leadbeater set out five scenarios for a post-Brexit London.[15] The 'collapsed city' and 'inward turn' scenarios seem unlikely, while the 'European enclave' and 'hovercraft city' scenarios have a certain allure. But as Leadbeater suggests, 'muddling through' is most likely.

[15] Leadbeater C (2016) London's Future: a Brief Guide *Financial Times* 22nd July 2016

- **Collapsed city** as happened to Youngstown (steel) and Detroit (motors) in the USA, where their principal industries fail over time.
- **An inward turn** in which London reverts to its 1950s, Festival of London role: "*a British city, rather than a cosmopolitan one*".
- **European enclave** takes West Berlin as a model: just as it survived within East Germany, so London could "*assert the European identity it has developed in the past 20 years by becoming a European enclave within an otherwise Eurosceptic Britain*".
- **Hovercraft city** in which London is "*hovering just above the territory of the UK, a global city-state governed by British law, like Singapore*".
- **Muddling through** is described by Leadbeater as the "*most likely and perhaps most optimistic scenario*", in which the UK "*would still be an associate member of the EU albeit on strained terms*" and perhaps with elements of all four previous scenarios.

2.1.62 Alternatively, there are the three scenarios proposed by Harriet Agnew and Patrick Jenkins.[16] These resemble some of the scenarios given above, with a 'souped-up Singapore' similar to 'hovercraft city' and 'drastic downscaling' similar to 'an inward turn'. The 'muted London' equates to the 'muddling through' scenario and again seems the most likely of the three options.

- **Souped-up Singapore** where London becomes a "*less regulated offshore centre for renminbi trading, private banking or fintech"* exploiting the UK's time zone advantage between Shanghai and New York. The article cites the Swiss Bankers Association's proposal for an alliance between Switzerland, London, Hong Kong and Singapore *"to pool ideas and resources to co-ordinate positions on global financial regulation and access to the EU market*". But the authors concede that retaining equivalence and access to the single market, is not entirely compatible with lighter touch regulation.
- **Drastic downscaling** involves the loss of passporting rights, and is the worst case scenario, in which the "*worry is that when banks leave London, the professional services firms who work with them would follow over time*", and that this situation "*would be compounded by a dearth of foreign direct investment and a struggling UK economy*".
- **Muted London** is a 'muddling through' scenario, "*where the UK is able to fudge some sort of access to the single market*" allowing London to "*carry on almost as before*". The main impact could be that banks operating from London and across the single market under equivalence rules governing regulatory standards retain their London presence, but grow with new employees elsewhere in the eurozone.

2.1.63 The proposition that there will be a long-term growth of headcount in the eurozone rather than in London (instead of a mass relocation of existing London jobs) seems logical given the need for, say, Paris and Frankfurt to spend time building up the underlying physical infrastructure that will allow them to accommodate the critical mass of business to re-create a globally competitive hub.

[16] Agnew H & Jenkins P (2016) Three Scenarios for the City after Brexit *Financial Times* 27th July 2016

2.1.64 As already stated, it is not only London's financial services cluster that is facing threats from a hard Brexit. For example, there might be jobs lost in the life sciences sector. The European Medicines Agency (EMA) is located at Canary Wharf and employs 890 staff. It is an EU institution and if the UK is outside the EU, it is almost inevitable that the EMA will relocate. According to one of our interviewees, many pharmaceutical companies locate head office functions in London to be close to the EMA, and it is likely that many of these head office functions would follow the EMA. In addition, the related ecosystem of lawyers, consultants, and businesses involved with compliance, drug trials, and so on that might also relocate parts of their businesses to stay close to the EMA.

2.1.65 **Cluster strengths** The City of London is a classic economic cluster, in which strong supply-chain relationships reinforce the benefits of agglomeration. Firms are held together in a tight cluster by an invisible 'glue', attracting and retaining activity in a beneficial cycle of growth. Thus, while there is a justifiable focus on the financial services sector, given its scale and concentration in London, not only is this sector itself comprised of many sub-sectors (asset management, insurance, investment banking, private wealth management, others), but it is intricately linked to the accounting, legal and management consulting sectors, among others. And all these are woven into a complex web of relationships with, for example, London's burgeoning creative and digital services sectors.

2.1.66 London's web of relationships is not invulnerable to externalities, but extracting parts as stand-alone activities and transplanting them to other sites (which have smaller workforces and less office stock) is not a simple process. In the latest Global Financial Centres Index (GFCI), London is ranked first; a position it has competed for with New York for several years. Singapore, Hong Kong Tokyo and Zurich then follow (Figure 2.3). And following Zurich, the leading European cities are Luxembourg (14th), Geneva (15th) and Frankfurt (18th).[17]

2.1.67 For London to fall from its current top spot to, say, 20th or 30th within a decade or so would imply a seismic economic adjustment for a major city on a scale that has no historical precedence. Even a fall to, say, somewhere between 5th and 10th would imply an enormous shift in activities, not only for London, but also for, say, Frankfurt or Paris. For example, Frankfurt is similarly-sized to Leeds, and it would need to change radically and quickly to bring about, say, a ten place increase in its GFCI ranking.

2.1.68 Potential host cities will also need to address the issues surrounding labour laws and costs. For example, French labour costs are significantly higher. A recent *Financial Times* report referred to French Banking Federation data showing that a €300,000 salary in London grosses up to €352,740 after all charges (eg taxes) are factored in. The same salary in Paris would cost the bank €471,799.[18] And then there is the question of 33% corporation tax. These are very significant deterrents to moving large workforces.

[17] Yeandle M (2016) *Global Financial Centres Index 19* Z/Yen Group, March 2016

[18] Paris Prepares Red Carpet for British Bankers Threatened by Brexit *Financial Times* online, 8th June 2016 Accessed 28th October 2016

Figure 2.3 GFCI: the top five cities plus European cities

City	GFCI 19 Rank
London	1
New York	2
Singapore	3
Hong Kong	4
Tokyo	5
Zurich	6
Luxembourg	14
Geneva	15
Frankfurt	18
Munich	27
Paris	32
Amsterdam	34
Stockholm	37
Dublin	39

Source: Yeandle (2016)

2.1.69 **Implications for the London Plan**

2.1.70 The analysis presented here suggests that there will be relatively few major setbacks for the London office market in the short-term. Elements of the market are subdued, but generally the market has continued to function as before 23rd June. The medium-term is much less certain and, at the very least, is likely to be characterised by prolonged uncertainty. London's medium-term prospects will also be influenced by a host of factors unrelated to Brexit.

2.1.71 The long-term outlook rests largely on the terms under which the UK leaves the EU; the degree to which it is able to establish trading agreements with countries in the rest of the world, and the wider global economic outlook, risks and uncertainties. Caricatured as 'soft' and 'hard' Brexit, the actual terms will determine issues relating to passporting rights and access to trade. It is difficult to envisage the physical relocation of many tens of thousands of jobs over the coming decade. Probably more likely is a gradual shift in the dominance of London within Europe in terms of financial services, as cities on the mainland take up the bulk of future growth. And then there is the question of how other sectors, notably professional services and digital and creative services are affected. If London's cluster strengths are weakened by the terms of Brexit, then the long-term implications for the whole office market are very significant.

2.1.72 Within the context of this LOPR, it is not possible to be any more prescriptive in terms of spatial policy and guiding capacity for growth. The employment forecasts in Section 9.0 suggest further growth and so there is a need to ensure capacity growth. However, future LOPRs will need to monitor the evolving situation and develop a more refined understanding of the implications.

2.2 The post-Referendum London office market

2.2.1 The health of the commercial property market is important not least because the exposure of the banking sector to commercial property lending means that any sudden or major dysfunction in the sector has the potential to ripple through to financial instability in the wider economy. A report by rating agency Moody's drew attention to the exposure of UK banks.[19] The report noted that they were in better shape than before the Global Financial Crisis, having cut their exposure to the sector by about 40% since 2010. Nevertheless, the report highlighted that Barclays, HSBC, Lloyds, Nationwide, RBS and Santander UK had a combined exposure to commercial real estate of £84.6bn; RBS alone held a £25.3bn exposure.

2.2.2 Because of this, the direction of travel in capital values is of great interest: if Brexit were to result in a loss of confidence among investors, and to a major adjustment in capital values, then the knock-on for the banks might be severe.

2.2.3 **The immediate reaction** The early impact of the Referendum on property has been quite modest. In the immediate aftermath, there was a rush of investors seeking to withdraw their money from property funds. Within a few weeks, Aviva, Henderson, M&G, Standard Life and Threadneedle had frozen redemptions on their retail property funds, in a recognition that outflows were so large that they might have insufficient liquidity to return cash to investors. This action gave them time to raise cash by selling properties, some of which were at significant discounts. However, the funds involved represented only a small proportion of the market; the action did not spread through the sector, and most have since re-opened.

2.2.4 Also in July, UK commercial property prices experienced their biggest slide since 2009, according to MSCI's IPD Monthly Property Index. Capital values fell by 2.8%, following a 0.3% fall in June.[20] General market sentiment seems to point to a negative impact on property returns through the remainder of 2016 and through 2017. Property advisor Colliers forecast that total returns will fall by 0.3% in 2016, with All-Property rental growth "*expected to flatten in H2 16, bringing the annual rate for 2016 to 1.2%, down from the 3.8% forecast prior to the Brexit result*".[21]

2.2.5 Alongside the immediate reaction of the investment market, a number of cancelled or postponed development and occupational deals were highlighted as evidence of the negative impact of Brexit. For example, the Axa-led scheme at 22 Bishopsgate, a 140,000 sq m tower, was put on hold in July; and in September there was market speculation that Paris-based bank Credit Agricole was re-assessing its plans to move into 14,000 sq m at 25 Cabot Square in Canary Wharf. The Axa decision has since been reversed and the company is now proceeding with pre-development activity at 22 Bishopsgate, with a view to completing the tower in 2019 (it looks as though the nearby 1 Undershaft, set to be the City's tallest building, will

[19] Cited in: UK's Big Lenders Would Lose £12bn in Commercial Property Stress Scenario *Financial Times,* 16th August 2016
[20] Cited in: Commercial Property Suffers Largest Value Drop since 2009 *Property Week,* 19th August 2016
[21] Colliers (2016) *Real Estate Investment Forecasts 2016 Q3*

proceed at the same time). Also, Credit Agricole has since agreed terms with British Land to extend its lease at Broadgate to 2025.

2.2.6 The broader sweep of evidence suggests that market sentiment has not changed markedly from before the Referendum. For example, research from LaSalle Investment Management suggested that fluctuations in the real estate market caused by Brexit are likely to be shorter-lived and less severe than many investors fear. The firm's mid-year Investment Strategy Annual found that a correction in real estate pricing is expected to be largely restricted to the next 18 months; and that medium-term capital flows into real estate would only be interrupted, not reversed.[22]

2.2.7 LaSalle said the UK, and a "*dynamic London, home to one of the world's most liquid, transparent, and investor-friendly real estate markets*", is likely to reinvent itself outside of the EU. Overall prospects for the UK outside the EU could well be broadly more positive than what is implied by current market commentators, Mokrane said. "*We expect the forecast correction in real estate pricing to be largely restricted to 2016 and next year and medium-term capital inflows into real estate will only be interrupted rather than reversed*."

2.2.8 LaSalle Investment Management's analysis hints at some of the strengths of the UK property market. It continues to offer investors secure income in a generally low interest rate environment; it is accessible to overseas investors (and currently attractive in terms of the strength of sterling), and its lease structures remain attractive relative to some other cities. Furthermore, the London market is not burdened either by an excess of property debt or oversupply of product. Whether these strengths are sufficient to withstand a hard Brexit is another matter.

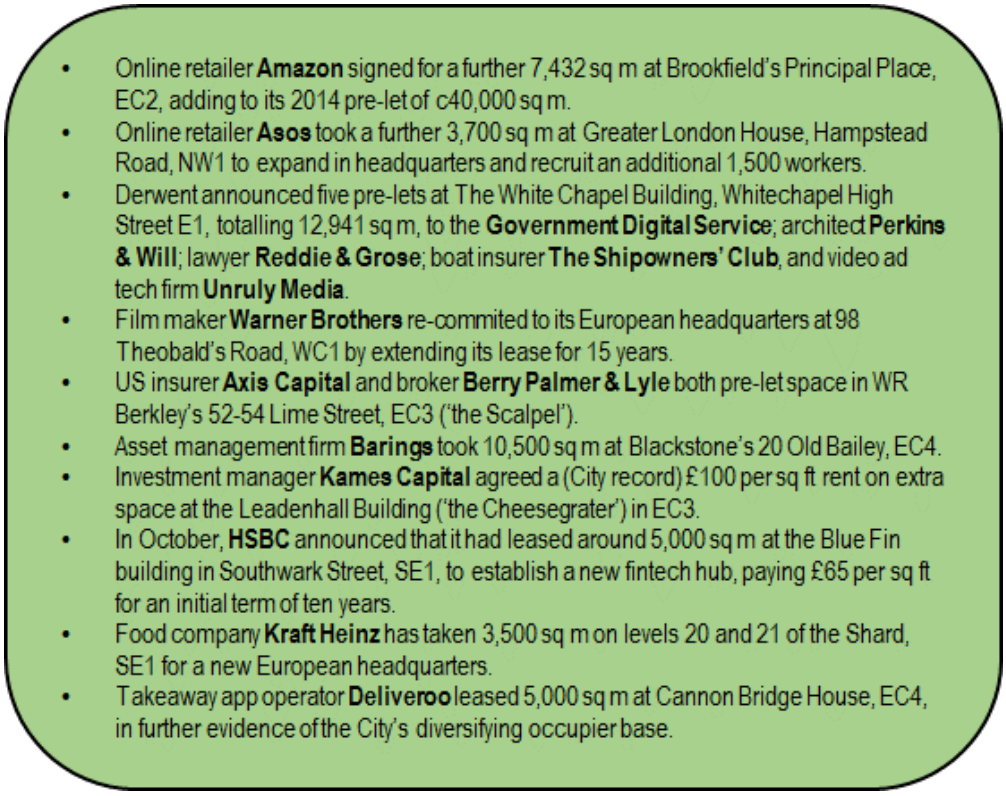
2.2.9 **Office leasing** The immediate aftermath of the Referendum saw leasing activity bounce back from a pre-Referendum dip. JLL noted that following "*a subdued Q2, take-up across Central London rebounded*" to around 214,000 sq m in Q3, with year-to-date take-up reaching around 613,000 sq m, or "*14% below the long-term average level*". The below par performance might simply reflect the 'lumpy' nature of deals.

2.2.10 Similarly, CBRE has stated that while there has been much speculation about the health of the post-Brexit market, "*demand for office space remains buoyant*", and businesses remain "*confident about London's significant advantages as a global business centre, even when the UK is outside the EU*".[23]

2.2.11 Figure 2.4 illustrates a range of post-Referendum leasing deals in Central London. The list of occupiers is diverse, in sector terms, international and illustrative of the increasing footloose nature of many occupiers. For example, Deliveroo moving into the City; HSBC taking space on South Bank and lawyers Reddie & Grose moving to Shoreditch.

[22] LaSalle Investment Management (2016) *Mid-year Investment Strategy Annual* July 2016
[23] CBRE Press Release, 11th August 2016, http://news.cbre.co.uk/post-referendum-uplift-in-london-office-take-up

Figure 2.4 A selection of post-Referendum, Central London leasing deals



Source: Ramidus Consulting

2.2.12 There has also been evidence of overseas businesses entering the London occupational market for the first time. For example, Canadian mining company Endeavour announced that it is relocating its headquarters from Paris to London, "*because it favours the UK's tax and business regime over the French system*".[24]

2.2.13 In further examples, in November, China's largest life insurance company announced that it was opening its first overseas office in Aldgate Tower, E1; while Chinese property investment company COS Capital leased a London office, with plans for investing £860m in European real estate.

2.2.14 By far the most important leasing news came at the end of September and in mid-November. First, Apple announced that it had pre-leased 50,000 sq m at the emerging Battersea Power Station development in Wandsworth. Apple is thought to have around 2,500 staff in London, with 1,100 in stores and 1,400 in offices (it also employs c4,000 people at its European HQ in Cork, Ireland). The new office will open in 2021. Using benchmark occupancy densities, the 50,000 sq m should be capable of accommodating at least 4,000 staff, so there is room (and possibly plans) for significant growth. Quite apart from the scale of this deal (among the largest ever

[24] Cited in: Canadian Miner Moves its HQ from Paris to London *Sunday Telegraph* 6th November 2016

outside Canary Wharf), the news is an enormous vote of confidence in London and its future role as a key tech sector hub.

2.2.15 The second announcement, in mid-November, involved the news that Google had confirmed its plans to invest in a new London headquarters at King's Cross. The plans involve a 10-storey, 65,000 sq m building at a reported cost of over £1bn. Google's chief executive was reported as saying that computer science in the UK "*has a great future with the talent, educational institutions, and passion for innovation we see all around us*". He went on: "*We are committed to the UK and excited to continue our investment in our new King's Cross campus*".[25] Already committed to King's Cross with two other buildings, the firm will consolidate into the completed development, and increase its headcount from 4,000 to 7,000 by 2020.

2.2.16 The Apple and Google deals are significant not only for the fact that they reflect a certain level of confidence in London from two global businesses, but also for the multiplier impact in terms of supply chain activity and their ability to reinforce London's technology cluster.

2.2.17 **Investment and development** Investment deals have also been completing since June. While a small number of deals were reported to have been postponed, in mid-July, American investment bank Wells Fargo announced its £300m acquisition of a new 20,500 sq m headquarters in the City. The building, 33 Central on King William Street, will be completed in 2017, and will allow the bank to consolidate its 850 staff from four City sites into a single location. Wells Fargo is based in San Francisco and employs nearly 270,000 workers globally. Other illustrative deals are shown in Figure 2.5.

2.2.18 Yields tend to reflect market confidence, and in the aftermath of the Referendum JLL reported that "*prime City yields have edged out by 25 basis points to 4.25%, while prime West End yields remain at 3.5%*".[26] JLL anticipated further caution, but in their subsequent report, they found that "*there are signs that sentiment is improving*" and that this was reflected in the fact that "*prime yields were stable in Q3, remaining at 4.25% in the City and 3.5% in the West End*".[27]

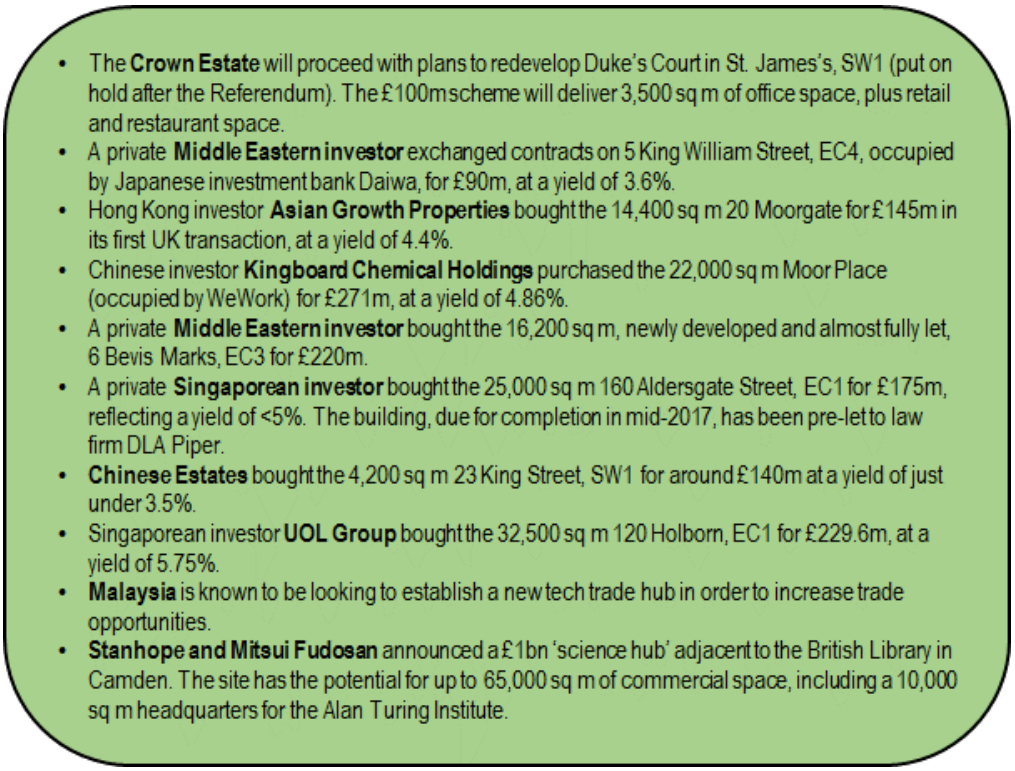
2.2.19 In October, CBRE reported that it had tracked 48 deals which have exchanged in Central London since the Referendum with 24 in the West End and another 24 in the City, equating to £1.8bn and £1.0bn respectively. CBRE suggest the evidence "*highlights that London remains a core target for foreign capital*".[28]

2.2.20 In terms of new development, in September, developer Almacantar submitted plans to redevelop 25 Shaftesbury Avenue, WC2, with an office-led mixed use scheme that will increase the existing building's footprint from around 22,800 sq

[25] *The Evening Standard* online. http://www.standard.co.uk/news/london/google-to-create-new-london-headquarters-and-3000-jobs-at-kings-cross-a3396496.html Accessed 16th November 2016
[26] JLL (2016) *Central London Office Market Report* Quarter 2, 2016
[27] JLL (2016) *Central London Office Market Report* Quarter 3, 2016
[28] Brett C: International Investment Unabated after Brexit Vote Report on *Property Week* website Accessed: 11th Oct 2016

m to around 31,000 sq m. At King's Cross, two mixed use buildings totalling around 35,000 sq m of offices have been given full planning permission. And, as we have already seen, decisions have been made to proceed with what will be the City's two tallest towers – 22 Bishopsgate and 1 Undershaft.

Figure 2.5 A selection of post-Referendum, Central London investment deals



Source: Ramidus Consulting

2.2.21 Chinese interest in the London development market has increased recently with two very large schemes being planned in East London. At the Royal Docks, developer ABP has started a 440,000 sq m business park which is intended to act as a focus for Chinese firms moving to and operating from the UK. In addition, Chinese developer ASF is one of three bidders for the £1bn redevelopment of the Albert Dock Development Area, just to the East of the Royal Docks. The GLA is due to select a preferred bidder in December 2016.

2.2.22 **Summary**

2.2.23 There is little question that early, post-Referendum indicators have proved more positive than was generally anticipated. Following an initial shock, most economic indicators, and the property market, have recovered. Whether this generally positive picture simply proves the robustness of London's inherent strengths (agglomeration, language, ease of business, social/cultural attractions,

etc); or whether it suggests a false sense of security that will become more negative in the medium-term, once Brexit negotiations begin, is difficult to say with precision.

2.2.24 London's property market had passed the peak of its current cycle *before* the Referendum (see Section 4.0), and it is important to distinguish 'business as usual' indicators from Brexit-specific indicators. At the time of writing, the state of the market is driven mostly by the former, and relatively little by the latter. This position could, of course, change quickly and profoundly, particularly as we move towards greater clarity on the likely terms of the UK's exit from the EU.

3.0 Workstyles, small occupiers and mega schemes

3.0.1 In this section, we begin with an overview of the continuing evolution of workstyles and workplaces. Arguably, these will have a great impact on overall demand for office space in London than Brexit. We then look at small occupiers, flexible space and affordable space. The critical issue here is the demand for 'secondary' space, and whether there is sufficient supply. Finally, we update work in earlier LOPRs, outlining the state of play in London's mega schemes.

3.1 Emerging workstyles and workplaces

3.1.1 Here we bring together and summarise the latest thinking about the recent evolution of workstyles and their continuing impact on the use and design of the workplace. We focus in this section on the workstyles and workplaces of larger, 'corporate' occupiers; while the more specific needs of small occupiers are addressed in Section 2.4 We highlight the critical role that technology is playing in the evolution of the of the workplace and the changing characteristics of office occupiers. We conclude with a discussion of the implications for the London Plan.

3.1.2 As stated in the introduction to the Brexit discussion (Section 2.1), the main purpose of the LOPR series is to take a long-term perspective on the London office market, and to examine whether the macro level of supply is broadly aligned with the macro level of demand. In this respect, the long-term balance between supply and demand is being radically shaped by the changing nature of work and workstyles. Indeed, it could be argued that, in the long-term, this will be the most important of the foreseeable factors influencing supply and demand dynamics.

3.1.3 The combination of changing corporate structures and evolving workstyles is bringing about profound change in the nature of demand for office space. As noted in recent work for the Corporation of London, reflecting the wider macro-economic transition from labour intensive work to knowledge-based work, "*the role of the office is increasingly acknowledged as enabling people to interact and collaborate*"; it is "*increasingly expected to provide a wider range of settings in which individuals and groups [can] work in more dynamic ways compared with much of the more solitary work of the pa*st", and the office is "*becoming less a place to go to work on a set of prescribed tasks, and more somewhere to visit and interact with colleagues*".[29]

3.1.4 **The impact of technology** Change in work and workstyles can be brought about by structural changes, such as 'Big Bang' in 1986, when deregulation of financial services fundamentally changed the nature of demand for space. Change can also be wrought by an economic event: the recession of the mid-1990s led many organisations to drive efficiency into space use and reduce demand. But today's prevailing changes are not being driven by either of these forces; rather they are being driven by an enabler of change: technology. And the key point here is that this enabler is responsible for changing work processes and the way in which

[29] Ramidus Consulting (2015) *Future Workstyles and Future Workplaces in the City of London* Corporation of London

companies organise themselves spatially, as well as allowing people to change their workstyles to suit evolving social structures.

3.1.5 It is important to recognise also that technology can both create and destroy jobs. To illustrate the job creation potential, a recent report from GLA Economics found that between 2003 and 2013, the number of Science & Technology jobs (part of the Professional, Scientific & Technical sector) in London grew by 14.6% (nearly 120,000 jobs).[30] The report went on to state that the fastest growing sub-category had been Digital Technology firms, up by 29%. Other research suggests that there are now over 23,000 Information and Communications Technology (ICT) companies based in London.[31] We also know that the technology sector has been the largest taker of space in London over recent years, surpassing even the financial sector.

3.1.6 Conversely, one of the single greatest threats to the number of office jobs in London is the potential of artificial intelligence to automate great swathes of routine (and not so routine) office tasks, particularly those of a transactional or process nature. Working with Oxford University academics Carl Benedikt Frey and Michael Osborne, Deloitte recently concluded that 30% of jobs in London "*are at high risk of disappearing over the next two decades as a result of technology*".[32] While many of these lie outside the office economy, there is nevertheless a major potential threat here that could negatively affect long-term demand for space.

3.1.7 This suggestion needs to be seen in the context both of employment forecasts which suggest a continuing expansion of the workforce, and a widely-held expectation that work will continue to play as no lesser role in people's lives. One interpretation could be a continuing expansion of knowledge-based work away from large corporate offices in workplaces more akin to co-working spaces.

3.1.8 The research noted that the capabilities of computers are expanding beyond routine work, and that "*as a result, tasks that were once considered too complex for coding will be converted into well-defined problems capable of digital solutions*". Obviously, the impacts will affect different jobs and sectors in different ways. Thus, "*jobs most at risk are in office administrative support work; sales and services; transportation; construction and extraction and production (manufacturing)*".

3.1.9 Technology is thus both a creator and destroyer of jobs, and the key question here is: what will the net balance of gains and losses be over the next decade or two? We cannot answer this with precision, but we can be aware of changes and their implications, and build this into to our long-term prognosis.

3.1.10 **Office occupier characteristics**

3.1.11 There are a large number of tangible ways in which office occupiers are evolving in response to technological pressures and opportunities; rapidly changing

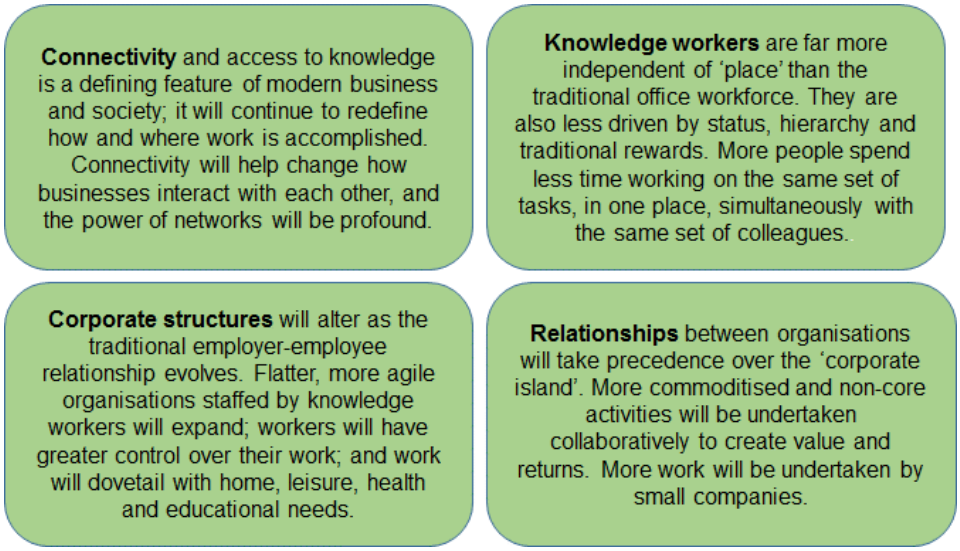
[30] Douglass G & Hoffman J (2015) *The Science and Technology Category in London* GLA Economics, Working Paper 64
[31] Theseira M (2012) *London's Digital Economy* GLA Intelligence Unit
[32] Deloitte (2014) *Agiletown: the Relentless March of Technology and London's Response*

economic and market circumstances, and social and cultural changes. The combined impact of these drivers of change is a constantly changing profile of demand, in terms of both the scale and nature of demand for space. Here we summarise some of the major forces of change.

3.1.12 **The emerging corporate landscape** One of the defining features of globalised, technology-enabled business in the 21st Century is the speed and ubiquity of change. Businesses must be capable of continuously adapting to changing market conditions, and this means that they must be fleet of foot. This is achieved through flatter, leaner and more agile organisational structures and business processes which, in turn, have been largely responsible for driving 'agile working', a workstyle that is more mobile and collaborative than in the past, and one which depends upon a high level of connectivity. The need for such adaptability and responsiveness is common to both large and small firms.

3.1.13 In a recent article on the future of work, *The Economist* described an 'old model' in which workers tended to receive security, benefits and a regular salary 'for life', while employers in return received a stable workforce in which they could invest.[33] However, the 'old model' is being redefined and Figure 3.1, adapted from recent work undertaken for the Corporation of London[34], summarises the main features of the 'new model'.

Figure 3.1 The evolving corporate landscape



Source: adapted from Ramidus Consulting (2015)

3.1.14 The critical nature of connectivity, changing corporate structures, the priorities of knowledge workers and the reduced importance of the 'corporate

[33] The Economist (2015) Briefing: the Future of Work *The Economist* 3rd January 2015, pp13-16
[34] Ramidus Consulting (2015) *Future Workstyles and Future Workplaces in the City of London* Corporation of London

island' in favour of more complex web of supply chain relationships will all alter the nature of demand for space. To take one example of the increasing adaptability and flexibility of organisations: the growth of a 'contingent' workforce. In growing numbers of corporate organisations, an increasing proportion of the workforce is not directly employed; they are consultants, contractors, 'interims', part-timers and supply chain partners. How these staff are housed and managed raises important questions for demand planning within buildings.

3.1.15 It should be stressed that this 'model' does not apply to all organisations – hierarchy and bureaucracy are not disappearing. And the model does raise legitimate concerns about job security. But it does illustrate a significant shift in working patters that will, ultimately, feed through into a changing pattern of demand for space.

3.1.16 Collectively, these features of corporate change are altering the traditional bedrock of demand: large, relatively unchanging and predictable 'corporate islands' that were largely process-based and which could plan ahead with a comparatively high degree of certainty. Occupiers today operate within short-term planning horizons, responding to an ever-changing economic landscape and seeking to maximize their flexibility to adapt. All this means a different approach to real estate: to minimize the commitment and cost, and to maximize the flexibility.

3.1.17 The interaction between evolving corporate demand for space and the emerging flexible space market will be critical in determining the overall amount and type of workspace required in the long-term, especially given the drive to automation referred to above. If the latter involves the replacement of human processing power, as well as physical tasks, then there will need to be significant creation of new, office-based jobs to sustain demand levels.

3.1.18 **Agile working** One of the most important implications of this emerging corporate landscape for our work here, and which is common to both large and small occupiers, is the spread of 'agile working'. Using technology as a key enabler, agile working involves a more mobile and collaborative workstyle; it involves working in a variety of settings: the office, at home, at client/partner premises and on the move. One of the consequences of agile working is a more efficient use of space through higher densities and higher utilisation.

3.1.19 Agile working is not a single workstyle: it is defined here as an approach to work that allows work to be undertaken where, when and in what kind of setting is most conducive to achieving whatever tasks a worker has to undertake. For some, work might continue to involve sitting at the same desk in the same building for most of the typical day. But for growing numbers it means something different. Laptops, tablets and, smart phones in many organisations now barely distinguish between personal and business use, and in growing numbers of businesses there is a 'bring your own device' approach. Similarly with telephony: fewer and fewer workers have a traditional desk phone; and it is likely that this once indispensable piece of office equipment will disappear altogether during the coming decade.

3.1.20 Technology provider TeamViewer released the results of a survey of 1,000 UK office workers in 2016, in which they found that workers are "*overwhelmingly turning their back on the standard 9-5 office life with 72% agreeing that it's not relevant for the 21st century*".[35] The survey found that 79% of people rate work-life balance as more important than salary, and that many already spend an average of 2.5 days per week working remotely. While the results of yet another agile working survey from a technology company might be questioned in terms of vested interest, it is now common practice for organisations to have shared desking environments – with fewer desks than people – as part of an agile working strategy.

3.1.21 **Public realm** Whether or not there is a causal relationship is unclear, but coincident with the rise in agile working has been a growing importance attached to the role of public realm. As expectations of the workplace have changed, so too have expectations of the 'setting' of the workplace – its urban context. Employers and employees now recognise the importance of access to amenities such as food and drink, health and wellbeing and leisure. Agile working means that the public realm is now part of the daily work experience for man, including public squares; curated private/public spaces, street markets and so on. The quality of the public realm will therefore form an increasingly important part of locational decision-making, which has important implications for locations seeking to establish new office markets.

3.1.22 **Higher density and utilisation** The density at which office buildings are occupied has been rising for a number of years. Certainly since the recession of the early-1990s, corporate organisations have been seeking to use less space to accommodate more people. In more recent times, this effort has been reinforced with higher utilisation of space, made possible through agile working and the introduction of desk sharing. The impact of higher densities has been significant, with averages falling from around 16-17 sq m per desk in the 1990s, to around 11 sq m per desk today.[36] Similarly, eight desks per ten people is now quite common. The growing impact of higher utilisation is likely to have an even greater long-term impact than higher densities.

3.1.23 The importance of these dynamics for this report are fairly obvious. Higher densities and higher utilisation rates allow organisations to achieve 'spaceless growth' – the binary relationship between higher headcount and additional real estate has been broken. If we add to this the growth of the flexible space market (see Section 2.4), which allows larger organisations to flex their demand using short-term space, then it can be seen that traditional supply-demand dynamics are changing considerably.

3.1.24 **A diverse and discerning workforce** The general trend towards living longer is resulting in people working longer. The result is that the modern workplace is having to respond to the different demands of a multi-generation workforce.

[35] TeamViewer (2016) *The End of Nine to Five: The Changing Nature of the Workplace*
[36] Bedford M; Harris R & King A (2013) *Occupier Density Study 2013* British Council for Offices

Government figures reveal the scale of growth in working people aged 50 and over: at 9.1 million in 2015, this cohort is 3.6 million (50%) larger than it was in 1995.[37]

3.1.25 The changing demographics of the workforce are necessitating a re-think of established approaches to workplace design. For example, younger and older people have different requirements for acoustics, heating and lighting. But age is only one factor in a more diverse workforce. At the same time, today's workplace is more multicultural; it has more working parents; it houses a workforce that is more diverse in terms of disability, ethnicity and gender, and it caters for a workforce that expects more in terms of quality, wellbeing and support. In short, it is becoming less and less appropriate to provide a 'vanilla office-scape' in which the same basic design and layout caters for a generic demand. For example, there is a growing recognition of psychology in the workplace, and the need to design the work environment around the needs of both introverts and extroverts.

3.1.26 Growing numbers of reports highlight the importance of health and wellbeing in the office today.[38,39, 40] Work for the Corporation of London identified "*widespread concerns over the physical and mental health of workers and the importance of encouraging employee wellness through workplace design in the City*"; and that the "*increased focus on wellbeing and stress reduction might encourage employers to rethink the interiors of buildings*", by providing breakout green oases for contemplation and recharging and "*elements such as living walls, internal winter gardens and roof garden terraces to punctuate and animate the environment and differentiate the workplace offer*".[41]

3.1.27 **Attraction and retention** As well as being more discerning, today's workforce is more demanding: the knowledge worker has transferable skills and no longer feels tied to a single or limited number of employers as was the case in the past. Such workers demand choice and quality in the workplace. Similarly, as work, home and leisure become increasingly blurred in terms of when, where and how they are undertaken, so the workplace is having to provide workers with greater flexibility, particularly the ability to work in an agile manner. In short, the workplace is having to work harder to attract and retain highly skilled workers: it is having to provide an experience and choice rather than simply a place to go to 'do work'.

3.1.28 As part of this focus on experience, growing numbers of employers are placing a greater emphasis on the management of their buildings. Many now provide a range of 'services' – healthcare, dining, exercise, concierge, and so on. Receptions are more akin to hotel environments rather than offices.

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[37] Department for Work & Pensions (2015) *Employment Statistics for Workers Aged 50 and Over, by 5-year Age Bands and Gender* November 2015

[38] The Helen Hamlyn Centre for Design & Gensler *Workplace & Wellbeing*

[39] Clements-Croome D; Aguilar A-M & Taub M (2015) *Putting People First: Designing for Health & Wellbeing in the Built Environment* British Council for Offices

[40] Brown R & Campbell J (2014) *Five Ways to Put More Wellness into Your Workplace* Work Design Magazine, 15th August

[41] Ramidus Consulting (2015) *Future Workstyles and Future Workplaces in the City of London* Corporation of London

3.1.29 Also to meet the attraction and retention agenda, for large organisations more than small, the workplace is increasingly used to express corporate values, common purpose and brand. This reinforces an employers' efforts to attract and retain highly skilled and discerning staff by conveying its culture and brand.[42,43] The workplace is also the means through which corporate organisations implement governance (systems, processes, management, etc). The importance of this to our discussion here lies in the fact that this 'role' for the workplace states something important about the enduring nature of the office (in the context of understanding influences on long-term demand in London). For example, while higher densities and utilisation might satisfy efficiency priorities, this must be balanced by recognizing the value created by a workplace that is attractive to workers.

3.1.30 Linked to the question of the office as an expression of corporate culture is the issue of co-location: if we have the technology to work anywhere, anytime, then why bring people into the CBD every day?

3.1.31 **The co-location debate** In 1997, economist and journalist Frances Cairncross published a book called *The Death of Distance*.[44] The basic premise was that emerging communication technologies would fundamentally change the economy, and in so doing would alter spatial relationships: technology would liberate businesses from their traditional locational ties. The question here is: will contemporary developments in technology reverse Central London's traditional centripetal pull and reduce the desire of businesses to co-locate there?

3.1.32 Twenty years on from Cairncross' book, there seems to be precious little evidence of her central thesis becoming reality – at least not in the office sector. The sheer weight of business in the capital, and the complexity of the business ecosystem, suggest that the potential of technology has so far failed to disrupt the established order. Moreover, there is anecdotal evidence that the pull to the centre is strengthening, and that it is equally applicable to small and large businesses.

3.1.33 Over the past decade, those very businesses that might have been expected to exploit Cairncross' thesis – Amazon, Apple, Facebook, Google, Nokia, Skype, Sony and Twitter among many others – have all arrived in the capital and established large, physical presences. Some of these companies would, in the past, have migrated towards the Thames Valley office market. Instead, over the past five years, the TMT sector has accounted for almost one-third of all take-up in Central London, compared to less than one-fifth by financial services.[45]

3.1.34 Amazon is a good example. It established its UK operations in Slough in 1998 (a popular location for tech businesses at the time). Between 2013 and 2015

[42] Haynes BP (2012) Corporate Real Estate Asset Management: Aligned Vision *Journal of Corporate Real Estate* Vol14 No4 pp244-254

[43] Khanna C; van der Voordt TJM & Koppels PW (2013) Corporate Real Estate Mirrors Brand: a Conceptual Framework and Practical Applications *Journal of Corporate Real Estate*, Vol15, No3/4, pp213-230

[44] Cairncross F (1997) *The Death of Distance* Orion, London

[45] Knight Frank *Central London Quarterly* Quarter 2, 2016

it established offices in Glasshouse Yard, EC1 and in Leadenhall Court, EC3, before taking a new 18,600 sq m building on Holborn Viaduct, EC1 and announcing the closure of its Slough office. Then, in September 2014, it pre-leased 40,000 sq m at Principal Place, EC2, near Shoreditch (which it has since extended by 7,500 sq m).

3.1.35 In another example, Facebook set up its first major UK office in Earlham Street, Covent Garden, WC2 in October 2012, where it occupied 3,334 sq m. Just over one year later, in November 2013, it leased 8,150 sq m at British Land's Regent's Place, N1, before extending this by a further 6,131 sq m in April 2015. Then, in September 2015, it pre-leased all of Great Portland Estate's 22,556 sq m Rathbone Square, W1, just North of Oxford Street. This represents an increase in demand for space from around 300 people to over 2,000, in just three years.

3.1.36 Apple took an even more radical route. With around 1,400 office staff in London, in September 2016, the firm announced that it had pre-leased 50,000 sq m at the emerging Battersea Power Station development in Wandsworth. The 1,400 staff represent a demand for around 15,000 sq m, suggesting that Apple has plans for very significant growth in Central London.

3.1.37 None of Amazon, Apple or Facebook represent an example of a tech business exploiting locational freedom. The key issue for LOPR here is the apparent contradiction that while technology allows businesses and workers freedom from the traditional pull of co-location in the CBD, just as agile working liberates them from the desk, so the pull of the centre and to the office appears undiminished. This is a significant issue when trying to assess the long-term demand for office space in London.

3.1.38 So what explains the contradiction? And will situation change in the years ahead? As we have seen above, the office provides a vehicle for creating a sense of common purpose, or business culture, and it allows for corporate governance. It allows staff to be mentored and trained. And it provides an environment in which colleagues can socialise, collaborate and share knowledge. And the means to do all this with least friction (in terms of travelling to work, access to skilled staff and so on) is to locate centrally and provide a hub, allowing workers from disparate locations to congregate.

3.1.39 Thus while the office is capable of simply providing "*temporary anchor points for interaction rather than daily travel destinations*",[46] it seems to be retaining its significance in terms of 'the place where we do business'.[47] Similarly, another study concluded that while business ideas can be borne from social

[46] Hansen T (2012) *The Future of Knowledge Work* Intel Corporation White Paper
[47] BCO (2014) *Making the Business Case for Wellbeing: The Wellbeing at Work Study* British Council for Offices

settings such as coffee shops, it is really the workplace when an idea is shared, shaped, agreed and realised.[48]

3.1.40 Pulling these strands together, it seems that agile working and co-location are not contradictory: the office provides the hub, a base, common systems, camaraderie and so on, while agile working describes the palette of workstyles and work settings that the office supports. As one study concluded: "*The best outcomes of remote working are likely to be when those ways of working are combined with working from the office or other collaborative work environments, at least some of the time. It is usually not an 'either or' but a 'both and' solution*".[49] In this sense, automation of jobs might have a more limited impact on the *quantum* demand, if non-routine work expands and new jobs are created, and a greater impact on the *nature* of demand – the provision and design of workplaces for knowledge workers.

3.1.41 The emerging office

3.1.42 There is no shortage of predictions about the future direction of workstyles and the workplace. The problem with many predictions is that they tend to paint a one-dimensional picture of the future: '*everyone will be working flexibly*'; '*the office as we know it will die*'. Many also tend to be deterministic: "*the technology allows freedom from the desk, so workers will discard desks*".

3.1.43 Similarly, that component of the design community which says that workplaces with ping pong tables and bean bags will become the new norm are wide of the mark. For example, the many images that have been published of Google's offices convey far more about that organisation's carefully cultivated image and brand than they do about how most people will be working in the future. Many predictions are based on imagery rather than functionality, and fail to recognise the complexity of work in terms of the work itself; the relationships between workers and the relationship between employer and employee.

3.1.44 For example, part of the technologically deterministic model is that people could avoid the cost, stress and lost time of commuting and, instead, enjoy a more relaxed but more productive work regime in the comfort of their home. There are a number of problems with this thesis. Not least is the fact that despite the negative aspects, the draw to the office remains strong: workers like to socialise and employers wish to create a common purpose. Similarly, the home is often not set up for work for one person, let alone two; and neither is it often set in a rural idyll. In fact, the quality of public realm, access to shops, leisure and services, and office support in the form of nutrition and wellbeing, are often far superior in the office to that which is available in the home environment or locale.

3.1.45 Furthermore, the workplace is a highly complex environment. The business will have a culture that it will be seeking to nurture or change; the business culture

[48] Miciunas G; Payne G; Bangham B & Macaraeg R (2014) The Destination Workplace *Work Design Magazine,* October
[49] AECOM (2013) *Productivity: a Homemade Recipe?* White Paper, July

is what employees buy into, and it supports the brand that is presented to customers. The business structure and process might be under review or being adapted to address economic and competitive pressures. The business is likely to have its share of workplace politics: '*who's up and who's down*', internal rivalries, and so on. And there will be projects, initiatives and activities that cut across different business units and skill areas. All of this complexity requires a certain degree of shared experience.

3.1.46 It is for these reasons that the office workplace is likely to continue to have an important role, albeit one that will change significantly. It is possible that the office will provide a hub for an increasingly mobile workforce that also utilises the home and 'third places'. As such it will provide a setting in which colleagues can come together for collaboration, knowledge sharing, mentoring and so on. Equally, from the employers' perspective it will provide the means of providing a common purpose, for governance and for business process continuity.

3.1.47 Such an evolution has the potential to be a major disruptive influence on the London office market. The amount of space required; the nature of buildings; workplace design and workplace management are all evolving quickly and will alter the traditional profile of demand. There might, for example, be a rapid growth in co-working space beyond Central London to town centres scattered across London and the WSE, which are accessible to agile workers living close by. This would have the benefit of bringing work activities back into high streets and relieving pressure on public transport.

3.1.48 Many new buildings are likely to take on the characteristics of hotels, where 'guests' demand a high level of service and experience. One such building is currently being developed in the City – 22 Bishopsgate. This is a 140,000 sq m building, being developed by Lipton Rogers and funded by a consortium led by Axa Real Estate Investments. The concept for the building is a 'vertical village', and it will be the first UK building certified by the new 'WELL Building Standard'[50], which measures the performance of buildings with a specific focus on seven areas of health and wellbeing: air, water, nutrition, light, fitness, comfort and mind.

3.1.49 The ground floor will provide constantly changing art installations, performance, audio visual interfaces and personal hotel style service. Level 2 of the building will offer catering, informal work spaces, local art/events and convenience amenities. Level 7 will provide incubator space "*to foster collective creativity, collaboration and innovative problem solving*". Level 27 will be an energising high intensity fitness and wellness centre with extra amenities such as a dentist, GP and specialist trainers. A sensory experience including a holistic approach to wellness with meditation and Pilates will be available on Level 41. And a "Members" only *Club 22* on Level 57 will provide destination dining/client entertainment and event space with views across London.

[50] International WELL Building Institute (2015) *The WELL Building Standard* Delos Living LLC, New York

3.1.50 The lesson of 22 Bishopsgate is that it exemplifies a trend in which landlords will design and mange buildings not only as multi-let spaces, but also as multi-use spaces. Just as corporate organisations discard their 'corporate island' approach in favour of a more agile, networked approach, so too buildings will become less monolithic and more permeable, with a positive impact on the street scene. Office buildings will become 'less generic' and less single purpose, and will instead work harder to provide choice and flexibility for the individual and the firm.

3.1.51 They will provide an interesting blend of business and domestic design attributes; a pleasant, welcoming atmosphere in which to collaborate, innovate, socialise and learn. A richer palette of work settings, which might be tailored to individual requirements and available 'on demand', will be provided in a highly connected environment, with a far more sophisticated, or smarter, management regime. Buildings will play additional roles by conveying and reinforcing the brand, and providing common purpose. They will be greener and healthier; they will become more 'mixed use', with more public access, and have the ability to create experiences rather than simply static backdrops.

3.1.52 In addition, the flexible space market will play an increasingly important role in providing the kind of space required by small, knowledge-based businesses which increasingly interact with large businesses in a complex web of supply chain relationships. They also require good quality space and many of the design attributes enjoyed by larger organisations. They might also be increasingly catered for in off-centre locations, perhaps in the high streets of Outer London centres.

3.1.53 **Implications for the London Plan**

3.1.54 In conclusion, organisations, workstyles and workplaces are changing rapidly in response to technological change, business change and individual choice. With regard to our central LOPR question – how much office space will London require in the long-term – the answer is likely to be '*more, but different'*.

3.1.55 London has a total stock of 26.15m sq m of offices[51] (VOA, 2016) and an estimated 1.98m office workers. This yields an overall density of 13.2 sq m per head – across all types and ages of buildings. The BCO benchmark for London, which is biased towards larger, newer buildings is 11.3 sq m NIA per worker.[52] If a combination of more efficient use and higher utilisation brought the overall density closer to the benchmark, say to 12 sq m per worker, then overall demand for space would fall to 23.96m sq m. This implies a reduction in stock requirement of nearly three million square metres. Obviously, this calculation does not take account of jobs growth, but it does convey the deflationary impact of changing workstyles on demand.

3.1.56 However, we know that the London office workforce is forecast to grow by almost 620,000 through to 2041 (See Section 9.0). And using current assumptions

[51] Valuation Office Agency (2016) *Floorspace statistics*
[52] See Section 9.0 employment and floorspace projection calculations.

about the relationship between headcount and demand for space we can deduce that around seven million square metres of additional office space will be required over this period.

3.1.57 On balance, it looks likely that headcount growth will outpace savings achieved through greater efficiency; although even this scenario suggests a slower rate of growth than in the past. But what other factors could impact this conclusion? In terms of 'known unknowns', we can isolate at least three factors.

- First, the adoption of agile working could spread further and deeper than anticipated, resulting in a far greater suppression of demand than suggested above through higher utilisation of desks, as well as home-working, part-time working and use of coworking centres and third places. Even more importantly, the nature of demand could change in terms of locational preferences, building typologies and specification.
- Secondly, there is the role of office automation. It is quite possible that the impact of this on overall demand could be far greater than the efficiency and Brexit scenarios combined, and is worthy of further investigation. This could be particularly significant in the banking and insurance sectors, but relevant to any sector where transactional and process-based activities are prevalent such as legal and accounting.
- Thirdly, there is the potential impact of Brexit, which is discussed in Section 2.0. The impact here might be lower growth rather than a seismic adjustment. But even so, if there is a sustained transfer of business away from London, then the threat is very significant.

3.1.58 The message for the London Plan is that we need to continue to plan new capacity to cope with growth (because we cannot plan for the unknown). However, we have seen in this section that workstyles and workplaces are evolving rapidly: agile working is now 'mainstream'; the flexible space market has matured; business processes are responding rapidly to changing circumstances, and building design is innovating. That is all before we consider the impact of Brexit and wider political issues. It is probably correct to say that the context to the London office market has never been more uncertain than it is at the current time. The key message for the London Plan must be that it will need increasing flexibility to respond to the shifting profile of demand, in terms of what kinds of space are in demand and where.

3.2 Smaller occupiers, flexible space and affordable space

3.2.1 Small- and medium-sized occupiers are a critical component of demand for office space. Rapid and ubiquitous technological innovation, coupled with economic change, have given rise to a rapidly expanding segment of demand. While their workplace requirements are little different from workers in large organisations in terms of, for example, quality of space and connectivity, their sheer numbers suggest that they will have a growing impact on the medium- to long-term profile of demand or office space in London.

3.2.2 The knowledge economy and SMEs

3.2.3 There can be little doubt that SMEs form a vital part of the UK economy: they make up 99% of all UK businesses; 60% of private sector jobs, and around 50% of total value-added. They have also been described as "*a vital catalyst for technological diffusion, entrepreneurial achievement, competition promotion, and raising innovative capacity*".[53] Thus, London's 1,410 large firms (>250 employees) are dwarfed by the 70,000 SMEs just in the 5-19 employee size band.

3.2.4 Despite its obvious importance, the SME sector is often overshadowed by the corporate sector in property market reports: big deals dominate the headlines. But, taking a longer-term perspective, SMEs could prove more significant in changing the nature of the market. As one recent report noted: "*the small business community … is at the forefront of reshaping London's economic landscape in the 21st century*".[54] One of the key factors behind such a claim has been the rise of the '*knowledge economy*'.

3.2.5 The knowledge economy has been a defining feature of the economic restructuring since the 1980s. It is typified by the rise of knowledge and technology intensive jobs and economic activity; and investment in knowledge-based assets or 'intangibles'; and a growing, well qualified and educated workforce.[55] Brinkley argues that the key enablers are "*powerful and cheap computers and the 'general purpose' information and communication technologies*". The knowledge economy has been instrumental in the growth of SMEs because it has greatly reduced 'barriers to entry' by allowing people to sell their intellectual capital using cheap and ubiquitous ICT infrastructure.

3.2.6 A recent article in *The Economist* underscored this point arguing that, while in the past new businesses "*used to face difficult choices about when to invest in large and lumpy assets such as property and computer systems*", today they can exploit technology to enable them "*to go global without being big themselves*".[56] The article went on to point out that they can do this in several ways:

> *Today they can expand very fast by buying in services as and when they need them. They can incorporate online for a few hundred dollars, raise money from crowdsourcing … hire programmers from Upwork, rent computer processing power from Amazon, find manufacturers on Alibaba, arrange payments at Square, and immediately set about conquering the world.*

3.2.7 Brinkley's observations also hint at a further very important driver of growth in SMEs – choice. The knowledge economy has resulted in many more people exercising choice over the nature of their work, their workplace and their employer. "*Most people in the UK who start up a business do so because they view it as an*

[53] Llewellyn Consulting (2015) *Enhancing the Ability of UK SMEs to Export* The City UK
[54] London Enterprise Panel (2013) *Jobs and Growth Plan for London* Greater London Authority
[55] Brinkley I (2010) *Innovation, Creativity and Entrepreneurship in 2020* The Work Foundation
[56] The Economist (2015) Reinventing the Company *The Economist* 24th October 2015

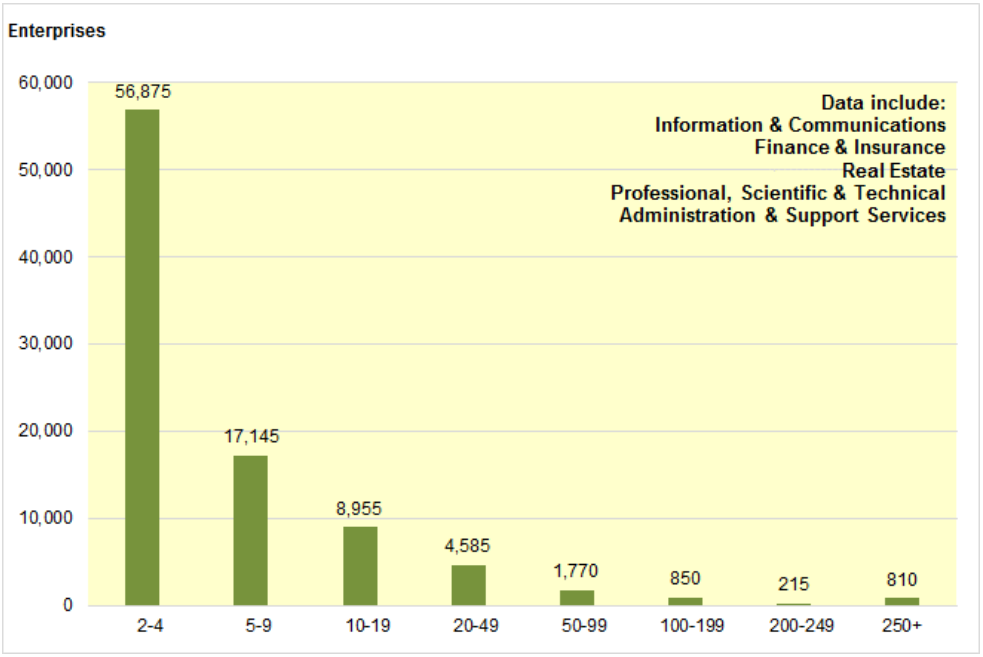
opportunity rather than a necessity".[57] The same report highlights the role of the internet: "*It has never been easier to set up a business*".

3.2.8 A report by Oxford Economics[58] underlined the link between the knowledge economy and SMEs, arguing that it "*will transform many aspects of the global marketplace*". The report highlighted the role of the internet as a shared platform, with mobility, cloud computing, business intelligence and social media being key ingredients. Indeed, the digital economy is transforming business structures by, for example, enabling small firms to compete directly with large corporates, as the barriers to entry become redefined by knowledge work. This in turn is associated with a significant increase in the number of knowledge-based SMEs.

3.2.9 The nature of SMEs

3.2.10 In covering such a large part of the economy, SMEs are enormously varied, and it is important in the context of LOPR to find a more focused sub-group. Figure 3.2 shows the breakdown of companies by size band in London in five key sectors: Information & Communications; Finance & Insurance; Real Estate; Professional, Scientific & Technical and Administration & Support Services. Together, these number 91,205 firms, and broadly equate to the 'office economy'.

Figure 3.2 Enterprise size band, five key sectors, London, 2015



Source: Dept. for Business, Innovation & Skills, 2015

[57] Lord Young (2013) *Growing Your Business: A Report on Growing Micro Businesses* HM Government
[58] Oxford Economics (2011) *The New Digital Economy*

3.2.11 The chart excludes firms of fewer than two workers because such firms are unlikely to make any formal demands on the real estate sector (recognising that some will be in co-working spaces).

3.2.12 The data show almost 57,000 firms in the 2-4 size band and around 17,000 in the 5-9 employee size band, with only around 4% of firms having over 50 employees.[59]

3.2.13 The knowledge economy and the expansion of the SME sector are inter-connected. For example, the number of people employed by SMEs or who work for themselves is equal to 39% of all employment in London. In the knowledge economy, the share is 47% in the Information & Communications sector and 54% in Professional, Scientific & Technical services.[60]

3.2.14 London-based SMEs in the Information & Communications sector employ 93,000 people, with 73,000 sole proprietor businesses or businesses with no employees. These firms account for turnover of £17bn, equivalent to 24% of the sector's total.[61]

3.2.15 **Small occupiers** Not all small offices are occupied by small businesses. For example, when large, foreign firms seek to establish a foothold in London they often take small units of space; and even when established, their requirement here might remain relatively small. Figure 3.3 shows data for the CAZ from a recent report for the GLA, with occupied units broken down by size band.[62] The report suggested that around four-fifths of occupied units are less than 100 sq m (approximating to eight workstations).

Figure 3.3 Estimated number of office occupations in CAZ, by size band, 2015

Size band	No. of occupiers
<100 sq m	79,417
101-500 sq m	11,401
501-1,000 sq m	3,343
>1,000 sq m	3,522
All office occupations	**97,683**

Source: Ramidus Consulting (2015)

3.2.16 Small occupiers also include large firms that lease additional, or 'flex' space to accommodate short-term growth, project teams and so on. The small occupier market is increasingly served in London by flexible space providers, who offer a range of different formats, including serviced offices, managed workspaces, co-working spaces, incubators and accelerators.

[59] Dept. for Business, Innovation & Skills (2015) *Business Population Estimates for the UK and Regions 2015*
[60] Bilfinger GVA (2015) *London and the Knowledge Economy* Spring 2015
[61] Bilfinger GVA (2015) *ibid*
[62] Ramidus Consulting (2015) *Small Offices and Mixed Use in CAZ* Greater London Authority

3.2.17 **Flexible space market**

3.2.18 In the past, small occupiers were, generally, limited to the secondary market of lower quality space. This was not only a question of cost, but also an issue about the reluctance of landlords to let small units of space, when there is plentiful demand for large units. Traditionally, the mainstream property sector has perceived small occupiers to lack 'covenant strength' and they were regarded as a management-intensive activity (which landlords shun).

3.2.19 However, in more recent times, the flexible space market evolved quickly to provide small occupiers with better quality space on terms that suit their needs. Indeed, the spread of flexible space has been such that traditional landlords have shifted their mindsets, and it is now accepted practice to include some form of flexible space allocation in large new office buildings.

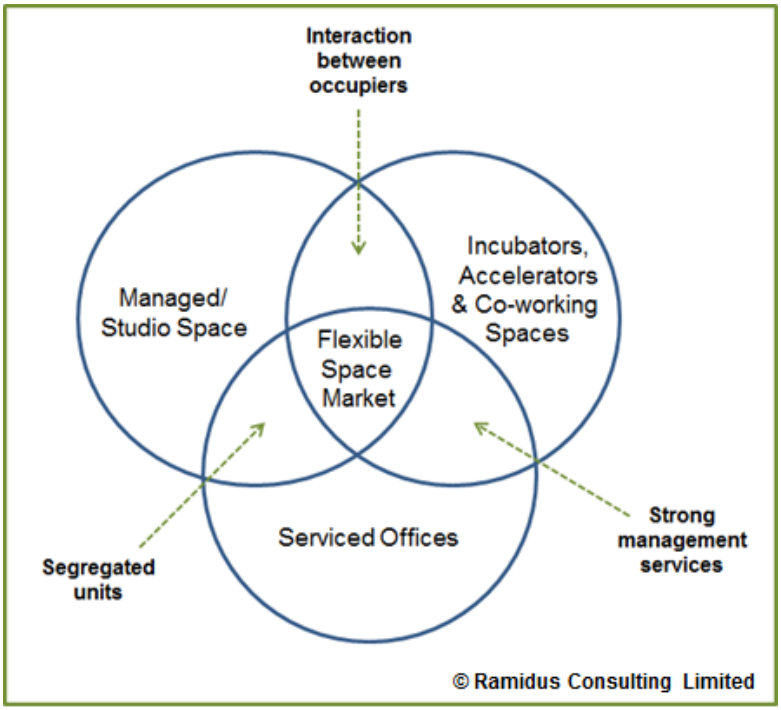
3.2.20 The Centre for Cities[63] noted that many SMEs operating in the creative and digital industries are sole traders or employ a small number of staff, and that they "*often prefer smaller, more flexible premises*", and that increasingly flexible work spaces "*are allowing for co-location, lower overheads and the capacity for businesses to grow quickly*".

3.2.21 The flexible space market offers 'easy-in, easy-out' terms, and allows small businesses to avoid the capital costs normally associated with establishing a new office, including fit out, furniture and fixings. The model means that a small business does not need to pay for expansion space which might be needed at a future date, nor for space that is used only occasionally such as large meeting rooms or conference facilities. When a business occupies serviced offices, it in effect combines its limited buying power for services such as a reception; ICT; security; telephony and meeting rooms with the other occupiers. Such space offers occupiers flexibility and an opportunity to have a presence at the heart of their market cluster, on terms that suit their business models.[64]

3.2.22 Flexible space is provided in several different formats (Figure 3.4). In addition to the widely understood serviced offices, there are managed spaces which are like serviced offices in terms of flexible occupation, but which also provide for larger occupiers and for more specialist users. For example, some occupiers require specialist equipment or support services. These centres provide businesses with flexibility, they reduce start-up costs and they support small-scale (technology dependent) manufacturing and product prototyping that is otherwise unaffordable.[65]

[63] Centre for Cities & Cambridge Econometrics (2015) *The Future of the City of London's Economy* Corporation of London
[64] Ramidus Consulting (2016) *Clusters and Connectivity: the City as a Place for SMEs* Corporation of London
[65] Bilfinger GVA (2015) *London and the Knowledge Economy*

Figure 3.4 Flexible space typology



Source: Ramidus Consulting

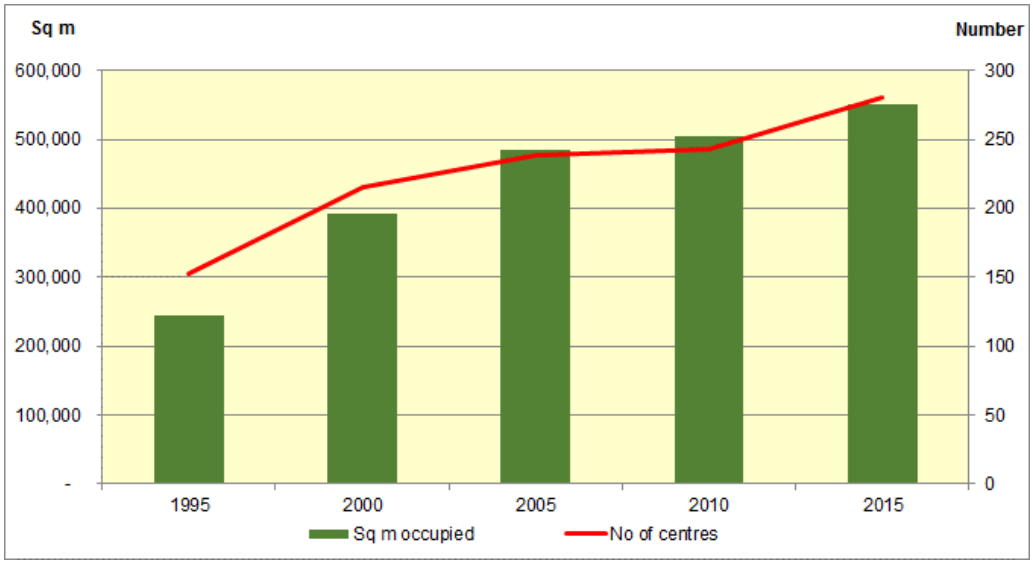
3.2.23 Incubators and accelerators involve the additional provision of mentoring, advice and business support, and occupiers are encouraged to enter formal growth and/or investment programmes.

3.2.24 The largest component of the flexible space market is serviced offices, and this sub-sector's growth highlights the growing attraction of flexible space (Figure 3.5). Thus, while serviced office operators occupied 243,500 sq m in 1995 in 150 centres across Central London, by 2010 they occupied 504,600 sq m in 243 centres; and by 2015 this had risen to around 550,000 sq m in 280 centres.[66]

3.2.25 The serviced office market has been complimented in recent times by the rise of the co-working market, which offers, mainly small businesses, environments that encourage interaction and collaboration. This market provides 'less corporate' space than serviced offices, and responds to "*technology enablement, the growth of the tech, online and creative industries … and an increase in micro businesses and independent workers*".[67] It provides "*clubs where members can work alone or interact with like-minded people on a pay-as-you-go basis".*[68]

[66] Ramidus Consulting (2015) *op cit*
[67] DTZ (2014) *The Co-working Revolution* DTZ
[68] Aecom (2014) *See Further: the Next Generation Occupier Issue* Aecom

Figure 3.5 Growth of serviced offices in Central London, 1995-2015



Source: Ramidus Consulting (2015), using EGi data

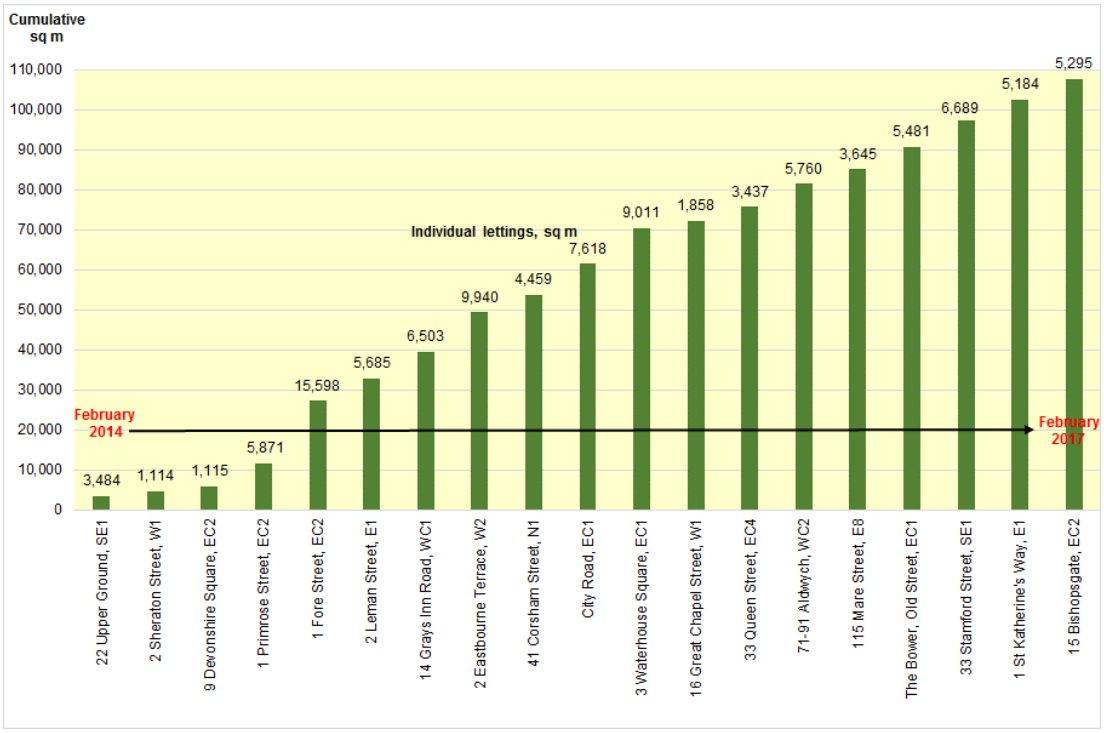
3.2.26 Co-working involves the sharing of workspace, typically but not exclusively, by self-employed people, very small firms and start-ups. Large organisations also use co-working spaces for project teams and ad hoc requirements, as well as for start-up operations. Operators include Hoxton Mix, Liquidspace, NearDesk and WeWork. Also, providers of more traditional serviced/managed office space (such as Regus, The Office Group and Workspace Group) are allocating more of their buildings to co-working environments.

3.2.27 In November 2016, a firm offering boutique, hotel-style shared offices announced that it would be launching in London in 2018. Fora said that its first centre would be in Clerkenwell, to be followed by further centres in Bethnal Green, Borough, Brick Lane, Kentish Town, Ladbroke Grove and Shoreditch.

3.2.28 The co-working workplace is largely shared rather than largely segregated for different firms; and the space is designed to encourage collaboration, interaction and knowledge sharing among members with cafes, informal seating areas shared workspace.

3.2.29 The expansion of WeWork in London symbolises the rise of the sector more generally. The firm, which was set up in New York only in 2010, took its first office in London in February 2014 at Sea Containers House on the South Bank. Since then, it has completed on another seventeen deals to take its total London occupation to nearly 108,000 sq m. Figure 3.6 shows the firm's individual and accumulated property deals completed during this period. In less than three years, WeWork has become one of London's largest occupiers. The firm is reported to have ambitions to double its London portfolio by the end of 2017.

Figure 3.6 The rise and rise of WeWork in London, 2014 to 2016



Source: Ramidus Consulting

3.2.30 The apparently insatiable demand for flexible space has, as noted above, encouraged mainstream developers to get involved. A number of recent buildings now accommodate serviced office providers, including the following.

- I2 Office: 3,840 sq m at 99 Bishopsgate, EC2.
- Landmark: 3,390 sq m at Heron Tower, 110, Bishopsgate, EC2.
- Servcorp: 1,100 sq m at the Leadenhall Building, EC3.
- The Office Group: 3,120 sq m at the Shard, London Bridge Street, SE1.
- The Office Group: 3,840 sq m at the White Collar Factory, City Road, EC1.
- WeWork: 15,598 sq m at 1 Fore Street, EC2 (formerly Moor Place).

3.2.31 During the past year, a number of developers have announced new schemes with co-working space forming an element of the designed scheme.

- Grosvenor has revealed plans for a 'creative hub' in Belgravia. The 8,000 sq m space at Eccleston Place near Victoria Station, designed by Buckley Gray Yeoman, is due for completion 2018.
- Developer First Base has submitted plans to Merton Council for a £70m residential-led, mixed use scheme in Earlsfield, including c900 sq m of collaborative space for start-ups, freelancers and small businesses.

- Developer Trilogy and investor La Salle Investment Management are creating 'Republic' at their East India Dock scheme in E14, targeted at the creative and tech sectors. The 19,000 sq m scheme seeks to compete on price with Shoreditch, and will include a 1,000 sq m co-working space.

3.2.32 One of the key points about the emergence of the flexible space market, notwithstanding any continuing concerns about the dominant business model of 'buying long and selling short', is that the providers are, in effect, aggregating small and micro businesses into relatively large buildings. To some extent, this might counter prevailing trends in use of space among large occupiers.

3.2.33 **Affordable workspace**

3.2.34 Perhaps the first step here is to clarify the term 'affordable' workspace, because there are two interpretations. One interpretation refers to space that is affordable in market, or economic terms, that is to say, conventional but less expensive space of a lower specification. The other interpretation, more widely used in policy discussions, refers to space that is, in some way, 'subsidised' to achieve certain social or economic outcomes. The latter is generally facilitated by or provided by public sector bodies (such as local authorities) as well as charitable and social enterprise providers.

3.2.35 Where these terms become confused, and perhaps controversial, is where policy intervention seeks to indirectly provide subsidised space in new developments, by asking developers to provide space at less than market value. The prevailing market perspective might be summarised as saying that affordable workspace is not analogous to affordable housing because while housing is a basic human right, running an office is not. This view would argue that if a business cannot keep pace with its peers in terms of being able to afford space, then it should not aspire to the same priced accommodation. On this basis, there is not a duty for large-scale provision of subsidised workspace, as with housing.

3.2.36 Nevertheless, a growing number of boroughs are beginning to introduce policies aimed at providing subsidised premises. The key motivation for doing this is the belief that local businesses are being 'priced out' of their local markets. Hackney Council has a policy stipulating that 10% of new space must be let at a discounted rent. Islington has a smaller requirement of 5%; and Southwark and Wandsworth are considering the merits of such a policy. Hackney's policy sets rents at a variety of levels, with the space taken by firms on a list of affordable workspace providers.

3.2.37 The public sector (in its wider sense) might choose to provide or facilitate affordable workspace, as a form of social or economic development infrastructure: to create opportunities in employment or support start-ups, for example. In no particular order, intervention can target the following.

- Specific sectors because they have social value such as office space for charities or social enterprises (eg Impact Hub, The Foundry in Oval).

- Specific sectors because they have cultural value such as artists' studios and maker spaces.
- Disadvantaged groups starting up in any sector, to address inequality or access to opportunity (eg Bootstrap, Bathtub to Boardroom).
- Educational outcomes from spill-over benefits of mentoring school children, or academic research, (colleges and universities are quite active here)
- Economic development in a particular area to attract and retain jobs in growth sectors (eg TMRW tech hub in Croydon and Wimbletech in Merton).
- Offer some form of activation to spaces which are long term vacant, in order to end blight on the surroundings, through 'meanwhile' workspace.

3.2.38 This may not be a comprehensive list, and affordable workspace may target several things at the same time, and may also be linked with business support and training too.

3.2.39 These spaces may also include more conventional and/or flexible workspace to cross-subsidise rents, or for the cross-fertilisation of their target businesses with more established businesses. The following examples illustrate some recent examples of affordable public workspace provision.

- LB Camden has announced plans to refurbish its Grade II listed town hall to create a 'knowledge hub' with an emphasis on tech, creative and life science firms. Plans include a 892 sq m start-up incubator and 2,880 sq m of offices.
- LB Croydon has adapted Davis House for the TMRW Tech Hub. The centre provides infrastructure and integrated support to ensure tech teams and companies flourish. It offers 350 desks in open or private spaces, 1GB internet, a 250-person event space, member lounges, meeting rooms, cafe and 3D printing on site.
- LB Lambeth has transformed its old town hall into Impact Hub Brixton.

3.2.40 Affordable workspace provided as a form of social or economic development infrastructure has, to date, had a relatively small impact on the flexible space market in the terms discussed above. Although the overlapping, cross-subsidisation, or cross-fertilisation of affordable workspace with more conventional flexible workspace such as co-working spaces can make this difficult to measure. Where affordable workspaces are set up with the involvement of the public sector but required to be "self-sustaining" after a period of time, there is a tendency for them to move towards more conventional flexible space.

3.2.41 One final point to make here relates to the interaction of local and national policy measures. The imposition of 'affordable office' components within large-scale office schemes is largely predicated on the assumption that small businesses are being 'priced out' of their local markets by escalating rents. Whether or not this is the case, the pricing mechanism is being influenced by a Government policy, namely through Permitted Development Rights (PDR). Thus, as we see in Section 7.0, Government policy is causing large-scale conversion of secondary office stock (the lower cost space preferred by many long-established SMEs) to residential use, thereby pushing supply of the latter down and prices up.

In contrast, local policy responses are seeking to introduce new supply or to protect existing supply. Also, these local responses might not directly benefit long-established SMEs if affordable workspace aims to support start-ups.

3.2.42 **Summary**

3.2.43 The foregoing has discussed the knowledge economy and the rise of SMEs. We have shown how the flexible space market has emerged; and we have reviewed issues surrounding affordable space.

There is a strong market perception that occupation of Central London office is becoming more difficult for some businesses, and in particular smaller businesses looking to occupy secondary (less expensive) space. While there is a dearth of hard data, rental hikes in recent times (not to mention the recent rating revaluation) are widely considered to be squeezing some businesses out of the CAZ. The evidence that we present in Section 5.0 on PDR, and the conversion of office to residential use, serves to underline the fact that secondary space is disappearing at a rapid rate.

Some of the pressure is being relieved by small occupiers being accommodated within mainstream stock, rather than in secondary, or even tertiary space. This is being achieved through a combination of landlords becoming more accepting of smaller occupiers, and the rapid rise of the flexible space market. Nevertheless, smaller occupiers have widely ranging costs sensitivities, and there remain large numbers of businesses for whom economic space remains a pre-requisite.

This raises the question of whether spatial policy should seek to 'protect' secondary space for smaller occupiers, or to ensure provision of 'affordable' space. It seems paradoxical that, on the one hand, central government policy should allow the wholesale loss of employment space (which is in demand as such) through PDR while, on the other hand, local planning authorities are considering market interventions to re-provide such space at affordable rates in new schemes. What seems clear, from a spatial policy perspective, is that supply needs to be maintained and, in so doing, price increases contained.

Small occupiers are, to some extent, dependent upon fringe locations that act as pressure valves when supply pressures build, leading to rapid rental growth. This being the case, and given that CAZ is exempt from PDR, then the greatest supply issue might be in the area just beyond the CAZ boundary. This suggest that a key spatial policy response could be the establishment of a transition or buffer zone between predominantly commercial and predominantly residential areas which, like the CAZ, is exempt from PDR.

3.3 Mega scheme geography

3.3.1 Until the mid-1980s, the geography of London's office economy was quite simple, based on a tight array of often overlapping business sector clusters. There was the City with its financial services focus and associated businesses. In the

West End, there were corporate headquarters, media businesses, the property industry and professional services. Victoria was largely occupied by government and oil and engineering firms. Midtown, as we know it today, was the heart of the legal profession, and little else. Outer London hosted many back offices of City firms. And that was it; all tightly defined. Since this time, London's business geography has changed dramatically.

3.3.2 Traditionally, office-based work in Outer London has been very significant, but in more recent times, most of the office employment centres there, excepting those to the West and South West, have stagnated, while Central London Fringe boroughs have increased. Thus while, between 2000 and 2016, Camden, Islington and Southwark all increased stock (by around 200,000 sq m), as did Hammersmith & Fulham and Hounslow along the A4 Corridor; in contrast Croydon experienced a loss of 191,000 sq m and Harrow 85,000 sq m, while Bexley, Bromley, Ealing, Hillingdon, Kingston, Merton and Sutton all experienced more moderate shrinkage.

3.3.3 Outer London's recent experience has contrasted heavily with the Central London market where the stock of space has grown substantially in response to strong economic growth in key service-based sectors (including finance, professional and technology). The enormous success of the central area market has been exemplified by the development of major sites on the central area fringe, leading to the creation of major development complexes, or 'mega schemes'.

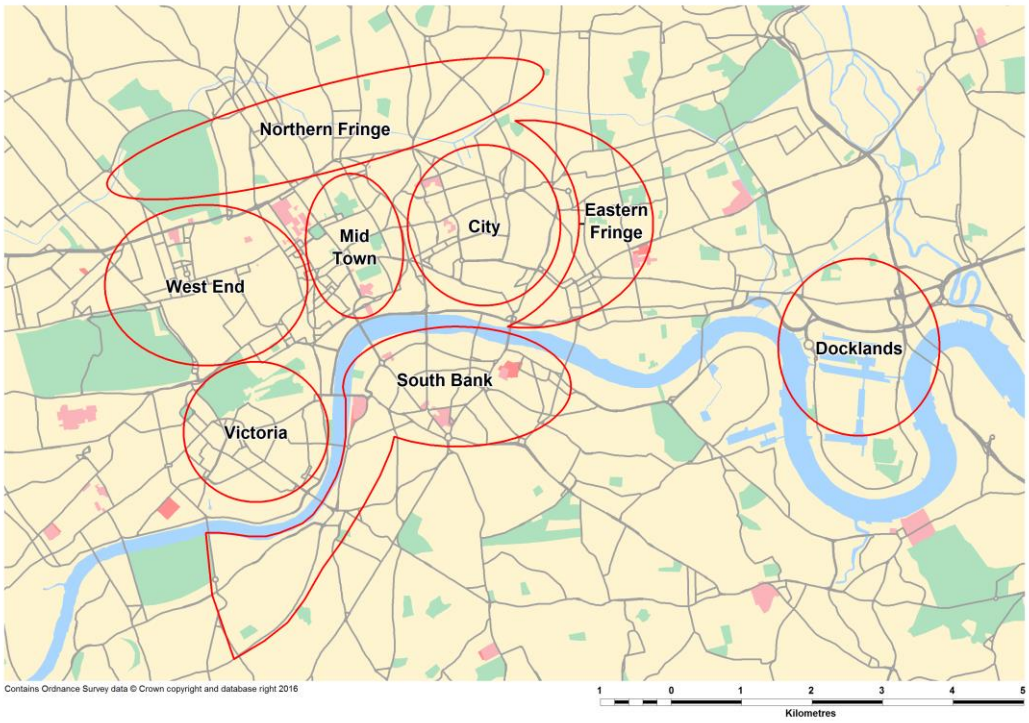
3.3.4 Defined by their scale and master planning qualities, these schemes have extended the boundaries of the traditional Central London market, starting with Broadgate and London Bridge City, moving on to the establishment of Canary Wharf and then King's Cross, Paddington, Regent's Place and others. Thus, London is now a polycentric office market, as shown in Figure 3.7.

3.3.5 As characterised in a 2013 paper by Ramidus Consulting, the mega schemes played a critical part in the movement of the old market model of City, Midtown and West End as centres for, respectively, finance and insurance, the legal sector and corporates/media/government, to a new one which comprised a more complex and disparate mosaic of business activity.[69] In doing so, by encouraging especially major occupiers to relocate to these new complexes, it broke down the old Central London business market to a significant degree.

3.3.6 The mega schemes began to form a necklace of new business nodes around the edge of London's central business district focused primarily, but not exclusively, on major rail and underground hubs. These can be characterised as large-scale, consolidated ownership regeneration projects containing more than 100,000 sq m of commercial office space, and including a large element of public realm, and a high retail and leisure content.

[69] Ramidus Consulting (2013) *London: A New Business Geography* www.ramidus.co.uk

Figure 3.7 The Central London polycentric office market



Source: Ramidus Consulting

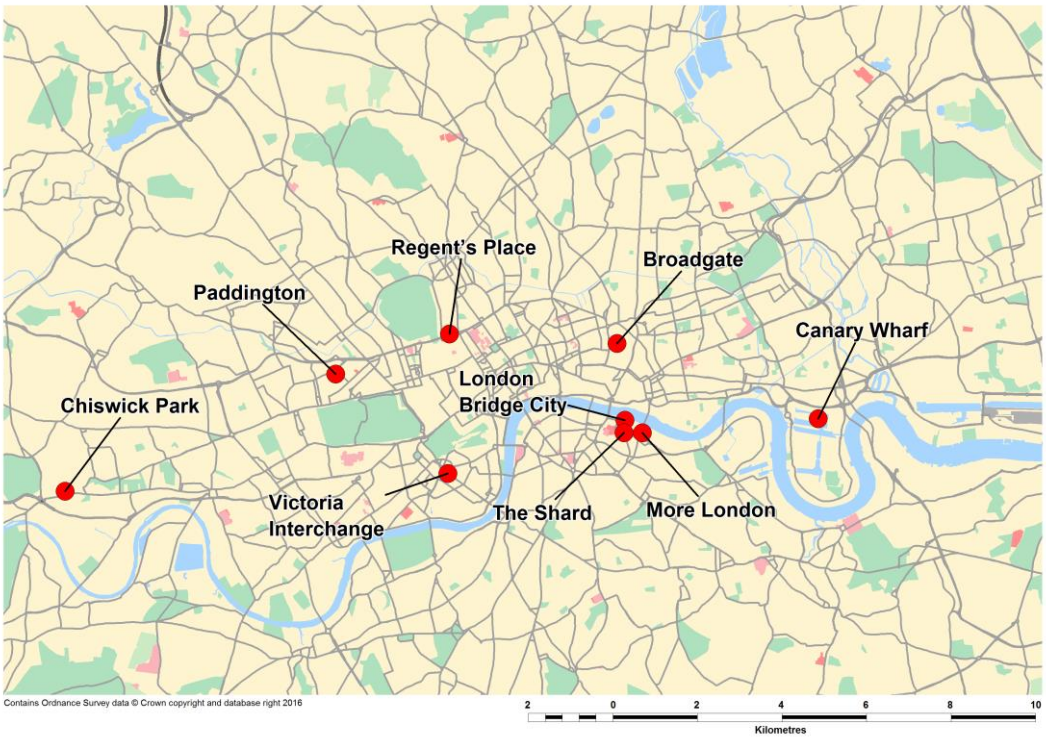
3.3.7 The Ramidus paper identified seven such schemes[70], totalling around 2.5m sq m of office space, which was compared to official Central London office stock figures for 1985 of 12m sq m. Thus, the mega schemes, built for the most part on non-office sites, contributed critically to the expansion of the office stock in Central London.[71] The mega schemes are summarised in Figure 3.8.

3.3.8 **Broadgate, EC2** The Broadgate complex was built on the site of Broad Street station and the adjacent Liverpool Street station on the North West fringes of the then City core, which was extended to include it because of its success. Between 1986 and 2008, 372,000 sq m of office floorspace was delivered, as well as retail and leisure accommodation, spread over what is now a 13ha estate providing employment facilities for more than 30,000 people. Broadgate's current occupier profile is dominated by the banking sector (50%), other financial services (20%) and the legal sector (20%).

[70] Broadgate, Canary Wharf, Chiswick Park, London Bridge City, More London, Paddington and Regent's Place.

[71] Chiswick Park is in Outer London and is usually characterised as a business park. While it shares most of the characteristics of the other examples cited above, its occupier base, a mixture of corporates and Tech and media companies, is more characteristic of West London office centres than Central London.

Figure 3.8 Mega schemes delivered 1985-2015



Source: Ramidus Consulting

3.3.9 Broadgate's location around Liverpool Street Station provides excellent access to the complex and for moving from there to other parts of Central London and beyond. The station also provides for a good range of convenience shopping while its position gives easy access to a wide range of other facilities in a part of the City which has become much livelier: something to which the success of Broadgate has contributed.

3.3.10 **London Bridge City/More London/The Shard, SE1** London Bridge City was developed in the mid-1980s, replacing a riverside complex of warehouses, and initially established itself as a fringe development offering good quality offices at a significant reduction to the City. This attracted a range of mainstream City occupiers which used it as a secondary location.

3.3.11 Despite some success, much of the surrounding area remained undeveloped until the late-1990s when More London was begun. Eventually delivering 160,000 sq m of new offices, this has successfully let to large occupiers relocating from the City and Midtown, notably accountants and lawyers. Another 100,000 sq m of space has subsequently been added with the adjoining Shard and The Place, buildings whose occupiers are drawn from across Central London.

3.3.12 Similarly to Broadgate, More London provides a distinctive 'precinct' style layout, with excellent access to London's fourth busiest station, London Bridge (now being renovated and expanded to cope with Thameslink expansion). But unlike Broadgate, London Bridge City is not a purely commercial area. With important tourist and leisure locations within walking distance, it attracts a lot of visitor traffic along its riverside walk. A combination accessibility and top quality floorspace has meant that the status of Southwark has shifted closer to the City in office market terms.

3.3.13 **Paddington, W2** This development arose on a base of an obsolete railway goods yard outside the eponymous railway terminus, and land surrounding Paddington Basin, a canal goods transhipment point next to the station. It is the core of the Paddington Opportunity Area, which covers an area almost the size of Soho and which, on current projections, will have about a million sq m of new space developed between 1998 and 2018.

3.3.14 The main development is Paddington Central, a mixed-use development, with offices, flats and retail units. New office occupiers in Paddington have a similar profile to the West End market, signalling the attractions of modern office buildings on the fringe of the West End to occupiers who prefer this side of the city but find it difficult to secure suitable accommodation in the core West End.

3.3.15 **Regent's Place, NW1** This was a redevelopment and extension of a 1960s-complex which centred on the still-standing 33-storey Euston Tower. Redevelopment of the extended site commenced in 1996, and the scheme is now fully built out, providing 200,000 sq m of office floorspace in eleven buildings, as well as several hundred apartments and ancillary retail and leisure facilities. Along with Paddington, it provides modern offices adjacent to the West End, where large floorplates in modern buildings are in short supply. The occupiers are widely distributed across business sectors, but have a distinctly 'West End' feel, being dominated by the corporate, Tech and media firms, with some financial services.

3.3.16 **Canary Wharf, E14** The recession in the early-1990s, combined with the lack of attraction of a remote and not particularly accessible location (the DLR was inadequate and prone to breakdown), caused difficulties in leasing space and the bankruptcy of its developers. But the certainty of the Jubilee Line facilitated new investors. As demand improved major financial sector companies relocated to Canary Wharf, attracted by its primary offer; buildings of a size and specification for the most part unavailable in the City in the 1990s.

3.3.17 Accessibility will now be significantly augmented by the completion of Crossrail in 2018. Currently the estate totals 1.45m sq m in 29 buildings, including 56,000 sq m of retail and leisure space. After nearly 20 years of growth in its occupier base Canary Wharf remains dominated by financial sector companies, which account for two thirds of the occupied estate. Recently, strenuous efforts have been made to attract a broader range of occupiers, focussing on 'fintech'.

3.3.18 Despite building out most of its original site this complex still has potential to grow, on sites inside and outside the original special development area. Together these could potentially add more than one million sq m of office space to the Canary Wharf complex. Two locations are at present in the process of being developed: a rebuilding at much higher density of part of Heron Quay (130,000 sq m), and Wood Wharf, a 10.9 ha site immediately to the East of Canary Wharf planned for around 200,000 sq m of offices and 3,600 residential units. Major office sites which could also be added to the complex include Riverside South and North Wharf, with the potential for as much as 400,000 sq m between them.

3.3.19 The schemes listed above reacted to, but also help form occupier expectations as to what a modern business development hub would look like and how it would be experienced. Contemporary occupier requirements have moved increasingly toward a combination of modern, well-specified but above all flexible buildings, combined with a wider immediate environment which is attractive to employees and provides the necessary support for work and recreation. As time went on the existing, and especially the newer schemes, with their emphasis on mixed uses and an enhanced public (or semi-private) realm, were developed or changed to meet these needs.

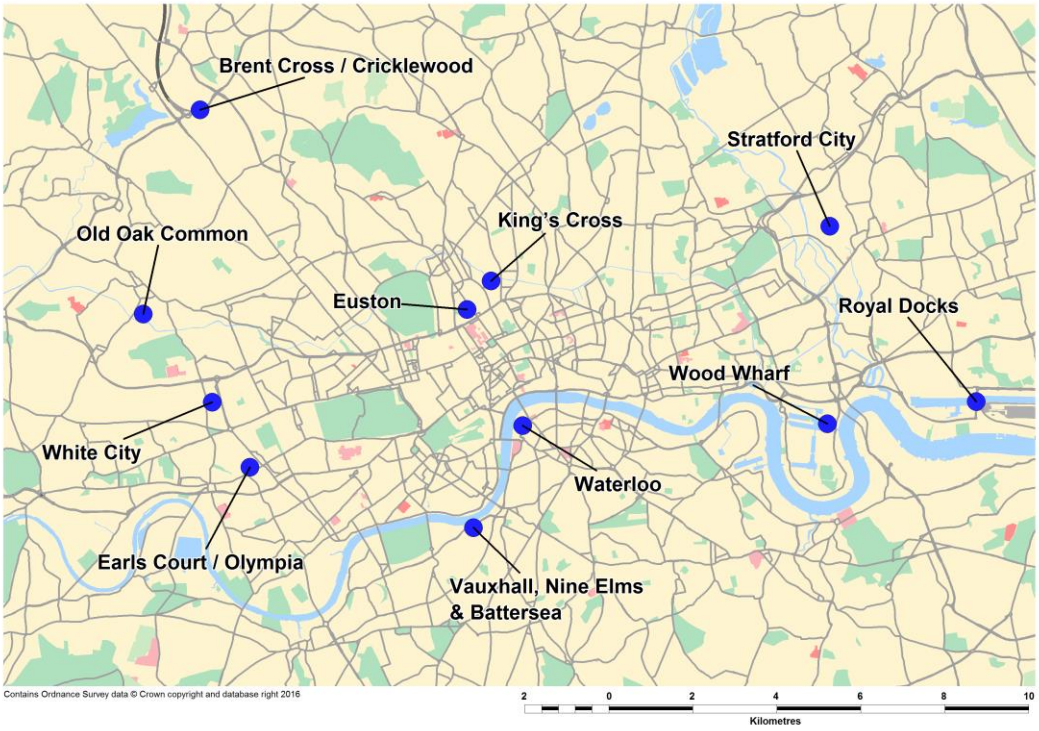
3.3.20 The mature schemes outlined above, except for Canary Wharf, were developed on the edge of the established Central London office market. The Ramidus paper identified a further set of schemes which were emerging or had the potential to develop as successful business hubs. Some of these later schemes are often some way away from the existing centre.

3.3.21 The position of the early schemes on the periphery of the CBD made movement to them rather easier for occupiers than going to an untried destination away from established office locations. To some extent the initial difficulties which Canary Wharf experienced supports this observation; accessibility needs to be good and trouble-free. However, success is also to a significant extent a question of scale: i.e. being big enough to develop an autonomous office environment with adequate infrastructure.

3.3.22 Stratford's initial success in establishing itself as a potential office location (see below) may have been a harbinger of the potential development opportunities which will be realised in locations outside the current central area (i.e. the CBD/CAZ). The designation of Opportunity Areas in the London Plan is at the heart of this, and are intended to provide substantial numbers of new jobs and homes. They will become the major focus for extending intensive development outside the central area.

3.3.23 A number of these locations are moving toward a position where development is either imminent, being actively prepared for, or is at least a potential possibility. These are examined below, and located on Figure 3.9. This illustrates the degree to which these potential new centres are, like Canary Wharf, located at a distance from the existing Central London office market.

Figure 3.9 Post-2015 mega schemes



Source: Ramidus Consulting

3.3.24 **King's Cross, N1** This development is now fast approaching maturity. Its original 2004 outline planning permission designated a total of 720,000 sq m gross of mixed uses, the final proportions to vary according to developer decision. In the end it looks as if about 316,000 sq m of net office floorspace will be produced, of which just over 200,000 sq m is now complete or under construction. A large proportion of the rest is now committed to be built, in the shape of a headquarters for Google, already resident on the site as a major occupier of other buildings.

3.3.25 The 27 ha site lies behind two main line termini (King's Cross and St Pancras), which together with their associated tube lines constitute the biggest transport interchange in London. Availability of land with unparalleled accessibility was the starting point for attracting occupiers, although initiating the development during the recession presented difficulties. The development of a new facility for Central St Martin's art college, arguably played a critical role in the scheme's success by establishing a lively centrepiece on the site, and in the subsequent attraction of TMT occupiers to the development.

3.3.26 After the securing the pre-let of a headquarters site to Google in 2013 leasing office space really took off. In all 260,000 sq m has been taken, two thirds in pre-lets, leaving 56,000 sq m of as yet unbuilt offices to be disposed of. The balance of development has moved some way in favour of residential, given the

flexibility inherent in the planning permission. Much of this is now underway with residential and student accommodation, as well as supporting retail and entertainment. This last is significant and will total 46,000 sq m when fully built out.

3.3.27 **Euston, NW1** Redevelopment of the station and its precincts has become embroiled in the discussion about the terminus for HS2, but opposition to the scheme together with entrenched opposition by LB Camden, are causing uncertainty in terms of office development. However, there are plans to create in the region of 300,000 sq m of office space at Euston. This would sit between Regent's Place and King's Cross, creating a ribbon of commercial development along the northern side of Euston Road.

3.3.28 **Stratford, E15** Similarly to King's Cross, much of the 31ha site was a major cargo transhipment hub, with large marshalling yards. This and adjoining areas of run down industrial uses formed the site for the Olympics. The regeneration of this area, allied to the location of the CTRL International Passenger station (completed in 2009) and the decision to build a 175,000 sq m shopping centre (now the busiest in the UK) has thoroughly changed its profile from a neglected secondary town centre to a major edge-of-centre location in its own right.

3.3.29 A swathe of developments associated with the urban redevelopment preceding and following the Olympics have included 5,000 housing units, the shopping centre, various other schools, retail and leisure facilities, and a new office complex, The International Quarter. This has a capacity for 400,000 sq m of offices; thus far, two buildings, totalling 76,000 sq m, are under construction, having been pre-let to Transport for London and the Financial Conduct Authority. Other adjacent developments, including HereEast, the converted broadcasting centre now attracting Tech companies, and a new UCL campus will further establish it as an office hub.

3.3.30 There remain some question marks over Stratford's success as an office location: the major occupiers are government organisations; no major commercial entity has moved there yet, and it is yet to establish recognition as a major commercial office centre. However, the Olympics raised the profile of the area and allowed the injection of public funds to provide the requisite rail capacity. On completion in 2019 Crossrail services will run through Stratford, giving it even better access to Central and West London.

3.3.31 There are strong reasons to believe that the area's full potential as a CAZ satellite, given its very high level of accessibility to Central London and the continuing rising real estate costs therein, could now be realised. The single most important caveat to this will be the on-going scale of delivery in and around Canary Wharf, as this sub-markets' established nature is likely to ensure its 'first choice' status over Stratford. The role of Stratford in helping to meet London's long-term capacity requirements is referred to in the conclusion to the employment and floorspace forecasts in Section 9.0.

3.3.32 **Waterloo, SE1** This is a designated Opportunity Area which has been identified as having the capacity for up to 15,000 jobs and 1,900 homes, to be created around the rail terminus. The major sites which have the greatest potential for commercial development are Elizabeth House (permission for 75,000 sq m of offices) and the recently initiated Shell Centre redevelopment, which will provide 75,000 sq m of floorspace as well as other uses, retaining its core occupier Shell plc. This has the potential to catalyse further development in and around the station and along the South Bank opposite the West End.

3.3.33 **Victoria, SW1** The £1bn Victoria Circle development, formally known as the Victoria Transport Interchange, is being built by a Land Securities/CPPIB joint venture around Transport for London's £700m upgrade of Victoria tube station. The scheme, known as Nova, comprises 56,000 sq m of offices, 18,000 sq m of residential, and 8,000 sq m of retail and leisure, and is nearing completion.

3.3.34 **Vauxhall Nine Elms Battersea (VNEB), SW8** This 200 ha development zone is on the South Bank of the Thames, mostly in the borough of Wandsworth. Until recently it comprised obsolete riverside functions and low density industrial uses. The area has recently been incorporated into the CAZ by the GLA and is regarded as having the potential to produce at least 8,000 jobs and 3,500 homes by 2026. Capacity has in fact been identified for up to 18,000 residential units, and 260,000 sq m of office space, as well as nearly 100,000 sq m of retail.

3.3.35 The construction of the new US Embassy has initiated the development, and now five schemes have completed and twelve are under construction (including the first two phases of Battersea Power Station with 1,300 homes and 100,000 sq m of commercial space in the redeveloped power station itself). Commercial development has been given an enormous boost by Apple's decision to take 46,000 sq m in the Power Station, and the developers are considering increasing the office element, especially in the light of slower demand for high-end residential. Development is being underpinned by improved access afforded by the extension of the Northern Line to Battersea, to be completed by 2020.

3.3.36 **White City, W12** A large area of previously mainly industrial uses, this development was initiated by the building of the Westfield shopping centre at Shepherds Bush in 2008. Existing rail (Overground) and underground facilities were improved by building two new stations. Two major sites, the BBC Television Centre and the Imperial West site (for Imperial College) are currently being redeveloped, in phases. The former is for a mixed redevelopment of up to 1,855,000 sq m of residential, offices, hotel and leisure uses. The latter will comprise a new research campus for Imperial College, including university facilities and commercial and residential to a total of around 93,000 sq m.

3.3.37 **Canada Water, SE1** A redeveloped Docklands site on the underground (Jubilee line) and the Overground (East London line) is a development opportunity as a result of a print plant closure, the replacement of a shopping centre, and the acquisition of a leisure park by the new landowner, British Land. Its proposal is for around 500,000 sq m of mixed residential, commercial, leisure and educational

uses, the latter involving an extension campus for King's College, London, on a 19.5 ha site. A masterplan is in preparation.

3.3.38 **Royal Docks, E16** Despite extensive residential development the docks complex still has significant commercial potential, despite its previous abortive office history. The major sites total around 30 ha. The main commercial area is the Royal Albert Dock, which has permission for a mixed-use scheme of around a third of a million sq m of mixed uses, 70% of which is commercial (office, light industrial), and Silvertown, where apart from extensive residential development, 165,000 sq m of commercial space is promised. The schemes are well established will substantial developers, and Crossrail will service the sites from 2018, and this greatly improved access might finally make the location viable for offices.

3.3.39 Chinese interest in the UK real estate market has increased recently with two very large schemes being planned in East London. At the Royal Docks, developer ABP has started a 440,000 sq m business park which is intended to act as a focus for Chinese firms moving to and operating from the UK. In addition, Chinese developer ASF is one of three bidders for the £1bn redevelopment of the Albert Dock Development Area, just to the east of the Royal Docks. The GLA is due to select a preferred bidder in December.

3.3.40 **Old Oak Common, NW10** In early-2015 the Old Oak and Park Royal Development Corporation was established, with powers over local planning. This covers a wide area, encompassing the Old Oak railway lands and the Park Royal industrial estate, and centres on the potential transport hub linking Crossrail and HS2 to the local rail and tube network. The transport access provides the logic for strategic development here, which aims to provide capacity for an estimated 25,000 new homes, the construction of a High Speed 2 station alongside Crossrail and the Great Western Main Line, and 65,000 new jobs across Old Oak and Park Royal. Again, the creation of an enhanced transport node connected to the centre of the city creates the justification for high density development. A major mixed-use scheme, Old Oak Park, on a 10 ha site. is at master planning stage, promoted by the landowner, Car Giant, in conjunction with London & Quadrant.

3.3.41 Similarly to Stratford, Old Oak Common has the potential to become a satellite office centre for the CAZ. It will experience major regeneration in the coming decades, and its accessibility will be transformed. It should be able to offer a cost advantage, and the scale of the venture will allow 'placemaking'.

3.3.42 However, the likely timescales needed to reach maturity under such a scenario should not be under-estimated, and such a scenario will be dependent upon sustained growth in the demand for the type of space (large floorplate, deep and highly-serviced buildings, managed environment) that the mega schemes have served so well to date. The role of Old Oak Common in helping to meet London's long-term capacity requirements is referred to in the conclusion to the employment and floorspace forecasts in Section 9.0.

3.3.43 **Earl's Court, SW7** A large but obsolete exhibition centre, now replaced by a new facility in East London, is the catalyst for the redevelopment of a 31 ha site bordered by three underground stations (Earl's Court, West Brompton and West Kensington). The site also includes existing public housing and an adjoining Underground site. While the development is largely a residential development, with 7,500 housing units, it also has permission for 80,000 sq m of offices. Phase two of the residential component, Lillie Square, is currently underway.

3.3.44 **Brent Cross-Cricklewood, NW2** There are plans here, now embodied in a masterplan which has planning permission, for a metropolitan-scale town with a new Thameslink station. Separate developers are expanding the Brent Cross retail centre and the urban 'new town' to its South, to which it will be linked. The aim is 10,000 homes and 22,000 jobs, the latter accommodated in up to 400,000 sq m of commercial space.

3.3.45 The location will have good fast access to the centre. It could be regarded as part of a group of non-peripheral centres, like the Royals and Canada Water which could be viable once existing 'new' centres (King's Cross, Stratford, VNEB and White City) are fully mature (i.e. established and fully occupied). The development of Old Oak Common (above) could also have an influence over the pace and scale of development here.

3.3.46 **Key policy implication**

3.3.47 The foregoing analysis, and its predecessors in earlier LOPRs, demonstrates that the nature of the Central (and to a less extent, wider) London office market is evolving. The mega schemes have allowed the physical capacity of London's economy to grow rapidly and help maintain the capital's critically important Global City role.

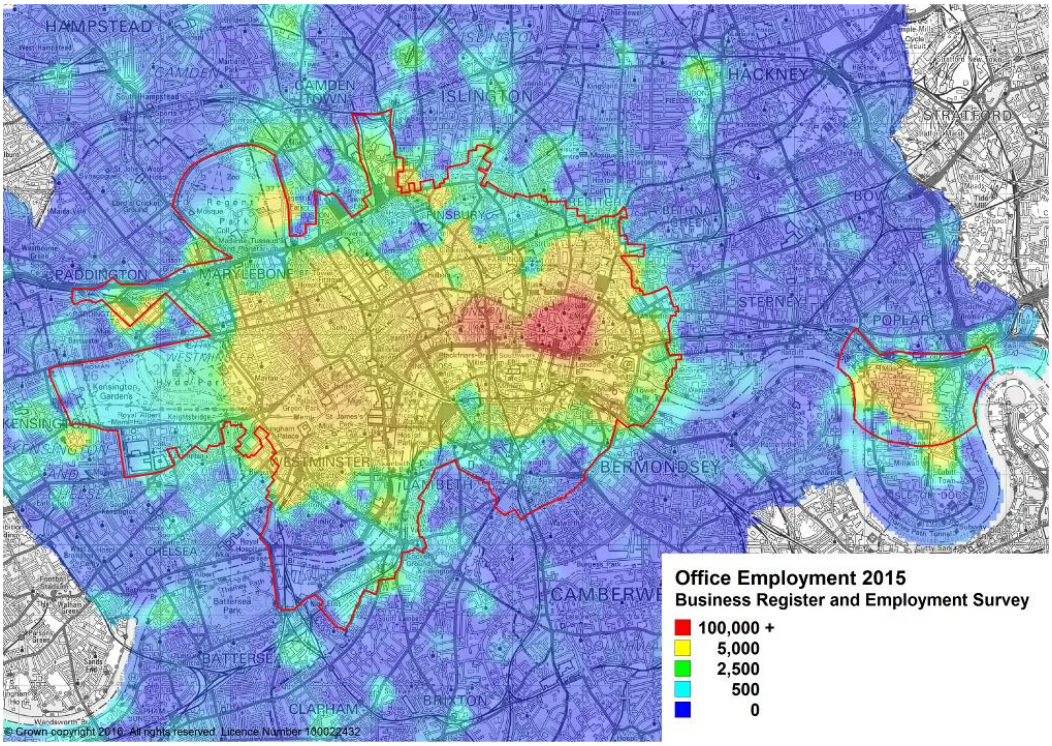
3.3.48 At the same time, they have changed the spatial structure of business: the historic duality of the tightly-defined City and West End markets has broken down; and companies are far more footloose than they ever were. As a consequence of these trends, the Central London economy has grown, physically, combining continued peripheral development (e.g. Tech City on the northern City fringe and VNEB) and with establishment of new satellite developments, such as Stratford.

3.3.49 We believe that the existing boundary of the CAZ should be refined, with two specific purposes in mind. First to recognise the crucially important role of 'CAZ satellites', both existing and potentially emerging, and affording those centres the same employment space policies as the existing CAZ. Figure 3.10 shows the distribution of office employment around the CAZ.

3.3.50 The second reason is to address the needs of smaller occupiers and, in particular, those seeking space at rents which they can afford. Such firms typically agglomerate in secondary space around the more expensive core area in the CAZ fringe (this point was referred to in the summary of Section 3.2). It is in this area that the viability of such firms is being threatened by the growing core area and by

conversions from office to higher value residential use. At a time when London needs to be encouraging enterprise and an 'open for business' approach, such firms need to be nurtured.

Figure 3.10 Office employment density and the CAZ



Source: Ramidus Consulting

3.3.51 We believe that the CAZ could expand in some areas, notably to the North and East. Crucially, we believe that the CAZ could itself be polycentric. Canary Wharf is already included as a satellite. Emergent centres in Old Oak Common and Stratford might, once they are more established, be treated similarly as 'CAZ satellites'.

4.0 Central London office market dynamics

4.0.1 This section describes the recent history of Central London office supply and demand dynamics. It begins with a few methodological points, particularly regarding data continuity. The following part summarises the relationship between economic growth and office rents, first in the City of London and then more widely across Central London.

4.0.2 Next, an examination of take-up and availability highlights the evolution of sectoral and quality differences over the last decade or so. This is followed by an analysis of the evolution of new supply and expectations going forward. The section concludes with an overview of the contemporary office market, covering the main supply and demand indicators.

4.1 Methodology

4.1.1 Central London dominates the London office market. The LOPR series has analysed office construction and planning activity since 1995 across a central area which takes in most of the office stock in the 11 Inner London boroughs.[72] Official floorspace statistics demonstrate that total Central London office stock stood at 20.9m sq m in 2012, compared to 5.8m sq m in the rest of London.

4.1.2 In 2000, the respective figures were 18m sq m and 5.7m sq m: Inner London stock continues to grow, while Outer London's remains static, new development being balanced by loss due to change of use, largely to residential. What development occurring in the latter has mostly taken place in West London, indicating an increasingly obsolescent stock elsewhere (Stratford excepted).

4.1.3 In the previous edition of the London Policy Review (LOPR 2012) the evidence base for the Central London analysis was derived from market and planning data terminating at 31st December 2011. In this edition, the evidence base is initially taken up to 31st December 2015, with the intention of extending this to the end of 2016 in a supplementary edition to be published in January 2017.

4.1.4 The evidence base of market indicators (availability, take-up, rents) continues with the same source as in previous reports. However, this source (previously from property advisors DTZ), has now undergone major changes occasioned by the merger of DTZ and Cushman & Wakefield. Current data sets available from the merged company are based on DTZ data; but due to reconfiguration and elaboration do not provide the same time series.

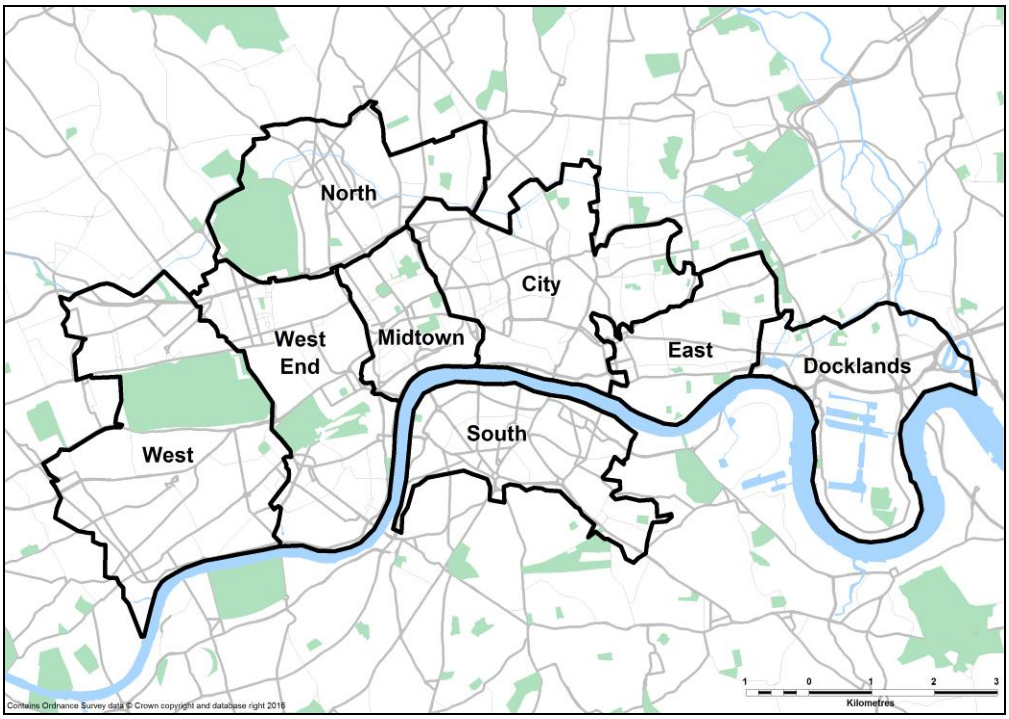
4.1.5 As a result, the sub-market areas have changed marginally[73], and are shown in their revised form in Figure 4.1. The West End, Midtown and the City have been known in the past as the 'core' markets, because of their historic size and

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

[73] The City market has been extended to the North West to include fringe areas in Hackney and Tower Hamlets and the North reduced marginally by inclusion of part of NW1 into the West End.

importance. But with changes in the structure of the office market, the other surrounding sub-markets are no longer regarded a 'fringe' or 'peripheral'. The term 'core' is retained in this report, to refer to the prime locations in the West End (the districts of Mayfair and St James's) and the City (the parts of EC2, EC3 and EC4 around the Bank of England) where the highest rents are achieved. For some types of analysis below figures are presented for the North and West sub-markets together, and similarly for the East and South.

Figure 4.1 Sub-markets of the Central London office market



Source: Ramidus Consulting

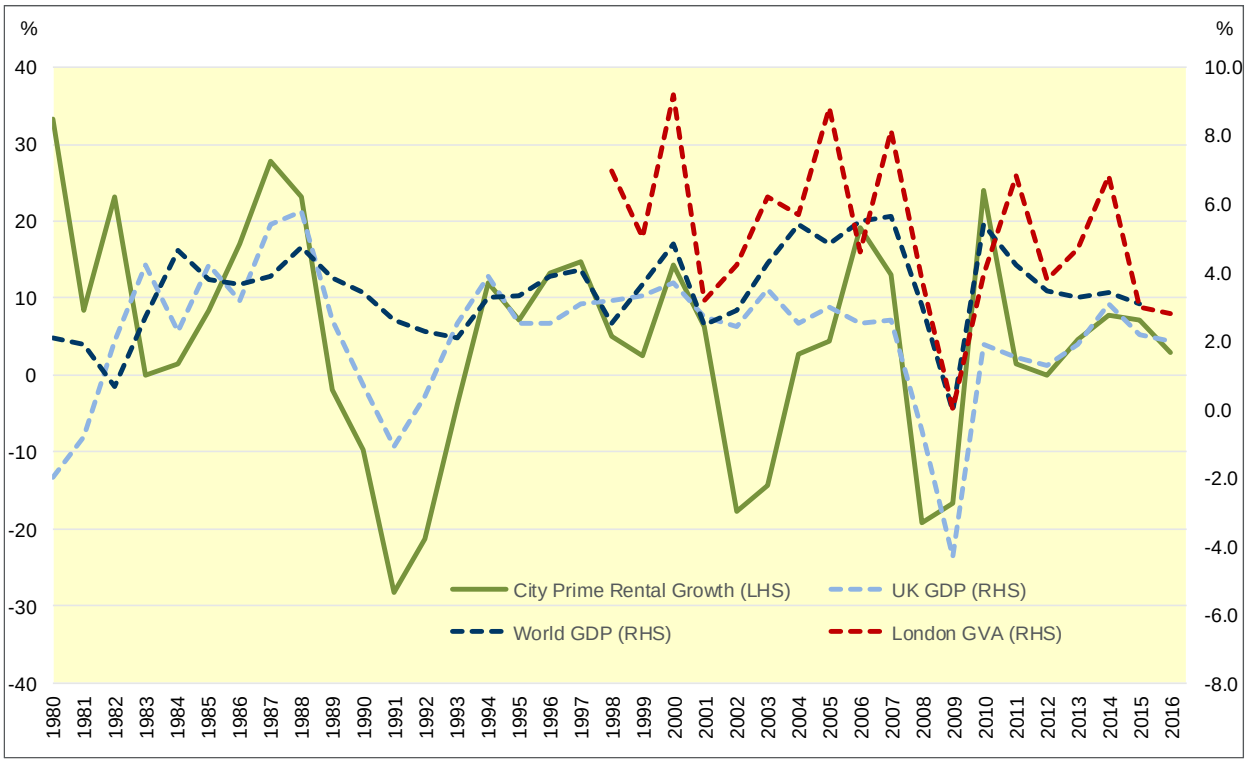
4.1.6 For planning data, LOPR 2017 has used the London Development Database, based on the 11 Inner London boroughs referred to above.

4.2 Economic growth and rents

4.2.1 The influence of the domestic and international economy on the dynamics of the property market is well understood. The economic cycle, albeit lagged, determines the level of demand and availability of second-hand space and demand for newly built offices, which in turn impacts the pace and direction of rental growth. This is illustrated below in Figure 4.2, which compares national GDP growth, by various measures (World, UK and London) with City take-up.[74]

[74] Note that the City market is used in Figures 1.2 and 1.3 because it is the only market for which sufficient time series data is available.

Figure 4.2 Economic growth and City prime rental growth, 1980-2016



Sources: Cushman & Wakefield, IMF, ONS

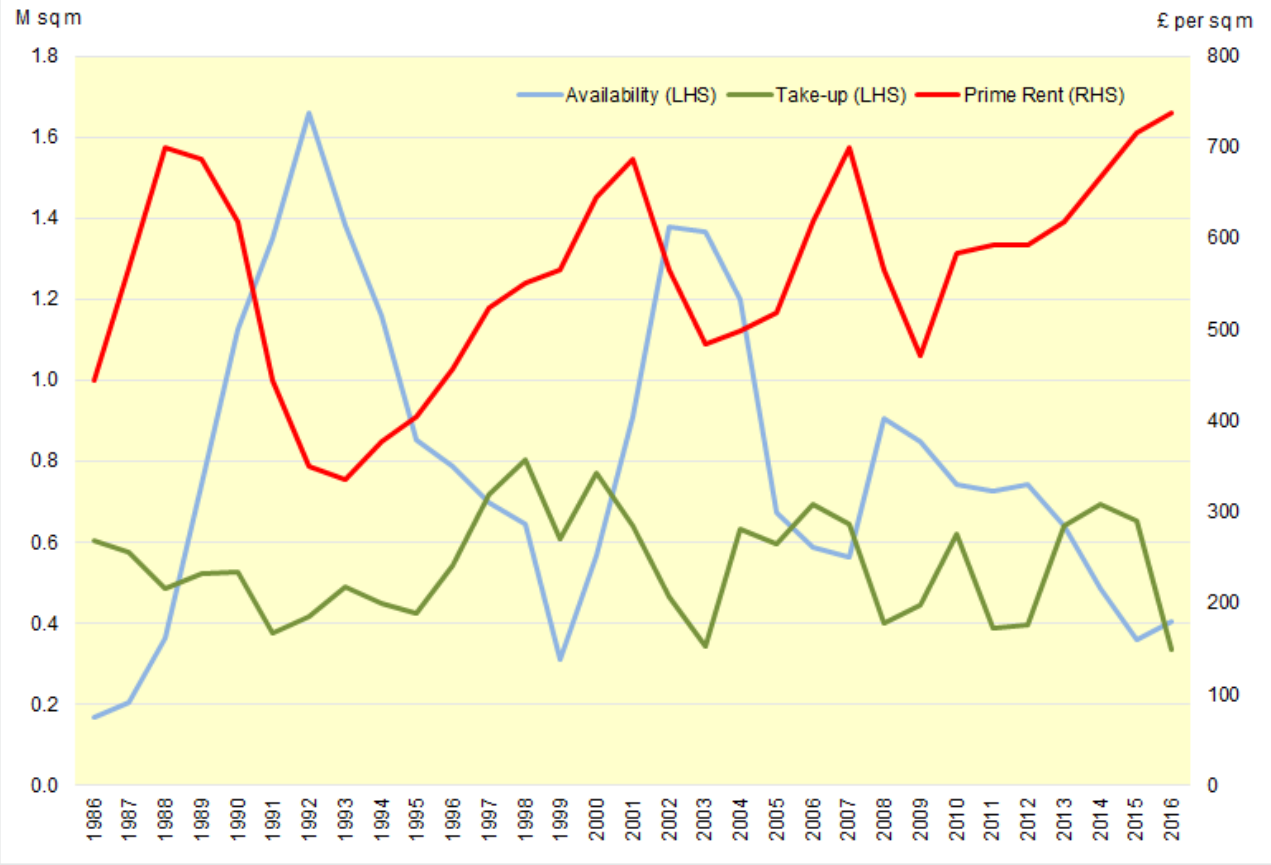
4.2.2 Take-up is more volatile than the various measures of GDP growth, and lately has been more sensitive to the global rate of growth rather than the UK's. But from 2011 onwards, London's GVA (Gross Value Added) parted company from both the UK and the global economy, the latter dragged down by low, developed world growth and the failure of world trade to recover from the recession. Recovery in London's GDP in 2009-10 led to a revival in office take-up and thus, in a context of diminishing supply, to a spike in rental growth. This was followed by two years of marking time in 2011-12, before moving up at a moderate rate in 2014-15 (but not a major recovery by the standards of previous economic cycles).

4.2.3 The 2015 GVA growth for London, at 3%, is substantially faster than the UK as a whole's 2.2% for that year.[75] GLA Economics' latest estimate is for a relatively healthy 2.8% in 2016, with a slower 2% and 2.3% forecast for 2017 and 2018 respectively. This is by no means an abrupt slowdown, and not as acute as that expected for the rest of the country. Employment growth is also expected to slow appreciably, but not turn negative. This suggests that the downturn in leasing activity being experienced in 2016 will not worsen appreciably, and that rental growth will accordingly not suffer an acute reversal (the evolution of the market in 2016 is dealt with in detail in Section 4.6 below).

[75] GLA Economics (2016) *London's Economic Outlook* Autumn 2016

4.2.4 Changes in rental growth, especially turning points in the trends from positive to negative, or from greater or lesser rates, are coincident with major changes in availability. This indicator has characteristically been rather more volatile than take-up in the City (Figure 4.3), as it has elsewhere in Central London. This has reflected not only lower demand for space, but also the propensity of existing occupiers to put space back onto the market at the same time, boosting the total. Nevertheless, the historic trend of rising take-up and positive rental growth versus declining availability shows that after 2009 the growth stage in the latest property cycle continued until 2015, but is now showing increasing signs of moving into contraction.

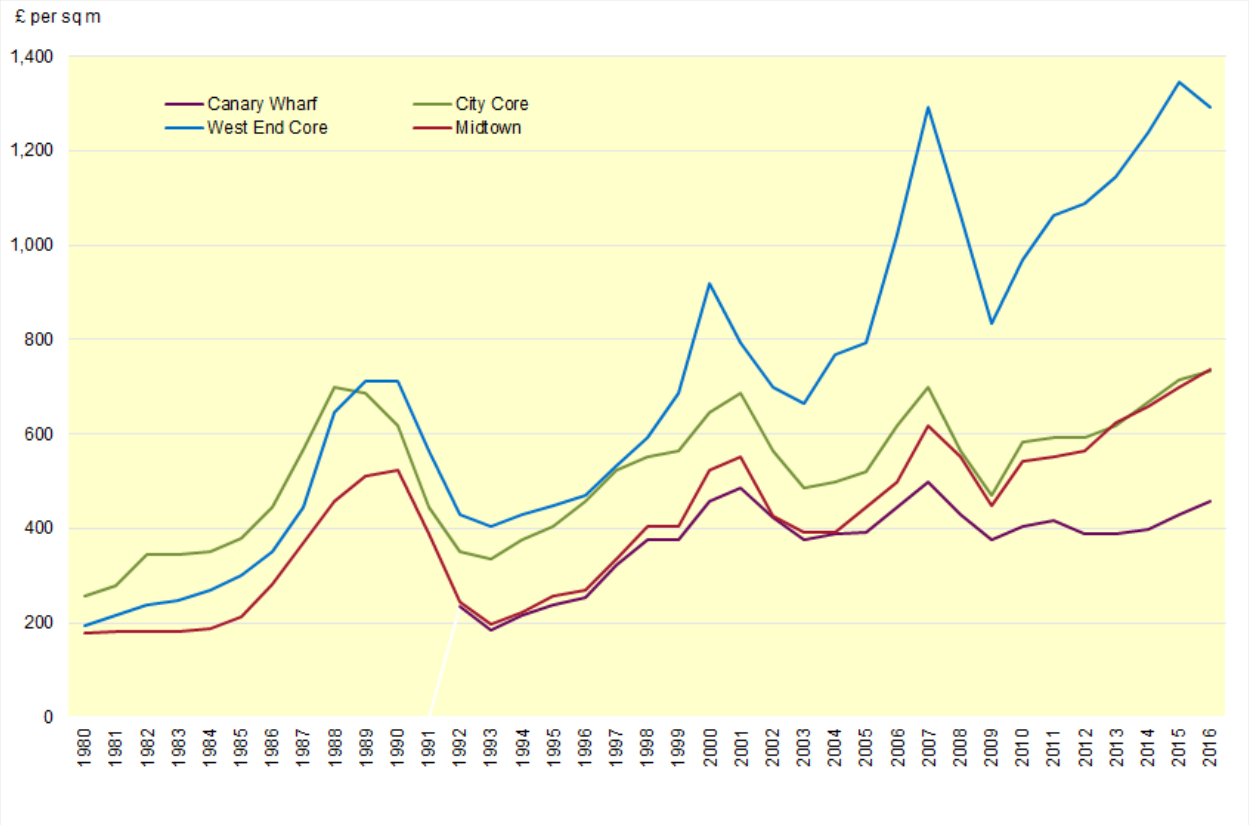
Figure 4.3 City take-up and availability versus prime rents, 1980-2016



Sources: Cushman & Wakefield, Ramidus

4.2.5 More widely, across Central London, rental growth has followed the cyclical evolution of supply and demand. Nominal rents, as measured by prime rental values, are shown in Figure 4.4. The City's historic status as the most expensive office location was overtaken by the West End during the downturn of the early-1990s, as the establishment of Docklands and other fringe City office markets developed and provided competing supply. From the late-1990s, West End prime rents moved very clearly ahead of the City.

Figure 4.4 Prime rental growth in Central London sub-markets, 1980-2016



Source: Cushman & Wakefield

4.2.6 Canary Wharf rents have remained at a 20-30% discount to City core prime rents, continuing to provide price competition, while at the same time, offering a high level of office specification and high quality of support services. Transport accessibility has been assured by the Jubilee Line, albeit that its status continues to be offset by its reputation as a financial sector monoculture. But Midtown rents (defined as the Holborn/High Holborn area) have moved from being at a discount to the City to parity in recent years, as shortage of supply and increasing demand have taken effect. In fact the major trend in Midtown has been toward colonisation of its western fringes by West End occupiers, searching for lower rents. This has led to far higher rental levels in Covent Garden than in Holborn: at the end of 2016 prime rents in the former reached £942 per sq m, versus £737 per sq m for the latter.

4.2.7 Office rental growth has not, generally, kept pace with inflation. Its performance has been very different from the rise in residential values, which have consistently exceeded rising prices over the last 25 years. If we look at the growth in the value of office rents in the City and the West End from 1980 to 2015 we see that City rental growth has been well below inflation (measured in RPI terms). It registered a 180% increase over the period, versus a 350% rise in the general price level. This contrasts with the West End where growth has outstripped inflation considerably: prime rents rising nearly 600% over the period.

4.2.8 Moreover, most of this rise had taken place by 1989, the peak of the 1980s property cycle, with little subsequent net growth. Development viability has been retained outside the West End, despite this poor performance, by increasing the build density, and thus the amount of floorspace produced in relation to site size. Within the West End increasing density has been more difficult due to planning and heritage constraints, and here refurbishment has been more favoured than elsewhere.

4.2.9 The West End's prime rents have been higher than the City's since the early-1990s. This divergence has intensified in the past decade. Thus, rents in the West End core and its associated districts have been growing in real terms, but in the City and surrounding districts they have not. At the same time, rental differentials have been diminishing between the City Core and surrounding districts (they were between 60% and 80% of the Core level in 2000, but are now 80%-90%). However, the differentials between districts have remained relatively close and stable in the West End, at between 50% and 75% of Core.

4.2.10 Midtown (covering the WC1 and WC2 postcodes under the historic DTZ definition) has more or less disappeared as a separate office market characterised by a distinctive occupational base (legal and professional services in particular). The Covent Garden and Strand districts have become more important as occupiers from the West End have migrated east. And now this trend to colonisation from adjacent markets from the West End is affecting Holborn and Clerkenwell, with the latter also being favoured by the Tech sector.

4.2.11 Changing rental levels and availability of suitable stock have thus resulted in a broadening of the Central London market, making it easier to view it as a series of districts or 'villages' with less contrast in terms of occupier profile. The historic occupier clusters remain, notably for insurance, but occupier mobility between sub-markets by other business sectors has been increasing.

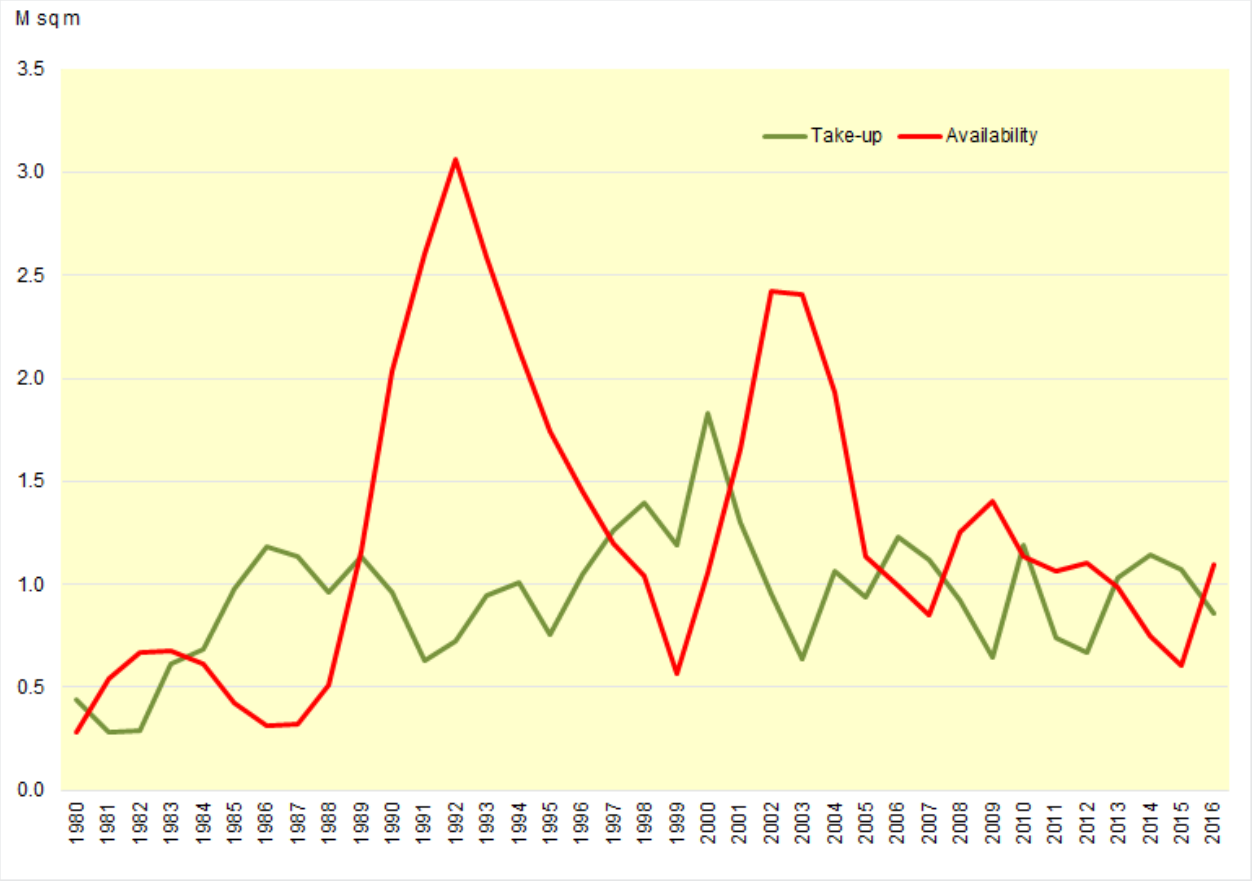
4.2.12 The establishment of a series of new business centres, starting with Broadgate, moving on to King's Cross, More London, Paddington, Regent's Place and now Stratford, have attracted major occupiers to move to new locations away from the old cores. As the model for 'place-making' has evolved, the centres have become more actively mixed-use, providing ambience and support services to attract occupiers. Apple's recent take-up of 50,000 sq m at Battersea Power Station, an 'unproven' office location, is a decision that reflects cost sensitivity and need for adequate accessibility, combined with the necessary scale and distinctiveness for the brand. As such it is emblematic of this trend.

4.3 Take-up and availability

4.3.1 Central London take-up and availability (Figure 4.5) have generally been inversely related, but this historic pattern has broken down to some extent since the recession. While take-up fluctuated post-2008, availability went into a continuous decline, before reversing in 2016. The major factor seems to have been office to residential conversion, where poor and even good quality second hand space has been removed from the market to effect a change of use. This accounts for the fall in

the share of second hand availability from 75-80% in the early-2000s to around 50% of total availability now.

Figure 4.5 Central London take-up and availability, 1980-2016



Source: Cushman & Wakefield

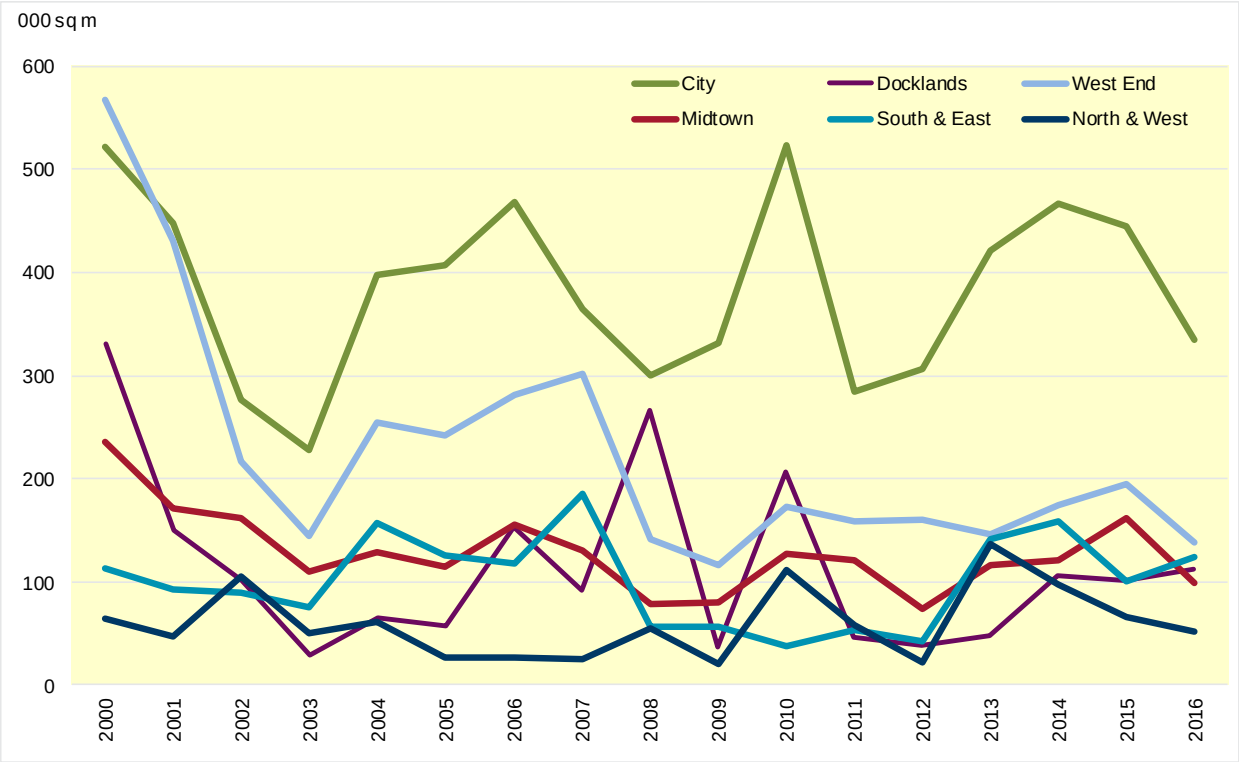
4.3.2 Take-up declined by 20% in 2016 across Central London as a whole, with sharper decline experienced by the core markets: the City and the West End fell by 30%, Midtown by 45%. The impact was less serious elsewhere in Central London, and in Docklands and the South & East it increased (Figure 4.6). Over the longer term sub-markets have tended to move in tandem, the main structural change being the decline in importance of the West End in term of take-up volume.

4.3.3 The West End suffered with other sub-markets in the recession but has not so far recovered, in contrast to the City, where leasing volumes responded markedly more strongly in the recovery phase in 2013-15. The West End dynamic has largely been a consequence of the growth in office-to-residential conversions, allied to the creation of new office capacity in locations outside the core markets. Shortage of new supply in the core markets (Mayfair and St James's) has driven rents upward and encouraged occupiers to relocate away from the West End.

4.3.4 The recession of 2009-10 is now well in the past, but its consequences, in terms of increased debt burden, government policies (notably austerity) and central

bank monetary policies (QE and interest rates) are still with us, and presently look set to remain major factors in the outlook for the UK economy for some time to come. To this we must now add Brexit (discussed at length in Section 2.1) which, it is generally expected, will have a significant impact in the medium-term. Even if negotiations go smoothly, the lengthy period of uncertainty in prospect will act as a brake on market activity, already being reflected in the increased time it is taking for deals to reach fruition.

Figure 4.6 Take-up in major sub-markets, 2000-16



Sources: Cushman & Wakefield, Ramidus

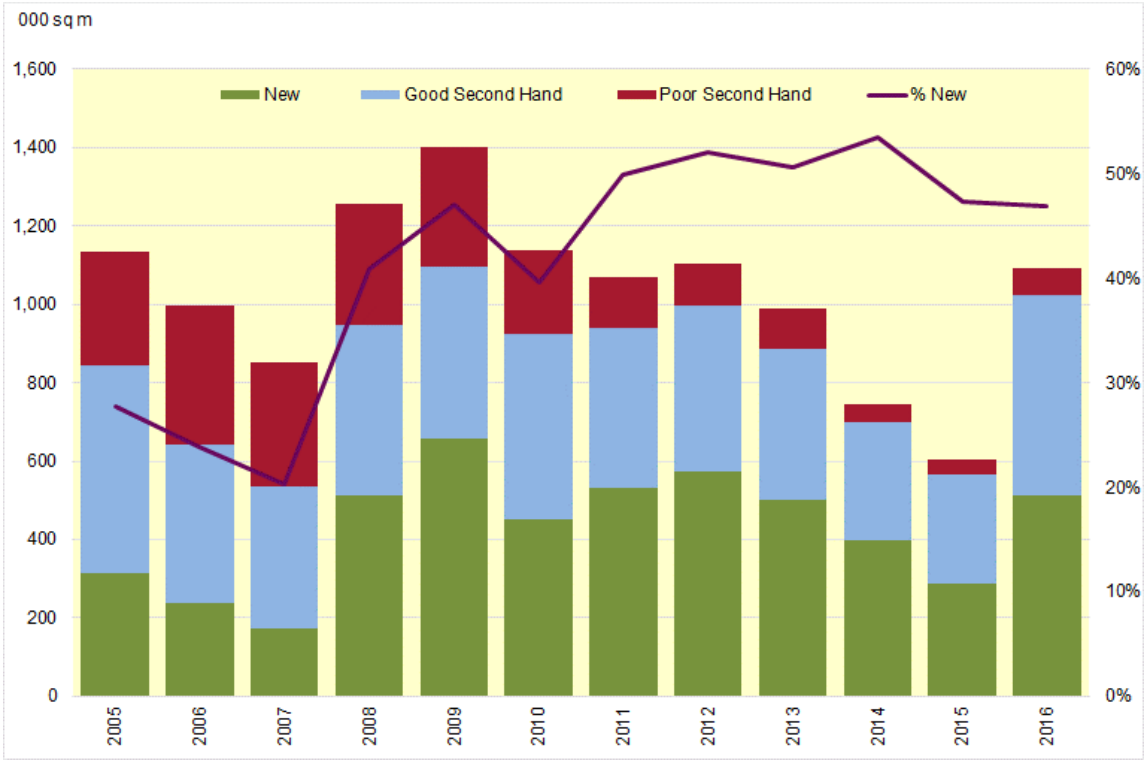
4.3.5 **Availability by quality.** Figure 4.7 gives year-end values for availability by quality. In the aftermath of increased availability in 2009 the share of newly built or refurbished space in availability increased significantly, to around 50%. This was in the context of declining availability due to increased take-up. But the outcome was also the result of changing levels, over time, of the supply of newly marketed space to the Central London office market.[76]

4.3.6 The supply of newly built space delivered to the market increased from 2012, ahead of the increase in demand, but as this demand 'caught up' the amount of newly built space available started to fall. But due to the diminishing supply of

[76] Newly marketed space is the supply side of the supply-demand balance, while take-up (and to a lesser extent withdrawals from marketing) is the (satisfied) demand side. In other words, the change in availability is simply the addition of newly supplied space to existing availability, minus take-up (and an adjustment for withdrawals).

second-hand space coming onto the market the proportion of newly built space in availability rose. The falling amount of second-hand space coming onto the market was a consequence of both the recycling of obsolete second-hand space into residential use (a long-term structural factor), and the lack of immediate threat to company profitability in the aftermath of the recession, which reduced the need to rationalise headcount and, in turn, floorspace). Another factor which supressed second-hand supply has been a rise in tenants re-gearing leases or re-leasing *in situ* (the latter deduced from the stable level of the take-up to stock ratio in the context of falling lease lengths).

Figure 4.7 Central London availability by quality, 2005-16



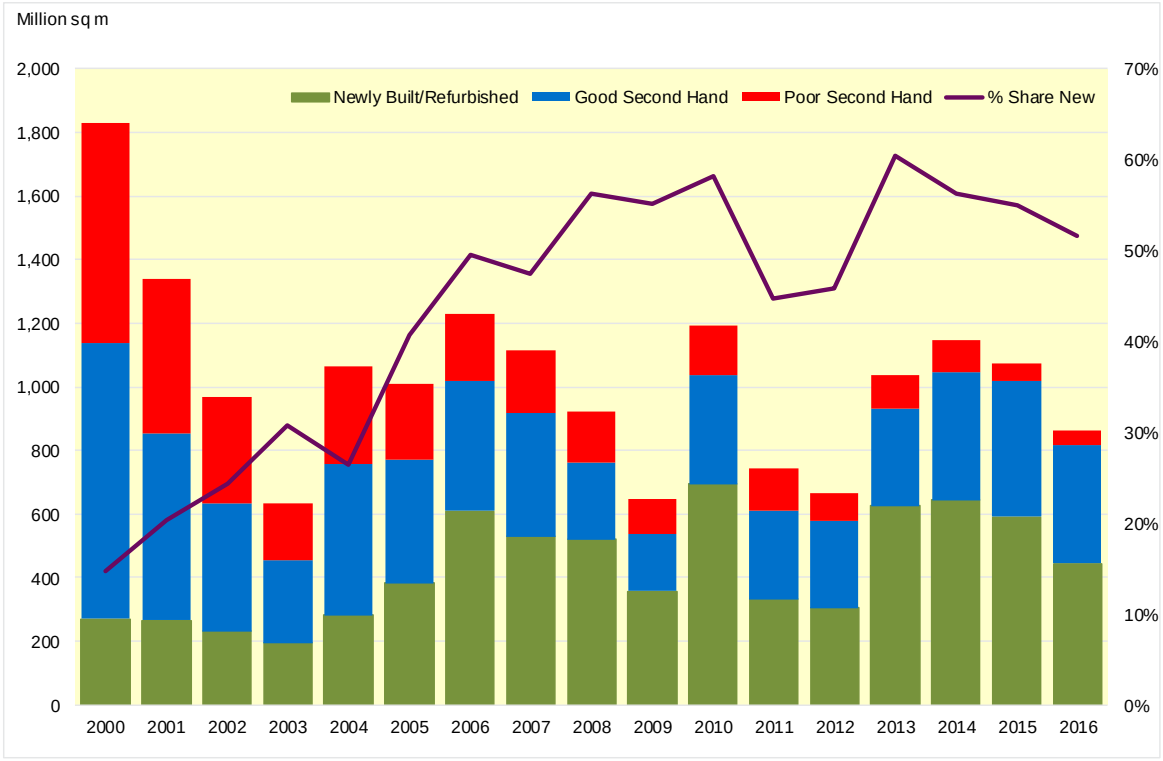
Source: Cushman & Wakefield

4.3.7 **Take-up by quality** As recession took hold, take-up in Central London fell sharply, but appeared to recover in 2010, due to the impact of 260,000 sq m in pre-leased and owner occupier deals (which reflects anticipated demand for space upon completion several years hence). However, despite continuing pre-letting, the volume of new take-up fell back in 2011 and 2012, while the volume of second-hand space leased remained at a similar level (Figure 4.8). Occupier appetite for immediate occupation of new premises continued to be put on hold during this period, as business prospects still appeared weak.

4.3.8 The volume of newly built or refurbished space taken recovered in 2014, as total take-up returned to a near long-term average level. In fact the proportion of newly built space has become significantly more important in the pattern of satisfied

demand by quality. Prime rents have risen, and this in turn, as we shall see in the next section, has encouraged development supply.

Figure 4.8 Central London take-up by quality, 2005-16



Source: Cushman & Wakefield

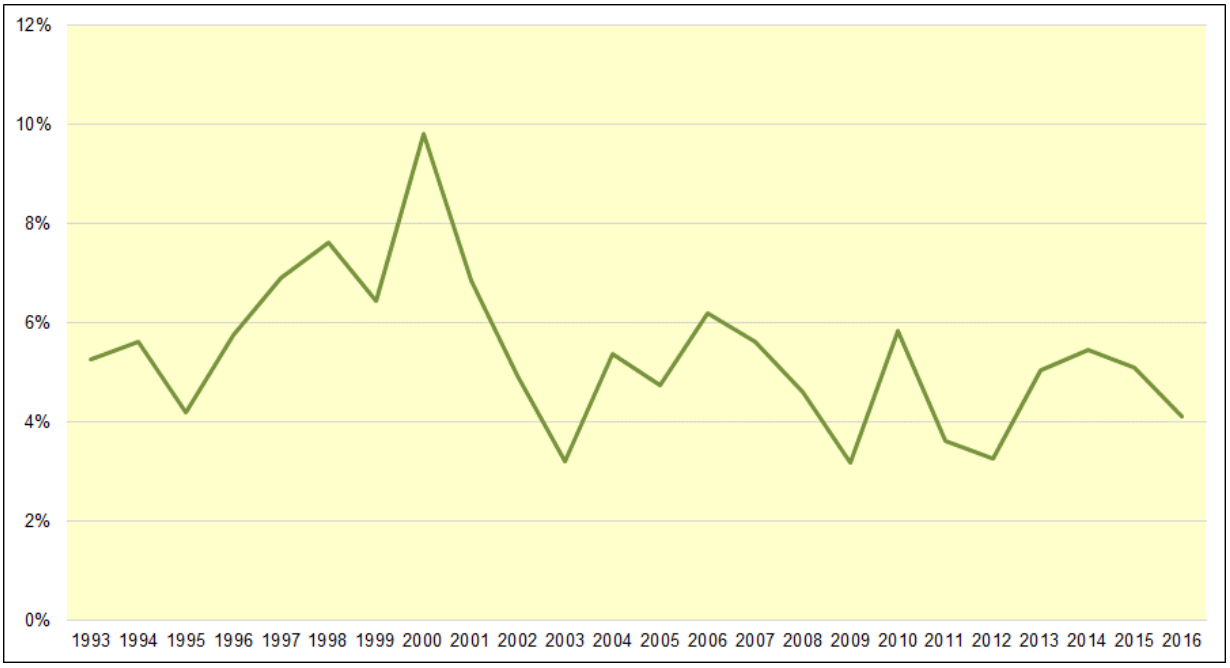
4.3.9 **Take-up and stock** In cyclical upturns the ratio of take-up of commercial floorspace to stock increases, and conversely in recessions, it decreases. The latter decline is amplified by the cyclical increase in deliveries of development floorspace, which normally 'overshoots' property cycles. Figure 4.9 shows the Central London ratio of take-up to stock: the ratio has fluctuated between 3% and 6%; higher at the peak, lower in recession. The exception was the peak of the 2000 cycle (1998-2001), where pre-lets to the financial sector combined with accelerated take-up by the 'dotcom' sector to move the take up ratio well above the 6% level.

4.3.10 The evolution of the take-up ratio is a good indicator of the evolution of the property cycle, as it combines a demand measure with the impact of development supply. The faster decline in the ratio in 2016 after a slight fall in the preceding year shows that the property cycle has turned.

4.3.11 Unless the political and economic news removes the current uncertainty, and at this point it does not seem likely until at least some time after the triggering of Article 50, occupational demand will be quiescent. Over the next two years there might also be a diversion of demand to rival centres (see Section 2.1), although at

this stage this is unquantifiable. Thus the decline in activity becoming apparent as 2016 has progressed will be followed, in all likelihood, by further decline in 2017. By which time rental values will have also turned downwards.

Figure 4.9 Ratio of take-up to stock in Central London, 1993-2016



Sources: Cushman & Wakefield, Ramidus

4.3.12 **Take-up by sector** The pattern of take-up by business sector over the past decade (Figure 4.10) shows an overall decline in financial sector activity, especially if we compare the 2005-10 period with 2011-16. The decline in financial sector activity occurred sometime after the recession itself, and was the result of longer term factors rather than immediate disaster (Leman's demise apart). As CBRE summarises, following the financial crisis of 2007-08 "*banks have undergone significant restructuring to eliminate unsustainable functions, repair their balance sheets and combat declining profitability*".[77] Legal take-up, associated with the financial sector, has followed a similar pattern, even declining in activity post-2010, while professional service take-up has remained stable.

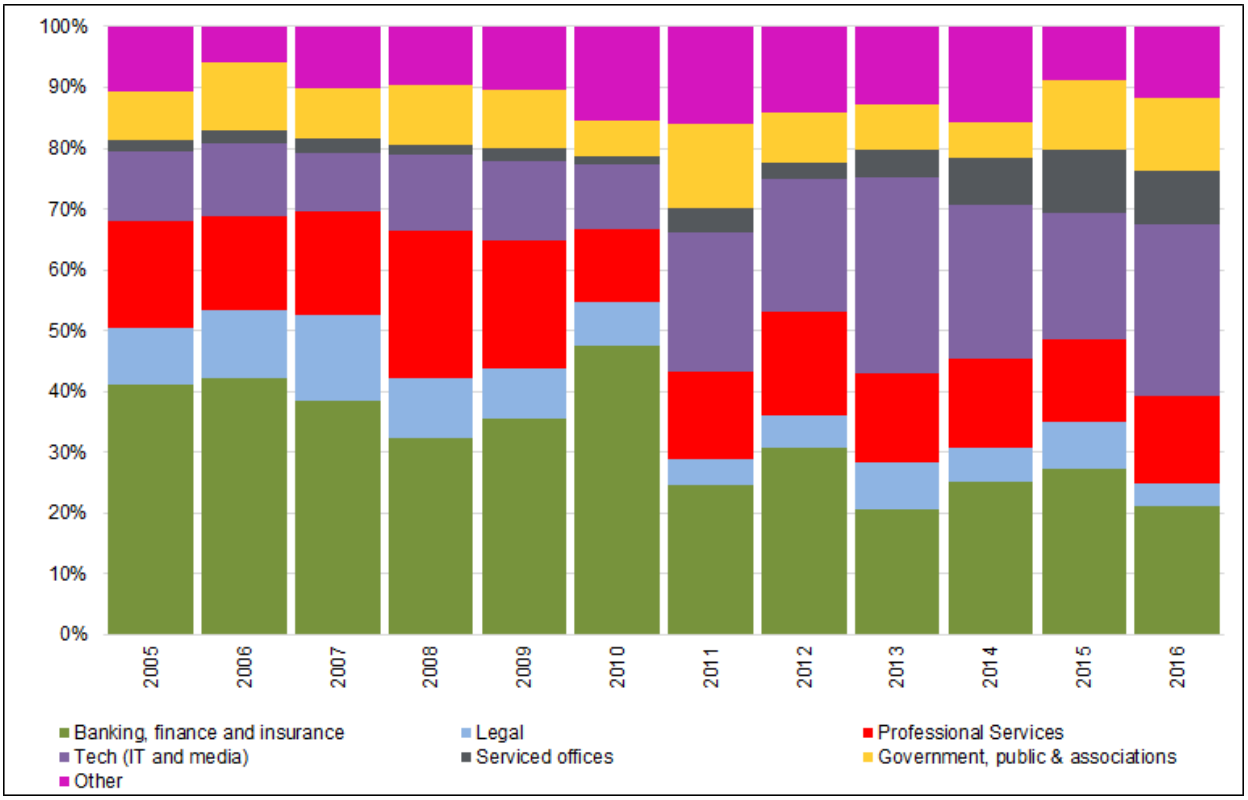
4.3.13 The big 'winner' in occupier activity has been the Tech (IT and media) sector, whose volume of leasing doubled post-2010. The sector overlaps with other business sectors because of its potential to invade their product areas, so to some unknown extent its expansion may be a partial function of such 'colonisation'.

4.3.14 The other big winner, reflecting occupier desire for more flexible space, and the shift to self-employment and novel workstyles, is the very strongly expanding serviced office sector. This also overlaps with Tech, to the extent that the latter

[77] CBRE (2016) *Financial London* May 2016

preferentially occupies flexible space, although many other business sectors are now evidently attracted to this form of office space.

Figure 4.10 Take-up by business sector in Central London, 2005-16



Source: Cushman & Wakefield

4.4 Longer term stock trends

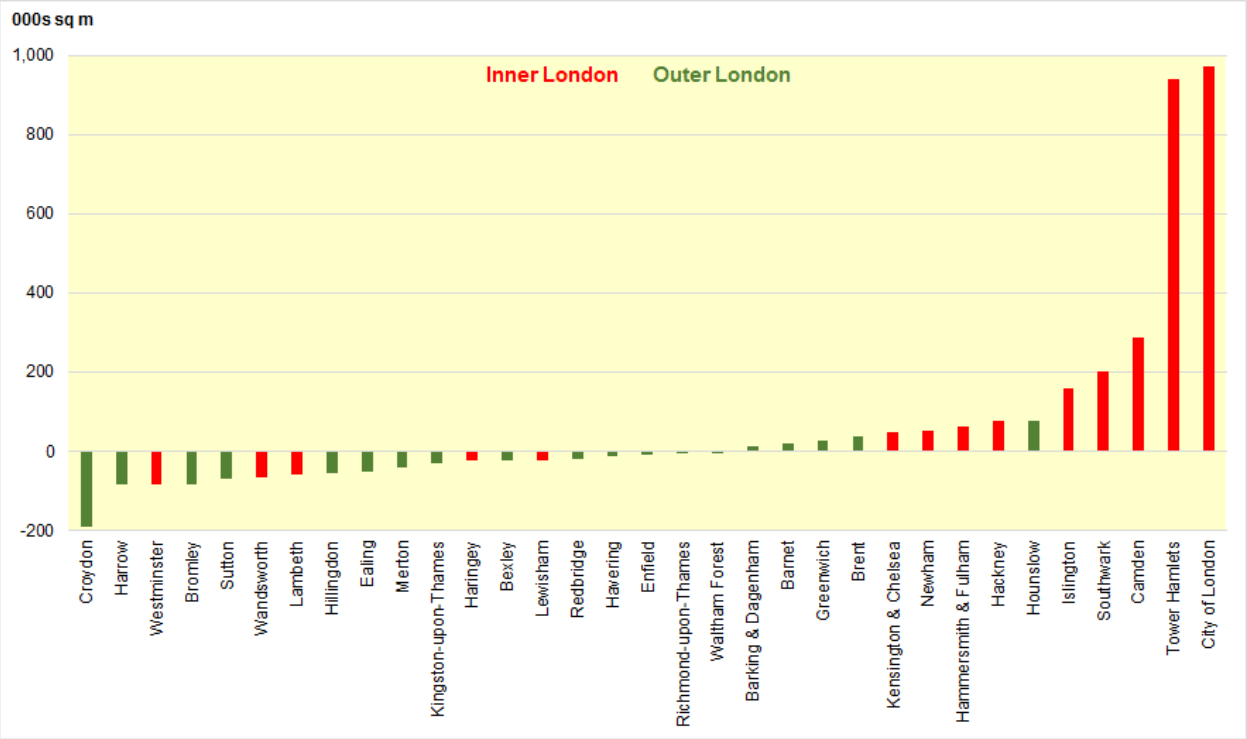
4.4.1 Since the previous LOPR in 2012, the Valuation Office Agency has released new stock data. In this sub-section, we review the key trends since 2000. For ease of reference, we include both Inner and Outer London here, and the latter should be cross-referenced to Section 6.0 which analyses changes in Outer London. Appendix Two contains a table showing the data, year-by-year, for each borough.

4.4.2 Figure 4.11 shows the change in stock in square metres. The huge divergence between boroughs is immediately apparent. As one might expect, the City of London and Tower Hamlets (Canary Wharf) dominate the growth in stock, each with close to 100,000 sq m. Camden, Islington and Southwark also put in strong performances. The chart shows large losses in Croydon (at almost 200,000 sq m) and Bromley, Harrow, Sutton and Westminster.

4.4.3 Figure 4.11 also distinguishes Inner (red) and Outer (green) London. It is also apparent that Outer London has suffered disproportionately in terms of stock shrinkage. This point is further amplified in Figure 4.12, which presents the VOA

data in terms of percentage losses. The Inner London boroughs[78] of Haringey, Lambeth, Lewisham and Wandsworth have suffered significant percentage change in stock (along with to a lesser degree, Westminster). The remaining large losses are all in Outer London.

Figure 4.11 Office stock, sq m, by borough, 2000-16



Source: VOA (2016) *Floorspace Statistics*

4.4.4 There are one or two unexpected results. For example, both Barking and Brent in Outer London grew significantly. The larger losses in the Inner London Boroughs of Haringey and Wandsworth are surprising but possibly explained by office-to-residential conversion activity. The contrasting fortunes of Hounslow (gain) and Hillingdon (loss) are also intriguing given the proximity of both to Heathrow.

4.4.5 The graphs underline the point made elsewhere in this report that Central London is growing compared to Outer London, not just in absolute terms as might be expected, but also relatively, and within Central London the impact of residential conversion on the West End can be seen in the losses in Westminster.

[78] As defined by the VOA

Figure 4.12 Office stock, % change, by borough, 2000-16

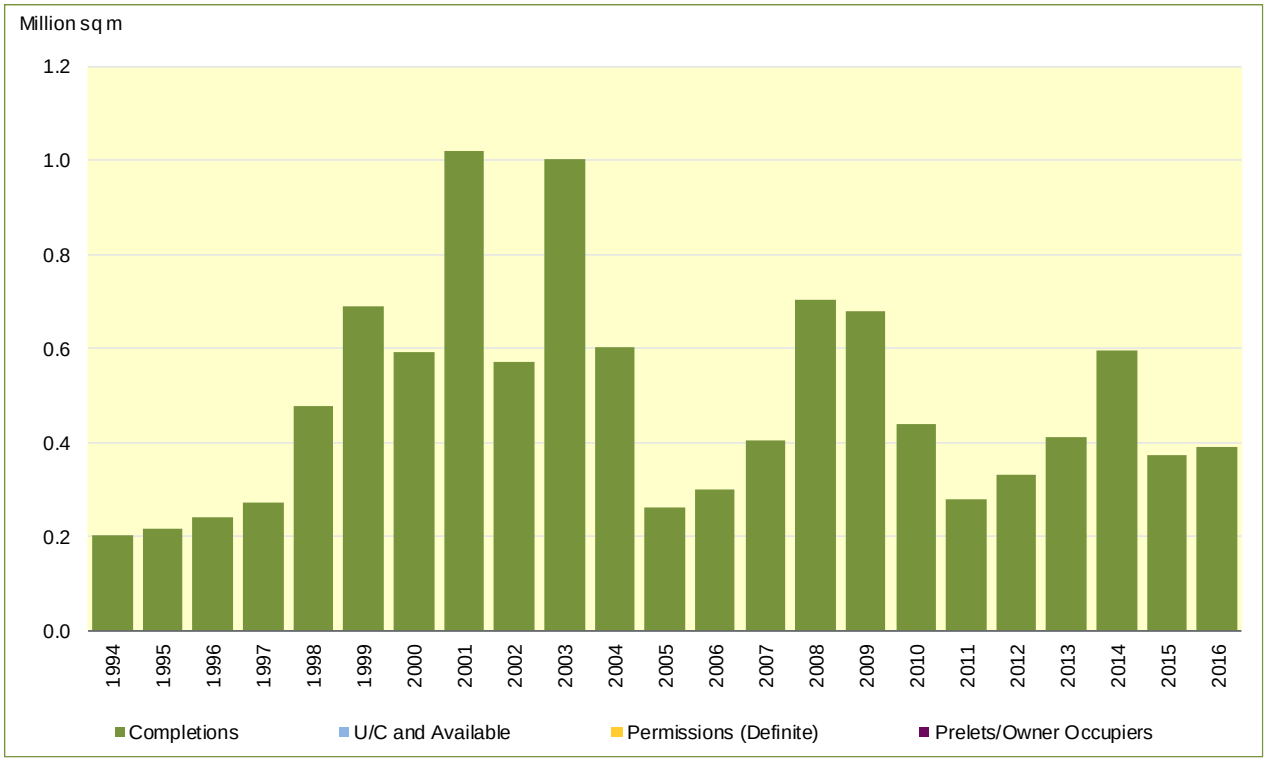
Source: VOA (2016) *Floorspace Statistics*

4.5 Office development

4.5.1 Despite the severity of the recession and lack of a marked economic recovery, both take-up and availability have not responded with the same degree of volatility as in previous cycles. Newly built supply (including major refurbishments) in particular, did not overshoot in the aftermath of the recession as it did in the previous two cycles. A certain amount of learning to anticipate the cycle from experienced developers and the 'advance warning' of 2007 evidently acted to moderate commitments to develop (Figure 4.13).

4.5.2 The moderation of supply continued through to 2014, by which time demand had revived, and in 2015 a reduced level of completions (the result of developer pessimism in 2011-12 leading to deferral of some development scheme starts), led to a growing shortage of newly built supply and concomitant upward pressure on rents. Serendipity also played a part, as the timing of the revival in demand in 2013-14 coincided with this upsurge in completions, although these declined in 2015-16. The result was that availability of newly built supply began to be eroded in advance of completion as occupiers scrambled to take an apparently diminishing supply of suitable floorspace.

Figure 4.13 Central London development completions, 1994-2016



Source: Cushman & Wakefield

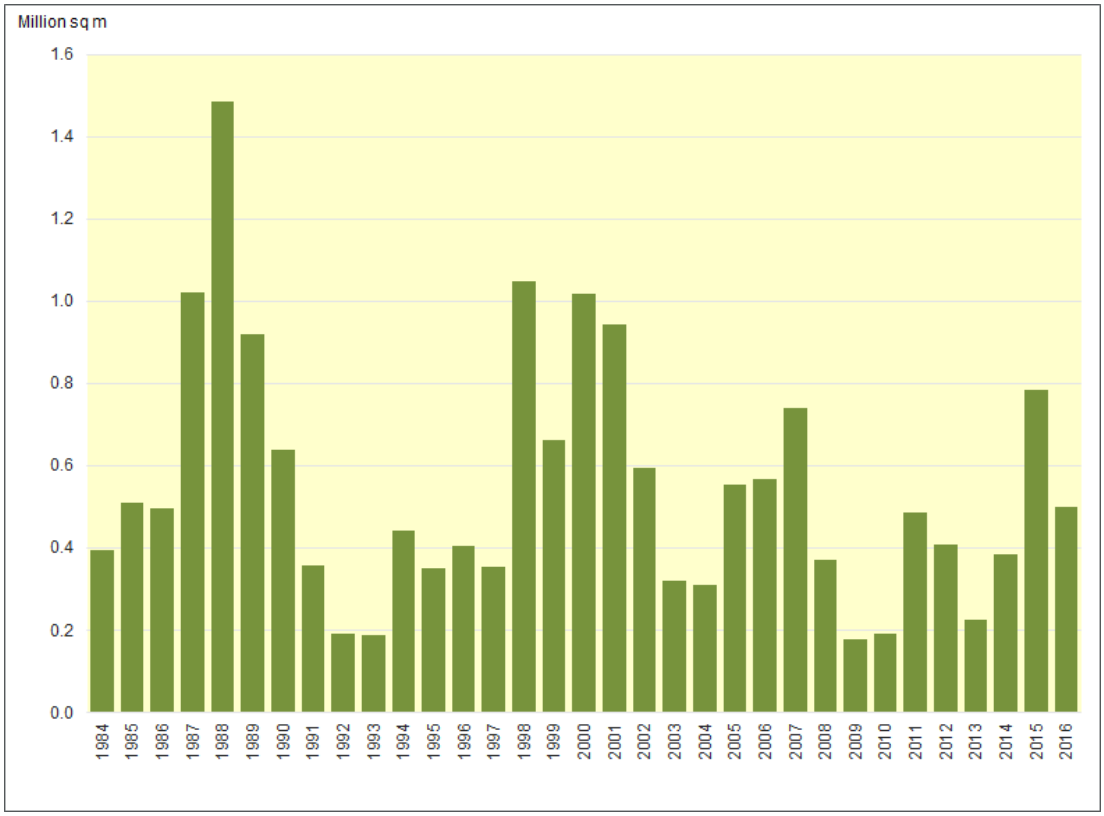
4.5.3 There was a great increase in office starts in 2015 compared to previous years (Figure 4.14), and at 750,000 sq m, higher than the previous peak in 2007. This was followed, in early-2016, by continued strong activity, reflected in the Deloitte London Office Crane Survey,[79] which reported a strong upsurge in development starts: 51 schemes were initiated in the six months to the end of March 2016, while the next highest total, 37 starts, was recorded in the six months to the end of September 2007, the peak of the previous cycle.

4.5.4 In May 2016, when the Deloitte report was published, it looked as if the development cycle was accelerating, with plenty of schemes ready to start: planning permission, site readiness and finance all being in place. But now, not surprisingly, the momentum has slackened: in the six months to end Q3 2016 Deloitte identified 40 new schemes underway.[80] In all 580,000 sq m in 65 schemes were started in 2016. This slight deceleration in development activity is not surprising: the unexpected Brexit decision and concomitant uncertainty over occupier demand has undermined developer confidence to some degree. However, the momentum is evidently still substantial; Deloitte noted that demolition levels had risen by 12% in late 2016, indicating continued commitment to new schemes. Combining this with a

[79] Deloitte (2016) *The London Office Crane Survey* Spring 2016
[80] Deloitte (2016) *The London Office Crane Survey* Winter 2016.

rescheduling of completions to later dates has ensured that the current rising level of deliveries of new space will continue for several years.

Figure 4.14 Office starts, Central London, 1984-2016



Sources: Cushman & Wakefield, Ramidus

4.5.5 Brexit has ensured that the current moderation in the property cycle will move into its contraction phase. As such, the 2015 development starts will mark the peak development activity in this cycle. Compared to development starts during periods of rental growth, such as 1998-2001 (2.5m sq m), and 1998-2000 (3.2m sq m), 2013-15 starts have only totalled 1.3m sq m. As the 2016 total has fallen markedly compared to the previous year, the development overshoot, although potentially substantial, is not expected to be severe as in previous cycle downturns.

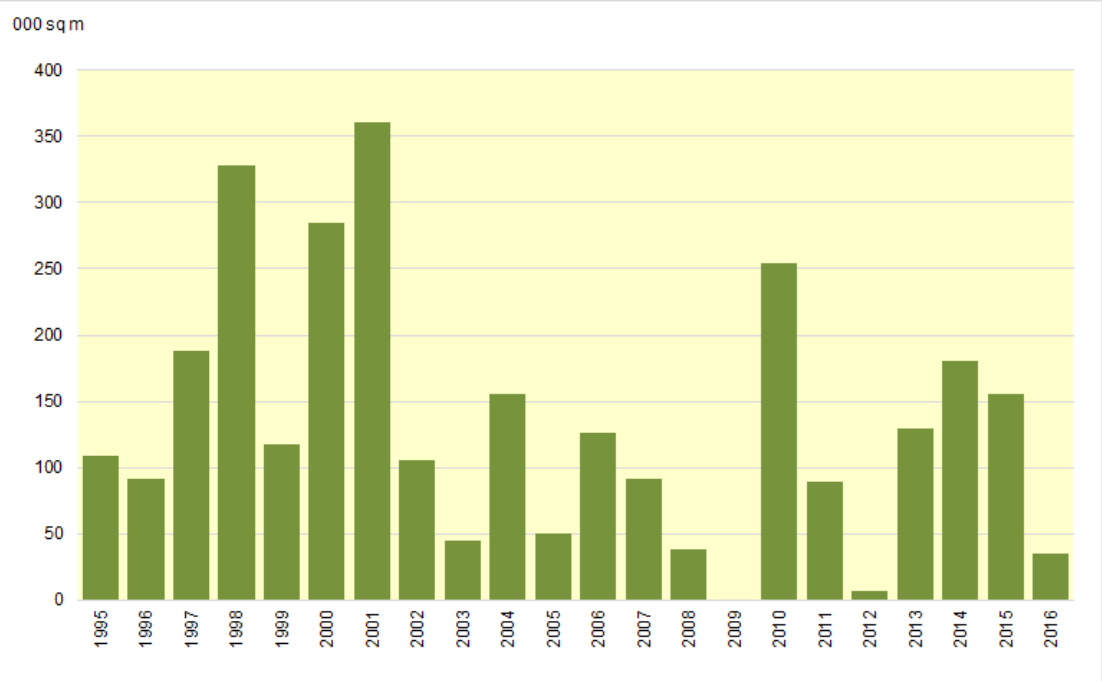
4.5.6 The development industry (the London-centric REITS and property companies especially) has learnt from experience. This anticipation of the cycle ameliorated the impact of the 2008-09 recession, though this was also allied to the withdrawal of banks from speculative development lending. In recent years, the entry of insurance companies and pension funds and other equity players has compensated for this. On the other hand, the value of new development loan

finance, still strongly Central London focussed, fell from £2.4bn in 2014 to £2.25bn in 2015, according to the annual De Montfort property lending report.[81]

4.5.7 While banks, building societies and insurance companies increased their loan originations for commercial development projects, other non-bank lenders withdrew support. The recently released interim 2016 version also observed that availability of finance fell again, with fewer institutions responding to questions on development finance, while loan margins rose. This provides further indications that development activity, which reached a peak in 2015-16, will decline as the market moves forward, as demand falls off and as development confidence and finance becomes harder to secure.

4.5.8 One factor contributing to the slowness in market response to increasing supply was the increasing absorption of development space by occupiers (Figure 4.15). Pre-letting (including owner occupation development) emerged strongly from 2013 onwards: the 2013-15 total (465,000 sq m) was the highest three-year period of pre-letting outside of the 1998-2003 peak. Major pre-let deals in 2015 included Goldman Sachs (78,300 sq m at Fleet Place, EC4); Facebook (23,300 sq m at 1 Rathbone Square, W1) and Amazon (56,400 sq m at Principal Place, EC2). In 2016 this has slowed considerably, to 45,000 sq m, the most prominent being the return of the Financial Times to its old City base at Friday Street, EC4.

Figure 4.15 Central London pre-let deals by volume, 1985-2016

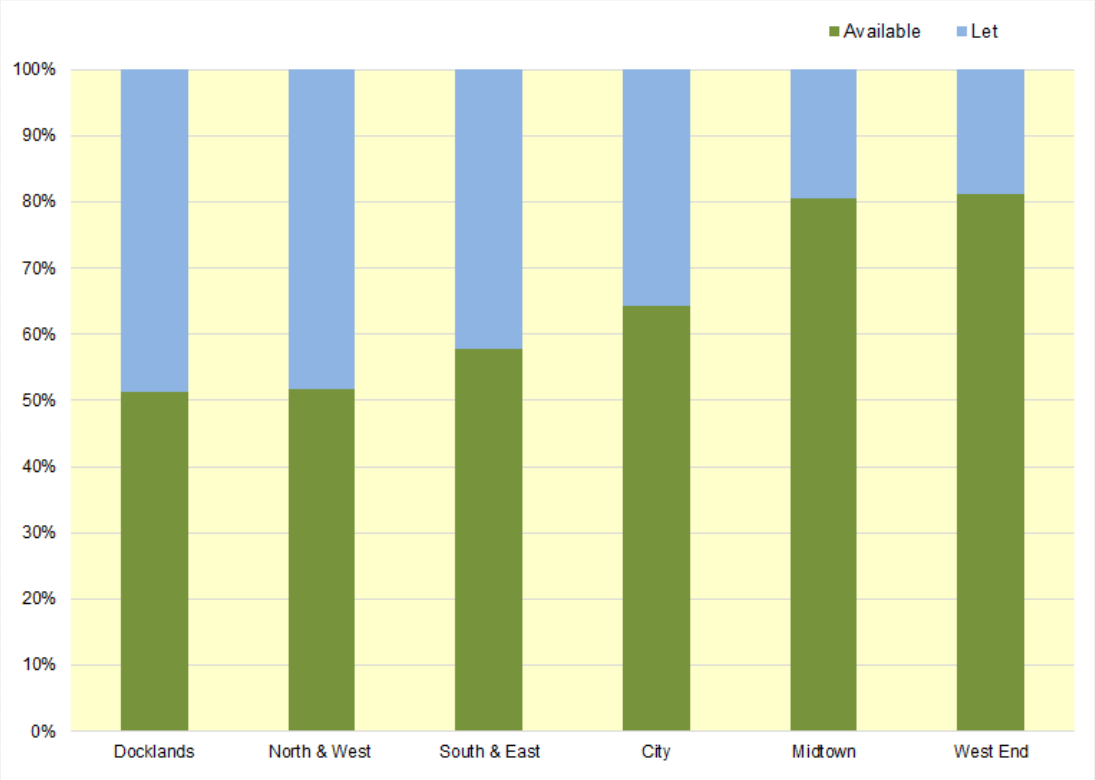


Sources: Cushman & Wakefield, Ramidus Consulting

[81] Lux N (2016) *The UK Commercial Property Lending Market 2015 Year-End* De Montfort University

4.5.9 Also in 2015, faced with a shortage of space, occupiers looking for newly built space increasingly took leases in schemes still under construction. Because of this, and factoring in pre-lets, availability of space in buildings under construction at the end of 2015 was 60% of the total, but by end-2016 this had dropped to just over a third (Figure 4.16). This varied significantly between sub-markets: availability in the West End and Midtown City was appreciable higher than in Docklands and North and West districts.[82]

Figure 4.16
Central London availability in buildings under construction, end-2016



Sources: Cushman & Wakefield, Ramidus Consulting

4.5.10 The uncertainty following the Brexit decision made developers nervous, and on large schemes especially so. This was reflected in the slowing tempo of development starts, and the increasing propensity for (smaller) refurbishments rather than newbuilds. But a major exception has been the 130,000 sq m 22 Bishopsgate scheme being promoted by an Axa-led consortium. This was initially delayed in the aftermath of the Brexit vote, but the consortium has recently started building out the site, on the basis that the building's qualities and its prime position, combined with an expectation of limited competing development completions when it completes in 2019, will make the speculative risk acceptable.

[82] See Section 4.1.5 and accompanying map (Figure 4.1) for explanation of market area definitions.

4.5.11 According to the most recent Deloitte survey, nearly 40% of the space currently under construction is scheduled to complete over the next twelve months (i.e. to end 2017).[83] This is partly the result of the increase in refurbishment projects, which account for just under half of the volume of new starts, and are typically quicker to complete than new-build schemes. The coincidence of supply delivery with a period of demand weakness will no doubt push up availability and place rents under pressure. The degree to which headline rents shift inward will depend on how seriously demand is mitigated.

4.5.12 Capital markets and occupier markets march to different drummers. The former has for some time been dominated by the vast amounts of cheap equity looking for yield, and this has driven commercial yields down to record lows. To a significant degree, this capital is mobile and opportunistic, and to that extent it is short-term.

4.5.13 Occupiers on the other hand are necessarily taking long-term decisions when contracting for a lease, and accordingly will hesitate to do so in an environment of uncertainty. For example, in the aftermath of the recession the investment bank Schroders, which had been looking for a pre-let, instead decided to extend its existing lease for a short period until greater certainty emerged. As the macroeconomic environment stabilised in 2013 its requirement re-emerged, and it took a 29,000 sq m pre-let on 1 London Place, EC2 in early-2014.

4.5.14 The outlook for development at the end of 2016 is shown in Figure 4.17. This is Cushman & Wakefield's assessment, in mid-2016, of the likely delivery volume of commercial floorspace to 2019. Most is development underway and with a firm delivery date.

4.5.15 The permissions component is of speculative schemes which Cushman & Wakefield expects to go ahead. There is an additional category not shown which is schemes with permission which might go ahead: finance, vacant possession and develop confidence willing. This could augment the development pipeline going forward, but as economic conditions are looking increasingly fragile, it seems certain now that development completions will peak in 2017, and decline to a still substantial level in 2018-19.

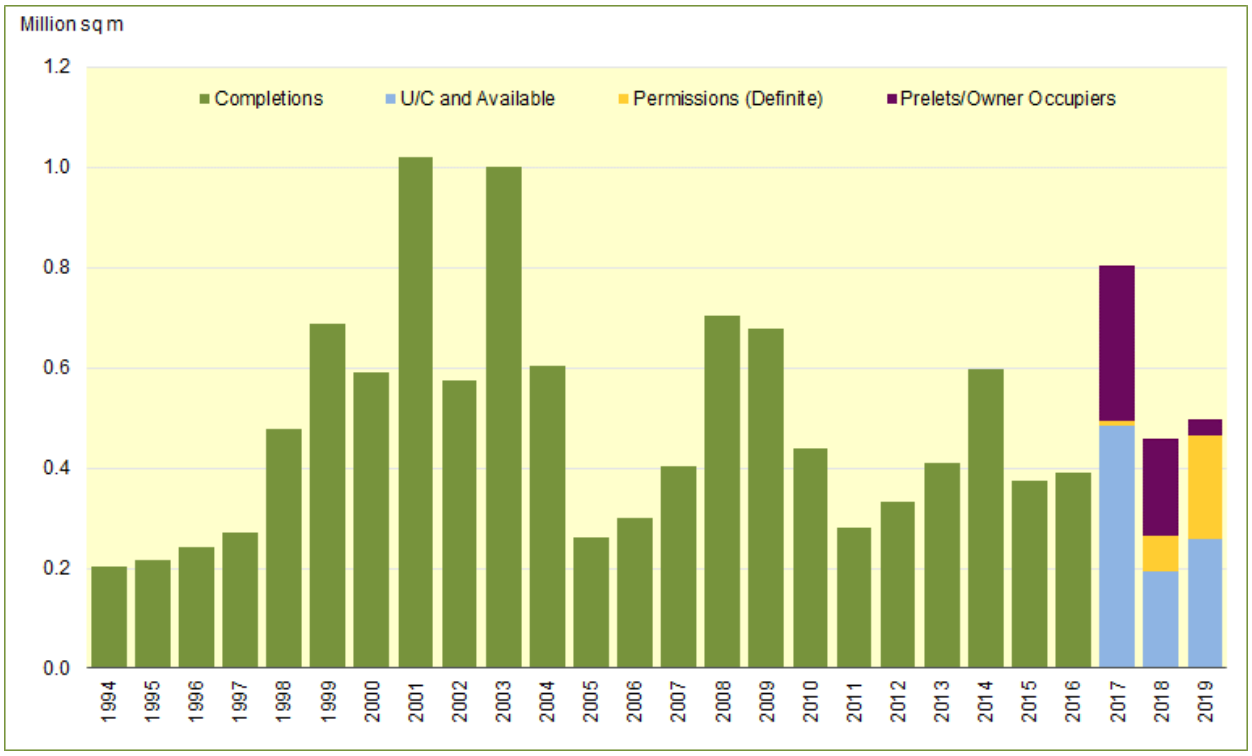
4.5.16 By contrast, Deloitte's outlook is the volume of office space delivered in 2019 and 2020 will be higher than in 2017 and 2018, as developers, uncertain over the scale of future tenant demand in light of the EU referendum, move projects further into the future. This view incorporates it understanding of developer expectations derived from the survey element of its report.

4.5.17 Moving beyond the current conjunction, and with the outlook that development supply will fall off sharply once the current schemes are exhausted, what shape is the planning pipeline in? At the end of 2015, outstanding planning permissions totalled about 1.5m sq m, rather different to the end-2011 total in LOPR

[83] Deloitte (2016).

2012, which was 3.8m sq m.[84] The 2011 total, only marginally down over the period since 2003, reflected the relatively slow level of implementation of permissions in 2008-11. Its fall since then reflects the increase in development starts, while the tempo of bringing potential sites forward through the planning system faltered.

Figure 4.17 Development outlook for Central London, 1994-2019



Source: Cushman & Wakefield

4.5.18 So far, this discussion on development has concentrated on development in Central London market as defined in successive LOPR reports. But Section 3.3 above has outlined the emergence of major development complexes outside this area. This is now coming through in terms of additions to stock. In total 272,000 sq m of office space will be completed between 2016 and 2018 in White City, Stratford and Vauxhall-Nine Elms-Battersea (VNEB). All three areas have potential capacity for more development to come, although, as the Deloitte report considers, these areas are relatively small, and it is not yet clear that their emerging tenant base is representative of other Central London sub-markets.

4.5.19 Nevertheless, the Apple deal at Battersea Power Station referred to elsewhere has had a major impact on the commercial potential of VNEB, and the tech company is itself definitely part of the Central London occupier base. Due to the slowdown in residential demand and the encouragement the deal has given to this

[84] The data here are taken from the London Development Database figures for FY 2015-16.

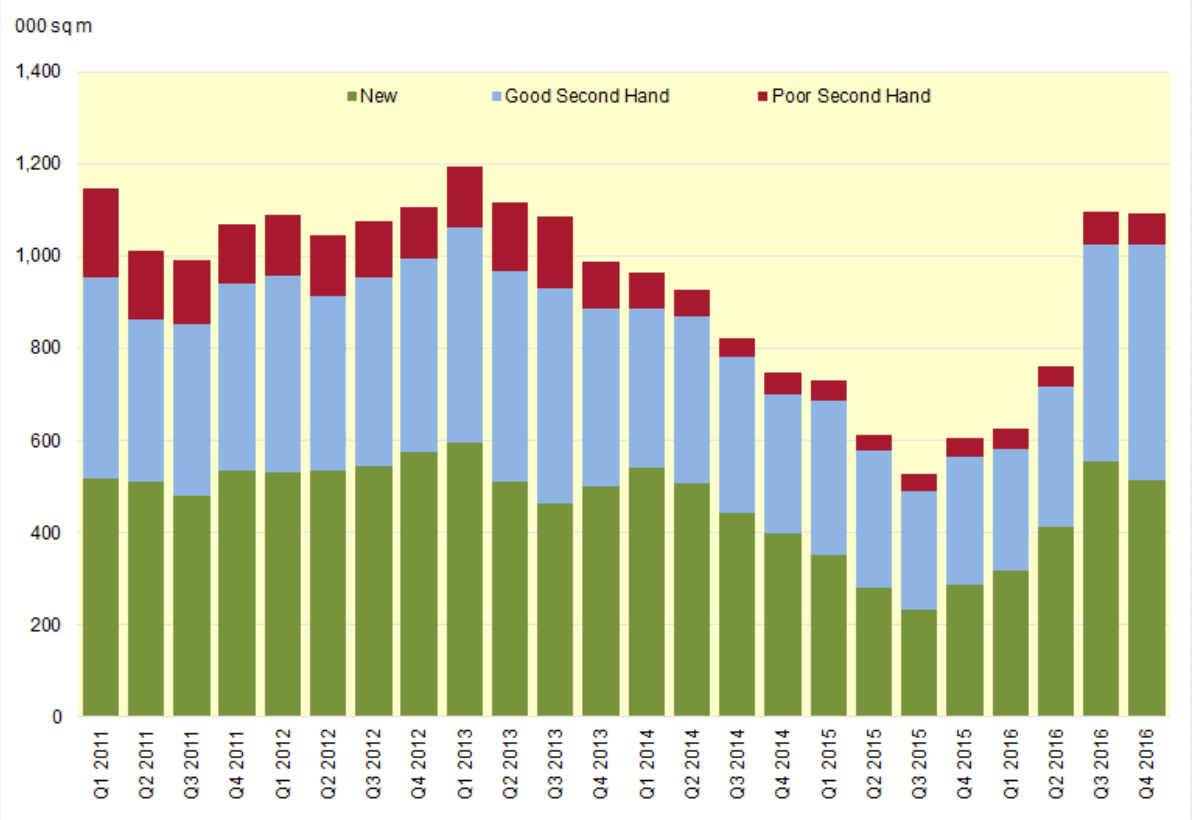
new location, the developers are now considering switching some of its capacity to commercial use from residential.

4.6 Supply and demand overview

4.6.1 The foregoing analysis has presented a largely statistical analysis of key trends in the Central London market over the past decade or so. This final section offers a more market-based perspective, necessarily shorter-term, including insights into how the market is perceived by the agency community – those who talk directly to occupiers, landlords and developers, and who are facilitating transactions.

4.6.2 After falling more or less consistently from 2009, the trend in available floorspace reversed in Q4 2015, well in advance of concerns about Brexit (Figure 4.18). At the end of 2016, availability totalled just over one million sq m, an availability ratio of 5%, compared to 530,000 sq m (2.5% of stock) at the previous low in Q3 2015. The substantial part of this increase has been newly built and refurbished space, reflecting increased completions, but also a weakening tempo of take-up in the first half of 2016. This can be attributed to the slowing growth in the London economy (GVA fell from 6.8% growth in 2014 to 3% in 2015) dampening occupier expectations of future expansion in business opportunities.

Figure 4.18 Central London availability by quality, Q1 2011-Q4 2016



Sources: Cushman & Wakefield, Ramidus Consulting

4.6.3 Availability grew strongly in Q3 2016 as take-up fell markedly in Q2 in the run-up to the referendum, but while take-up recovered in Q4 (especially in the City), availability remained at the level of the previous quarter. This rise in the level of marketed supply was due to an increase on both grade A and second-hand space, as new supply reached a peak.[85] But in addition, rising availability is now increasingly being driven by space being marketed by occupiers. Property advisor BNP Paribas Real Estate recently identified nearly 200,000 sq m of floorspace being offered for sub-letting by occupiers, as opposed to landlords, a significant increase on the less than 100,000 sq m identified by BNP at the start of 2016.[86] This pattern of availability increase is a sign of occupier retrenchment, which is a familiar feature of downturns in the property cycle.

4.6.4 Take-up was strong between 2013-15, rising to average levels for post-2000 property cycles (the 2000 and 1988-89 peaks being markedly higher). As is common in an upturn in demand, firms already resident in the capital looked to expand their floorspace, while new entrants resumed setting up in the capital. To this was added fresh demand from a revived business sector, serviced office operators, as well as expanded demand from Central London's major educational and medical occupiers.

4.6.5 Recent take-up has been dominated by media and tech firms and the financial sector: in the past three years these two accounted for over 50% of total take-up (Figure 4.19). Media and tech dominated in 2013-14 but the financial sector, notably non-bank firms, increased activity in 2014-15. In a possible indicator of a slowing market, the rate of new entrants into the market, which doubled in 2013-14, has now reduced considerably.[87]

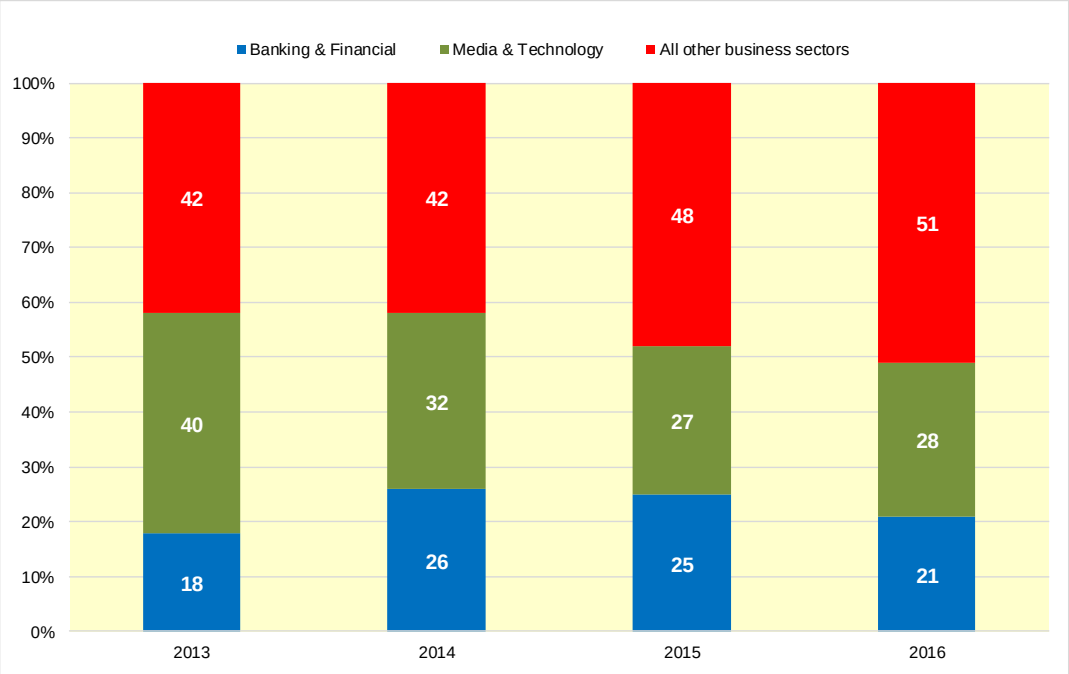
4.6.6 The serviced office sector has been growing fast: it comprised 4% of take-up in 2013, but rose to take a 10% share in 2015. Section 3.2, regarding the flexible space market, explains this growth. Strictly speaking, however, this growth represents a diversion of demand from other business sectors.

4.6.7 A major trend emerging since the recession has been increased occupier mobility. Hitherto the City and West End markets have tended to address different occupational groups, most prominently the finance and professional business services sector in the City, and media and the corporate sector in the West End.

4.6.8 Where cost (and in the West End, access to modern large floorplate offices) has been an issue for occupiers, the pattern has tended to be of movement peripherally to adjoining districts or new foci of development away from the core (see Section 3.3 above). This has weakened and dispersed the historic clustering of business sectors which remained intact until the 1990s.

[85] In keeping with industry norms in terms of marketing in advance of availability for occupation Cushman & Wakefield add schemes to availability six months ahead of practical completion.
[86] Office Space for 21,000 Workers Sublet by UK Businesses *Financial Times* 23rd November, 2016
[87] Cushman & Wakefield (Spring 2016) *Central London Movers & Shakers*

Figure 4.19 Central London leasing by major business sector, 2013-16



Sources: Cushman & Wakefield, Ramidus Consulting

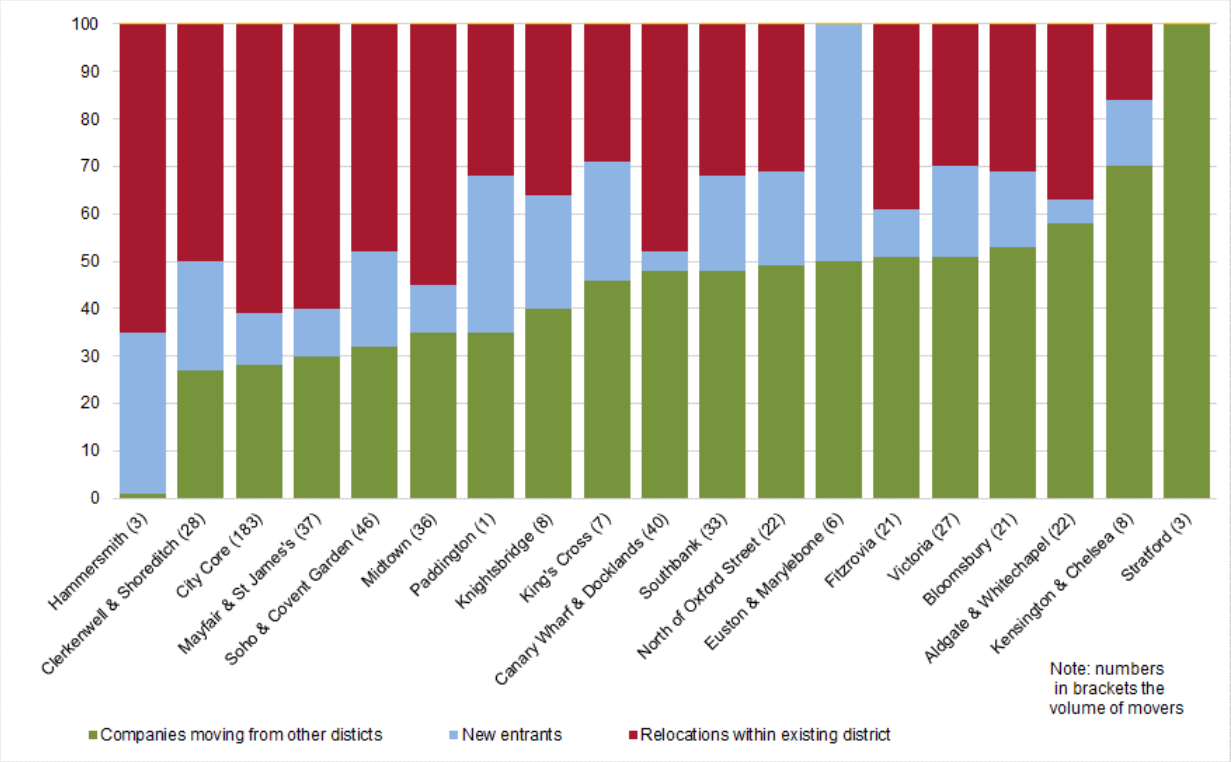
4.6.9 This historically pronounced clustering of activities has further changed recently as occupiers have apparently become more mobile. Cushman & Wakefield have noted that around 45% of established occupiers (i.e. those already with accommodation in Central London) moved some or part all of their operations out of their existing sub-market during 2015.[88] It found that:

> *the City Core had the highest number of occupiers relocating from other areas, followed by Canary Wharf & Docklands. The former attracted occupiers from all across central London, predominantly Midtown and Mayfair & St James's and Soho and Covent Garden. Canary Wharf & Docklands' in-movers however mainly originated from the City, particularly the City Core and Southbank*.[89]

4.6.10 Figure 4.20 shows Cushman & Wakefield's breakdown of in-movers versus relocations within the various districts. In-movers are not uncommon in every district (except Hammersmith). While Clerkenwell and Shoreditch have a relatively low ratio of in-movers, probably reflecting the indigenous growth of the Tech sector. By comparison, Aldgate & Whitechapel have a much larger proportion, reflecting the growing attractions of this 'East City Fringe' area to occupiers from other districts. Buildings such as the Aldgate Tower, complete and leased in 2015 to an eclectic range of mainly non-financial tenants including Aecom, Ince, Maersk, Tag, Uber and WeWork, are emblematic of this trend.

[88] Cushman & Wakefield (Spring 2016) *ibid*
[89] Cushman & Wakefield (Spring 2016), p.11

Figure 4.20 origin of occupiers taking space in 2015 by district (%)



Source: Cushman & Wakefield (2016) *Movers & Shakers*

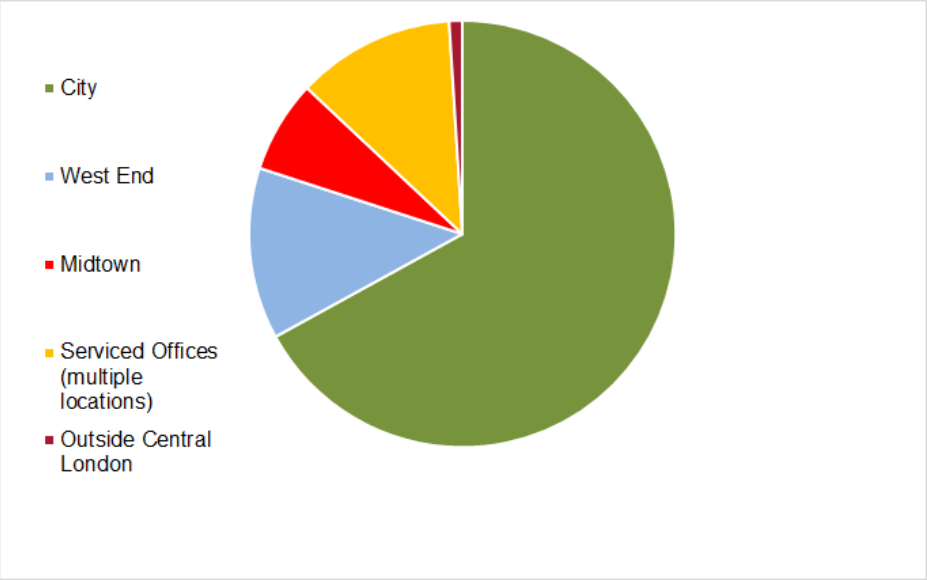
4.6.11 Movement from West to East (notably from the West End) was the key trend; reflecting high and rising rents and a shortage of supply across much of the West End office market. But also from the City core to surrounding districts, again prompted by rental growth and a lack of availability of suitable space. The City core saw the highest number of occupiers migrating from other areas in 2015, supplanting the West End core which accounted for the highest outflows in 2013 and 2014.

4.6.12 Tech companies and professional services were the most likely to move, banks and insurance the least. The Tech sector's occupational flexibility has been highlighted by online delivery company Deliveroo acquiring 4,600 sq m at Cannon Street House, EC4. Deliveroo is not even a 'fintech' company (unlike PayPal, which took space in the neighbouring Walbrook Building in 2013). But its occupation of space which once hosted the LIFFE trading floor symbolises what the *Financial Times* summarised [90] as diversification of the City's occupier base, especially, but not restricted to, the Tech sector.

[90] Technology Groups Move into Banks' City Turf *Financial Times* 25th November 2016

4.6.13 Recent research by CBRE quoted in *Property Week*[91] highlighted the City's attraction to West End and Midtown occupiers. Looking at take-up in units in excess of 2,000 sq m over the previous twelve months it noted that 20% had come from occupiers in the West End and Midtown (Figure 4.21).

Figure 4.21 Breakdown of occupiers moving to the City by origin (%), 2015-16



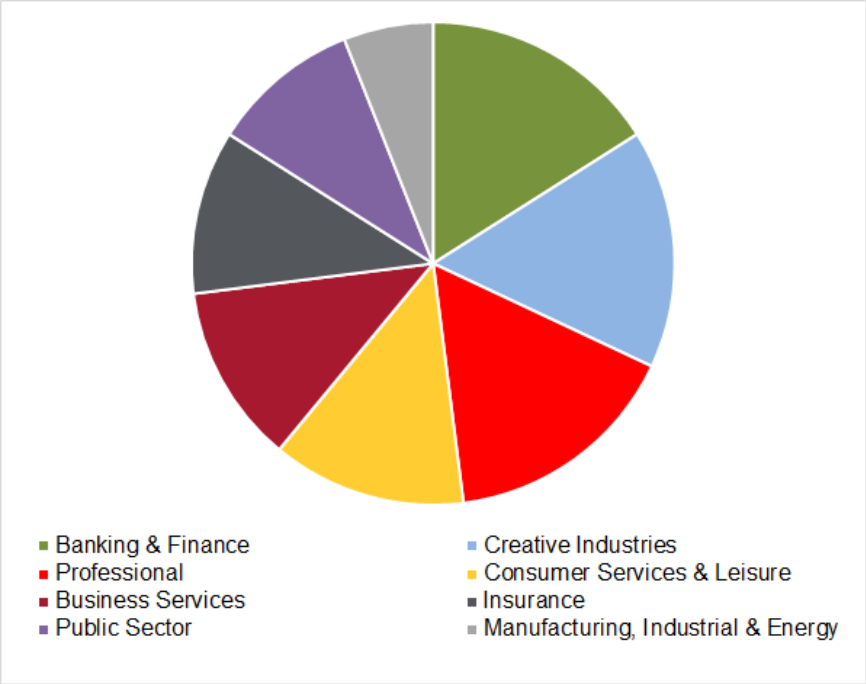
Source: CBRE (*Property Week*)

4.6.14 The CBRE work also highlighted the movement of non-office support services such as retailing, restaurants and other entertainment activities. CBRE noted that active demand for space in the City was only 27% for the key finance and insurance sectors, much less than the sector's occupier base of around half the City's offices. In fact, the demand base is now very diverse (Figure 4.22). This is a long-running trend, but since the recession a perception barrier has weakened. Cost and suitable space has been the driver, but the change in the City's image combined with a new flexibility on behalf of occupiers has at least partially broken down the locational 'silos' of the Central London office market.

4.6.15 It remains true, however, that certain core occupier groups remain wedded to the West End, notably the specialist financial sector (wealth management, hedge funds, private equity), and other services catering to the ultra-rich. A good example was the relocation of Deutsche Bank's asset management and wealth management functions from the City to the Zig-Zag building on Victoria Street, SW1. Cushman & Wakefield found that 16% of relocations from the City and East London were to the West End in 2015.

[91] Footloose London Firms Favour Non-traditional Office Locations *Property Week* 28th October 2016

Figure 4.22 Sectoral breakdown of occupier enquiries for floorspace in City and environs (%), September 2016



Source: CBRE (*Property Week*)

4.6.16 The slackening of take-up activity in the first half of 2016 has been ascribed most particularly to a slow-down in decision-making activity by occupiers, increasingly concerned as Q2 progressed by uncertainty around the Referendum. Post Brexit this uncertainty has now been strengthened, and expectations by market participants is that some elements of demand will be put on hold until the situation becomes clearer.

4.6.17 Indeed, some major deals have gone ahead, albeit that Q2 data were marked by many fewer large (i.e. more than 5,000 sq m) transactions than hitherto. Wells Fargo's owner occupation purchase of 33 Central, EC4 (21,000 sq m), and Amazon taking 8,000 sq m of additional space at Principal Place, EC2 were significant milestones. And there has been little to see in terms of transactions at under offer stage falling through.

4.6.18 Take-up in Q3 recovered somewhat, and as reported by the major agents as up by as much as a fifth in volume compared to Q2's abysmal performance. The Apple pre-let deal gave the figures a fillip, but it remains true that leasing activity is still significantly down on the same period in 2015, especially in the City. However, a wholesale retreat from the market is not felt in prospect at present. Though some leasing deals have fallen through, others have firmed up. Nevertheless, anecdotally argents are also saying that leasing deals are taking longer to reach completion, a major sign of a slowing market.

4.6.19 Occupier caution is most pronounced in the financial sector due to continuing uncertainty over 'passporting'; the extent to which doing business within the EU will require new 'domestic' offices, reducing the importance of a London base. In addition, the TMT sector, which is now the largest source of demand, also has issues over free movement of labour. This, however, has not put off the major players from announcing deals which underline their confidence in London as a major employment centre. As noted in Section 2.2 above, Apple, Facebook and Google have all made very substantial commitments in recent months.

4.6.20 Enquiry levels (i.e. known requirements actively searching for floorspace), are holding up well, according to agents. Knight Frank recently reported that active office searches exceed 880,000 sq m, well above the long-term average of 750,000 sq m. Cushman's report a similar level, it having declined by about 10% from 12 months previously; significant, but not disastrous. Bargaining over lease terms is becoming sharper, and although rental levels are remaining firm, rent free periods, the main form of leasing incentive given to occupiers by landlords, are increasing. According to Cushman & Wakefield they have grown from 21 months to 24 months on a 10-year lease in the City.

4.6.21 Financial and Tech take-up is slowing, but accountants and lawyers are increasing demand. This is seen as a Brexit side effect: a rise in activity connected with the potential legal and accounting implications of any move away from membership of the Single Market. But about half of all take-up is accounted for by the former two sectors, and should active occupier demand here continue to stagnate then leasing activity will lose its momentum and rents will be affected. As yet financial sector rationalisation has been marginal, and tech demand is holding up well.

4.6.22 On balance, so far, there are reasons to be optimistic about the extent and acuteness of the current downturn. Demand indicators are not uniformly weak, deals are being done, even if they take longer, enquiries are still strong. Development supply has remained tight, and though 2016 deliveries were substantial, their impact was constrained by the extent of leasing before completion, and availability has not risen significantly so far. New supply in 2017 will be substantially higher than 2016, but over 40% of this floorspace is pre-leased, with the prospect that developer anticipation of weaker demand could reduce the 2018 total. So currently the outlook is that rents are not likely to become under seriously under pressure immediately.

5.0 Benchmarking the Central London office market

5.0.1 Since 2001 a series of benchmarks on the performance of the Central London office market have been provided, to assist the GLA and the boroughs to define and implement a robust policy for office development. The sources of the data underlying them are explained in Section 4.1 above. The report discusses five strategic benchmarks which were thought to provide a useful tool for monitoring the relationships between supply and demand in Central London.

5.0.2 These are primarily intended to inform policy makers as to 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 supply.

5.0.3 The benchmarks are broad-based tools, intended to illustrate the general direction of the office market, rather than to guide specific local area policies. To this end in this report we suggest additional benchmarks which might provide additional, or indeed preferable measures of market capacity.

5.1 Benchmark 1: Permissions versus starts

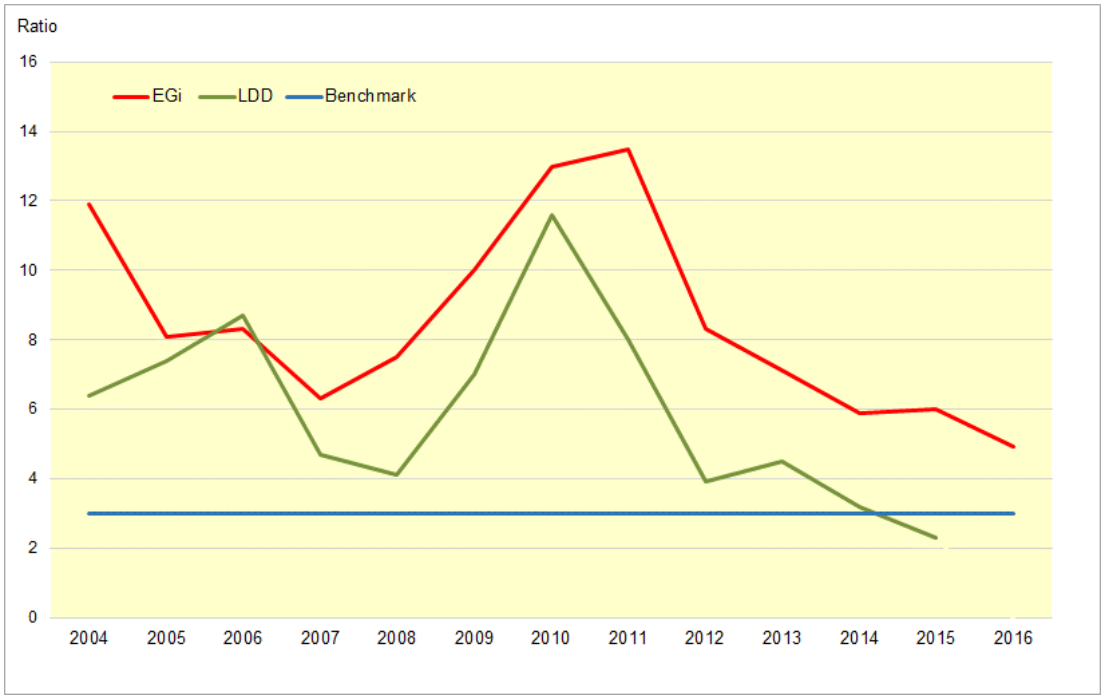
5.1.1 *The stock of permissions (measured as net internal area) should be at least three times the average rate of starts over the preceding three years.*

5.1.2 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.

5.1.3 Figure 5.1 shows the London Development Database (LDD) series of ratios resulting from the comparison of office starts (averaged over the preceding three years) and outstanding planning permissions. For comparative purposes this is shown alongside the same ratio based on the Estates Gazette Interactive London Database (EGi) data.

5.1.4 These differ significantly, in that EGi data for permissions are based on planning committee decisions which are a precursor to discussion on the content of S106 agreements, whereas LDD waits for a decision letter to be issued which does not happen until the legal agreement has been signed. LDD data has a minimum threshold of 1,000 sq m gross, whereas the threshold in EGi data is 500 sq m gross. LDD data exclude refurbishments where the existing building is already in office use, which are included by EGi. These definitional differences result, over the period 2004-2011, in office floorspace permissions recorded by LDD being typically 60-70% of the floorspace recorded by EGi.

Figure 5.1 Office starts and permissions ratio, 2005-2016



Sources: EGi, LDD, Ramidus Consulting

5.1.5 In addition, EGi data for starts are based on observed construction of new or refurbished space, whereas LDD records whether work is started in a legal sense, so can include demolition works as starts where these, in effect, activate the permission. Consequently, LDD registered starts can antedate a committed start of construction according to commercial criteria. Works implementing a planning permission can be said to have commenced when any material works, including most demolitions, are commenced. Some very substantial schemes, such as Crossrail sites, schemes which are halted before completion (e.g. as 22 Bishopsgate was before its current commencement), as well as multi-phase projects involving extensive advance works (e.g. Wood Wharf and Battersea Power station) are thus included in the LDD starts register.

5.1.6 As a result, the ratios between starts and permissions are intrinsically lower for the LDD series than for EGi, and the year-on-year pattern is slightly different (Figure 5.1[92]). With development starts down in 2016 compared to 2015, it has become clear that the property cycle is turning, and that development activity, still strong in 2016, is on a trajectory of decline. This will ensure that the start volume will fall, and, if schemes continue to come through the planning process as before, that the ratio will recover. This can happen quite quickly as the change between 2008 (the previous low point in the series) and 2011 shows.

[92] Starts and permissions are measured in net internal terms, converted from gross starts by the application of an 85% ratio. The 2016 LDD data is not yet available.

5.1.7 However, the current ratio is low, and has breached the benchmark level. The longer EGi-based series used in LOPR 2012 indicates that this level was only approached one before, since the 1980s, during the period when the exceptional dot com-related demand boom and pre-letting to the financial sector stimulated starts and depleted permissions.

5.1.8 Consequently, we regard the measure is showing an amber warning: rising development intensity has outstripped replenishment by new permissions, and the ratio has decreased below the threshold. Looking forward, the expected declining trend in development starts can be expected to prompt an uplift in the ratio as long as fresh applications for planning permission continue to come forward.

5.1.9 This benchmark is a longer-term indicator than others in this section, since it is concerned with the potential supply of permissions, which are implemented by developers in proportion that the property cycle is on an upward trajectory and encourages confidence that demand will be in place. Currently that is not the case, and so it is not so much the current level of permissions that matters, but their replenishment and augmentation. This suggests that attention should be directed to examining the potential of sites not yet with permission, or those where permissions have lapsed. It should also focus attention on the use class for which permissions are sought, to avoid an undue shortage of office capacity in the pipeline.

5.2 Benchmark 2: Availability versus stock

5.2.1 *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.*

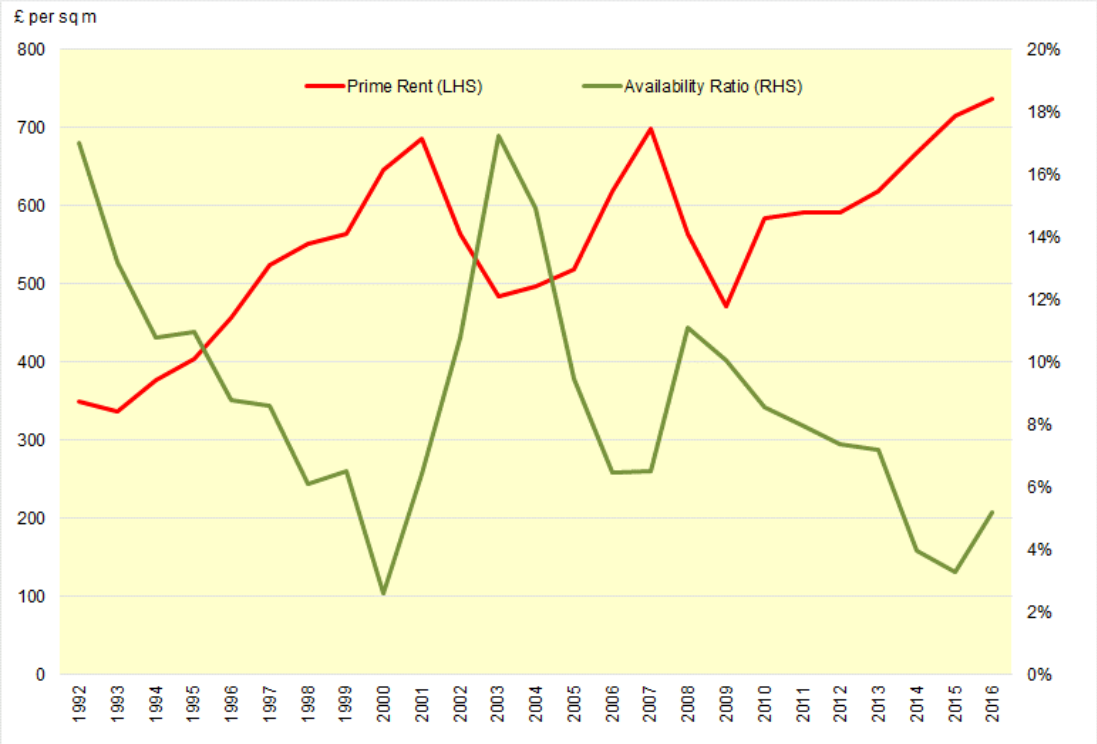
5.2.2 In previous reports the 8% availability rate has been regarded as a pivotal measure for the London office market. Rates above 8% are regarded as offering occupiers a wider choice of accommodation, and the associated tendency for rents to fall at this level, especially when availability has been on a rising trend and wider choice (and less competition for space) has been anticipated. Conversely, if availability rates fall below 8%, then there is a tendency for rents to rise, reflecting a narrowing choice of accommodation. The threshold still indicates the onset of positive rental growth: prime rents turned positive at 7% availability in the West End and 9% in the City, both in 2009.

5.2.3 The overall Central London availability rate rose from 6.2% in 2006 to over 8% in 2009 before steadily falling until late 2015 to around 2.5%. 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 5.2 and 5.3 indicate the long-term relationship between availability rates and rental change in the City and West End.

5.2.4 Since 2011 Benchmark 2's 8% availability threshold has not been breached. The threshold still seems to work in terms of positive rental growth: prime rents turned positive at 7% in the West End and 9% in the City, both in 2009. At 2.7% and

4.4% respectively supply availability was undoubtedly very short at the bottom of the cycle. But now, at end 2016, availability has risen appreciably, to 4.4% in the West End and 5.2% in the City, and so this constraint for occupiers, of limited choice, is becoming less stringent.

Figure 5.2 City availability ratio vs headline prime rent, 1986-2016



Sources: Cushman & Wakefield, Ramidus Consulting

5.2.5 In both the City and the West End the extreme heights of availability at the bottom of the property cycle seen in the early-1990s and 2000s have ameliorated. In 2009 their respective values were 11% and 9.5%. However, the minimum values at the peak of the market have tended to remain at around 2% for both markets. At this point rental values can be seen to be reacting strongly to lack of available space in both markets, but rather more strongly in the West End.

5.2.6 In the City, the rate of rental growth spiked in 2006-07 as availability went from 9.5% to 6.5%; in 2009-10 as it fell from 10% to 8.5%; and most recently from 2012 to 2015 as the availability ratio fell from 7.5% to 2.5%. Take-up rose on all three occasions. But in the City rents reached a peak of £750 per sq m in 2007, and then having fallen to under £540 per sq m in 2010 started to rise again, jumping from £580 sq m at the end of 2013 to reach £710 per sq ft at the end of 2015. This, however, only meant that City rents had at last, albeit in nominal terms, exceeded the 1988 record for the first time.

5.2.7 In the West End restricted supply has caused availability to generally be lower than in the City: the 30 year West End average has been 6.4% of stock, compared to 10.2% in the City. This has followed through in terms of availability at the height of the cycle (in the years 1988/89, 2000, 2007, 2015): averaging 5.5% in the City and 3.1% in the West End. When we look at responses to restricted availability we see that from 2009 onwards West End prime rents rose by 60% as availability fell from 7.5% to 2.2%.

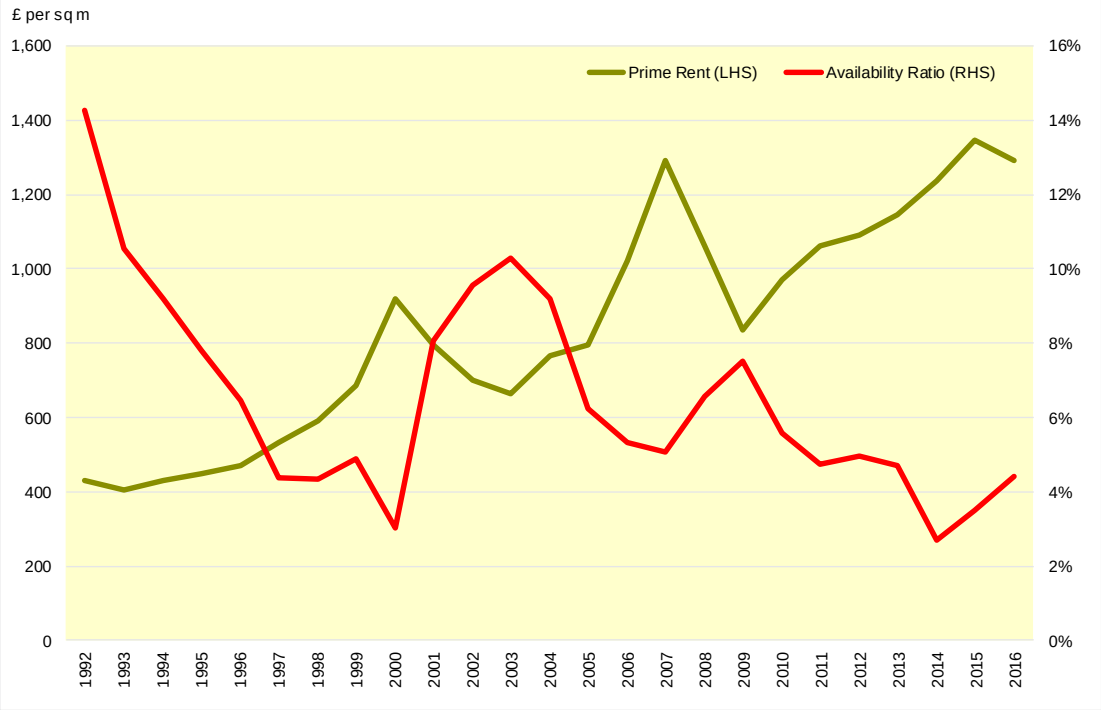
5.2.8 The impact of competition from residential development in restricting supply in the West End was noted in LOPR 2012. It observed that if the pressure from residential investors intensified it "*would constrain supply even further, and this would in turn inflate rents*", and this has turned out to be the case. It also considered that if this had the "*effect of displacing demand outside the West End [this] could, in the long run, conceivably bring some degree of stability to a market that has looked very inflationary for a significant period*".

5.2.9 This outcome has taken place. At end-2015 rents were much higher than in 2011, and availability lower, at nearly 2% nearly as low as ever recorded (Figure 5.3). Availability of new supply became quite short, at around 45,000 sq m, leading to strong competition for space. While the downturn in the market has corrected this position in 2016 (availability has risen to around 3.5%), the West End remains the market, alongside Midtown, where demand most strongly outstrips supply in market upturns, because the development response is weaker and second hand supply is limited by diversion to change of use toward residential, but also hotel use.

5.2.10 At the inception of LOPR 2017 there was discussion of the degree of applicability of the 8% threshold. Availability in Central London is currently low (3.6% of stock), well below 8%, and at present is moving upwards only slowly. The work in this section shows that the performance in the City and the West End is now quite different: in the latter market it looks as if this threshold should be lower, as supply is even more constrained than in the past, and pace and direction of rental growth is likely to react at a lower level than 8%.

5.2.11 Alternatively, monitoring the rate and direction of change rather than absolute level might be a better indicator. This is because the alacrity with which availability can rise when demand falls off significantly can change availability and rental levels quite quickly. The market moves in cycles, so anticipating either an excess or shortage of availability is probably the critical variable in anticipating whether development capacity is adequate or not.

Figure 5.3 West End availability ratio vs headline prime rent, 1986-2016



Sources: Cushman & Wakefield, Ramidus Consulting

5.3 Benchmark 3: Pre-lets versus starts

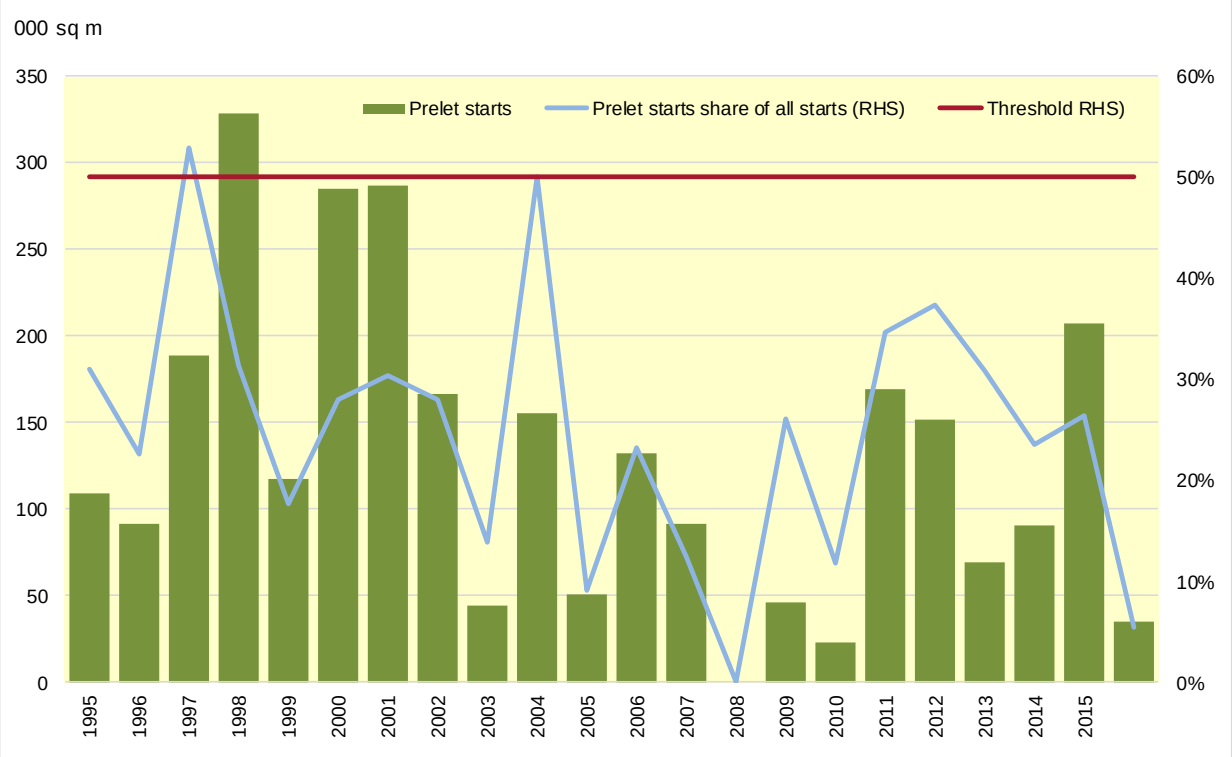
5.3.1 *Up to 50% of annual starts being comprised of pre-lets and owner-occupier schemes can be regarded as a normal and healthy market, provided the overall volume of starts is consistent with strategic policies to maintain London's World City role, as defined in strategic Benchmark 1.*

5.3.2 Figure 5.4 shows pre-let and owner occupier starts. This is different to the timing of actual pre-let deals, for various reasons. Sometimes building redesign, necessitating fresh planning permission, will delay project initiation. In addition, occupier considerations, especially owner-occupiers, may lead to delay. So, for example, while 2010 was a strong performer in terms of pre-let agreements (four large deals totalling 245,000 sq m, a larger total than starts in that particular year) they actually started construction in 2011-12. Google, which acquired its site at King's Cross in 2013, has redesigned its building, secured a new consent in July this year, and has just announced the go-ahead for the scheme, probably for 2017.

5.3.3 Over the long-term, the trend in the proportion of office starts accounted for by pre-letting and owner-occupier development has been the equivalent of 13% of take-up but has averaged just over a quarter of development starts over last 20 years. Since 2011 pre-let and owner-occupier starts have been higher, at 30% of total starts. Only in 1997 and 2004 have pre-let starts hit, or just exceeded, the 50%

threshold: in the former a result of large banking pre-lets at Canary Wharf, and in the latter, the consequence of the lowest level of starts since the early-1990s.

Figure 5.4 Proportion of starts accounted for by pre-let starts, 1986-2016



Sources: Cushman & Wakefield, Ramidus Consulting

5.3.4 Looking at the pattern of net gains or losses by sub-market reveals that in the recent period the City and Fringe markets have played a more important role than hitherto (Figure 5.5[93]). The City especially has generally lost occupiers in the pre-letting process, but in the last three years has gained. The Fringe markets have continued to gain, and more strongly. Docklands is also positive, but not as strong as hitherto. The West End and Midtown continue to lose occupiers, part of a wider process of decentralisation of their occupier bases. This is in keeping with the general pattern of a shift in the relative importance of non-core sub-markets.

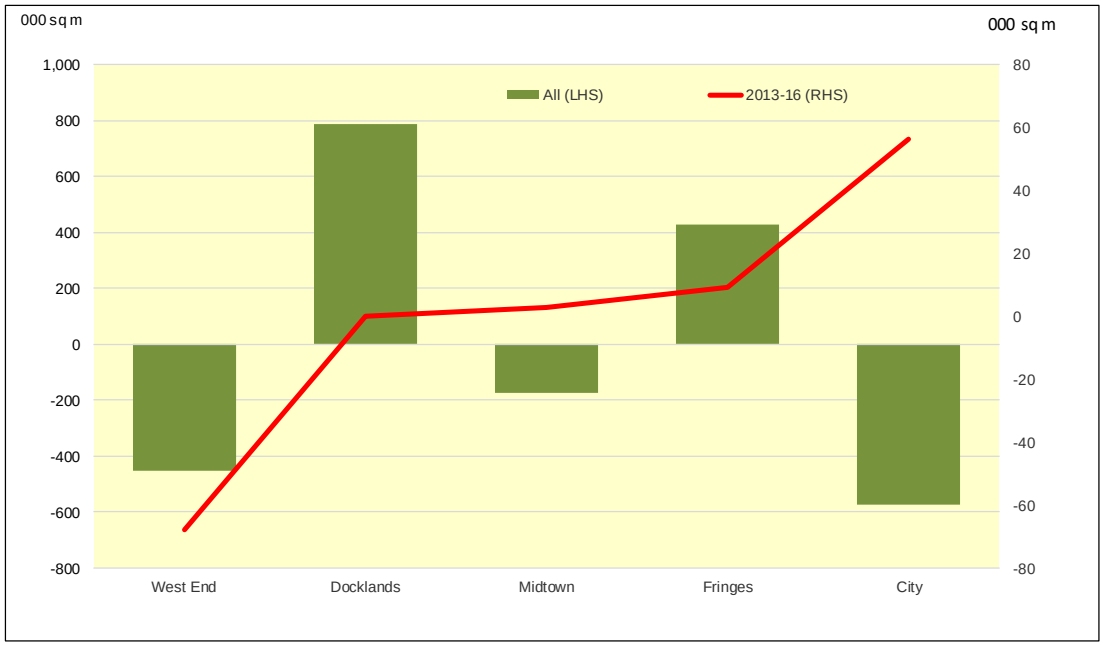
5.3.5 Non-speculative starts reached a peak in this cycle in 2015, with the highest volume since 2001 (207,000 sq m), even though the impact was dwarfed by rise in speculative starts (577,000 sq m). The most prominent non-speculative development was Goldman Sachs' start on a new 78,300 sq m headquarters at 70 Fleet Place, EC4. Amongst pre-let starts, Amazon's pre-letting of 56,400 sq m at Principal Place, EC2, and the taking of 23,300 sq m by Facebook at Rathbone

[93] The graph shows the balance between the overall space lost and gained in terms of the origin and destination sub-markets – the value used is the pre-let transaction size.

Square, W1, showed the importance of the Tech and media sectors. In the past three years, this sector has been the most important source of non-speculative starts, and while banking, hitherto dominant, has been important, insurance and consumer goods occupiers have also become more prominent.

5.3.6 In 2016 pre-lets were much less in evidence in Central London: a total of 35,000 sq m was agreed, and thus its importance in terms of development starts fell off significantly, to just 5% of starts, compared to a 26% share in 2015. But in new developments outside the Central London market 62,000 sq m of pre-lets took place in 2016, 44,000 sq m of this by Apple at Battersea. Thus, the fall is much less significant than at first sight, if we take the new development areas on the fringe of Central London.

Figure 5.5 Sub-market shifts in pre-let activity, 1985-2016



Sources: Cushman & Wakefield, Ramidus Consulting

5.3.7 One impact of non-speculative development worth mentioning is its potential for increasing speculative supply. Several schemes have started which are either planned to be only part-occupied by its owner-occupiers (WB Berkeley's Scalpel, EC3, and the eponymous Bloomberg Place, EC3), or where a partial pre-let provided the impetus for a larger scheme development (1 Bank Street, E14, a 40,000 sq m building in which 14,000 sq m is available, and 25 Churchill Square, E14, where about half was available when it started construction in 2011). Finally, pre-lets can influence the market through the amount of space which is put back onto the market if conditions have deteriorated in the period before completion.

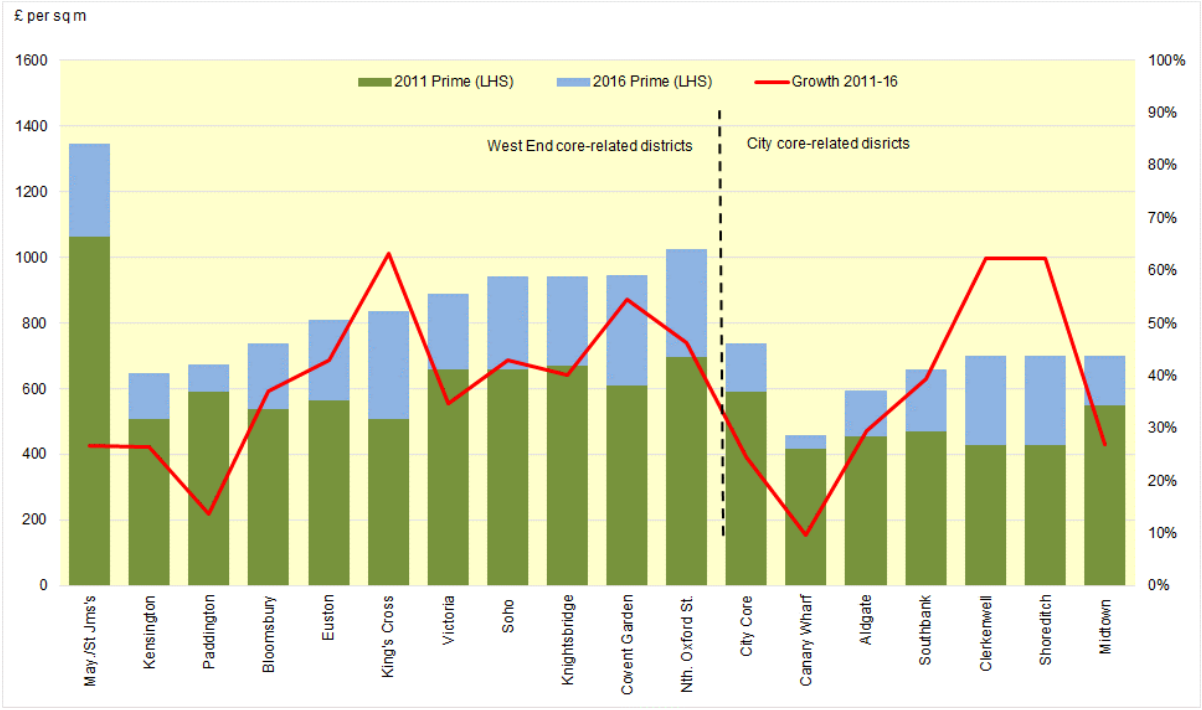
5.3.8 Another issue connected with pre-letting and owner-occupier space is the potential for 'grey space' being released onto the market. This is occupier space

which is surplus to occupier requirements for the foreseeable future as a result of scaling back business expectations. This usually rises as the property cycle turns down (see 4.6.3 above). Sometimes, though not always, it is offered to the market, and can influence the level of rents being secured.

5.3.9 In the big pre-letting wave of the early 2000s the completion of schemes coincided with the 'dotcom' crash. A large amount of space was put back on the market, notably at Canary Wharf, by the major banks who had initiated the pre-lets. A similar factor has been at work there again in the aftermath of the 2008 crisis, and accounts for the seemingly aberrant stability of Canary Wharf rents in the face of rises elsewhere in Central London from 2011 onwards (see Figure 5.6).

5.3.10 While a similar trend is not evident now, the banks once again might find themselves with surplus space, if the Brexit impact requires the movement of significant tranches of activities to Europe. If so, once again Canary Wharf would be vulnerable, due to the concentration of major banks there.

Figure 5.6 Prime rental growth by district 2011-16



Sources: Cushman & Wakefield, Ramidus Consulting

5.4 Benchmark 4: A range of rent levels

5.4.1 *In seeking to promote 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.

5.4.2 In this section, we examine rental growth and rental relativities. It is organised around a distinction between locations (i.e. market 'villages' or districts like Covent Garden) adjoining the West End and those adjoining the City. This is not a hard and fast distinction, as increasing occupier mobility is undermining the integrity of a West End/City distinction. But it reflects the similarities in occupier base in part reflecting preferences for relocation from their respective cores. Figure 5.6 shows the change in prime rents by district in Central London between 2011 and 2016, a period of strongly rising rental growth.

5.4.3 All locations have experienced substantial growth, except for Canary Wharf, which was held back by the existence of a large amount of Grade A, occupier-marketed space available because of the recession's impact on the financial sector. There was also an absence of development, which meant that the level of prime rent was untested.

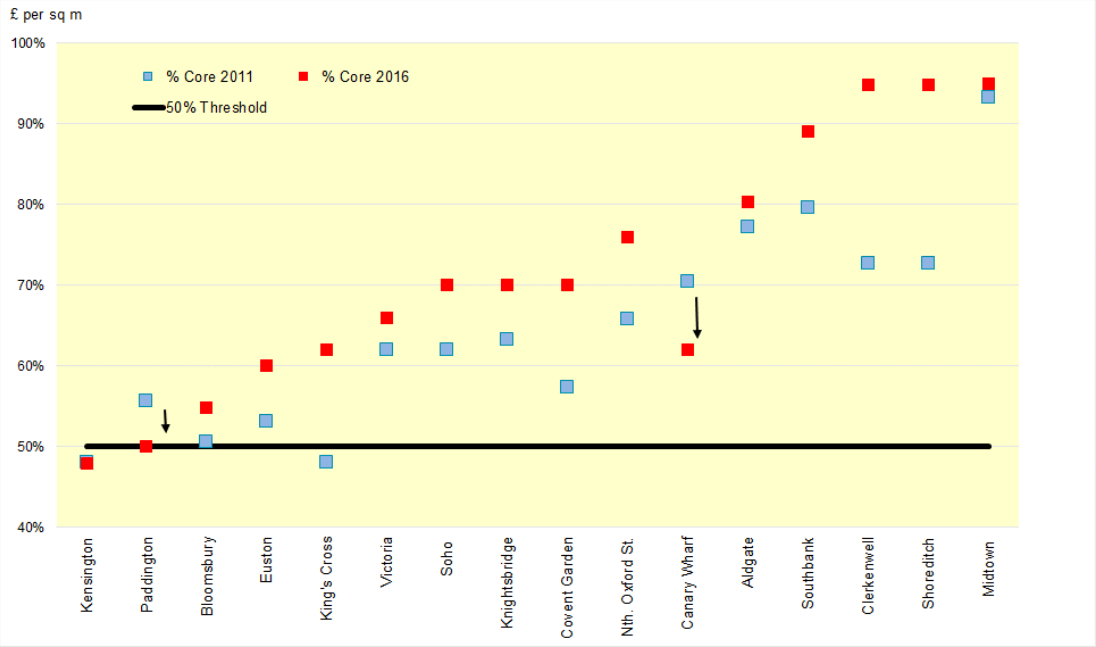
5.4.4 By comparison, the strong growth in Shoreditch and Clerkenwell reveals the importance both of indigenous Tech sector growth in stimulating demand and thus rental growth, and their increasing potential as relocation destinations for firms finding the City and West End cores too expensive. However, prime rents in these two districts are now over 90% of the City core, and this may both inhibit in-movers looking for cheaper premises, and prompt existing occupiers to look elsewhere, notably Aldgate and perhaps further east.

5.4.5 King's Cross and Covent Garden showed the strongest growth amongst the West End grouping. Landlords in both locations have prospered by being able to attract major West End companies relocating to find either suitable space (King's Cross) or lower rents. Covent Garden also has a diverse and largely smaller scale office stock, suitable for start-ups and the SME sector in general.

5.4.6 The relationship of prime rental growth in the core markets[94] (Mayfair/St James's and core EC2/EC3/EC4) to rents in the adjoining districts is shown in Figure 5.7. The 50% benchmark is also shown: this illustrates sharply the extent to which, as far as prime rents are concerned, new office space is no longer available in non-prime locations at 50% or less of top rents, and that this situation has become more acute in the run-up to the top of the current property cycle.

[94] The prime rent referred to is a headline rent (i.e. what is stipulated in the lease as the average rent for the hereditament), not discounted by rent free periods, usually referred to as the 'effective rent' (discussed in Section 4.4.9 below). The prime rents are found in the 'core' locations, which are the prime locational sub-area of a market/sub-market, In Central London there are conventionally two major 'cores': in the West End the 'villages' of Mayfair/St James's, and in the City an area, which is open to interpretation by market participants but which certainly centres on the Bank of England and covers much of EC2, EC3 and EC4.

Figure 5.7 District prime rental growth compared to core markets, 2011-16



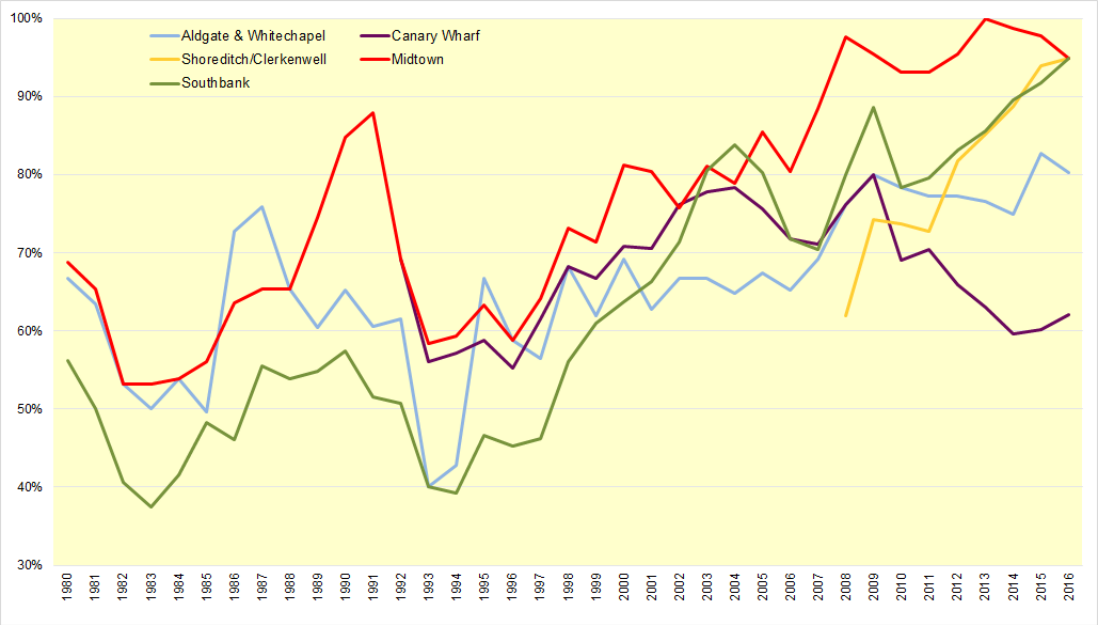
Sources: Cushman & Wakefield, Ramidus Consulting

5.4.7 The fastest moving districts in terms of closing the rental gap with core prime rents are of course those whose absolute growth was highlighted in Sections 5.4.3-5.4.4 above. But even those districts, all in the West End grouping, which were most closely aligned to 50% threshold, have moved above it, except for Kensington & Chelsea, where development is uncommon and evidence of prime rental growth commensurably rare, and Paddington, which like Canary Wharf, slipped back in relative terms over the period due to lack of development.

5.4.8 If we take a longer view of rental relativities a significant difference appears between the rental growth levels in City orientated districts with those that are West End orientated. Figure 5.8 shows the City oriented districts, and presents them as a proportion of the then ruling city prime rent. In the early-1990s prime rents were 40-60% of the City core rent. But a continuous rise in relative rents since then means that the relativities have moved to between 80-100%, except Canary Wharf (a position which is now, in 2016, changing as rental growth has resumed).

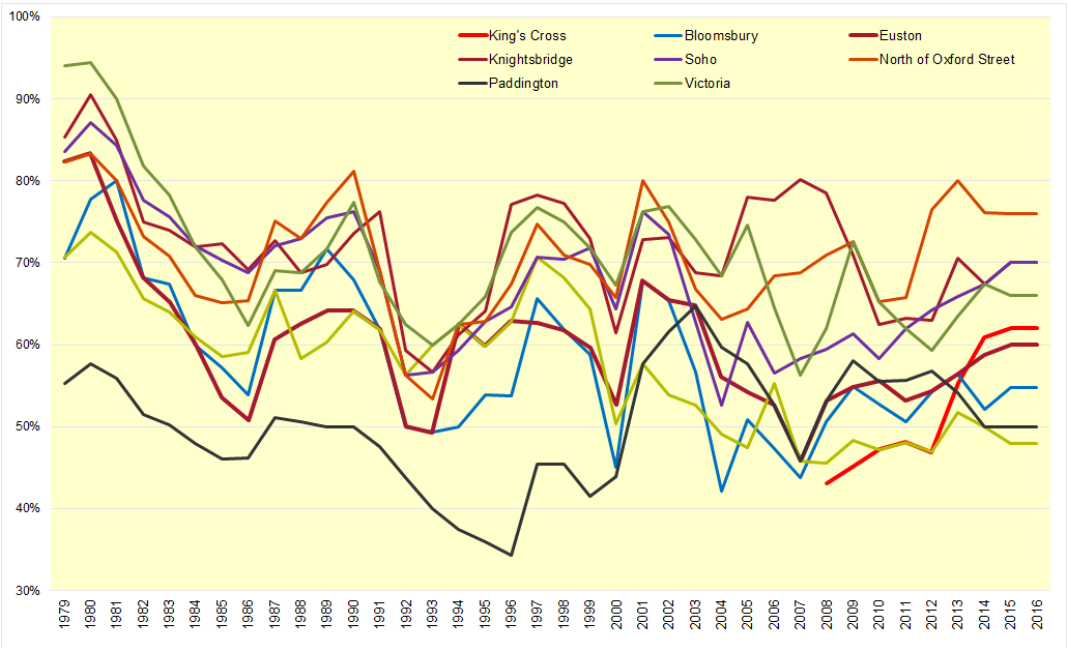
5.4.9 Figure 5.9 shows relative prime rents over the same period for the West End core and adjoining districts. The pattern is distinct from the City. Prime rents were closer to the core between 70-95%) than in the City, but declined to a 50-65% level in the trough of the early 1990s. Since the early-2000s they have been stable, with a spread of between 45-80% of the core prime rent. This lower ratio reflects the raised rental levels in the core, where competition over limited space by a specialist financial sector (hedge funds, private equity, wealth management) acutely conscious of locality, has led to very high rental growth.

Figure 5.8
Sub-market prime rents as proportion of City prime rents, 1979-2016



Sources: Cushman & Wakefield, Ramidus Consulting

Figure 5.9
Sub-market prime rents as a proportion of West End prime rent, 1979-2016



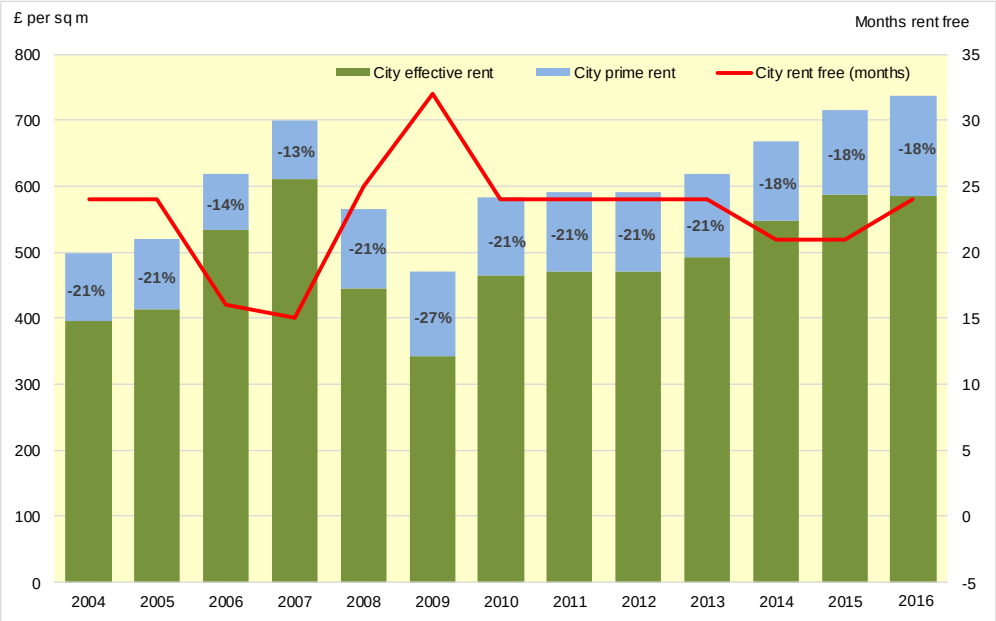
Sources: Cushman & Wakefield, Ramidus Consulting

5.4.10 A feature of the market which has become more important over the past 25 years has been the gradual spread of the habit of using rent free periods, expressed as a number of months granted in the first five-year term of a lease as an inducement to occupiers from landlords. This rises and falls with the property cycle, becoming larger as negotiating strength moves towards occupiers, and conversely weaker as the reverse takes place in market upswings.

5.4.11 Rent free periods act as a discount to the headline rent (the rent which appears in the lease). This can be calculated in a number of ways but the conventional approach is to measure it as the percentage discount to the headline rent. This is based on the proportion of a ten-year period (I.e. assuming a ten-year lease), minus a standard three-month fitting out period, which is covered by the number of months rent free granted.

5.4.12 The impact can be shown in relation to the City. Figure 5.10 shows the rent free periods granted over the past 12 years, and the impact on the headline rent in terms of discount to the effective rent. The rent-free period used is the agent measure of a market typical period offered for a prime building at the end year. The discount, not surprisingly reduces as landlord bargaining power increases (compare 2004 with 2007), but there has also been a ratcheting up of the level of rent frees over time. So, in 2015, the discount has reduced, but not as much as in the previous property cycle. Landlords have preferred to maintain the headline rent in return for granting occupiers greater rent frees, as this has proved useful in underpinning the value of the underlying asset. In 2016 the City prime rent rose overall but so did the rent free periods, so the effective rent remained virtually the same as in 2015.

Figure 5.10 City headline and effective rents and rent free periods 2004-16



Sources: Cushman & Wakefield, Ramidus Consulting

5.4.13 The above analysis is limited to a consideration of prime rents (see footnote 90 above). For cost-sensitive occupiers of secondary space the relativities can be different. Secondary space is previously occupied floorspace, in contrast to prime space which is usually new or refurbished space of high standard. Availability of secondary space has been declining in recent years (see Figure 4.7 above), so this may have resulted in a rise in the relative rent of secondary space.

5.4.14 The observation in 5.4.6 above that prime rents are above the 50% threshold implies that the Central London office market is becoming a 'flatter' market. Occupier flexibility vis-a-viz location reflects this. They are less inhibited than hitherto in moving in order to secure lower rents as well as better space. They have been helped in this by the provision of improved transport access and better service infrastructure in recent decades. A reduced contrast between prime rents across different office districts is the result.

5.4.15 The implications for policy remain the need to ensure plentiful supply and the strategic one of ameliorating trends toward a rise in the general level of commercial rents.[95] This means ensuring sufficient schemes are brought forward to populate the development pipeline, and resisting the loss of office space to other uses in areas of high demand (e.g. the West End and Midtown).

5.5 Benchmark 5: Years' supply of office space

5.5.1 *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.*

5.5.2 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 number of years' supply at the average rate of take-up (in the case of LOPR 2017, over 17 years). Figure 5.11 shows annual average take-up of new and refurbished space since 1997 in each Central London sub-market.

5.5.3 Both pre-leased (including owner-occupier) and speculatively leased activity fell in the period summarised in the table, in comparison with the LOPR 2012 averages for the 1997-2011 period. Pre-letting declined as the peak in activity in 2013-16 did not match the collection of very large schemes, mostly banking pre-lets at Canary Wharf, which occurred in 1997-99. The case is similar regarding speculative leasing volume, as the early years of the 1997-2011 period experienced the strongest years of take-up in market history.

[95] Although this has not outstripped the general rise in business expenses over the long-term; see Paragraph 4.2.7 above.

Figure 5.11 Annual average take-up, new and refurbished, 2000-16

Sub-market	New and refurbished (sq m)		
	Pre-leased	Leased	Total
City	46,276	191,393	237,670
West End	9,522	115,173	124,695
Midtown	1,937	50,416	52,353
Docklands	32,773	10,879	43,652
South & East	16,511	22,869	39,380
North & West	15,395	11,803	27,198
Central London	**122,413**	**402,534**	**524,948**

Source: Cushman & Wakefield

5.5.4 Figure 5.12 shows actual and potential new and refurbished supply at the end of 2015 in each of these sub-markets, for three categories, as follows.

- New and refurbished space: completed and available at end-2016, including space available in buildings scheduled for completion six months ahead.
- Schemes under construction, excluding space either pre-let or let during construction, prior to end-2016.
- Outstanding planning permissions, including permissions under construction, according to LDD criteria, but not actually committed in terms of development delivery – e.g. Wood Wharf and the various Crossrail-related developments.

Figure 5.12 Actual and potential new and refurbished supply, sq m, end-2016

Sub-market	New/ refurbished, completed & available	Under construction & available	Planning permissions	Total
City	188,174	681,431	1,237,870	2,107,474
West End	31,764	97,607	1,014,100	1,143,471
Midtown	23,683	68,677	392,298	484,658
Docklands	33,025	72,455	417,308	522,788
South & East	110,105	43,022	127,953	281,080
North & West	126,008	127,461	192,673	446,142
Central London	**512,759**	**1,090,652**	**3,382,202**	**4,985,613**

Sources: Cushman & Wakefield, Deloitte Consulting, Ramidus Consulting

5.5.5 Note that the geographical area covered here is somewhat smaller than the earlier data for starts and permissions which covered the whole of the 11 Central boroughs; hence the totals for starts and permissions are lower than Benchmark 1 above. This is to ensure that the take-up and supply data are from identical areas.

Also, unlike in Benchmark 1 availability in completed buildings and those under construction as well as planning permissions include refurbishments (unlike the LDD). This is why this market measure of supply performs rather better than the Benchmark 1 ratio.

5.5.6 Figure 5.13 shows years of supply, by type of space, against annual average take-up, 2000-15, 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 5.10, 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.

5.5.7 Taking Central London as a whole, Figure 5.13 indicates that, based on the long-term average rate of take-up, there was, at the end of 2016 (a) just one year's supply available for immediate occupation; (b) just over two years of supply under construction and available, and (c) nearly six and a half years of supply in unimplemented planning permissions. Taken together, the completed, construction and planning pipeline at the end of 2015 represented nine and a half years of supply at historic rates of demand.

5.5.8 Despite the substantial decline in development availability, which is reflected in the under construction and available ratios (due to strong take-up), planning permission, at 6.4 times average take-up is at a very similar level to the 6.5 ratio pertaining at end 2012 when development activity was substantially less.

Figure 5.13
Actual and potential new and refurbished supply, in years, end-2016

Sub-market	New/ refurbished, complete & available	Under construction & available	Planning Permissions	Total
City	0.8	2.9	5.2	8.9
Docklands	0.7	2.2	23.2	26.2
North & West	0.9	2.5	14.4	17.8
South & East	0.8	1.8	10.6	13.3
Midtown	2.1	0.8	2.4	5.4
West End	1.0	1.0	1.5	3.6
Central London	1.0	2.1	6.4	9.5

Sources: London Development Database, Cushman & Wakefield, Deloittes, Ramidus Consulting

5.5.9 If we look at the sum-market level we see some commonalities with LOPR 2011, and some differences. City and the North and West sub-markets are adequately provisioned, while Midtown, Docklands and South & East are in a better

position in 2016 than in 2011. In the West End, however, supply is even lower than it was in 2011 (5.2 years then, 3.6 years now).

5.5.10 Figure 5.14 compares the 2016 result with the results for this benchmark registered in recent previous LOPRs. The data sources for the years before 2016 were DTZ and EGi; while for 2016 it is Cushman & Wakefield (successors to DTZ), Deloittes and the LDD. Together this provides a good comparison with the EGi-based reports, and so allows comparison of change over time.

Figure 5.14 Actual and potential new and refurbished supply, in years, 2003-16

Category	2003	2008	2011	2016
New, completed & available	2.0	1.7	1.8	1.0
Under construction and available	1.1	2.1	2.8	2.1
Planning permissions	6.7	7.0	6.5	6.4
Total	**9.8**	**10.8**	**11.1**	**9.5**

Sources: Greater London Authority, Ramidus Consulting

5.5.11 Availability amongst completed developments was in much shorter supply at the end of 2016 compared to the figures presented in earlier reports. Compared to 2008 this reflects a higher level of pre-letting and a lower level of new speculative supply, which has resulted in higher levels of letting before completion amongst the latter. The level of availability amongst space under construction in 2016 stems from the high level of speculative starts in 2015-16 combined with a fall-off in take-up. The planning permission supply position has remained very similar across reports. From this perspective, the current level of supply has not changed in recent years.

5.5.12 Benchmark 5 implies that if overall supply falls below 3.25 years then there is potential for shortages. The current position is that there is just less than a decade's supply available, either being implemented or with planning permission, and that this appears comparable with levels assessed in previous reports. This suggests that at the strategic level the development industry and the planning system are delivering the necessary office capacity. At the sub-market level, however, the substantial imbalance between Midtown and the West End and the rest, remains, and has deepened in the case of the latter.

5.6 Benchmark 6: The rate of rental change

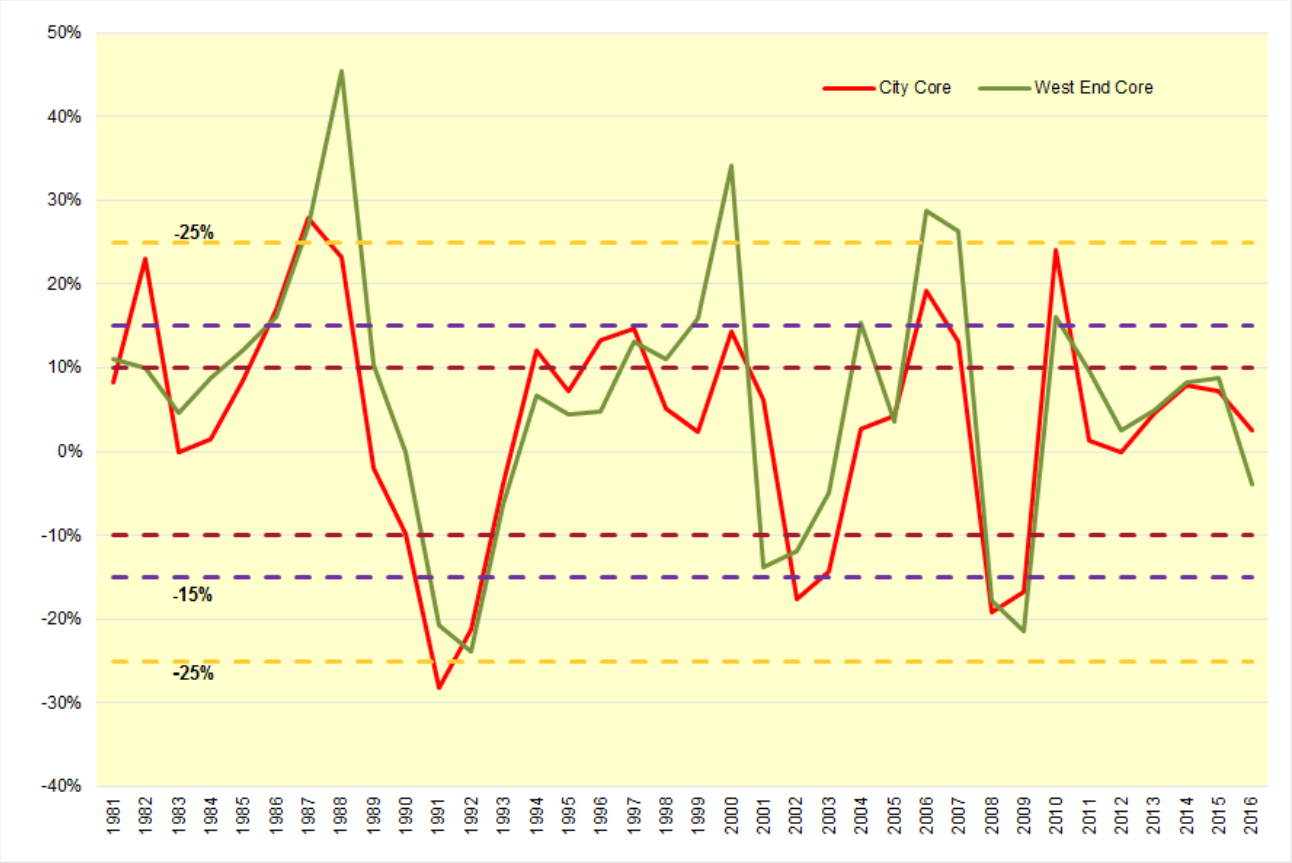
5.6.1 *Rental change should be monitored to register acute changes the in level of rents. The policy response in terms of encouraging or discouraging the supply of space will be gauged by threshold levels of annual rental change. The proposed policy thresholds are 10-15% (monitor); 15-25% (closely watch, consider action); and 25% plus (take action).*

5.6.2 The establishment of this new benchmark as an early warning mechanism for excessive rates of change could be useful for policy makers. Strong and acute rates of rental growth are responses to the changing balance of supply and demand.

If positive they are a burden to the existing occupier base and a disincentive to new entrants, but if also negative, they discourage development. Both movements encourage the extremes of cyclicality which are a hallmark of the commercial property cycle, a feature which is in any case 'baked in' by the mismatch in the rates of response of new supply and overall demand.

5.6.3 If we look at rates of change in rents over the long term, for the core City and West End markets (Figure 5.15), the annual rate of change of rents has exceeded 25% in the City on only one occasion in the 35-year period observed, but five times for the West End. The respective occurrences for breaching the 15% threshold were seven times in the West End, and five times in the City. This reflects the contrast in relative performance: rental growth in the West End has grown faster than in the City over the long term, so the percentage changes will be greater, even if market fluctuations are similarly volatile, other things being equal. The same is true of rental growth rates in other districts of Central London which have been 'catching up' with their respective core markets.

Figure 5.15 Annual rates of change in rental growth, 1981-2016

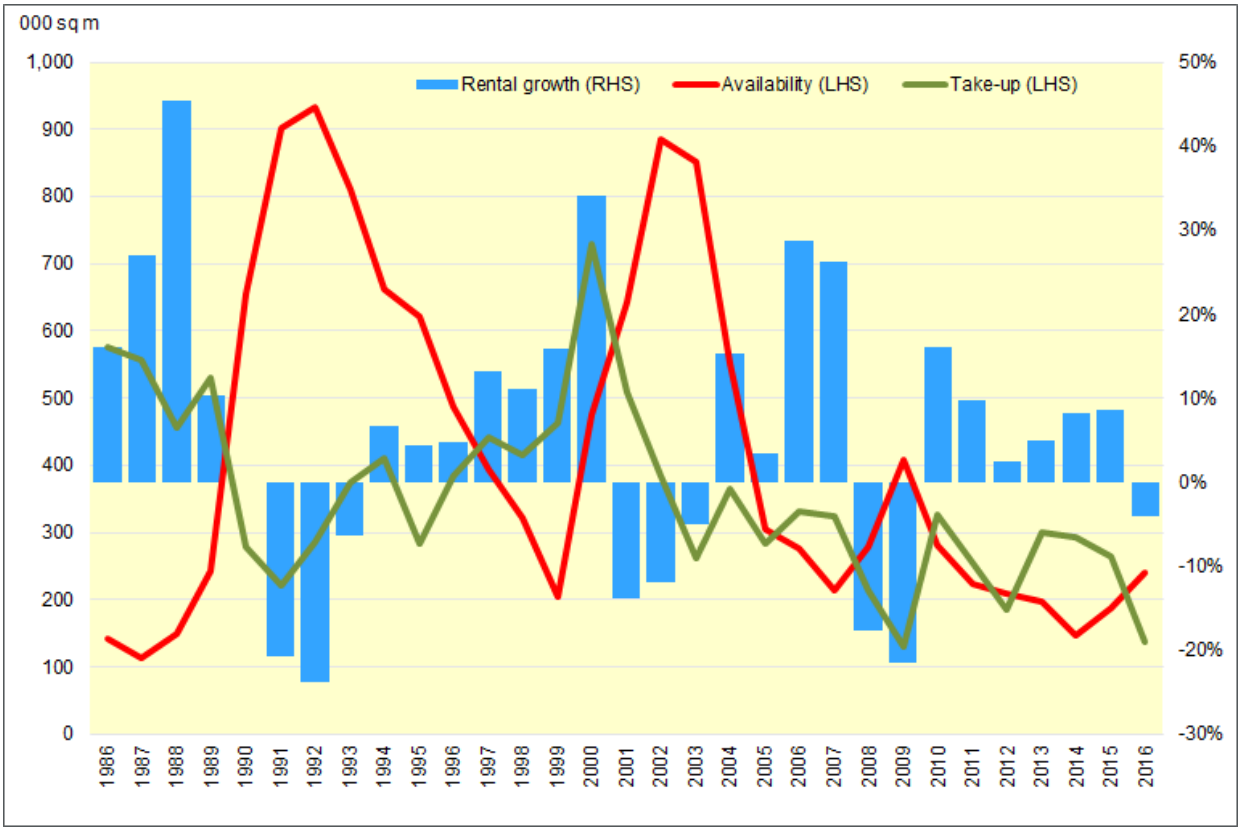


Source: Cushman & Wakefield, Ramidus Consulting

5.6.4 These rates of change are of course heavily associated with peaks and troughs in the property cycle. Most recently the amplitude of these fluctuations has ameliorated to some extent. In 2014 and 2015 rental change was less than 10% (i.e. an average of 8% per annum in both the City and West End core districts). This compares with 15%+ annual growth in the same areas in 1986-88, 1999-2001 (the West End only), in 2006-07 and in 2010 (when a temporary recovery occurred). In 2016 the rate has fallen in both markets, with the prospect of both being in negative growth territory in 2017.

5.6.5 Figure 5.15 shows the characteristic way that rental growth starts slowly then usually (though not invariably) accelerates, although the peak growth rate does not necessarily occur right at the peak of rental value. This in turn is closely associated with, but not always at the same time as, the concomitant values of other key property market indicators (availability and, to a lesser extent, take-up). This is also indicated in Figure 5.16, which relates take-up and availability to rental growth in the West End.

Figure 5.16 West End take-up, availability, and prime rents, 1986-2016



Source: Cushman & Wakefield

5.6.6 The property cycle which culminated in 2007, in terms of rental growth (24%), coincided with a trough in availability, with take-up volume at a similar level

to 2006. In the previous cycle, availability bottomed in 1999, a year before peak rental growth, which was prompted by the record volume in take-up that year. Take-up and availability levels are historically very low, reflecting the weakness of the market.

5.6.7 Thus, in terms of the benchmark thresholds proposed, the current rate and direction of change in rental growth is mild and unthreatening, not even breaching the ±10% level. I.e. not even at monitoring level.

5.6.8 The alacrity with which rental growth changes makes it difficult to use as an indicator of inadequate supply. New supply only comes to the market slowly, over a period of years, but demand can change over a much shorter period. This mismatch of variable behaviour makes it difficult to use changes in rental growth as an indicator of the degree to which new supply should be either encouraged or inhibited by planning policy.

5.6.9 It might be possible to use a number of consecutive years of positive rental growth as a better indicator, rather than a single year, but in this case as well, the end to positive rental growth is often a swift descent into negative growth, indicating an over-supplied market. This is because of the nature of the property cycle: supply ramps up due to rental growth, but demand falls due to exogenous factors, leaving availability exposed to weak demand with the result that surplus space accumulates and rental growth quickly turns negative (as can be seen in figure 5.16 above).

5.7 Summary

5.7.1 **Benchmark results** Some of the benchmark results are untroubling. Since 2011, the 8% floorspace availability threshold of Benchmark 2 has not been breached. The threshold still indicates the onset of positive rental growth: prime rents turned positive at 7% availability in the West End and 9% in the City, both in 2009. At 2.5%, availability was undoubtedly very short at the end of 2015, but now, in 2016, we are on upward trajectory of availability. So, this constraint for occupiers, that of limited choice, will become more relaxed for the foreseeable future.

5.7.2 Pre-letting, even though augmented by significant owner-occupation developments, has not approached the 50% of development starts threshold in recent years (Benchmark 3).

5.7.3 Rental volatility too has ameliorated in recent years, the rate of change remaining within a +/-10% metric since 2011 (Benchmark 6). Thus at present the indicator is untroubling, and will remain so as long as the factors putting downward pressure on the market do not become aggravatingly strong

5.7.4 Rental variation has narrowed between the City and its associated districts (Benchmark 4). This is an aspect of a generalised movement within the Central London office market toward a less polarised ‘core versus fringe’ relationship and a spreading out of demand. Sensitivity to costs and the search for appropriate floorspace has encouraged firms to relocate to different districts, and this represents

a change in locational sensibility on behalf of occupiers and the development of the sort of service infrastructure (retailing, entertainment, public realm, etc.) that is attractive to contemporary occupiers. Nevertheless, in terms of the policy goal behind the Benchmark, to provide a range of rental values, choice has narrowed, at least in terms of rents for prime property. The extent to which this is mirrored by differentials in secondary property has not been established.

5.7.5 Benchmark 5 measures the adequacy of new office supply in terms of ability to meet demand. This has remained comfortable: at 9.5 years of average take-up it is very similar to the ratios reported in previous reports. Reflecting their structural shortage in new supply, these ratios are lowest in the West End and Midtown.

5.7.6 Taking these observations in the round, we can again conclude, as with LOPR 2012, that the Central London market has coped well with recent conditions in recent years. Development has responded well, availability has been adequate outside of the West End and Midtown, and the ensuing rental growth has merely brought nominal prime rents in core markets back to the level registered in 2007. Rents have increased faster in other districts, but this is more of a catching up with the core areas (specifically the City) as demand has dispersed more widely.

5.7.7 However, Benchmark 1's threshold is that planning permissions should be at least three times the average rate of starts. This measure is now showing an amber warning: rising development intensity has outstripped replenishment by new permissions, and the ratio has decreased below the threshold, for the first time since monitoring began. This position is further endorsed by the trend in the EGi ratio, which has likewise declined, to a point not seen since the early-2000s.

5.7.8 Looking forward, the expected declining trend in development starts can be expected to prompt an uplift in the ratio as long as fresh applications for planning permission continue to come through. This should focus attention on the designation and protection of strategic sites, whose importance for expanding Central London capacity and its attractiveness as an employment centre, as the developed examples attest, has been profound.

5.7.9 **The pattern of development.** Since 2011 the Central London office market has experienced a recovery in leasing activity and rental growth. Take-up has increased to long-term average levels, while availability has fallen significantly, aided by the withdrawal of secondary space for residential development, a long-term trend affecting the West End and Midtown sub-markets in particular. Thus rental growth, which started to recover in 2010, strengthened considerably in the West End, while being slower to respond in the City.

5.7.10 Due to constricted supply and shrinkage in secondary stock, the West End and Midtown remain under pressure. However, despite increased property costs, these markets hold their attraction for certain types of occupiers. Moreover, given the resilience of the wider Central London market in terms of supplying attractive buildings, and the improving character of these locations in terms of supporting

infrastructure, the older core locations are not irreplaceable. It seems unlikely that capacity problems here will cause problems to the Central London office market.

5.7.11 If the West End and Midtown find it increasingly difficult to produce new office buildings, especially sizable ones, the rest of the market can compensate. There is little evidence that new development is in short supply for the foreseeable future. Rental growth is not excessive; even in the West End the prime rental indicator is growing at the long-term rate of GDP growth; i.e. at roughly the general level of cost increase in the economy as a whole.

5.7.12 Take-up has been low in the West End and Midtown sub-markets since the early 2000s. Second-hand supply has been inadequate, and the volume of office stock either stagnant or falling. Increased demand, combined with restricted stock, explains the greater strength of West End rental growth. In addition, a greater proportion of new supply has been refurbished stock than in Central London as a whole (63% of new supply versus 32% for the latter), leading to occupiers who want newly built space to look outside the sub-market.

5.7.13 Loss in the West End core has been matched by a concurrent removal of secondary stock on the wider periphery of Central London. Development has tended to favour smaller units (offices selected for residential conversion have been on average half the size of redeveloped office sites). Indeed, in principle, the attraction to developers of residential conversion in areas where office rental levels are lower (i.e. on the periphery) could well be higher than the core. This is because the proportionate contrast between residential and office capital values are likely to be higher in secondary office locations.

5.7.14 A structural shortage of office space emanating from conversion should have led to a rise in long term rental levels above the movement in the general price level. In terms of prime rents this has not been the case in the City, but true to some extent in the West End (See 4.2.7 above). This will reflect the long-term balance of supply and demand, including the relative impact of residential conversion. Nevertheless, the limitation of this analysis is that it is at the level of prime stock, and does not extend to secondary space.

5.7.15 But seems logical that the reduction in secondary stock would impact relative rents in this section of the market. It follows that while definitive evidence is lacking, anecdotal experience suggests that the reduction in secondary space in the West End particularly, has increased rental levels for all classes of floorspace and commensurably reduced occupier choice. This has led to occupier out-migration from the more expensive districts. Undoubtedly, the ability of more cost-sensitive SME's to find appropriate premises in central locations has been reduced.

5.7.16 The shrinkage in development supply in the aftermath of the recession led, as is usual, to a shortage in newly built availability in Central London, which in turn pushed up rents in a cyclical manner. The acute withdrawal of loan financing initially cramped new supply, but by 2012 equity finance was coming into speculative development, and development companies had refinanced with low interest rates,

so the development cycle set off once again. The outlook for development is a supply peak in 2016-17, with decline after this, as the now widely anticipated negative rental growth and outward yield movement continue to undermine developer and financier confidence in speculative investment. Recovery of the property cycle after this will depend on the timing of economic recovery and the contingent results of Brexit negotiations.

5.7.17 Despite office to residential conversion (which has removed around 1.5m sq m from stock over the past 20 years in Central London) office stock has increased substantially. This has resulted from increasing the density of existing office sites (the average increment to floorspace of new buildings over the past decade has been 50%), and the conversion of brownfield sites to offices, which has supplied over 900,000 sq m over the same period.

5.7.18 The centre of gravity of office development activity in terms both of volume, scheme size and additions to stock remains in the City and Docklands, with the peripheral areas also becoming important as the sites of new 'mega schemes' (Section 3.3 above). We have also noted that development of Central London type buildings occupied by Central London type occupiers is appearing outside the periphery (4.5.16 above). This suggests that the borders of the Central London market need to be reconsidered to take on board these developments and the contribution such areas can make to increasing the office stock.[96]

5.7.19 Looking forward, the capacity implication of the composite projection combining both employment-based and trend-based methods summarised in Paragraph 9.4.2 below suggests a net additional requirement of 4.72m sq m of office space through to 2041. The comparison with the capacity study (Figure 9.16) indicates a reassuring increment in terms of supply capacity over demand. It is the conversion of this potential capacity (which includes permissions and potential development sites) which is at issue here. The time horizon is large from a market perspective, and will no doubt contain several property development cycles (periods in which potential developments can be converted into implemented schemes). The relatively low level of current outstanding consents revealed in Benchmark 1 has been noted, suggesting that vigilance will be needed to ensure that these potential locations of office expansion are safeguarded, and encouraged to come forward into the development pipeline. While redevelopment at higher densities is critical, the identification and protection of brownfield sites for development is also essential.

5.7.20 But further than this, the impact of residential conversion should be of concern, both in terms of the PDR impact outside the CAZ, and continuing conversion within it. As things stand, the exemption for the latter is temporary, and while the boroughs are currently able to protect office sites, and are increasingly willing to do so, loss of the exemption could seriously impede the delivery of adequate space.

[96] A review of commercial surveying firms' definitions of the Central London market shows that locations such as Hammersmith, Battersea, Stratford, White City are being incorporated into the central area.

6.0 Beyond Central London

6.0.1 This Section examines the dynamics of the office market beyond Central London – that is, mainly Outer London but also covering Hammersmith to because as well as being treated as part of Central London it also operates as 'free-standing' market with a distinctive user base.

6.0.2 This Section should be cross-referenced with our analysis of the latest VOA stock data, presented here in Section 4.4 and Appendix Two, and which provide borough level data on office stock change from 2000 to 2016.

6.1 Introduction

6.1.1 The LOPR series has undertaken a high-level review of centres across London since 2004, in order to assess their prospects for office development. The 2012 review informed the office guidelines in Annex 2 of the London Plan. LOPR 2009, undertook a comprehensive review of potential strategic office locations around London, covering approximately 100 centres. While many locations were found to be at least potentially sound, others were found to have no plausible future as significant office locales.

6.1.2 Since LOPR 2009, many of the smaller centres have lost further office space to residential and some are thought to have reached a point of stress with small businesses finding it difficult to continue operating in their long-established locations. This, combined with trends in office work discussed above, means these finds need to be reviewed.

6.1.3 Time and cost constraints make reviewing every centre unviable, but we have gathered market and development data and made site visits to a subset of 15 markets and reviewed them on a similar basis. Therefore, consideration of implications is focussed on these 15 centres and focuses on whether they are still robust with regard to the selection of centres we have been asked to consider, and recommend and makes recommendations for future. It observations on the current London Plan strategic office centres (Stratford and Croydon), and a mix of town centre office centres, mid-urban and conventional business parks, science and innovation parks, and appraises the scope for office development.

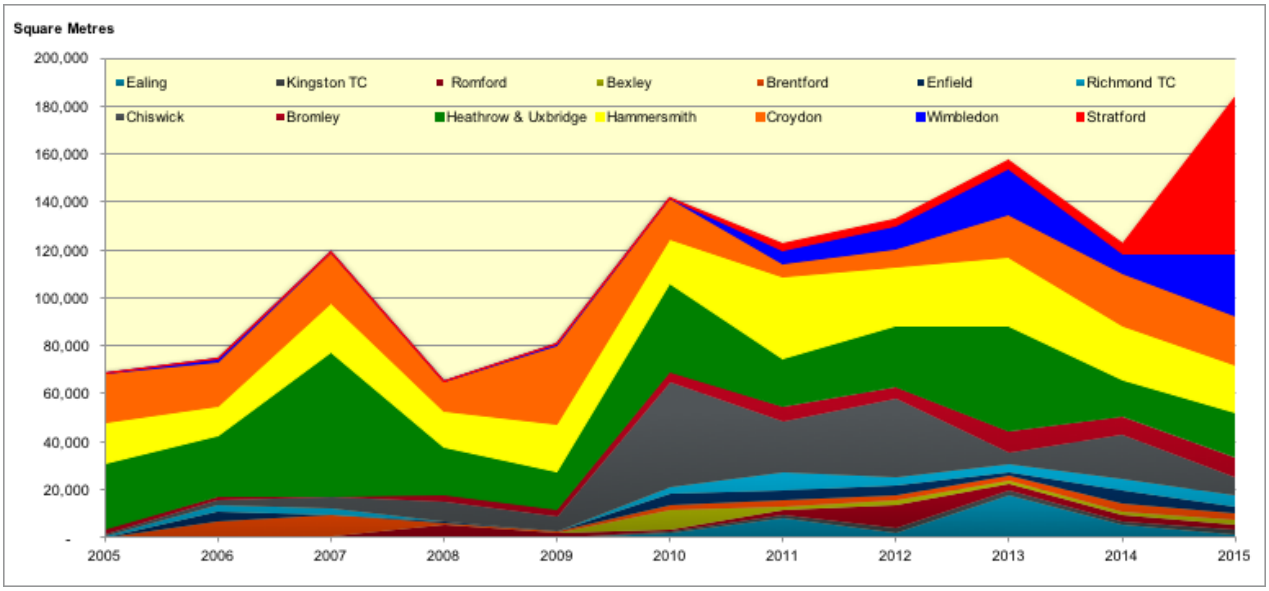
6.1.4 Just as Central London is not a single homogenous market, there is no single outer London office market. This is not merely a geographical observation: different markets have grown up for different reasons, some to serve largely local markets, other as preferred bases for specific sectors and others in the push for decentralisation in the 1960s and 1970s. London, as has so often been said, is a polycentric city and nowhere is that more evident than in Outer London.

6.2 A review of 15 centres in Outer London[97]

6.2.1 The 15 key centres were discussed at inception as those seen as of particular interest, either through being known as key centres or as suspected of suffering particular pressure for change of use. Our analysis is based on 15 key centres distributed around North, West, East and South London. The difficulty of gathering reliable data for some centres is a telling indicator of the market view of those centres, an observation that becomes evident in the following narrative.

6.2.2 The diversity of Outer London markets is illustrated by two graphs. Figure 6.1 shows take-up over the past ten years in the 15 markets (where data exist) and how some markets have emerged, while others have declined or been erratic.

Figure 6.1 Take-up, Outer London centres, 2005-15



6.2.3 The data lying behind Figure 6.1 are shown in full in Appendix Three.

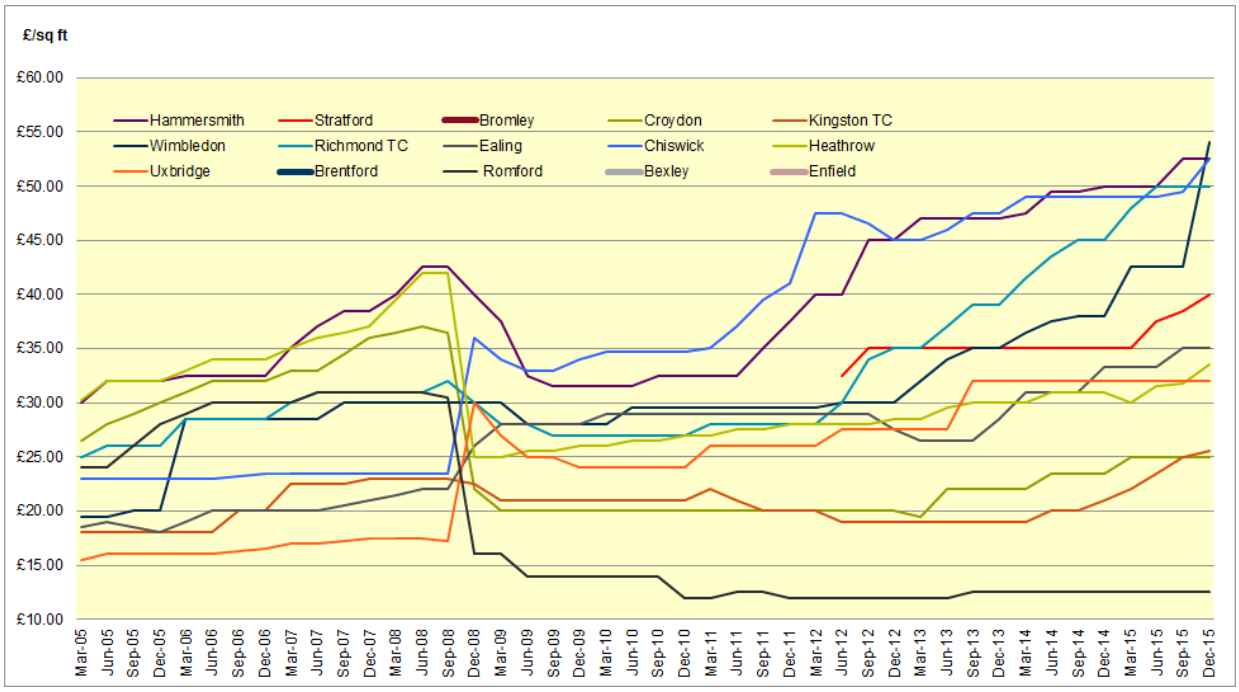
6.2.4 Figure 6.2 plots rents in the same 15 markets. It is not intended as a source of individual rental data (for that see Appendix Four), but to demonstrate that these markets do not move in parallel.

6.2.5 The complexity of the chart fully reflects the diversity of the markets not only over time, but also in their changing relative performance. Stratford, for instance, appears as if out of nowhere, while nearby Romford and far away Heathrow show noticeable slumps from which they have not fully recovered.

[97] Unless otherwise stated, data refer to the borough (TC = Town Centre). In practice, given that this is market data, it will refer to the major office markets in any given locale.

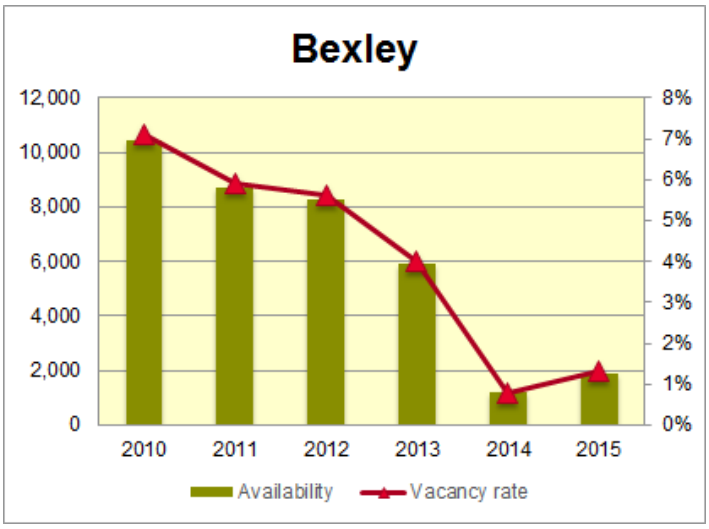
6.2.6 The remainder of this Section examines the individual centres that were selected for review. Note that vacancy rate and availability data covers only space that is being marketed or is available for marketing. Space that is empty but not being marketed, nor expected to be, will not be counted. Also, area figures are net, not gross. The background data for the charts can be examined in Appendix Five.

Figure 6.2 Rental performance in Outer London markets



6.2.7 **Bexley**

6.2.8 **Stock** Borough stock is estimated at 160,000 sq m, based on 2012 VOA data, but this has not been historically tracked and supply data is limited to post-2010. Given the sharp decline in both availability and vacancy rate it is likely that, when new VOA data is published, stock will have fallen.



6.2.9 **Take-up** has typically been less than 2,800 sq m per annum in

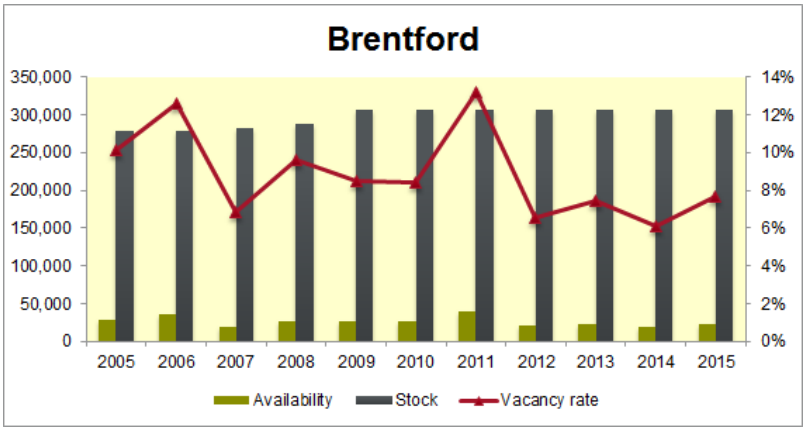
recent years. There was 7,900 sq m of space taken up in 2010, but that was exceptional.

6.2.10 **Rent** No rental data is monitored by Cushman & Wakefield for Bexley.

6.2.11 **Supply** has steadily fallen, with a particularly sharp fall in 2014 – the year following the introduction of PDR and the vacancy rate, although increasing slightly in 2015, has remained below 1%.

6.2.12 **Brentford**

6.2.13 **Stock** in Brentford has climbed slightly, despite being perceived in the market at large as a market with its best days behind it. Stock is estimated at around 290,000 sq m suggesting it accounts for around one third of LB Hounslow's stock using VOA stock data. Much of the remaining stock will be within the Heathrow market (see below).

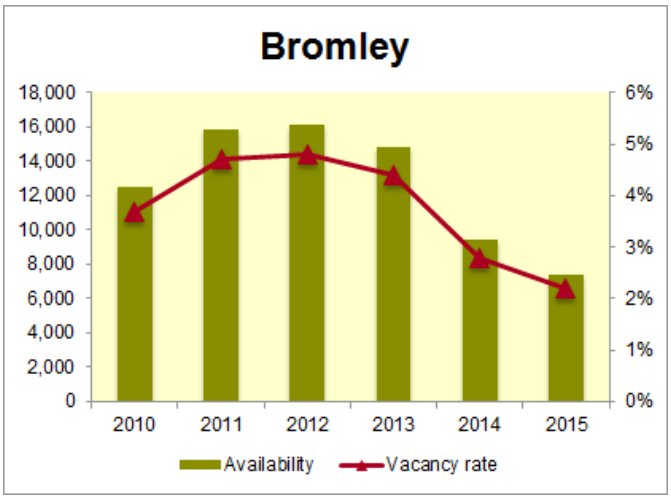


6.2.14 **Supply** has fluctuated somewhat, but vacancy rates have remained above 6% despite a slight long run downward trend.

6.2.15 **Take up** Take-up in Brentford is monitored in terms of Grade A and Grade B space, illustrating its history as a major HQ-standard office location (lesser markets draw no such distinction). Nearly all take-up has been of Grade B space, averaging around 3,100 sq m a year, since 2006, but with lettings since the credit crunch markedly lower at an average just over 2,300 sq m a year. Over this entire period Grade A lettings accounted for only 2,200 sq m – all after 2012.

6.2.16 **Rent** It is a sign of how far Brentford diminished as an office location that Cushman and Wakefield have not actively monitored rents for the entire run of data. Despite having some significant corporate HQs (such as GSK) it is no longer viewed as sufficiently active to warrant close monitoring.

6.2.17 **Bromley**



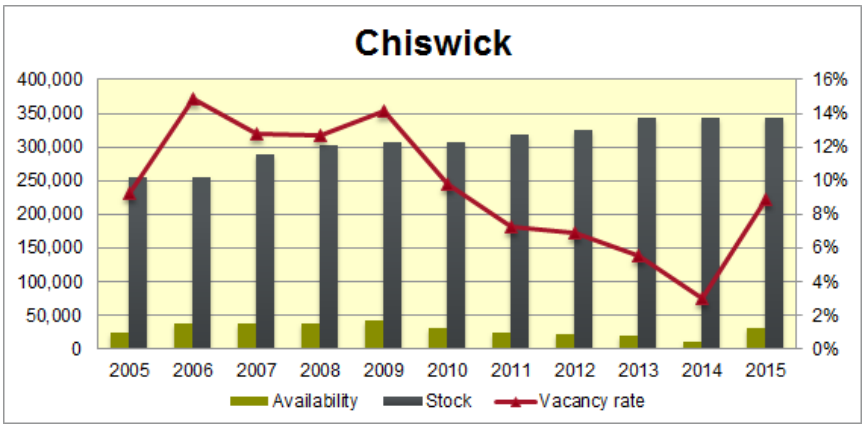
6.2.18 **Stock** As with many Outer London markets, the borough's stock is not routinely monitored but is estimated at 335,000 sq m. No distinction is made between Grade A and Grade B in the supplied data. Vacancy rates are low – consistently below 5% - and standing at 2.2% at the end of 2015. Availability ranged between 12,000 – 15,000 sq m until 2013, but has since fallen sharply but down to 7,400 sq m in 2015. This is consistent with the introduction of PDR and suggests that a significant amount of space has been taken off the market for conversion to residential use.

6.2.19 **Take-up** Having noted that PDR may account for the fall in availability, take-up, which had previously hovered around 2,300 sq m per year, saw some improvement after 2010 to 8,400 sq m per year.

6.2.20 **Rent** Cushman & Wakefield do not record rental data for Bromley.

6.2.21 **Chiswick**

6.2.22 **Stock** Chiswick stock rose from 251,000 sq m in 2005 to 343,000 sq m by the end of 2015 as new phases of Chiswick Park were built out. Up to 2010, vacancy rates were over 10%, peaking at 15%. By the end of 2015 they had fallen to 9%. Although this seems high, it is the nature of Chiswick as an emerging market, with significant blocks of supply coming on stream and then being let in large chunks.



6.2.23 **Take-up** The erratic take-up in Chiswick is what we would expect from an emerging market. Until 2011 take-up was less than 9,300 sq m a year, reflecting that no new space had come on stream. After 2011, take-up

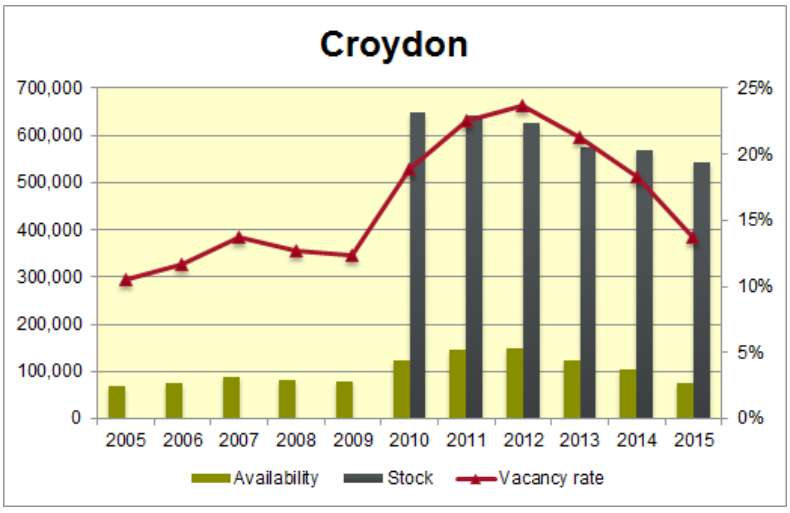
accelerated to between 18,600 and 37,000 sq m in any given year. Arguably of more interest, is that the period since 2010 has seen the gradual emergence of a Grade B market. This is what we would expect as an emerging market matures and should be seen as an encouraging indicator that Chiswick is now firmly established as a diverse market.

6.2.24 **Rent** It should not be surprising that Chiswick is becoming a more attractive location as new development proceeds and this is fully reflected in rents. In 2005 rents in Chiswick were just £23 per sq ft, but by the end of 2015 they had more than doubled, to £52.50 per sq ft. This, again, is a clear sign that Chiswick is emerging as a mature market, potentially taking the place of the stagnant Brentford market.

Croydon

6.2.25 **Stock** The centres' stock has seen a dramatic change, from 641,000 sq m in 2011 and to 539,000 sq m by 2015. Based on VOA data we believe that this had already fallen slightly before Cushman & Wakefield began monitoring. This loss of stock reflects a market that had, despite many attempts, failed to capitalise on its roots as a major centre for decentralisation. Much of the stock is obsolete and Croydon has the highest level of PDR conversion to residential in London. We expect stock to fall further.

6.2.26 **Supply** Availability remained stubbornly above 100,000 sq m until 2014, having peaked at 150,000 sq m in 2012. A couple of strong years for lettings, and the removal of some available space for residential conversion brought availability down to 74,300 sq m in 2015. Vacancy rate peaked at 26% in Q3 2013, having climbed steadily from 2005 to 2012-13. Although it has gradually fallen the vacancy rate still stood at 14% at end 2015. That no distinction is made between Grade A and Grade B reflects the dearth of new development in Croydon – something which may be about to change (see below).



6.2.27 **Take-up** Prior to the credit crisis take-up varied from 12,000 sq m to 20,500 sq m then fell sharply from 2009 onwards, down to just 5,500 sq m in 2011. There has been a gradual recovery to20,500 sq m in 2015. The sharp fall immediately after the credit crunch rather highlights the vulnerability of markets with a paucity of good quality stock to economic shocks.

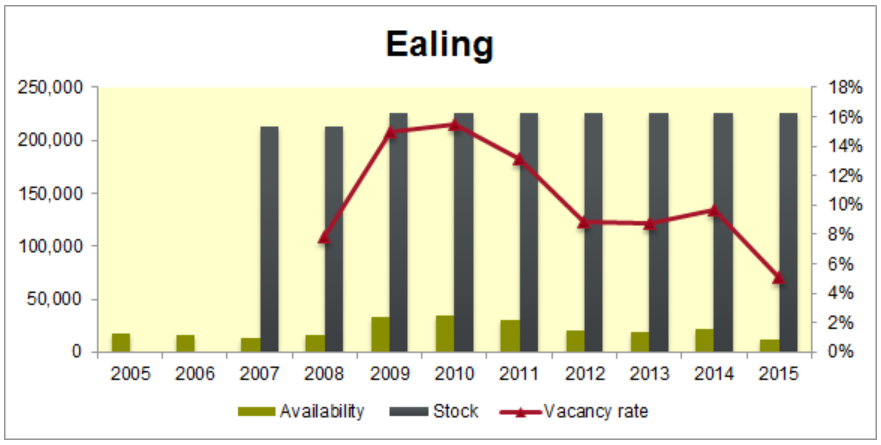
6.2.28 **Development** Croydon saw 22,000 sq m completed in 2012 and a further 9,000 sq m in 2013, but other than that the development market has been quiet. There is currently 22,000 sq m under construction, with 91,600 sq m of outstanding consents: a welcome and long overdue renewal and upgrading of stock.

6.2.29 **Rent** Croydon looked like it may be heading towards a revival in the run up to the credit crisis, with rents rising from £26.50 per sq ft in 2005 to peak at £37 in 2008, but then fell sharply as take-up collapsed. Even though rents have recovered they are still only £25 per sq ft and are not at levels that would attract unsubsidised speculative development, as might the location of a Government Hub in Croydon.

6.2.30 Croydon an offer large lots of reasonable quality space at discounted rents (compared to other large markets) and there is a good supply of consented space. But vacancy rates remain relatively high, supply is not constrained and rents are not driven upwards, which in turn reduces incentives to develop.

6.2.31 **Ealing**

6.2.32 **Stock** Ealing borough's stock has been fairly stable, with a modest increase from 214,000 sq m to 227,000 sq m in 2009 and stable since. However, the feedback from the workshop is that Ealing has lost office space from its town centre, the remaining buildings are a longer walk from the station to the West and it has therefore lost its 'vibe'. The town centre is 'hemmed in' by high value residential and struggles to retain its role as a mixed town centre. Its retail has also diminished in status. SMEs would find it difficult to locate even in small units in the heart of the town centre because stock is being lost (almost three-quarters of space lost to PDR was at least partially occupied – see Section 8.0).



6.2.33 Should Old Oak Common be developed, it is likely to draw more demand from Ealing's office market and its fate seems to be as a suburban functional centre with boutique retail. The conclusion is that, without protection, Ealing will continue to decline as an office employment centre and that, already, it will be difficult to reverse the decline. The private sector is not motivated to provide affordable SME space which means the only options are managed space which is more expensive.

6.2.34 **Supply** Availability has consistently varied around 18,600 sq m, with occasional increases, peaking at 35,000 sq m in 2010. It them fell to 11,500 sq m in 2015. This is reflected in vacancy rates in the 9-15%, perhaps in the high side for a West London market.

6.2.35 **Take-up** With the exception of 2013, take-up has been fairly low in Ealing, typically in the 1,860 to 7,400 sq m range. Exceptionally, 2013 saw nearly 17,700 sq m of take-up with a small number of large lettings.

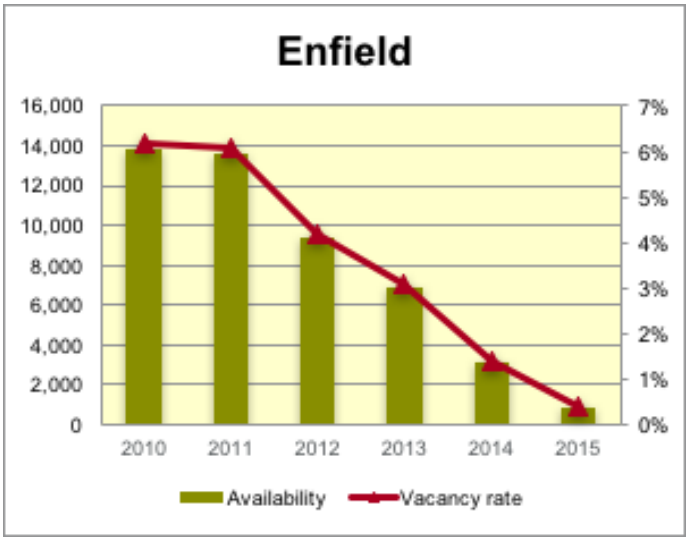
6.2.36 **Rent** Despite mainly modest take-up, rents have climbed steadily since 2005 when they were £18.50 per sq ft to £35 per sq ft at the end of 2015. The growth has been steady and the exceptional take-up in 2013 does not seem to have accelerated growth.

6.2.37 **Development** Since 2010, there has been 46,500 sq m built, most of it in a single 23,000 sq m building completed in 2010, and 14,400 sq m completed in 2011. But there is less than 9,300 sq m in the pipeline.

6.2.38 **Enfield**

6.2.39 **Stock** Enfield borough has 223,000 sq m of office stock. Our data provider Cushman & Wakefield has not, historically, monitored this. The main locales are Enfield town centre and Enfield Chase with smaller concentrations towards Cockfosters and in Edmonton. The borough is mainly characterised by distribution space, unsurprising given its easy access to the M25.

6.2.40 **Supply** Availability was not recorded before 2010. At that time 13,800 sq m was available, representing a vacancy rate of 6%. The vacancy rate has fallen progressively since then, and at the end of 2015 stood at less than 1% with less than 930 sq m available. However, it is difficult to judge whether this is because of market lettings or the loss of empty space to other uses.



6.2.41 **Take-up** Since 2006 take-up has peaked at around 3,700-4,600 sq m in five particular years (2006, 2010, 2011, 2012, and 2014). But otherwise it has been minimal, with less than 470 sq m of lettings recorded.

6.2.42 **Turnover** As a proportion of stock this represents a turnover rate of just 2% at the peak – which is below even a base turnover

rate that would be expected from lease expiries and other routine causes of market activity.

6.2.43 **Development** There has been just 1,200 sq m of new development completed since 2006, in 2012. There is outstanding consent for 1,400 sq m, unimplemented. Middlesex University, Trent Park Campus, was vacated in 2012 and the council wrote a planning statement which sought to encourage employment uses, and specifically named 'institutional headquarter-type uses' and 'technical specialist and R&D uses' suggesting the council was aiming to position the campus in the high tech park market.

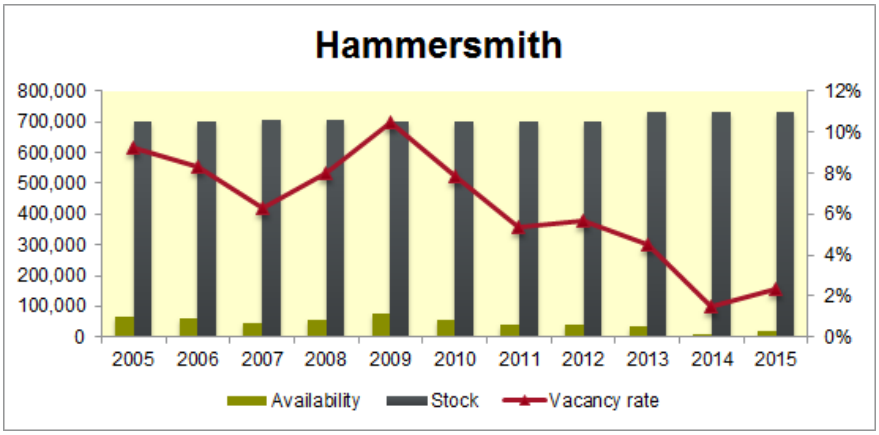
6.2.44 To place the new development in context, Enfield has lost 2,800 sq m since 2013 to PDR (see Section 5.3).

6.2.45 Overall observation: Enfield is a small and insignificant office market and we do not expect this to materially change.

6.2.46 **Hammersmith**

6.2.47 **Stock** Hammersmith is a very well established office market that has served as a hub for media business and as overspill for the West End for many years. The borough's stock is fairly stable, growing slowly from 706,000sq m to 734,000 sq m between 2005 and 2015.

6.2.48 **Supply** behaves in a way similar manner to other well-established markets, moving in line with the economy at large, but it is notable that it has fallen in recent years from vacancy rates of around 9-10% (falling to 6% in the period immediately before the credit crisis) to less that 3%. This is despite stock growing by nearly 23,225 sq m. Hammersmith has seen relatively modest loss to PDR, so the overall picture is of a healthy market well suited to modern requirements, and arguably in need of more office space.



6.2.49 **Rents and take-up** This is further supported by rental growth, which has seen rents move from £30 per sq ft in 2005 to £52.50 per sq ft in 2015. It is easy to see why when it is noted that of the 223,000 sq m of lettings recorded in the data, almost all was Grade A space.

6.2.50 The conclusion can only be that Hammersmith is a well functioning, mature market fulfilling the needs of West London occupiers. Hammersmith is also one of the few centres that registered significant development activity (see Section 6.3 below), although it has rather less consented and under construction than has been completed since to 2010.

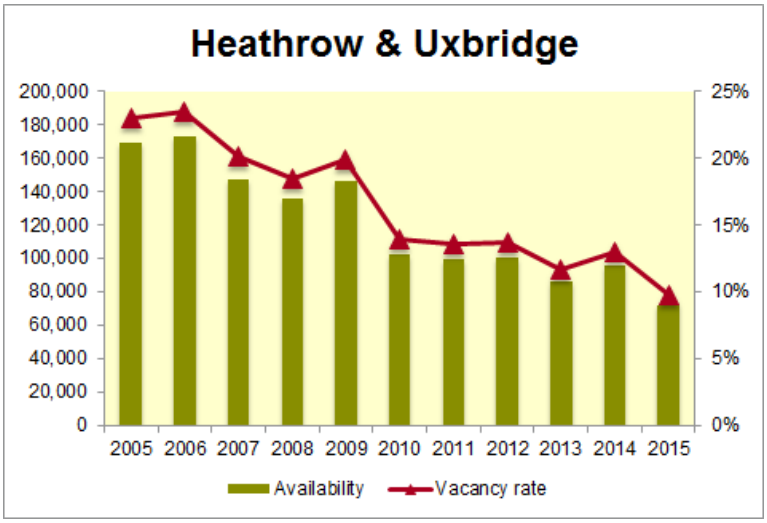
6.2.51 **Harrow**

6.2.52 Harrow was a reasonable sized office market but lost a couple of large employers and, subsequently, has lost a large quantum of office space to PDR, pushing down vacancy rates. There is a desire to retain income from business rates but the local authority feels powerless to resist the flow of space to residential because they cannot offer the kind of office space that is in demand. It would require site assembly to create sites large enough in the town centre. Further, demand focusses on campus style offices and has been diverted elsewhere. The old Kodak industrial site is a potential opportunity if any developer has the appetite which seems unlikely.

6.2.53 **Heathrow & Uxbridge**

6.2.54 **Stock** Estimating stock for Heathrow and Uxbridge is highly problematic because of the somewhat diffuse nature of the office market around Heathrow. There isn't a clear centre of gravity. Cushman and Wakefield give an estimate of 734,000 sq m. VOA data suggest total 2012 stock for Hillingdon and Hounslow of around one million sq m, so the Cushman & Wakefield estimate seems reasonable. It is very difficult to judge if the area has lost significant stock, but Hounslow was one of the first boroughs to report significant pressure from residential developers, as noted in previous LOPRs. It will be little surprise if new VOA data report loss of stock.

6.2.55 **Supply** Heathrow supply has fallen steadily since 2005, with vacancy rates declining from more than 20% to slightly under 10%, although given suspicion that stock has fallen further this should be treated with some caution.



6.2.56 **Take-up** has been largely consistent around a baseline of c18,000 sq m but with two notable peaks in 2007 (60,400 sq m) and 2013 (44,200 sq m). This suggests a steady

market rather than a dynamic one, but possibly one in which good new space will find a customer base.

6.2.57 **Rents** One curiosity of this area is that prime rents for Heathrow & Uxbridge converged, after a period in which Heathrow held a substantial premium over Uxbridge (£32.25 per sq ft versus £15 per sq ft). Both markets now command similar rents of £32-33 per sq ft. We suspect that this is a function of much of the poorer quality stock in Uxbridge being removed from the market both by PDR and by normal planning consents for office to residential conversion.

6.2.58 **Ilford**

6.2.59 **Overall observation** We draw attention to Ilford, which is not monitored by our data provider and which we were not asked to comment on specifically. This is because, although it is nominally a smaller market than nearby Romford, our site visits suggest that, as a town centre, it has greater vitality than Romford. This is an entirely subjective view and should be treated with the caution that this entails, but future work might usefully investigate the dynamics of both town centres.

6.2.60 **Kingston-Upon-Thames**

6.2.61 **Stock** Kingston town centre has a stock or around 149,000 sq m with vacancy of just 2,100 sq m, or 1.4%. This may be seen as surprising, since Kingston is not generally regarded as a significant office market and is not closely monitored by Cushman & Wakefield. It is only study centre that has insufficient time-series supply-side data to graph. It has simply not been monitored consistently enough.

6.2.62 **Take-up and rents** That take-up has not breached 1,900 sq m gives some clue as to the why Kingston is not seen as a significant market, especially in the context of rental growth that can – at best – be described as modest, rising to £18 per sq ft in 2005 and to £25.50 per sq ft in 2015.

6.2.63 Minimal rental growth and very limited activity, make this market appear very sluggish, despite having a respected science and engineering university and the very highly regarded Kingston School of Art (also part of Kingston University). There is no space under construction or recently built and consent for just 5,600 sq m outstanding.

6.2.64 The reason is partly because Kingston has been unable to solve congestion problems, but also, Kingston town centre is not served by a fast rail line to London – nearby Surbiton is the local fast line – additionally the lack of a Tube line weakens the attraction of Kingston compared to Wimbledon and Richmond. If Crossrail 2 progresses, then this view may well change radically.

6.2.65 **Richmond Town Centre**

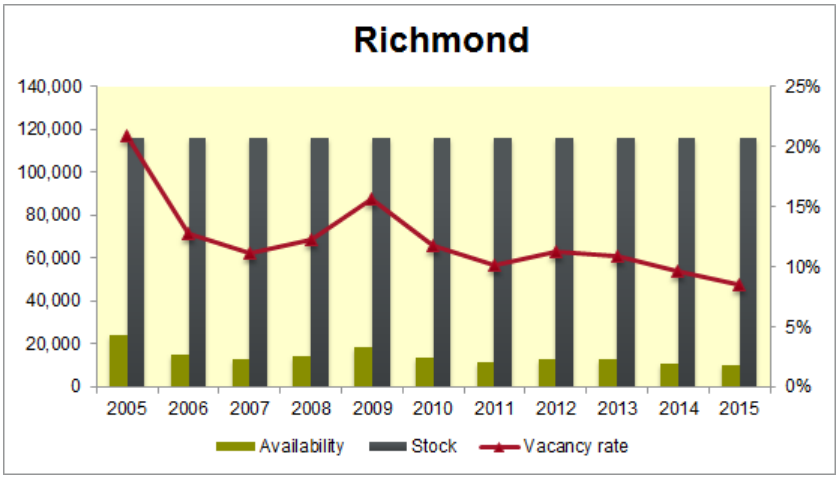
6.2.66 **Supply** Richmond town centre is a market under great stress which is not fully reflected in the data. Stock of 111,000 sq m has been stable, but elsewhere the

Borough has seen loss of all kinds of employment land. Availability fluctuated between about 24,000 to 29,000 sq m during 2005. Over the subsequent decade, availability has dropped by two thirds to just over 9,300 sq m - although the vacancy rate remains at 9%.

6.2.67 **Take-up** has consistently been 2,800 to 7,400 sq m per year (including Grade A and B space), indicating a market that is active, but small.

6.2.68 **Rent** rose from the mid-£20s per sq ft in 2005 to the high-£20s per sq ft up to the credit crisis. Since the global financial crisis, rents have risen to £50 per sq ft.

6.2.69 **Development** Richmond Town Centre is a small market with few development opportunities, so there has been very little development activity – between 2,800 and 6,500 sq m per year. Since 2014 it has fallen to below 9,300 sq m with just 3,250 sq m under construction as of 2014 and just 2,140 sq m of outstanding consents in 2015. Richmond Council has been very concerned about PDR and it is likely, from a developer's point of view, residential took precedence.



6.2.70 **Other** There is a secondary market in Twickenham with several sites under severe pressure from residential since before PDR came into effect, although most of these are non-office.

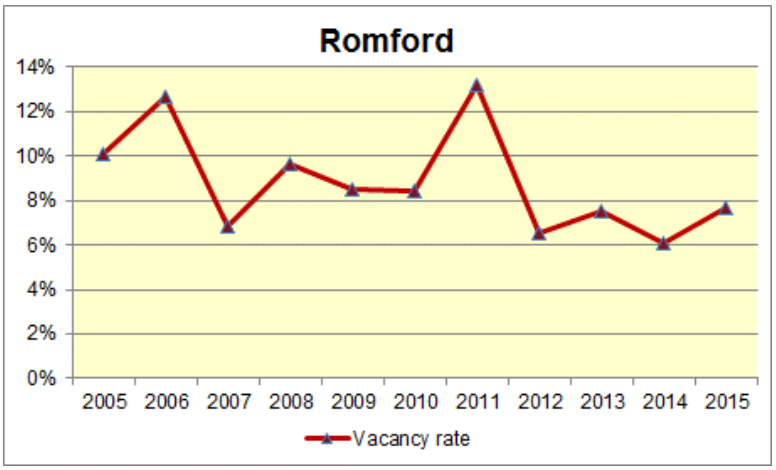
6.2.71 **Romford**

6.2.72 **Stock** Despite being recognised as a distinct office centre Romford, has not been closely monitored by the market for many years. The current stock level is 130,000 sq m, but there are no historic data.

6.2.73 **Supply** 6,900 sq m is recorded as currently available in this market but we have no historic data. This translates into a vacancy rate of 6.9%.

6.2.74 **Take-up** The rate of lettings varies widely from year to year with an exceptional take-up of 9,300 sq m in 2012 but otherwise fluctuating between less than 450 sq m to around 5,000 sq m with no obvious pattern.

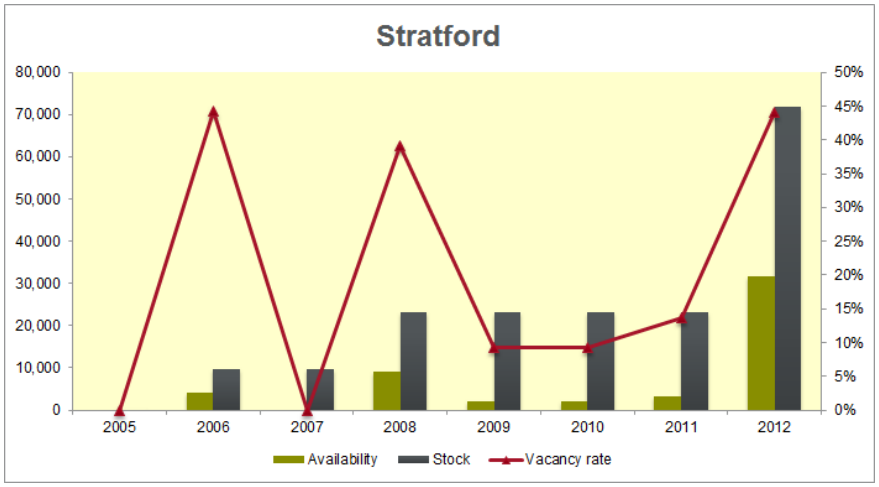
6.2.75 **Rents** Trends in rental values are interesting because they appear to reflect some serious collateral damage from the emergence of a market at Stratford. In 2005, rents were in the mid-£20s per sq ft, but by mid-2008 they had plummeted to £12 per sq ft and have not recovered since. It seems likely that the emergence of Stratford has stolen any potential for demand from Romford. It is likely that Crossrail is already being considered in the minds of developers, and that the centre continues to decline as an office location suggests that Crossrail is as likely to intensify decline as to arrest it.



6.2.76 **Development** There is just 1,480 sq m of new office space in the pipeline, and there was evidence of office-to-residential conversion during a site visit.

6.2.77 **Stratford**

6.2.78 **Overall observation** Stratford has been subject to very large-scale regeneration since the past LOPR in 2012. Our base data then went to end-2011 and, although the significance of the imminent Olympic games was fully appreciated, a slight note of caution was sounded because Stratford had been seen as a potential new major office location for at least 15 years at that stage with no obvious progress.



6.2.79 **Stock** It is, perhaps, not surprising that market agents began fully monitoring Stratford in the years after the Olympic games were secured. In 2009 stock was estimated at around 103,000 sq m and it has grown in sporadic bursts as the large pre- and especially post-Olympic opportunities were taken.

6.2.80 From a starting point of virtually no Grade A office market, Stratford has grown to a centre with almost 80,000 sq m of new high quality office space with large tranches of expansion as new blocks were completed, reaching 25,000 sq m in 2011, then 50,000 sq m by Q3 2015 and over 70,000 sq m by the end of Q4 2015.

6.2.81 **Supply** fluctuates, as is characteristic of an immature market and has been driven by development and pre-lets. While year-end supply was typically well below 10,000 sq m in any one year between 2009 to 2014, apart from 2011 when it rose above this level, however some caution is needed as space will be flagged as available ahead of construction because of the need for pre-lets.

6.2.82 **Vacancy** In these circumstances vacancy rate is a very poor metric because of the stage of a market's evolution. For Stratford, it has ranged from 44% to zero, depending on what is being actively marketed at the time.

6.2.83 **Take-up** is similarly problematic. It was between 3,000 sq m and 4,000 sq m in 2011 to 2014 but then in 2015, reached over 70,000 sq m. For all the reasons noted above, this might be space that is not yet completed and has never appeared in the supply data, showing up neither as stock nor available space.

6.2.84 The Financial Conduct Authority took over 40,000 sq m in a building of 50,000 sq m, and Transport for London took the entire 26,000 sq m building next door. These two buildings are due for completion in 2017 and 2018 respectively.

6.2.85 BT Sport occupies c8,000 sq m at the former media centre, where 25,000 sq m became iCity and is now occupied by Here East – as a tech innovation hub. It will be home to Loughborough University's postgraduate campus.

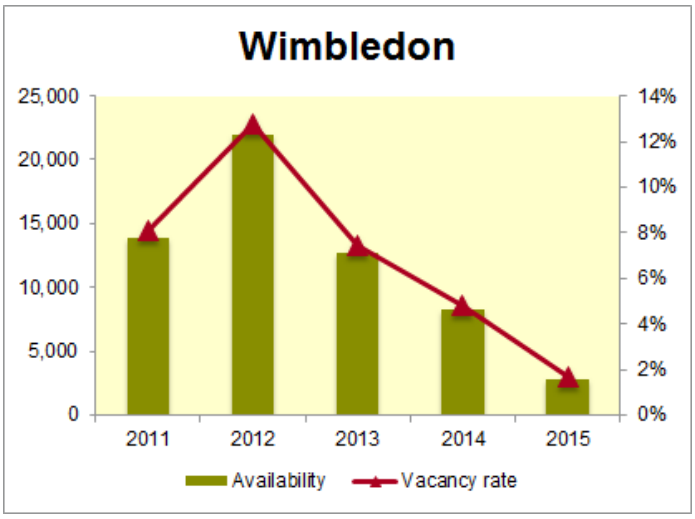
6.2.86 **Development** As might be expected, Stratford dominates development pipeline including unimplemented consents for further 500,000 sq m of office space.

6.2.87 **Rents** have only been routinely monitored in 2012 when they were estimated at £32.50 per sq ft. They are now reported to be £40 per sq ft, although it is likely that there are significant incentives in place.

6.2.88 **Wimbledon**

6.2.89 **Overall observation** Wimbledon has emerged as an active office market in recent years but historical data is limited probably demonstrating that it was not of interest to the commercial or investment market until the past few years.

6.2.90 **Supply** Stock is estimated at 167,000 sq m. Availability has only been systematically recorded since Q3 2011 when there was 14,000 sq m representing an 8% vacancy rate. Supply peaked sharply at 230,000 sq m at the end of 2012 and has fallen steadily since then such that by the end of 2015 there was a little over 2,800 sq m – just over 2%.



6.2.91 **Take-up** was never more than 1,900 sq m pa until 2011 when it reached almost 5,600 sq m. This rose to 9,760 sq m in 2012 and a year later to 18,900 sq m. It slipped back in 2014 to 8,700 sq m before rising again to 26,000 in 2015. Despite be a supply constrained market, there is an evident market appetite for Wimbledon.

6.2.92 **Rent** In 2005 rents were barely touching £20 per sq ft. They climbed through 2012 to 2014 and jumped sharply during 2015 from £32.50 per sq ft at the beginning of the year to £54 per sq ft by the year end. This has not been driven by the creation of new, modern stock – development in Wimbledon has been quite modest, but by genuine demand. Unsurprisingly, therefore, the vacancy rate and availability level vary closely together.

6.2.93 **Development** Wimbledon has seen less than 2,000 sq m per year of new development since records were started, with the highest in 2013 at 2,300 sq m. There is 4,500 sq m under construction and outstanding planning consents of nearly 2,000 sq m.

6.2.94 Wimbledon has most likely benefitted from supply and cost restrictions elsewhere, but in the absence of significant new development it is easy to envisage a scenario where rents start to look inflationary.

5.2.94 There is an active BID in Wimbledon that has helped to make the town centre attractive to employers. Its fast and frequent connection to London Waterloo, strong retail centre and orbital tram link to Croydon means it can attract labour from over a wider geographical area.

6.3 Development activity

6.3.1 The ultimate test of any market is its capacity to attract investment to upgrade or add to stock. Figure 6.3 shows completions, space under construction and outstanding consents since 2010 for the markets examined here. It is of little surprise that Stratford is, by a large margin, the dominant centre in terms of space committed given the huge Olympic and post-Olympic investment in the area.

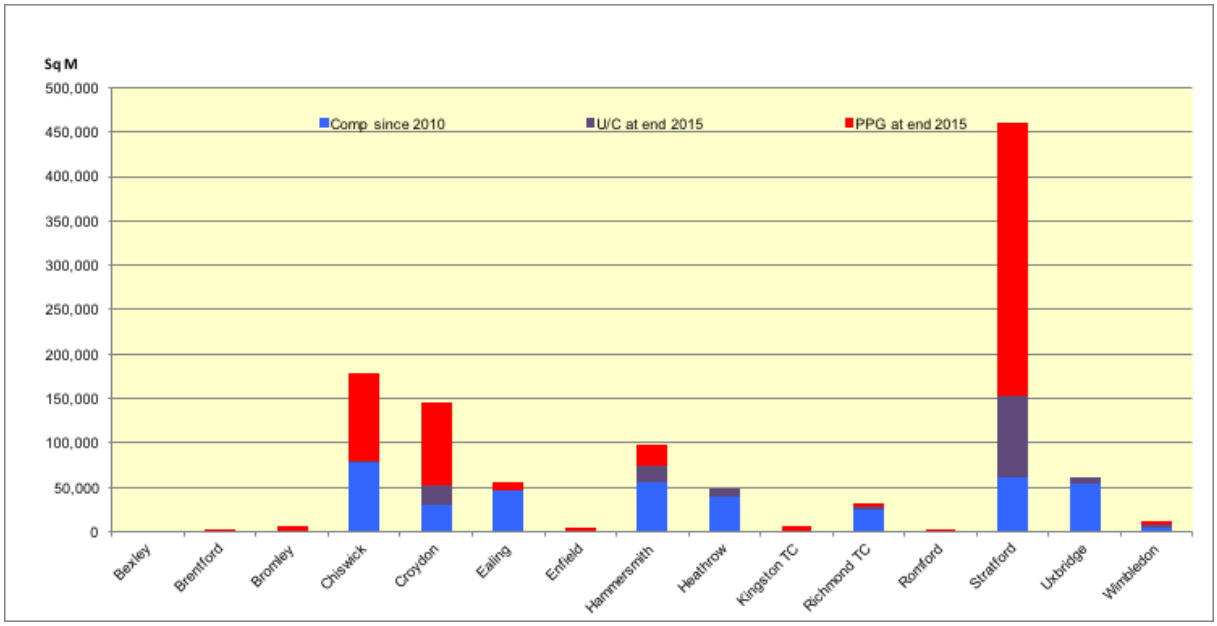
6.3.2 What is, perhaps, surprising is that few of the areas under consideration have a significant stock of outstanding consents. Only Chiswick, Croydon and Hammersmith exhibit notable levels of outstanding consent, although it must be

suspected that Wimbledon would have more were sites available, given the strong rental growth there.

6.3.3 It is hard to escape the view that the development is focusing on very few locales, although the dynamics for each vary somewhat. Stratford has, of course, been public-investment driven while Chiswick is very much a private sector success story. Croydon continues to work its way out from the legacy of obsolete stock, and public-private partnership is the most likely way forward. Even so, some of that obsolete stock is likely to be lost to residential. This may, in the end, help the office market by concentrating value in fewer properties.

6.3.4 By the same token, Stratford has been such a powerful presence that nearby markets that are anything less than thoroughly modern will struggle to compete. While the China Trade Centre proposed for the Royal Docks has powerful investment behind it, Romford is probably set to contract. It needs to be understood that Stratford – mooted as a potential office location for at least two decades – would probably not have progressed without the substantial public investment in both the Olympic games and transport infrastructure. This investment should be consolidated and promoted.

Figure 6.3
Completions and pipeline since 2010 in selected Outer London centres



6.3.5 Th consideration of market indicators and what they tell us set out in this Section, leads to the fundamental issue at stake: to what extent should policy seek to promote these centres? Which are viable for policy intervention?

6.4 Viable office locations outside Central London

6.4.1 When assessing the viability of a location rooting assessment in market reality is essential. It is a stark reality of current market conditions that competition from residential is pervading throughout outer London (and, indeed, the whole of London) and that – as the next section will show – PDR has greatly intensified.

6.4.2 Figure 6.4 summarises our view of the 15 centres under consideration here and presents a concise summary of the options for each. It echoes the much larger exercise in LOPR 2009, which examined around 100 centres, many of which were found to have no future as office markets. Note that where the recommendation is to "Leave to market" we do not simply mean that there is no future for the market, but that scarce promotional and protective resources are better deployed elsewhere.

Figure 6.4 Viability assessment for 15 key centres

Centre	Comments	Assessment
Bexley	Local market with little scope for enhancement	Protect small units
Brentford	Stagnant market, past its best but still viable	Protect small units
Bromley	Low vacancy rates and minimal rent data suggest a stagnant market. Large users unlikely to be replaced if they relocate.	Protect small units
Chiswick	New and expanding with successful letting and strong rents	Promote
Croydon	Despite struggling, a very sound location with much stock for potential upgrade, but needs firm commitment from stakeholders and policy support.	Promote
Ealing	A strong secondary West London location that is under intense pressure from residential.	Protect
Enfield	A very local market that is likely to stay as such	Protect small units
Hammersmith	A mature market with strong cyclical behaviour and active demand.	Promote
Heathrow	A strong local market with intense pressure from residential.	Protect
Kingston TC	A small market with limited capacity to enhance.	Protect small units
Richmond TC	A small market but popular because of its proximity to Heathrow	Protect
Romford	A contracting market that faces intense residential pressure; worth examining with Ilford	Protect small units
Stratford	A major investment focus; needs to be support to reinforce role and ensure critical mass is reached.	Promote
Uxbridge	A useful secondary market under intense residential pressure	Protect
Wimbledon	A newly emerging popular location that should be safeguarded, given pressures faced in Kingston and Richmond.	Protect

6.4.3 Appendix Six details our evaluation of town centres listed in Annex 2 of the London Plan, with regard to their suitability for office development[98], and adds observations on non-town centre office locations.

6.5 Summary

6.5.1 Outer London faces many challenges, most of which come from the perfectly normal – even if, from time to time, tumultuous – operation of a market economy. This is not, in any way, to trivialise the challenges faced by these markets. But it is an evident truism that a legacy of obsolete and obsolescent stock that was built up over several decades cannot be 'fixed' at a stroke, and that there is no single tool that can fix them. As Section 7.0 will show, blunt or overly simplistic tools such as PDR are prone to unintended consequences that might, in turn, take a while to fix.

6.5.2 The market has responded to these challenges as it generally does: it has sought to consolidate value. As can be seen in the analysis of development activity above, this is focusing in a small subset of areas, one of which –Stratford – is the focus of great public investment. This is not a rapid process, but the best approach is probably to ensure that moving towards critical mass is supported as far as available tools permit.

6.5.3 Section 7.0 will show that PDR is proving a tool of mixed blessing. There is little doubt that, in some locations such as Croydon, it has helped clear out much poor quality stock, but it is equally clear, that a planning tool which is blind to the occupancy status of buildings and the role of property values in shaping private sector decisions can have unintended consequences. Good space and occupied space is being lost – not necessarily Grade A, but serving the needs of many cost-conscious businesses, especially SMEs. Given that, as noted above, the efficacy of PDR in addressing London's housing need can be questioned, some detailed cost-benefit analysis would be prudent

6.5.4 The critical issue from a policy standpoint remains as stated in previous LOPR reports and the CAZ report: once employment land is lost it is virtually impossible to return to employment use in any reasonable timescale. Conversion to residential use is, to all practical purposes, a permanent loss of capacity.

[98] Note here that suitability – the presence of physical capacity and appropriate social and transport infrastructure – does not necessarily equate to economic or market viability, which requires strong rents and sustainable investment yields.

7.0 PDR and office-to-residential conversions

7.0.1 PDR were extended, temporarily, in May 2013 to allow office-to-residential conversions without the need for formal planning consent. The Government granted exemptions for London's nationally significant office markets in the CAZ, northern Isle of Dogs, Tech City, the Royal Borough of Kensington & Chelsea and the Royal Docks Enterprise Zones. The PDR extensions have now been made permanent and the current exemptions will cease at the end of May 2019. The GLA has estimated that, outside the exempted areas, around 1.6 million sq m of office floorspace could potentially change to residential use through PDR.

7.1 Recent evidence

7.1.1 In 2015 the GLA commissioned research to investigate the challenges faced by the small office market within CAZ.[99] This research collated data from for LDD and Borough Monitoring of all schemes that involved change in the amount of office space. An extra stream of this work involved looking at the impact of PDR throughout London because at the time of commissioning CAZ had not yet secured its exemption. To analyse this, data covering permitted rights (Class J as then was, now Class O) for the whole of Greater London was gathered. This provided a very comprehensive set of data related to change in office floorspace, which is summarized in this section.

7.1.2 Figure 7.1 shows the net change to B1 for nearly 7,000 schemes completed, under construction or consented between 2005 and 2015 (in fact, Financial Years 2005 to 2014, which explains the very limited data from 2015). Even before relaxation of PDR it was evident that several CAZ boroughs had been facing loss of office stock. The City of Westminster was an extreme outlier having unimplemented consents involving a net loss of more than 325,000 sq m of office space, mostly to residential, although some also to hotels.

7.1.3 In fact, over the study period, (2005 to 2014) there were 6,837 schemes in CAZ boroughs that involved an element or gain or loss in office space. Of those, 2,988 schemes caused a loss of <500 sq m, while 1,340 caused larger losses. While it was felt that some of the <500 sq m losses could have been small reductions in overall space, incurred as part of mixed use schemes, it was also felt reasonable to infer from the data that there has been a significant loss of small buildings in CAZ boroughs.

7.1.4 Figure 7.2 analyses the data to isolate the specific impact of residential schemes in contributing to the loss of office space. It shows the contribution of Canary Wharf in Tower Hamlets, and King's Cross in Camden, to *expanding* office supply outside the City of London, but generally only Westminster stands out for suffering large scale, residential driven loss of office space. This is arguably to be

[99] Ramidus Consulting (2015) *Small Offices and Mixed Use in CAZ.* Unfortunately changes to the structure of the LDD mean cannot currently be appended to the older data set. This should be resolved for future LOPRs

expected – residential development chases the best value as with any other asset class and at the time of this report a great concern was so-called Prime Residential and its inflationary impact on residential values.

Figure 7.1 Net loss of B1 (sq m) - completed schemes, under construction or planned - 2005-15 in CAZ boroughs

Completion year	Camden	City of London	Hackney	Islington	RBKC	Lambeth	Southwark	Tower Hamlets	Wandsworth	Westminster	Total
2005	2,063	5,867	5,039	15,018	-94	304	10,334	115,550	-3,368	-31,378	119,335
2006	-3,609	-19,129	13,645	-2,677	3,527	11,629	97,679	25,491	5,155	54,582	186,293
2007	-21,835	28,274	2,016	-16,297	-359	7,625	4,127	-8,823	19,087	-21,201	-7,386
2008	-21,484	202,341	10,070	15,691	9,328	11,487	29,777	14,497	-4,449	-21,487	245,771
2009	-9,511	25,471	-37	41,610	539	13,075	20,513	117,955	6,200	4,226	220,041
2010	23,838	62,771	10,296	8,356	262	-18,209	65,365	-26,041	-5,012	-131,666	-10,040
2011	-4,104	44,269	-411	-6,623	-7,765	-17,732	8,026	-9,324	-4,654	15,804	17,486
2012	-19,000	-23,558	525	-258	-5,256	-6,521	-10,733	-1,233	-5,005	-119,875	-190,914
2013	31,366	-1,841	-10,615	518	-3,542	-16,235	-10,452	3,573	-10,672	-13,345	-31,245
2014	-27,243	113,893	2,443	-6,603	-7,710	4,013	-5,248	-2,974	-613	-43,367	26,591
2015	-3,267	2,613				54					-600
Total completed	-52,786	440,971	32,971	48,735	-11,070	-10,510	209,388	228,671	-3,331	-307,707	575,332
Under construction	439,245	416,261	-9,713	8,692	-89,111	11,837	8,480	424,470	-3,601	-124,936	1,081,624
Total committed	386,459	857,232	23,258	57,427	-100,181	1,327	217,868	653,141	-6,932	-432,643	1,656,956
Not started	-42,647	118,907	79,896	13,696	7,340	-22,223	-31,016	414,565	91,373	-335,713	294,178
Not recorded										-58,523	-58,523
Total	343,812	976,139	103,154	71,123	-92,841	-20,896	186,852	1,067,706	84,441	-826,879	1,892,611

Source: Ramidus Consulting (2015)

Figure 7.2 Schemes given planning consent 2005-15, with a net gain or loss of B1 in CAZ boroughs

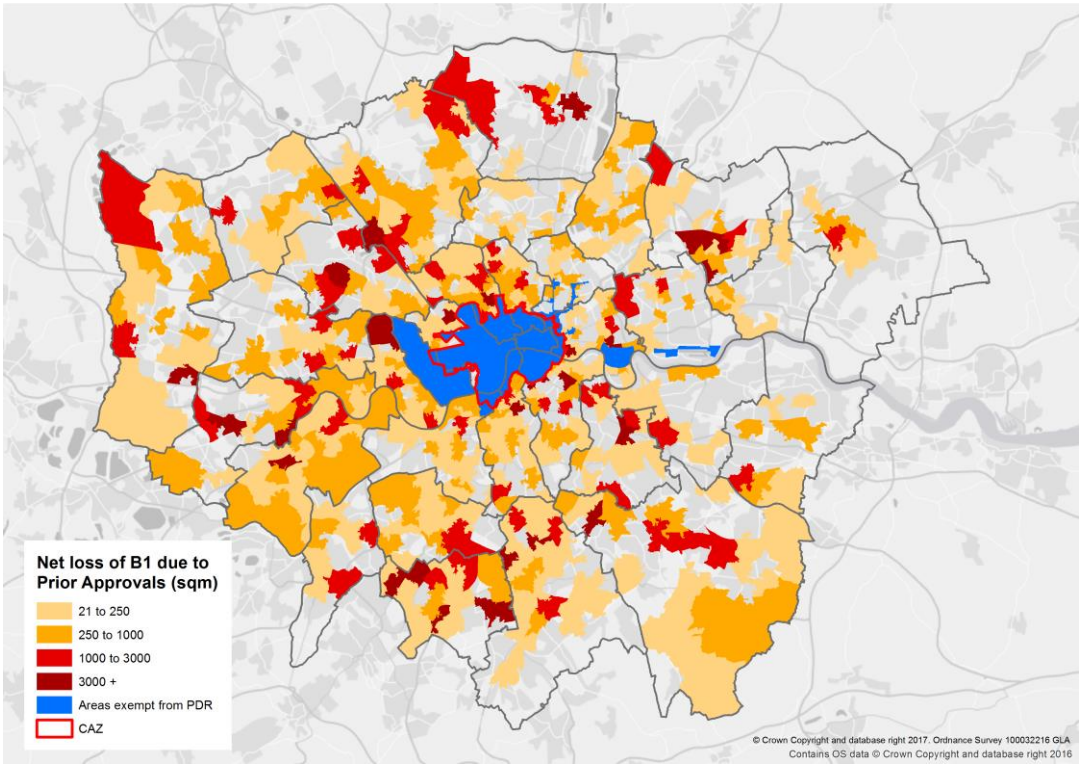
Borough	No residential element		Residential element		All schemes	
	No. schemes	Net B1 gain/loss	No. schemes	Net B1 gain/loss	No. schemes	Net B1 gain/loss
Camden	479	-48,822	520	392,447	999	343,625
City of London	223	1,186,136	436	-209,997	659	976,139
Hackney	190	10,372	327	92,782	517	103,154
Islington	337	128,619	382	-57,496	719	71,123
RBKC	91	-27,506	139	-65,335	230	-92,841
Lambeth	163	28,509	243	-49,434	406	-20,925
Southwark	76	255,270	259	-68,418	335	186,852
Tower Hamlets	64	620,775	245	446,931	309	1,067,706
Wandsworth	46	-1,443	303	85,884	349	84,441
Westminster	252	19,567	2062	-846,446	2314	-826,879
Total	**1,921**	**2,171,477**	**4,916**	**-279,082**	**6,837**	**1,892,395**

Source: Ramidus Consulting (2015)

7.1.5 It must be noted, however, that Westminster is almost entirely within CAZ, so PDR was not a factor driving loss of stock there.

7.1.6 Figure 7.3 shows the distribution of B1 office floorspace potentially lost through prior approvals for change of use from office to residential space. The pale yellow indicates lower levels of office floorspace loss through prior approvals and the deep brown and red areas show where the highest levels of floorspace loss numbers have been granted. Two features stand out: (a) close to the CAZ boundary there are distinct clusters in Camden and Islington and further hotspots on the South Bank in Southwark and Lambeth; and (b) further out there are clusters in several Outer London town centres including Acton, Bromley, Croydon, Harrow-on-the Hill, Ilford, Lewisham, Richmond, Sidcup and Sutton, and there is an unmistakeable westward bias in the distribution. Although there are hotspots to the East and South East, we again see PDR going where the values are highest.

Figure 7.3
Prior approvals under PDR, May 2013 to March 2016, by MSOA



Source: GLA

7.2 PDR and loss of B1 in wider context

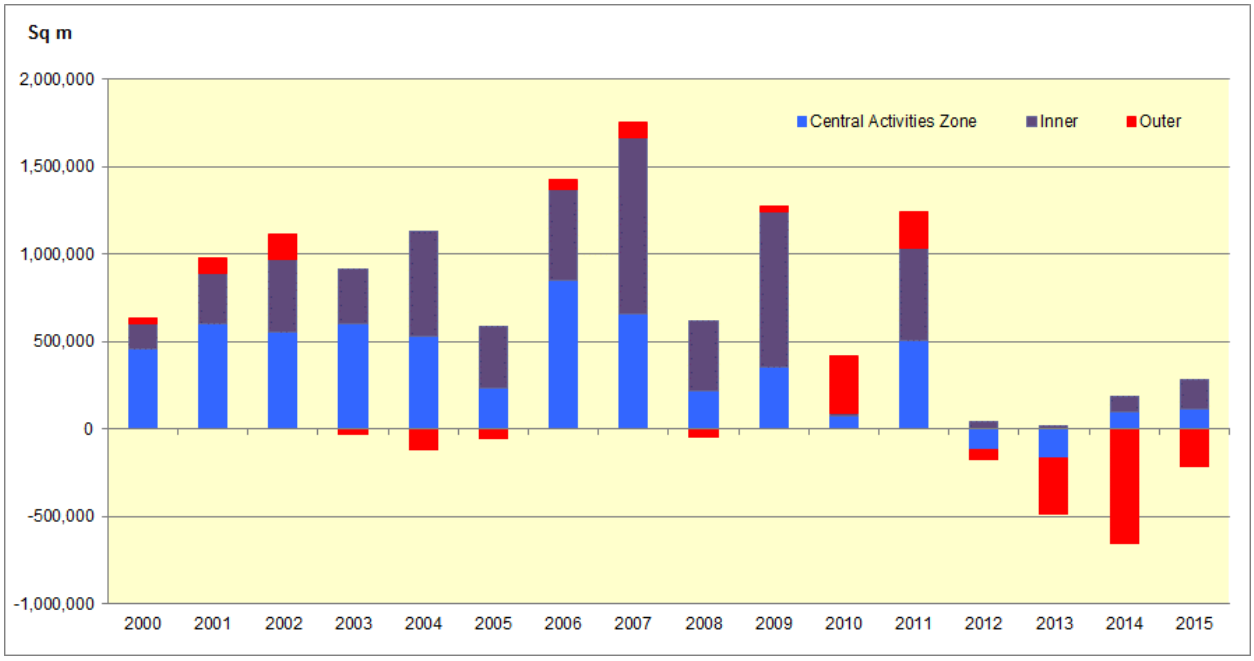
7.2.1 LOPR 2017 sought to extend the data analysis from the CAZ report, but time and cost constraints meant that gathering data at the Borough Monitoring level was

impractical and instead two main data sets are used here. While the 2015 data was gathered by contact with individual boroughs, the current data is direct from LDD.

7.2.2 The first is the LDD series for all consents over 1,000 sq m – a data series that runs from the year 2000 – and second all residential PDR schemes since 2013, which must be notified to the GLA. The practical impact of this is that the data cannot simply be 'tagged on' to the data from the CAZ Report so need some care in presenting and interpreting.

7.2.3 Figure 7.4 shows the net change proposed to B1 space for all approvals above 1,000 sq m since 2000, splitting out CAZ, Inner and Outer London.[100] Some care is need when interpreting this graph because not all approvals are implemented and it is possible that individual sites could be subject to several approvals over time with, potentially, none being implemented.

Figure 7.4 Net change in B1 space, approvals, 2005-15, by location



Source: London Development Database

7.2.4 However, the graph shows the weight of market interest and highlights that even before PDR were extended, Outer London was seeing attrition of office space. This is consistent with anecdotal observations in earlier LOPR reports and will, most likely come as no surprise to Outer London planners.

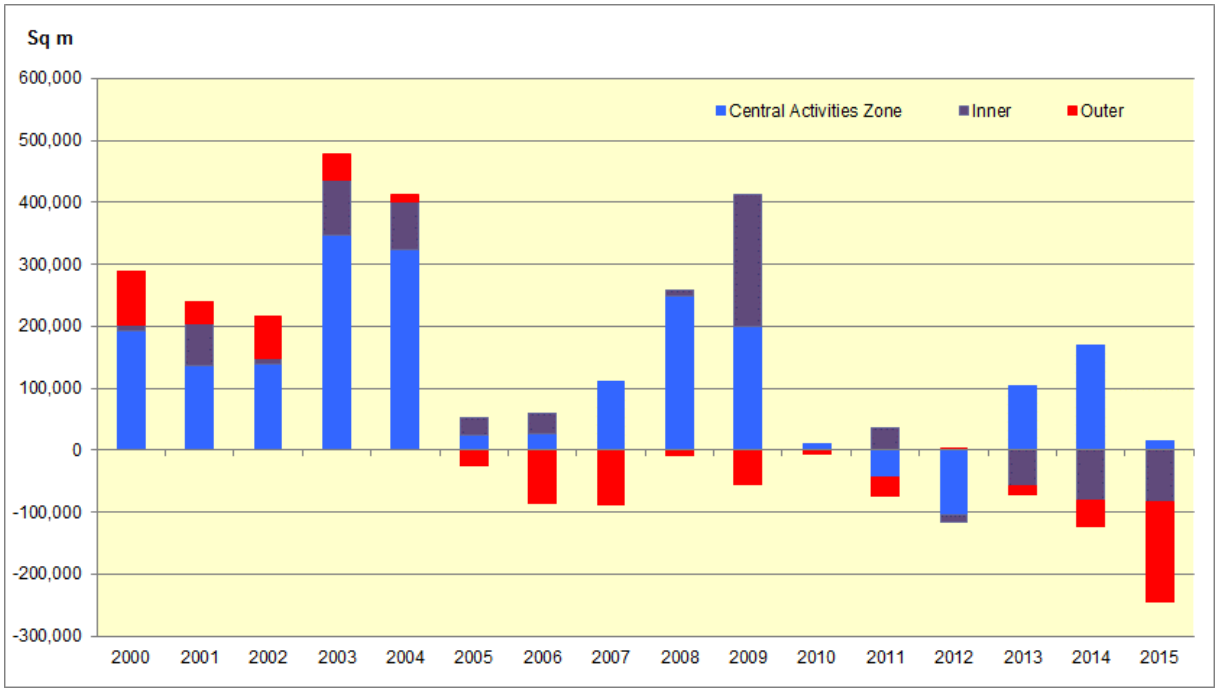
[100] This data was supplied by GLA, although not created with LOPR in mind, meaning borough breakdowns are not available.

7.2.5 The introduction of PDR exposed the level of pent-up demand for housing but it did not create new demand for housing. Outer London was disproportionally impacted and saw pressure for change of use through the 2000s. Even after PDR came in both CAZ and Inner London continued to see net gains to office stock – helped by a small number of very large schemes – despite Westminster coming under intense change-of-use pressure.

7.2.6 A combination of changed market circumstances, in particular a strengthening of demand for offices, and revisions to Stamp Duty Land Tax appears to have choked off the most intense pressure within the CAZ.

7.2.7 Figure 7.5 shows the same type of data, but includes only schemes marked as completed.[101] As might be expected, the recording of completions more-or-less lags by one year, with 2015, for example, reflecting the level of approvals in 2014. However, equally notable is that Outer London stands out even more starkly in terms of net loss of space and, again the data for 2006 shows, this is not a new or exclusively PDR-related phenomenon.

Figure 7.5 Net change in B1, completions, 2000-15



Source: London Development Database

7.2.8 We would expect the level of completions to fall off in future, although this depends on the fall in approvals being sustained and other factors remaining equal.

[101] We say 'marked as completed' because LDD relies on boroughs to supply the data and completions are not independently verified.

It is fair to say that this may be challenging given the many uncertainties in global markets at the moment.

7.2.9 The implementation rate of approvals – that is, how many proceed to completion – is an important variable to have in mind. Overall, in CAZ and Outer London, only around half of approvals proceed (although, as noted above, approvals may include multiple applications for single sites). However, whether measured by approvals or completions, it is clear that the volume of activity was markedly lower in the years before the 2008 credit crunch than it was after (Figures 7.6 and 7.7).

Figure 7.6 Total net change approvals, 2000-07 and 2008-15

Sub-region	Net change in office stock (sq m)	
	2000-2007	2008-2015
Central Activities Zone	4,484,356	1,085,030
Inner London	3,633,976	2,141,550
Outer London	212,268	-719,512

Figure 7.7 Total net change completed, 2000-07 and 2008-15

Sub-region	Net change - completions (sq m)	
	2000-2007	2008-2015
Central Activities Zone	1,300,335	600,775
Inner London	316,265	25,736
Outer London	42,693	-315,839

7.2.10 Outer London, whether measured by approvals or completions lost much more after 2008 than it gained in earlier years. Indeed, for completions Outer London barely held its own prior to 2008.

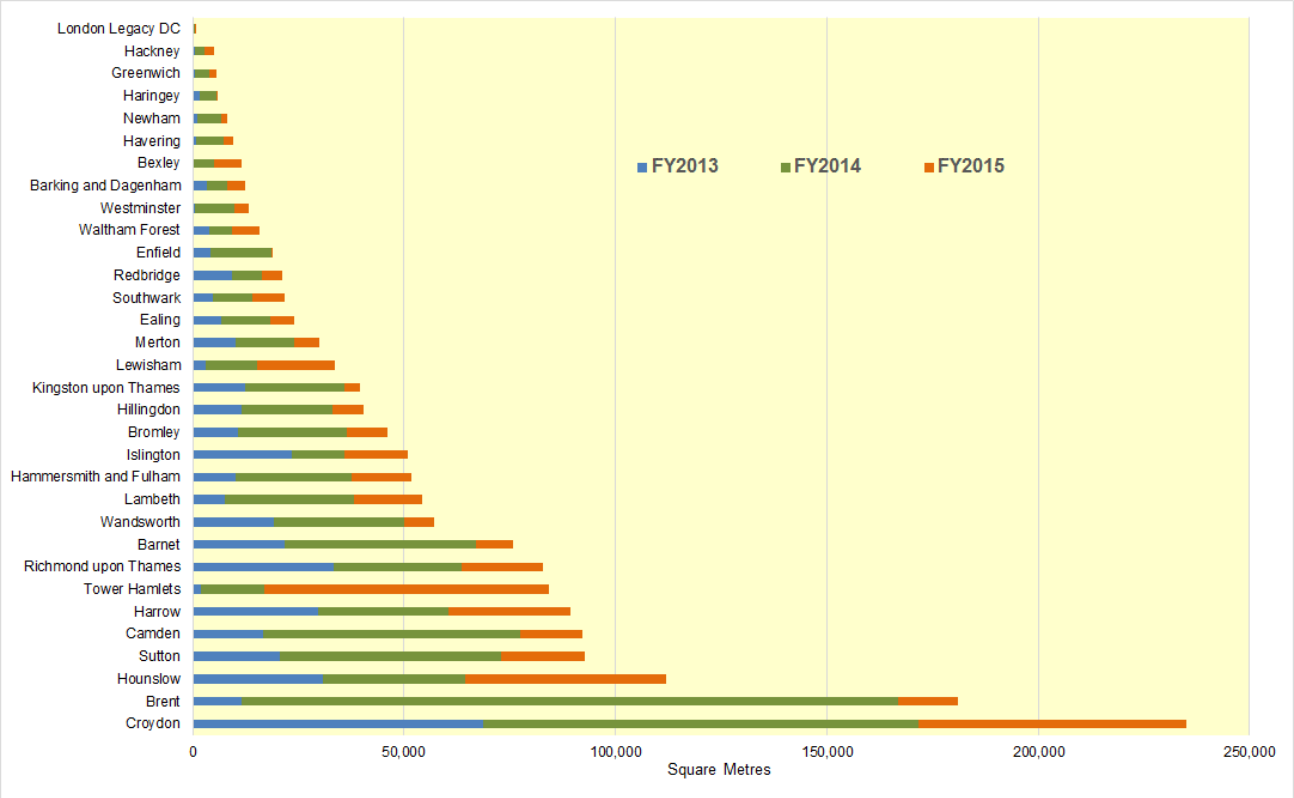
7.3 The specific impact of PDR

7.3.1 All of the above analysis shows that PDR, although sufficient to bring about loss of stock, is not in itself necessary. Yet, since 2013 it has been a practical reality and LDD data on this is comprehensive since then. Figures 7.8 and 7.9 show PDR approvals and completions respectively from FY2013 to FY2015.[102] It is not especially surprising that two boroughs – Croydon and Brent – have, by some margin, the highest level of approvals.

7.3.2 Other boroughs under pressure closely follow – but are not limited to – housing values, which should not be surprising. Other than the act of implementing PDR, matters have largely been left to the market. As expected, PDR has had minimal impact in CAZ because it was exempt from the outset. West, North West and South West London are feeling the greatest effect.

[102] Financial Year (FY) basis: 1st April 2013 to 31st March 2016

Figure 7.8 Office floorspace potentially lost in permitted development approvals, office-to-residential, FY2013-FY2015



Source: London Development Database

7.3.3 Figure 7.9 uses the same dataset to compare the impact of PDR on stock, with the overall change in stock reported in VOA data. Perhaps unsurprisingly, there is no clear correlation, since many approvals are either yet to be implemented or have been counter balanced by new supply elsewhere in a borough. Overall, PDR approvals account for at potential loss of over 1.6 million sq m of office floorspace in London, some 6.3% of 2012 stock, while overall stock changed by only 1.31% between 2012 and 2016. The impact of PDR is greatest in Outer London where some 21.9% of the 2012 stock has prior approval to change use to residential.

Figure 7.9 The impact of PDR on stock – approvals basis, FY2013-FY2015

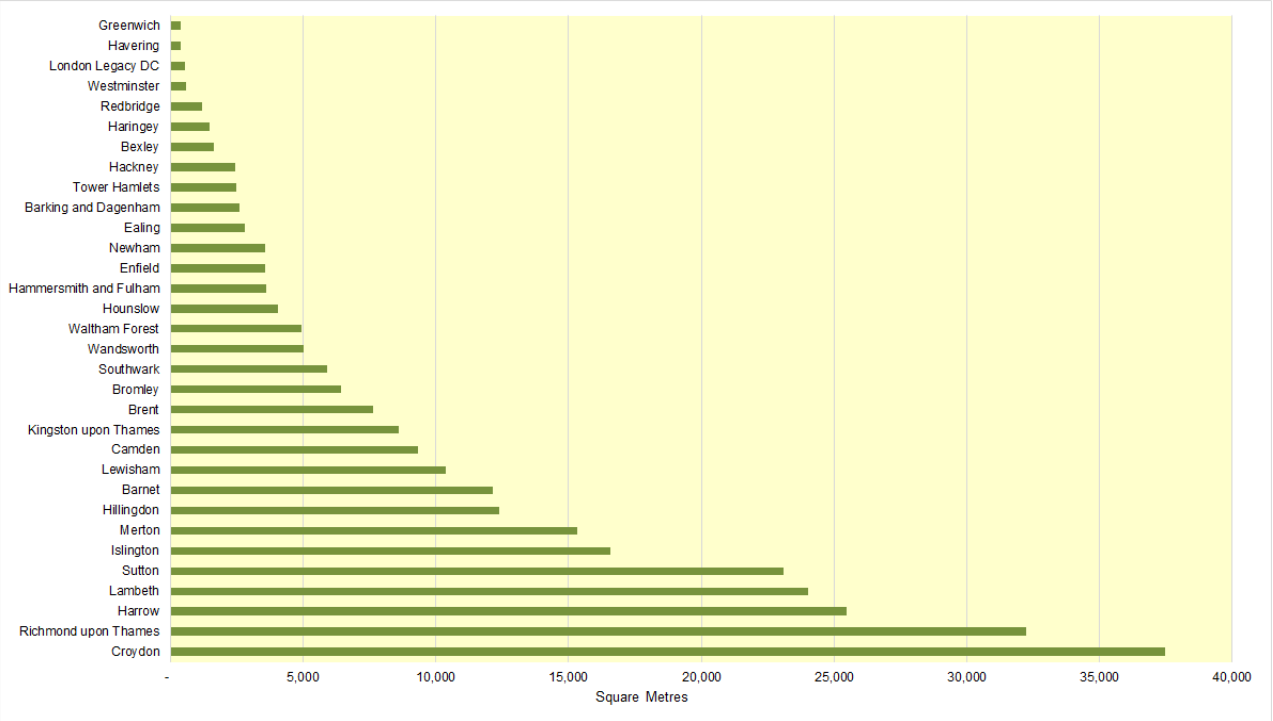
Borough	Lost of B1 (sq m)	Stock 2012-13	Stock 2015-16	Loss as % of 2012 stock	Loss as % of 2016 stock	Stock change, 2012-16
Barking and Dagenham	-12,578	91,000	92,000	13.82	13.67	1.10
Barnet	-75,794	356,000	343,000	21.29	22.10	-3.65
Bexley	-11,451	127,000	112,000	9.02	10.22	-11.81
Brent	-181,060	257,000	280,000	70.45	64.66	8.95
Bromley	-45,970	281,000	264,000	16.36	17.41	-6.05
Camden	-92,098	2,164,000	2,268,000	4.26	4.06	4.81
City of London	N/A	5,055,000	5,226,000	N/A	N/A	3.38
Croydon	-235,150	602,000	542,000	39.06	43.39	-9.97
Ealing	-24,091	379,000	370,000	6.36	6.51	-2.37
Enfield	-18,665	166,000	165,000	11.24	11.31	-0.60
Greenwich	-5,605	139,000	147,000	4.03	3.81	5.76
Hackney	-5,195	495,000	520,000	1.05	1.00	5.05
Hammersmith and Fulham	-51,853	738,000	746,000	7.03	6.95	1.08
Haringey	-5,924	135,000	123,000	4.39	4.82	-8.89
Harrow	-89,447	206,000	206,000	43.42	43.42	0.00
Havering	-9,517	143,000	136,000	6.66	7.00	-4.90
Hillingdon	-40,423	627,000	633,000	6.45	6.39	0.96
Hounslow	-111,927	650,000	650,000	17.22	17.22	0.00
Islington	-50,860	1,407,000	1,458,000	3.61	3.49	3.62
Kingston upon Thames	-39,681	258,000	266,000	15.38	14.92	3.10
Lambeth	-54,340	590,000	583,000	9.21	9.32	-1.19
Lewisham	-33,634	115,000	111,000	29.25	30.30	-3.48
London Legacy DC	-651			N/A	N/A	N/A
Merton	-29,942	233,000	219,000	12.85	13.67	-6.01
Newham	-8,253	219,000	215,000	3.77	3.84	-1.83
Redbridge	-21,222	149,000	154,000	14.24	13.78	3.36
Richmond upon Thames	-82,768	289,000	265,000	28.64	31.23	-8.30
Southwark	-21,787	1,267,000	1,259,000	1.72	1.73	-0.63
Sutton	-92,879	150,000	121,000	61.92	76.76	-19.33
Tower Hamlets	-84,186	2,360,000	2,467,000	3.57	3.41	4.53
Waltham Forest	-15,853	89,000	90,000	17.81	17.61	1.12
Wandsworth	-57,114	315,000	268,000	18.13	21.31	-14.92
Westminster	-13,362	5,282,000	5,376,000	0.25	0.25	1.78
Inner London	-478,938	**20,619,000**	**21,092,000**	2.32	2.27	2.29
Outer London	-1,144,342	**5,192,000**	**5,056,000**	22.04	22.63	-2.62
Greater London	-1,623,280	**25,811,000**	**26,148,000**	6.29	6.21	1.31

Source: London Development Database

7.3.4 Given the analysis above it is no surprise that there are far fewer completed schemes than approvals. Although the overall pattern remains broadly similar, it is worth noting that Brent has seen far fewer schemes come to fruition to date when compared to Croydon (Figure 7.10). Even with PDR in full effect it is not always enough to see schemes through to completion. We should caution that this could change before the approvals expire but for the time being at least, an empty building is necessary for progress.

7.3.5 Even with London's chronic housing shortage, PDR is not in any way a panacea and the appetite for building is not unlimited. It should be little surprise that the market chases value, but areas of 'clean' opportunity will in all likelihood be prioritised.

Figure 7.10 Office floorspace lost to residential in permitted development completions, FY2013-FY2015



Source: London Development Database (only includes schemes for which the loss of office floorspace has been recorded)

7.3.6 Figure 7.11 compares completed PDR schemes with change in stock and it seems there is a closer correlation between loss to PDR and change to stock generally, although the pattern remains far from consistent.

7.3.7 At the London level, the loss to PDR is almost equal to the change in stock from 2012-16. On one level, this should not be surprising – it is obvious that completed consents will have a real impact, while the impact of unimplemented approvals remains notional. Even so, some caution is prudent since other factors can lead to changes in stock. But it does seem fair to say that, in some locations at least, PDR has had a significant impact of stock levels in the context of all causes of stock change. Given the analysis above, it should be no surprise that Outer London boroughs have been disproportionately hit by PDR.

Figure 7.11 The impact of PDR on stock, completions basis, FY2013-FY2015

Borough	Lost of B1 (sq m)	Stock 2012-13	Stock 2015-16	Loss as & of 2012 stock	Lost as % of 2016 stock	Stock change, 2012-16
Barking and Dagen	(2,602)	91,000	92,000	2.86	2.83	1.10
Barnet	(12,152)	356,000	343,000	3.41	3.54	(3.65)
Bexley	(1,644)	127,000	112,000	1.29	1.47	(11.81)
Brent	(7,628)	257,000	280,000	2.97	2.72	8.95
Bromley	(6,430)	281,000	264,000	2.29	2.44	(6.05)
Camden	(9,315)	2,164,000	2,268,000	0.43	0.41	4.81
City of London		5,055,000	5,226,000	N/A	N/A	3.38
Croydon	(37,466)	602,000	542,000	6.22	6.91	(9.97)
Ealing	(2,791)	379,000	370,000	0.74	0.75	(2.37)
Enfield	(3,586)	166,000	165,000	2.16	2.17	(0.60)
Greenwich	(370)	139,000	147,000	0.27	0.25	5.76
Hackney	(2,440)	495,000	520,000	0.49	0.47	5.05
Hammersmith and	(3,592)	738,000	746,000	0.49	0.48	1.08
Haringey	(1,470)	135,000	123,000	1.09	1.20	(8.89)
Harrow	(25,477)	206,000	206,000	12.37	12.37	0.00
Havering	(373)	143,000	136,000	0.26	0.27	(4.90)
Hillingdon	(12,371)	627,000	633,000	1.97	1.95	0.96
Hounslow	(4,047)	650,000	650,000	0.62	0.62	0.00
Islington	(16,565)	1,407,000	1,458,000	1.18	1.14	3.62
Kingston upon Thai	(8,606)	258,000	266,000	3.34	3.24	3.10
Lambeth	(24,021)	590,000	583,000	4.07	4.12	(1.19)
Lewisham	(10,373)	115,000	111,000	9.02	9.35	(3.48)
London Legacy DC	(555)	-		N/A		N/A
Merton	(15,317)	233,000	219,000	6.57	6.99	(6.01)
Newham	(3,574)	219,000	215,000	1.63	1.66	(1.83)
Redbridge	(1,205)	149,000	154,000	0.81	0.78	3.36
Richmond upon Th	(32,242)	289,000	265,000	11.16	12.17	(8.30)
Southwark	(5,898)	1,267,000	1,259,000	0.47	0.47	(0.63)
Sutton	(23,081)	150,000	121,000	15.39	19.08	(19.33)
Tower Hamlets	(2,485)	2,360,000	2,467,000	0.11	0.10	4.53
Waltham Forest	(4,939)	89,000	90,000	5.55	5.49	1.12
Wandsworth	(5,016)	315,000	268,000	1.59	1.87	(14.92)
Westminster	(609)	5,282,000	5,376,000	0.01	0.01	1.78
Inner	**(84,813)**	**20,619,000**	**21,092,000**	0.41	0.40	2.29
Outer	**(203,427)**	**5,192,000**	**5,056,000**	3.92	4.02	(2.62)
Grand Total	**(288,240)**	**25,811,000**	**26,148,000**	1.12	1.10	1.31

London Development Database

7.4 What is PDR achieving?

7.4.1 A final point to consider is whether PDR is achieving its intended goal of helping ease London's housing shortage. Given that, by definition, it causes the loss of office stock, what can be deduced about the extent towards it is filling need?

7.4.2 One aid to this analysis is the restrictions on what is permitted under PDR. Specifically, it can be said with some confidence that virtually all PDR schemes are self-contained and of known scale (i.e. the lost office space will be virtually identical to the gained residential space). Given this, it is reasonably straightforward to calculate the typical size of new residential units, at least in broad brush terms.

7.4.3 Figure 7.12 gives a borough-by-borough breakdown of the typical residential unit size and, although there is some variation, once aggregated it is striking that

whether Inner or Outer London, the typical size is almost identical at 59 and 61 sq m respectively, which is roughly the size of a one-bedroom flat. This suggests that PDR is addressing a very narrow segment of the market and that this may not be a sector attractive to owner-occupiers.

Figure 7.12 Average floorspace per residential unit gained through office to residential permitted development, FY2013–FY2015

Borough	Office floorspace lost (sq m)	Residential Units	Average floorspace (sq m) per residential unit
Barking and Dagenham	2,602	35	74
Barnet	12,152	198	61
Bexley	1,644	17	97
Brent	7,628	145	53
Bromley	6,430	108	60
Camden	9,315	136	68
Croydon	37,466	654	57
Ealing	2,791	40	70
Enfield	3,586	69	52
Greenwich	370	5	74
Hackney	2,440	48	51
Hammersmith and Fulham	3,592	55	65
Haringey	1,470	31	47
Harrow	25,477	425	60
Havering	373	10	37
Hillingdon	12,371	191	65
Hounslow	4,047	73	55
Islington	16,565	271	61
Kingston upon Thames	8,606	157	55
Lambeth	24,021	418	57
Lewisham	10,373	224	46
London Legacy DC	555	9	62
Merton	15,317	292	52
Newham	3,574	90	40
Redbridge	1,205	22	55
Richmond upon Thames	32,242	426	76
Southwark	5,898	73	81
Sutton	23,081	336	69
Tower Hamlets	2,485	33	75
Waltham Forest	4,939	88	56
Wandsworth	5,016	73	69
Westminster	609	5	122
Inner London	**84,813**	**1,440**	**59**
Outer London	**203,427**	**3,317**	**61**
London	**288,240**	**4,757**	**61**

Source: London Development Database (only includes schemes for which loss of floorspace has been recorded)

7.4.4 It is beyond the scope of this report to consider the cost-benefit of whether the gain in residential stock merits the (likely permanent) loss of employment land, but this is a factor that could usefully be considered in wider discussions.

7.5 Overview of PDR

7.5.1 The pressure for new residential development is pervasive throughout London and is unlikely to go away on any reasonably foreseeable time scale. Although turning markets can provide temporary relief the fact remains that London is a very successful global city where people want to live.

7.5.2 This is not a new phenomenon, but the introduction of PDR has changed the landscape bringing housing land and employment land into much more direct conflict. The impact has not been uniform and property market verities remain a significant factor: places with the highest residential values will be targeted first. As noted, PDR is sufficient but not necessary – the same market verities drove Prime housing in Westminster and Kensington & Chelsea, despite their exemption.

7.5.3 But it should be no surprise that the bulk of PDR pressure had been felt in North West, West, and South West London and immediately around the fringes of the CAZ. These areas contain some of the most affluent locales in London – indeed, in Europe.

7.5.4 However, the non-PDR data for this project was limited to schemes of 1,000 sq m (that which has to be notified to GLA) and seems very likely that smaller sites throughout London will be very vulnerable to pressure for residential conversion, whether through PDR or the normal planning process. Until 2013 planners had some tools with which to protect employment land, but these have been severely curtailed and justifying protection of a small site may be prohibitively difficult.

7.5.5 One key purpose of this section is to explore whether PDR had effectively 'mined out' some local markets of surplus office space. On one level this is simple to answer by looking for consistently falling vacancy. Bromley stands out as a market burdened by a legacy of tired stock where vacancy has fallen steadily over the past few years. It would be tempting to infer from this that PDR was having the effect of 'right-sizing' the market, but this would be a naïve inference for two reasons.

7.5.6 First, in the case of Brent, we have already noted the low implementation rate of PDR schemes compared to Croydon, a borough with similar levels of PDR applications. This might simply be availability constraint since, as noted above, while a building does not have to be vacant to gain prior approval, it does need to be vacant before it can actually be converted to residential.

7.5.7 There is much anecdotal evidence elsewhere that some developers are not waiting for vacant property to become available: these are three examples that Ramidus has become aware of in the course of its work.

- Linton House on Highgate Road was a c4,000 sq m building that, although old and by no stretch of the imagination a "Grade A" building, nevertheless provided a home for around 100 small businesses, including architects, a dance school and film businesses. It is now being converted to 54 residential units and all the businesses have been forced to relocate.

- Premier House in Edgware town centre was an occupied, 7,000 sq m office building. Once prior approval for conversion into 112 dwellings was granted, around 100 businesses were immediately given notice to quit.

- Whittington House was a fully-occupied office building on Holloway Road, one of the first to secure approval for office-to-residential conversion through PDR. The businesses and charities occupying the building had signed new leases eight months before they were given notice to leave. Most of the evicted businesses left the borough.

7.5.8 We investigated this anecdotal evidence further using GLA data, including occupancy status of buildings subject to PDR.[103] Figure 7.13 shows that for London as a whole, 55% of PDR schemes for which the occupancy status is known were occupied (of which 40% were fully occupied and 15% partially occupied). In several boroughs, more than 75% of the offices affected were either partially or wholly occupied. It is very likely that owners will have started the process of emptying buildings before putting in a PDR application and that the amount of space recorded as occupied is understated.

7.5.9 What is arguably alarming about this is that – using the standard ratio of 10 sq m per worker – this represents around 31,000 to 36,000 jobs being disrupted (and some 83% of these jobs are in Outer London). Even factoring down for partially occupied space shows 31,000 jobs being disrupted, although this requires accepting the debatable notion that a building can be *partially* viable. We estimate that around 20,000 jobs have already been displaced by completed schemes.

7.5.10 As the illustrative examples listed above suggest, it is very likely that the overwhelming majority of the disrupted businesses were SMEs occupying less expensive space which may be hard to replace, and this represents a significant disruption to the small business economy.

7.5.11 We would therefore be very cautious of any suggestion that any given locale has had all – or only – surplus space removed. ‘Surplus’ is a concept contingent on market conditions and is not synonymous with ‘vacant’. Indeed, vacant space is not necessarily surplus because it provides a critical role in allowing markets to respond to demand, while preventing rent inflation. When combined with the impact on SMEs

[103] Some caution is needed because this data is not from the "live" database (which is in the process of being reconfigured) so is not fully updated and the headline numbers do not tally exactly with the graphs and tables above. However, it contains the majority of schemes, totalling 1.6 million sq m. GLA is highly depended on boroughs for this data and we believe some boroughs have not reported fully, rather than having no occupied/partially occupied builds subject to PDR.

shown above, it is hard to resist the conclusion that PDR is a policy that is having unintended, negative consequences.

Figure 7.13 PDR and occupancy status with potential jobs displaced (approvals), FY2013-FY2015

Borough	Space lost/ potentially lost to PDR (sq m)	Non-vacant floorspace	% non-vacant	Jobs disrupted
Barking and Dagenham	12,578	2,963	71	296
Barnet	75,794	25,504	65	2,550
Bexley	11,451	6,289	66	629
Brent	181,060	0	0	0
Bromley	45,970	10,360	52	1,036
Camden	92,098	5,229	98	523
Croydon	235,150	79,419	47	7,942
Ealing	24,091	10,274	68	1,027
Enfield	18,665	333	100	33
Greenwich	5,605	3,437	61	344
Hackney	5,195	70	100	7
Hammersmith and Fulham	51,853	5,509	40	551
Haringey	5,924	1,074	84	107
Harrow	89,447	23,596	34	2,360
Havering	9,517	322	27	32
Hillingdon	40,423	5,210	92	521
Hounslow	111,927	51,350	75	5,135
Islington	50,860	13,082	42	1,308
Kingston upon Thames	39,681	12,501	36	1,250
Lambeth	54,340	15,075	82	1,508
Lewisham	33,634	1,785	9	179
London Legacy DC	651	96	100	10
Merton	29,942	3,242	100	324
Newham	8,253	200	28	20
Redbridge	21,222	5,677	95	568
Richmond upon Thames	82,768	20,719	66	2,072
Southwark	21,787	430	32	43
Sutton	92,879	42,198	75	4,220
Tower Hamlets	84,186	1,294	43	129
Waltham Forest	15,853	1,770	20	177
Wandsworth	57,114	15,043	79	1,504
Westminster	13,362	1,477	64	148
Total	**1,623,280**	365,528	55	36,553
Inner London	478,938	62,727	52	6,274
Outer London	1,144,342	302,801	56	30,279
London	**1,623,280**	365,528	55	36,553

Source: London Development Database (GLA) and Ramidus Consulting

8.0 Relationships with the Wider South East

8.0.1 A key role of LOPR 2017 is to help support the co-ordination of office policy with the Wider South East (WSE). Some previous LOPRs have addressed the comparative roles of London's office sub-markets, and especially the relationship between those in Outer London and those associated with Central/Inner London and the WSE. In this section we provide a high level assessment of the current relationships and how these might evolve in the future.

8.0.2 We also consider the implications for broader objectives, especially for the Outer London economy; retention of adequate office capacity in terms of quantum, quality and cost; encouragement of new capacity; and for other land uses, particularly housing. We comment on any positive measures that could be taken to improve the prospects of office locations in Outer London to improve their competitive strengths relative to locations in the WSE, for example in relation to public transport accessibility, car parking standards and qualitative enhancements.

8.1 Context

8.1.1 In previous work, we concluded that Outer London and Outer Metropolitan Area (OMA) centres were more similar than different; that the market does not distinguish between Outer London and OMA; but that markets operate more in segments or corridors around London, determined by transport routes. For instance, West London and the Thames Valley is a long-established market, and the North East corridor to Cambridge has emerged more recently.

8.1.2 We have focussed our analysis on areas that have experienced material change, or where there is policy focus that could lead to material change.

8.1.3 Since LOPR 2012, the context for this analysis has changed and it is an important discussion. The case for protecting office space in Outer London might now be more compelling and there might be a more pressing need to work with the WSE to meet new demands.

8.1.4 We have shown in earlier sections that Central London has been and remains under intense pressure to provide residential space and that there are also pressures on the supply of office space. This raises critical issues about the best way to meet the need and raises questions, for example, about policy responses to the Green Belt and the appropriate density of land use in Outer London.

8.1.5 We explored a number of possible futures that could influence demand for office space in Outer London and the WSE, including the following.

- Reduced floor areas per worker (higher densities).
- The preference of businesses for town centre locations.
- Capacity constraints and cost pressures in and around Central London.
- Whether new infrastructure will stimulate demand for office space in newly accessible locations.

- The option to use workplaces near home for all or part of the day/week/working life.
- Designing residential developments to incorporate small, integrated workspaces.
- The availability of land for workspace in Outer London and the WSE.
- Government policy to create hubs in Outer London at Croydon and Stratford.
- The possibility that other, private sector organisations. might decentralise.

8.1.6 We considered whether changing working practices and technological innovation might open up opportunities for centres in Outer London and the WSE to be part of the solution to the pressure on space in Central London. Also, the extent to which alternative locations were actively positioning themselves to meet any demand that might arise from the capacity pressures in Central London. We explored the potential for competition, or collaboration, between Outer London centres and the WSE to ensure that outer London centres are not 'leap- frogged' and are in a position to meet any increase in the need for local office provision.

8.1.7 As part of the background research for considering the relationships between Outer London and its wider regional setting, we also reviewed recent research on the economic performance and characteristics of Outer London and the neighbouring sub-regions. Some of the key messages from these reports are incorporated into this analysis.

8.2 Stakeholder workshops

8.2.1 We conducted a series of four workshops to explore these issues and to establish the extent to which centres in Outer London and the WSE were taking active steps to capture demand.

8.2.2 The workshops brought together agents; developers; policy makers and Local Economic Partnerships (LEPs), and each workshop focused on a specific quadrant: North, South, East and West. We acknowledged that there were overlaps between these areas and encouraged discussions to cross those boundaries as appropriate.

8.2.3 In the workshops we led discussions under six key themes listed below and the broad messages from the workshops are summarised in the following section.

- Economic linkages between London and the WSE.
- The symptoms of capacity constraints.
- Feasibility and potential for substitution of capacity.
- Infrastructure investment.
- Technological innovation and changing working practices.
- Interrelationships between different land uses.

8.2.4 **Economic linkages between London and the WSE** There was a general acknowledgement that large proportions of the population in Outer London commute

to Central London for high value, high skilled knowledge work, while, as a broad generalisation, local jobs tended to be lower value, support or administrative roles. There are of course exceptions to this, particularly in the western corridor where there is a higher incidence of high value, high skilled work. There was a similar characterisation for much of the neighbouring WSE and as we highlighted in LOPR 2012, the market does not make a distinction between places either side of the political GLA boundary.

8.2.5 Poor orbital public transport means that road connections are the key determinant of movements between job markets within and between centres in outer London and the WSE.

8.2.6 The significance of car travel means that there is a highly localised 'boundary effect' where there are distinct differences in car parking standards either side of the GLA boundary, which can, in some limited circumstances, have a material impact on demand for office space and on rental value.

8.2.7 Journey times to London determine the strength of the linkages to Central London for labour markets. The longer the journey, the weaker the links but it does not translate into local high order jobs.

8.2.8 While it is a broad generalisation, we heard the view that improvements to transport infrastructure tend to 'create dormitories rather than destinations'. In other words transport infrastructure improvements enable people to commute more easily into Central London to access higher order jobs but do not, on their own, encourage businesses to relocate from the centre. For that to happen there would need to be other complementary place-making improvements.

8.2.9 Policy intervention can shift demand by creating new magnets. Some consultees expressed the view that the emphasis on Stratford for instance, by capitalising on connections to Central London, associations with the QE Olympic Park and so on, had undermined opportunity for places further out from the centre which might have been created by Crossrail.

8.2.10 In its document, *City in the West,* the GLA acknowledges that "*many of the Outer London boroughs [have] an identity more associated with the counties such as Surrey rather than the City.*" It goes on to predict that planned transport improvements within the GLA will change that relationship: "*As London's population and infrastructure grow that relationship will change. Crossrail 2, Thameslink, the Bakerloo line extension and the metroisation of railway lines along with a shift in the way and in the locations in which people work, are driving that change*." [104]

8.2.11 **Capacity constraints in London** There was a view expressed in the workshops that there is 'no shortage of office space in Central London at the high level but that there are 'selective shortages', i.e., capacity constraint only exists for some types of space. For instance, while there may be shortage of economically

[104] Mayor of London (2016) *City in the West*

priced space across most of Central London, and of large single units in the heart of the West End, overall there is a reasonable balance between supply and demand. This is explored in Section 3.0.

8.2.12 In the WSE, much of the office stock dates from the 1980s and has not been upgraded since then. It is therefore dated and does not meet the demand of most occupiers which, in the experience of our workshop attendees, is for Grade A space.

8.2.13 The provision of economically priced space in the central area is under pressure. Rising rents and imminent increases in business rates are expected to push businesses that seek this kind of space out from the CAZ and out from town centres in Outer London and the WSE. For instance, a firm of architects that has rented warehouse space in Clerkenwell for the past 12 years has been quoted a rental increase from £27 per sq ft to £52 per sq ft. This business is co-located with three small businesses that rent desk space from them. All four businesses will be displaced.

8.2.14 PDR have stripped out office space from centres in Outer London and the WSE in a process that is causing some capacity constraints in those markets. The most vulnerable workspace is generally of low value to investors (low rent and poor covenants) and so simple economics mean that these buildings have more value as residential. This type of space is often most suitable for SMEs.

8.2.15 . At one of the workshops it was reported that Dorking had lost 20% of its stock to prior approvals and this included *occupied* offices built in the 1980s. Redhill/Reigate reported losing older low quality space that met a need for SMEs but that the larger units have been retained (so far). The loss is not regretted in all markets. For example, the view expressed about Elmbridge was that PDR works as expected and helps to address the housing shortage.

8.2.16 In sum, shortages of economically priced space suitable for SMEs seeking to occupy with low overheads have arisen across all of London and the WSE and it cannot be assumed that outer London or the WSE can easily accommodate large numbers of businesses displaced from Central London in secondary office space.

8.2.17 **Feasibility and substitution of capacity in the WSE** As a broad generalisation we found a stronger motivation to preserve existing jobs rather than seek new employers amongst centres in parts of the WSE, where unemployment is not an issue - which suggests that the potential for substitution in these areas is limited. While this was not the case for all centres, there was a lack of interest, and even active resistance to, actively seeking new office employment space in many parts of the WSE.

8.2.18 This was particularly the case in the South West and West where residents are expected to object to economic expansion. The experience in these locations is also that developers do not express interest in taking up opportunities on employment land when they arise, so there is economic pressure to release employment land for residential development.

8.2.19 Some of this was put down to the restrictions imposed by policy designations to protect land such as the existence of the Green Belt, Areas of Outstanding Natural Beauty and physical limitations of being coastal authorities. Surrey, for instance, is 70% Green Belt.

8.2.20 That might reflect an 'acceptance of reality'. In many centres across the WSE values are not high enough to make new development viable. That is a frustration for some centres because demand is focused on Grade A space, even where the market is not very active. Thus many centres are caught in a loop of ageing stock that cannot be renewed and are losing employers to the small number of places where development is viable.

8.2.21 **Development viability** As a broad rule of thumb, the baseline rental value required for economically viable development of new office space is £27.50 per sq ft, assuming conservative build costs of £175 per sq ft and an all risk development yield of around 5.75%. Unless this rental value can be supported, it is highly unlikely that any private sector actor would be prepared to risk a speculative development.

8.2.22 The building cost at £175 per sq ft is at the low end of market price. In constrained town centre locations and closer to London, that figure would be £200 per sq ft.

8.2.23 In some circumstances, where the land can be acquired at no cost and the development is pared back through value engineering, some developers have calculated that development can be viable at £25 per sq ft. This would not be considered viable in the open market. Figure 8.1 sets out these numbers.

Figure 8.1The economics of development appraisal

Key variable in development appraisal	Baseline assuming land value	Baseline assuming nil land value
Rental value	£27.50 per sq ft	£25 per sq ft
Yield	5.75%	5.5%
Building costs	£175 per sq ft	£160 per sq ft

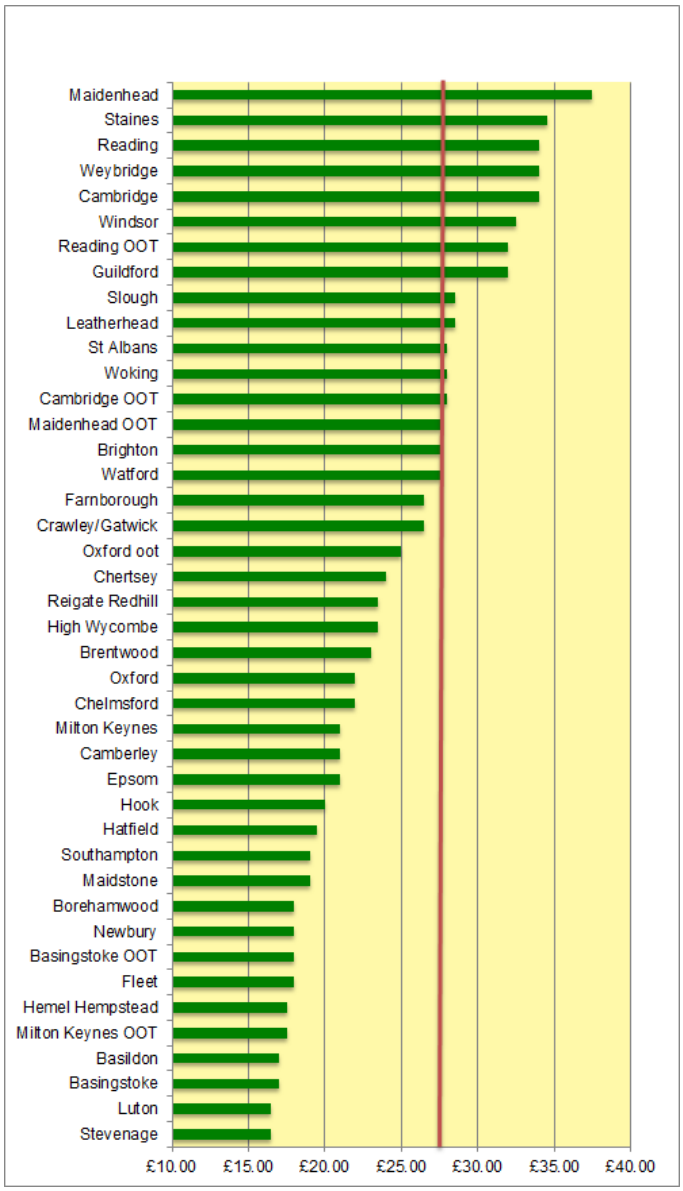
8.2.24 Rental values across the WSE only exceed £27.50 per sq ft in 10 of the 37 centres we analysed, based on the Colliers International Rent Map[105] and only five exceed that rent by a comfortable margin. This is illustrated in Figure 8.2, where the red line indicates the tipping point at £27.50 per sq ft.

8.2.25 The locations where rental values clearly justify development and demand is robust are almost exclusively to the west of London: Maidenhead and Windsor; Staines; Reading; Weybridge and Guildford. The exception is Cambridge which thrives on the back of its very strong life sciences cluster. Opportunities to develop in these locations however are constrained, except in Reading which has more

[105] Colliers *International Rent Map*

scope. It is therefore possible that nearby centres which do have potential sites and are close to the viability threshold, such as Slough, could benefit, particularly with the attraction of Crossrail.

Figure 8.2 Grade A rents (£ per sq ft) in centres around the WSE, indicating viability break point (red line)



Source: Ramidus Consulting/Colliers International Rent Map

8.2.26 While new development may not be viable in many places, refurbishment is also unattractive and compares poorly with alternative uses. The cost of refurbishing a dated, 1980s office block is high at around £130 per sq ft. While it may be possible

to make adequate upgrades at around £100 per sq ft, the risks and uncertainties are higher when working on a dated building and so contractors tend to price them at around £130 per sq ft. Since the rental value is unlikely to match a new development, only a small number of situations can be considered viable.

8.2.27 Residential is therefore very often a more economically attractive option than refurbishment for a 1980s or 1990s building. Even office stock built around the year 2000 can be problematic. In order to sub-let, buildings have to comply with EPC Level E (under the Energy Act 2011) and it is not unusual for buildings just 15 years old to fail to comply.

8.2.28 The economics of office development – whether new build or refurbishment are such that renewing the office stock has become a structural impossibility in many locations. On the other hand, values for residential remain strong enough to justify development costs and the simple mathematics encourage loss of stock through PDR and the momentum is gathering.

8.2.29 The result is that many centres have lost the kind of space that was available at low cost, often on short leases or even licenses, to young, small or low margin businesses. Flexible workspace delivered by the private sector is not a substitute for all this space because the unit cost is so much higher. What is now described as 'incubator space' that suits young and insecure businesses in the early unstable phase of their business development was formerly provided by the 'end of life' phase of office buildings until it was economically viable for the owner to redevelop or refurbish. PDR have given these owners other more lucrative options.

8.2.30 **Infrastructure investment** There was a feeling that provision and speed of broadband is as important to the success of an office economy – and its ability to attract and retain employers - as investment in new transport connections.

8.2.31 Nevertheless, the influence of transport connections and their power to promote economic development is widely recognised. For instance, places on rail links to King's Cross, believed they would benefit from being connected to the life sciences cluster and other economic drivers in that part of Central London. Crossrail 2 will improve connectivity along the Cambridge and North East Corridor.

8.2.32 A phrase used several times to describe the impact of Crossrail was that it will 'make dormitories not destinations'. In other words, it will take labour to CAZ rather than take jobs from Central London to stops along the line. In that way, its greatest impact is on the value of housing in areas close to one of its stations, rather than to generate office employment.

8.2.33 It is not new to point out that London's public transport network is predominantly radial and that orbital connections are poor. Travel-to-work is therefore more likely to be car-dependent if the employment is outside Central London. Some places see potential for local transport connections between centres, for instance North Down Rail or Brentford-Southall – both of which would create new public transport links between local centres. The Brentford-Southall link, for

example, would serve the Sky Media Campus and directly save substantial overheads spent on privately funded bus services.

8.2.34 Heathrow and Gatwick both drive demand for office space because access to air travel often plays a part in business location decisions.

8.2.35 **Technological innovation, changing working practices** Changing working practices are having a substantial impact on demand for office space in the WSE by enabling 'spaceless growth'. For example, the point was made in Section 2.3 that occupancy densities have fallen from around 16-17 sq m per desk in the 1990s, to around 11 sq m per desk today: a thirty per cent reduction in demand.[106] This issue is examined in depth in Section 2.0, but was very much on the minds of attendees at the workshops.

8.2.36 Agile working practices might well create demand for local provision of workspace: to accommodate businesses that might otherwise be based in the home; as an alternate workplace for those employed in Central London with agile working practices; or for businesses that might have been dissuaded from locating in Central London by rising occupation costs. There is some logic to assuming that people undertaking office-type employment from home might prefer to work in a place outside the home but nearby, given the option. If that is right, it would generate demand for flexible workspace provision in local markets. As we show in Section 9.0, over 20% of those employed in business services work mainly at or from home and, according to ONS, the jobs that home workers carry out tend to be concentrated more in higher skilled roles compared to those who do not work from home (See footnote to 9.1).

8.2.37 Workshop attendees were considering ways to intensify the use of their existing workplace stock or even to look at ways to introduce workspace into buildings that were not designed or intended for that purpose such as community centres, sports centres, galleries, transport nodes, schools outside normal term-times or in the outdoors public realm to accommodate demand for local and flexible office workspace.

8.2.38 While the role of flexible workspace providers such as Regus, The Office Group or Avanta was acknowledged, it is important to recognise that they are not necessarily an effective substitute for low cost space because operating costs are significantly higher.

8.2.39 **Interrelationships between different land uses** The issue of merging boundaries between use classes is an important one in the office as well as the industrial market. Overlap between advanced manufacturing and R&D space means that the distinction is no longer helpful unless it is to prevent one being lost to the other. They are not in conflict. 'Life sciences space' covers both. The original intent of the B1 use class and its sub-classes was to allow easy adaptation between pure office and, hybrid uses and light industrial. Unfortunately, market circumstances in

[106] Bedford M; Harris R & King A (2013) *Occupier Density Study 2013* British Council for Offices

the late 1980s meant that a large legacy of B1was created at the expense of B1b and c. But rather than the surplus space blending back with B1b or B1c uses, it is tending to be lost to residential or in some locations, B8 and even to a free school. Only residential is effectively a permanent loss.

8.2.40 The Pfizer campus in Sandwich originally had around 300,000 sq m of office, lab and production space that was vacated by Pfizer. It has had some success in reinventing itself as Discovery Park. Today, 115 companies operate from the campus creating 2,500 jobs. A simple division demonstrates that these are very small businesses. Initially, Pfizer kept 300 scientists on site and hoped to attract medical researchers from London and Cambridge. That strategy was not fruitful and so they targeted more local businesses without a sector focus. Now it has 600 scientists and a mixed business community including medical science and local professional businesses that have relocated from poor space in the town centre.

8.2.41 The office market in this part of Kent was weak and small. The fact that the former Pfizer site has been able to attract that number of occupiers shows the importance of having the right kind of space. The quality of space at scale has meant that a new business community has been created. However, the market could not have supported speculative development and so it is only by lucky accident that the right kind of space became vacant and available. These conditions could not easily be replicated.

8.2.42 The fast rail connection to King's Cross and presence of the Francis Crick Institute close to King's Cross station (as well as the life sciences expertise based in UCH, UCL and the Wellcome Centre) is seen as a powerful driver for the local economies connected by rail. Maidstone is pursuing this angle too, as is Ebbsfleet, in the hope that they can become high growth centres.

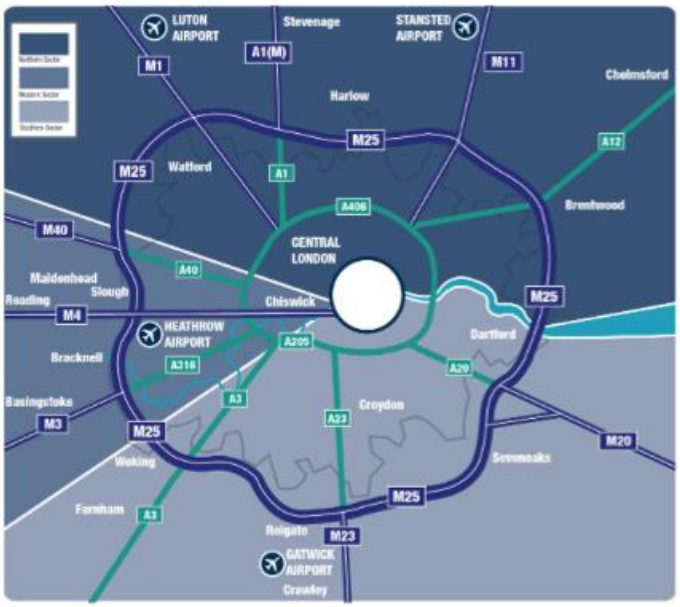
8.2.43 **Policy intervention** There was a discussion about how policy can be used to intervene in the market and influence the location of office employment. For instance, policy can be designed to re-distribute office jobs over a larger area of London and the WSE. However, concerns were raised about unforeseen consequences. For instance, the support given to economic development in and around Stratford is thought by some to have blighted the potential for the office market in Ebbsfleet.

8.3 Trends in the WSE office market

8.3.1 The M25 and the B1 Use Class spawned a whole generation of new offices when it was built in the 1980s and much of that office stock is now facing obsolescence at the same time. Often this space is on business parks out of town or edge of centre. This has led to widespread oversupply of a type of space that is no longer of interest to larger corporate occupiers. In other circumstances, that space could move down the value gradient to become utility space and thereby meet the needs of SMEs, but in the current market it is very often vulnerable to conversion to residential space. This is happening to occupied as well as vacant buildings.

8.3.2 The office market in the WSE is strongest in to the West of London in the M4 or Western Corridor. Savills' map of the M25 office market[107] illustrates the point by showing many more centres in a geographically much smaller area to the West than around the rest of the area (Figure 8.3).

Figure 8.3 Map of M25 office market



Source: Savills[108]

8.3.3 However, the role of the WSE office market has changed fundamentally since the majority of its stock was built. Whereas in the past it provided off-centre locations for back offices, most of these functions have now disappeared. For larger firms, while there remains a significant cost differential between Central and Outer London in terms of rent, this is far outweighed by a much shallower curve in salary costs. Thus demand for larger offices in Outer London and the WSE has structurally (rather than cyclically) reduced.

8.3.4 Demand has polarised to centres that have renewed their stock because speculative development has proved viable and attractive. This becomes self-reinforcing because of the agglomeration phenomenon.

8.3.5 Certain centres in the western corridor have shown growth over the past year and that is growth from a higher base. The M3 market is less successful, with exceptions. Farnborough has Grade A rents of £26.50 per sq ft and recent annual growth of 13%. Grade B space is £18 per sq ft. It is reliant on one successful business park and, while it lost Nokia to a Central London location, it gained BMW in

[107] Savills (2016) *Greater London and South East Offices Market Watch January 2016*
[108] Savills *op cit*

2013. It lost an 8,000 sq m office building to residential in the town centre, which might, in part, explain rental growth. Guildford has values of £32 per sq ft and recent growth of £5 per sq ft. It is highly constrained. In other words, supply constraint can support rental growth at relatively low levels of demand. Other centres in the M3 corridor have experienced little growth and have rents in the high teens or low-£20s. It might be coincidence that the centres with higher values and at least some growth are east of the M3.

8.3.6 To the East of London, the office market is much weaker. Gravesham reported that it had lost stock to PDR, and that replacement or renewal was out of the question with values at £8.50 per sq ft. It had experienced no new development for over 30 years. Demand was leaking to Medway and Dartford where more modern office space was available, for instance on the Crossways Business Park in Dartford where rents are around £15 per sq ft.

8.4 Case studies

8.4.1 We have taken four locations as 'case studies' to illustrate the key themes arising from the workshop discussions. These four have either experienced material change in their market conditions or underlying economy or have been the focus of policy intervention. Milton Keynes (and the Oxford-Cambridge Arc); Basingstoke (and the M3 Corridor); Reading (and the Western Corridor), Ebbsfleet and East London.

8.4.2 **Milton Keynes** Milton Keynes created the Milton Keynes Commission and produced the MK Futures 2050 report with a view to 'making a great city greater'. The document proposes that the city needs a 'Strategy for 2050', that it must rediscover 'think big' and identifies 'Six Big Projects'. The first project is to position itself on the Cambridge-Milton Keynes-Oxford Arc' (Figure 8.4) which is pertinent to this discussion.

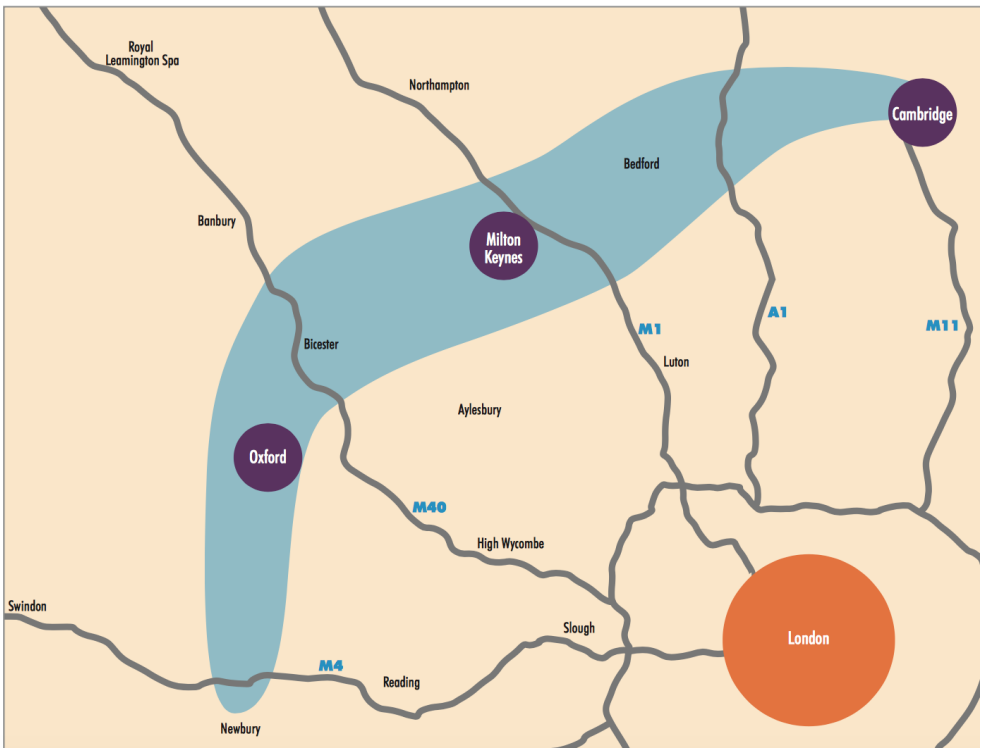
8.4.3 Our interpretation is that Milton Keynes has ambitions to plug into the knowledge economy. By associating itself with this arc it can benefit from the branding of two internationally recognised leading universities and perhaps overcome its lack of a clear single focus. Milton Keynes has the Open University (OU) and Cranfield Business School nearby but the OU does not create a student or academic population cluster as a driver for economic growth.

8.4.4 Milton Keynes 2050 expressed concern about an ageing population and the need to retain young people and expressed an intention to invest in skills and education. This ties in with the workshop feedback which suggested an emphasis on building a successful and dynamic SME economy. The aim is to retain businesses that might otherwise set up elsewhere, including London, rather than a mission to attract large employers out of London. It believes itself to be strategically located on the Oxford Cambridge Arc.

8.4.5 'Up to the M25 is within the London orbit' but places like Milton Keynes (and Oxford and Cambridge) are far enough away to sustain their own local economies

and not be cannibalised by London. This in part relates to journey time and cost. Developing that theme, the perception is that places like Watford and Hemel Hempstead are more vulnerable to the centripetal power of Central London.

Figure 8.4 The Oxford-Milton Keynes-Cambridge Arc



Source: MK Futures 2050[109]

8.4.6 Milton Keynes is probably more of a threat to M25 advanced manufacturing than it is to London office economy. For instance, several Formula One teams have located in and around Milton Keynes because of proximity to Silverstone.

8.4.7 If rising occupational costs in London displace SMEs it is unlikely that Milton Keynes will be amongst the first destinations to attract displaced businesses. They are likely go to the next neighbouring cheapest place on the rental gradient. However if Milton Keynes offers the right kind of environment and skills mix it could build its own cluster and become conceivable that a cost tipping point might allow it to draw business from London – but only once it has an established cluster.

8.4.8 Rental values in Milton Keynes are £21 per sq ft for Grade A with no growth over the last year and £12 per sq ft for Grade B space.

[109] Milton Keynes Futures 2050 Commission (2016) *Making a Great City Greater*

8.4.9 **Reading and the Western Corridor.** There is a long track record in Reading and the western corridor of attracting headquarters and in particular IT businesses as part of the M4 corridor. There have been some high profile examples of such businesses recentralising to Central London but, within the western corridor, amongst businesses that remain committed to a West of London location, demand has polarised to Reading.

8.4.10 Reading has been able to attract speculative development and so can offer the high quality of office space that is required. Nevertheless, Cisco pulled out of a 100,000 sq m deal and the Green Park scheme was halved in size and land allocated to residential. In other words, even in one of the strongest office markets in the WSE, the pressure to shift to residential is hard to resist. The highest office values are marginal compared to profits available from residential. In the case of Green Park, as an out of town campus, there was also an opportunity to change an office park into a mixed economy or a sustainable community by co-locating housing with out of town office space.

8.4.11 Rental values in Reading are £34 per sq ft in Reading town centre for Grade A and £25 per sq ft for secondary space (with modest recent growth). The discount for out of town space is small and Grade A buildings still achieve £32 per sq ft.

8.4.12 Reading has issues with town centre traffic congestion but will benefit from a station on the Elizabeth Line, which connects it directly with office markets across the CAZ. The key point in this study is the vulnerability of almost all office markets to loss of space to residential.

8.4.13 **Basingstoke** The office stock in Basingstoke is dated and of poor quality which, according to the M3 Enterprise study[110] is depressing rental values and discouraging investors from building new, high quality offices. The report states that it is "*losing out on investment to towns on the M4 corridor which have seen significant investment in high quality stock.*"

8.4.14 As a former 'expanded town', Basingstoke has control over its land supply and can therefore resist the threat of PDR. It has also planned a £4 billion investment to upgrade the town centre environment, for which it owns 70% of the head-leases and which will create Grade A office stock as well as upgraded leisure, a John Lewis at Home store and a new designer outlet. It includes proposals for 13,000 new homes over 45 years at Manydown.

8.4.15 The vision for Basingstoke is to attract digital businesses and to be recognised as a tech centre. It is hoped that this will improve its ability to compete with alternative locations, especially Reading. Basingstoke claims a substantial cost advantage over Reading with rents some £20 per sq ft cheaper. Current rents in Basingstoke are around £17 per sq ft for the best space and £12.50 per sq ft for secondary space (with no recent growth).[111]

[110] Regeneris Consulting (2016) *Enterprise M3 Commercial Property Market Study*
[111] Colliers *International Rent Map*

8.4.16 Basingstoke has an ambition to 'attract London businesses' – i.e. benefit from 'substitution', which may be over-optimistic. The town hopes to trade on its relatively inexpensive housing costs to encourage younger knowledge workers to return to Basingstoke after university in their early career stages.

8.4.17 While Reading has the enormous advantage over Basingstoke of a Crossrail station, it nevertheless suffers from traffic congestion.

8.4.18 **Ebbsfleet/Dartford** Ebbsfleet was the biggest single planning consent in British history at around 800,000 sq m of mixed uses. It has a long-term ambition for growth energised by the international railway station, which connects it to Central London in 17 minutes or to Paris in two hours.

8.4.19 A development corporation was established in March 2014 for 'Ebbsfleet Garden City' and its stated ambition is to "'*become a magnet for new business, for education, research and development and for leisure and recreation*".[112] The vision includes parks, 30,000 new jobs and around 450,000 sq m of commercial space. Thus far, the only significant development is for residential.

8.4.20 Ebbsfleet was one of four areas within the Thames Gateway – Canary Wharf; London Gateway, Olympic Park area and Ebbsfleet. It is situated between Dartford and Gravesend on the southern bank of the Thames Estuary.

8.4.21 The original vision was to accommodate businesses that were linked to Canary Wharf, to be, in effect, the back office location for Canary Wharf – or for occupiers wanting to be nearby in high quality space but at lower rents. That role seems to have been usurped by Stratford.

8.4.22 Dartford town centre is in decline but there is higher quality space on the Crossways Business Park that has a reasonably robust market. It has access to the M25 though suffers from congestion at the Dartford Crossing. It does not serve the town centre market but has attracted some larger businesses wanting higher quality and more prestigious space than is generally available in town centres and enables its staff to commute by car.

8.4.23 Broadband provision has been improved for residential stock but businesses often find that it is not adequate for their demands.

8.5 The issues, opportunities and implications

8.5.1 Many centres in the WSE that have a history of office employment, are concerned at their inability to retain employment space in the face of market pressures and fear the prospect of becoming a dormitory town. They often feel that they have no tools to resist the change – that they are powerless in the battle to retain a mixed town centre economy.

[112] Ebbsfleet Garden City

8.5.2 Rental values do not support new development in the majority of centres and yet, where there is demand for larger units of space, it polarises to higher quality space, even if that means relocating to an alternative centre.

8.5.3 Values for residential space do support new development and so low value space is very vulnerable to change of use. This is not a new phenomenon, conversion of obsolete office space to residential use was occurring before PDR. The difference is that there are now very few grounds on which a local authority can resist the loss of office space to residential and markets are losing the low value, secondary space that met the needs of many small, young or low margin firms which created local employment. This is also the kind of space that could enable a centre to attract refugee businesses that have been out-priced from London.

8.5.4 Many places recognise the potential in creating a cluster such as life-sciences, or tech start-ups but lack the means to supply the space. They are aware that using public sector land or buildings might be the key. Local authorities could, for instance, subsidise managed workspace where the private sector is not motivated to do so.

8.5.5 While space is being lost, there is also far greater awareness of the potential offered by improved efficiency of use to offset the loss of quantum of space. This is understood as 'intensification' and might, for instance, include blurring boundaries between different uses such as advanced manufacturing and R&D with office employment space. Thus, for instance office uses can be accommodated on what is normally considered to be industrial space.

8.5.6 There is a widespread hope that SMEs will move along the rent gradient as they are squeezed out and will create demand in centres further from Central London. This seems to be a pipedream for most places. The prospects for retaining local demand, or persuading local entrepreneurs to stay closer to home are much more realistic in most places than the prospect of securing inward investment.

8.5.7 There is a case for using the planning system to facilitate or encourage the provision of economical and small units, possibly in exchange for higher density in planning consents. Public sector subsidy – whether in the form of land, surplus buildings or financial support could also play a part.

8.5.8 Central London can absorb a substantial volume of employment growth through changing working practices and the only real pressures we have identified are on SMEs needing low cost space. To some extent pressures on infrastructure in Central London can also be addressed through flexible and agile working.

8.5.9 One of the primary pressures on capacity in Central London is caused by the persistence of the 'rush-hour'. Travel outside the rush hour, with the increasingly widespread provision of WiFi, enables knowledge workers to continue working *en route*. There are, in any event, questions over the prospects of employment expansion in a post-Brexit economy as discussed elsewhere in this report and particularly in Section 2.0.

8.5.10 Central London is not capacity constrained overall. However there are two exceptions: very large lot sizes, which will always have limited options, and economical space particularly suited to SMEs. The private sector has little incentive to fill this need and so public intervention is the key –either by imposing planning restrictions/obligations or by giving subsidy and/or direct development.

8.5.11 The WSE supplies labour to the high value job market in Central London. That is a reality for many people. The problem is the cost, time and discomfort of commuting but some of these will be addressed with changing working practices. There are a number of potential piecemeal solutions: workplaces at transport nodes are an important part of the solution; the cost of rail fares is, in any event offset by lower housing costs; the loss of time can be offset by using the journey constructively and discomfort can alleviated by spreading rush hour over a longer period and more flexible working hours to reduce overcrowding on transport.

8.5.12 Some groups of neighbouring authorities are already working well together, perhaps under the banner of a LEP and recognising the scope for treating their employment markets as parts of a single business ecosystem. Thus, office space available in one of the group locations is seen as resource for the others. They demonstrate the potential for successful sub-regional collaboration as long as the groupings reflect the functional local economy.

8.5.13 The 'boundary effect' noted above in 8.2.5, where there are distinct differences in car parking standards either side of the GLA boundary can, in some limited circumstances, have a material impact on demand for office space and on rental value. However, the effect is tightly limited to cases where 'all else is equal'. A business park in Uxbridge is often cited as an example where the buildings in South Bucks can command higher rental values than those within the GLA boundary. It seems though, that when there are other factors in the equation, such as distance from public transport, environment, amenities and so on, the impact of parking is generally overridden.

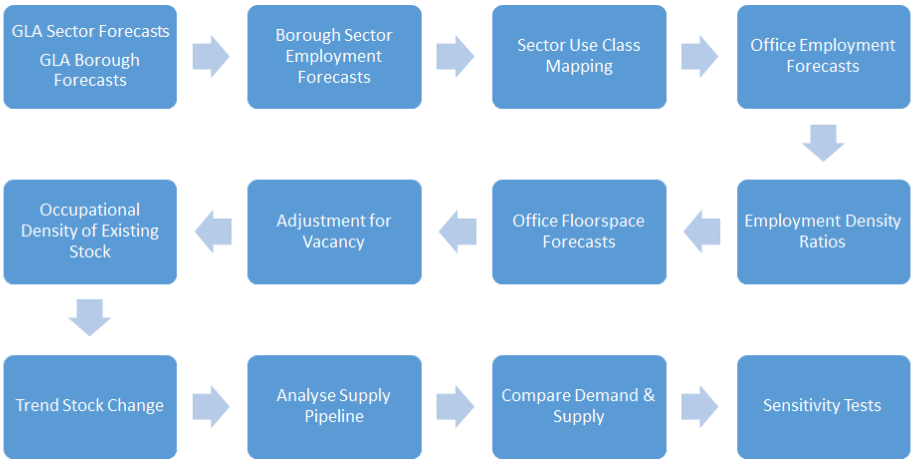
8.5.14 Specialism and clusters can attract businesses to a location that would otherwise have scant potential as illustrated by the Discovery Park example but these circumstances are particular and rare.

9.0 Employment and floorspace demand projections

9.0.1 This section sets out office employment projections for London. The projections are disaggregated to borough level and converted into demand for office floorspace through the application of employment density ratios. These employment-based projections are calibrated against past trends in office floorspace stock at borough level. The resultant projected demand for floorspace by borough is then compared against the pipeline of office supply identified through the planning system. Around these projections, we then apply a number of sensitivity tests.

9.0.2 Our approach to generate forecasts of office floorspace for London is summarised in Figure 9.1. The method and resulting output of each of these steps is set out in the subsequent sections.

Figure 9.1 Forecast methodology



9.1 Employment forecasts

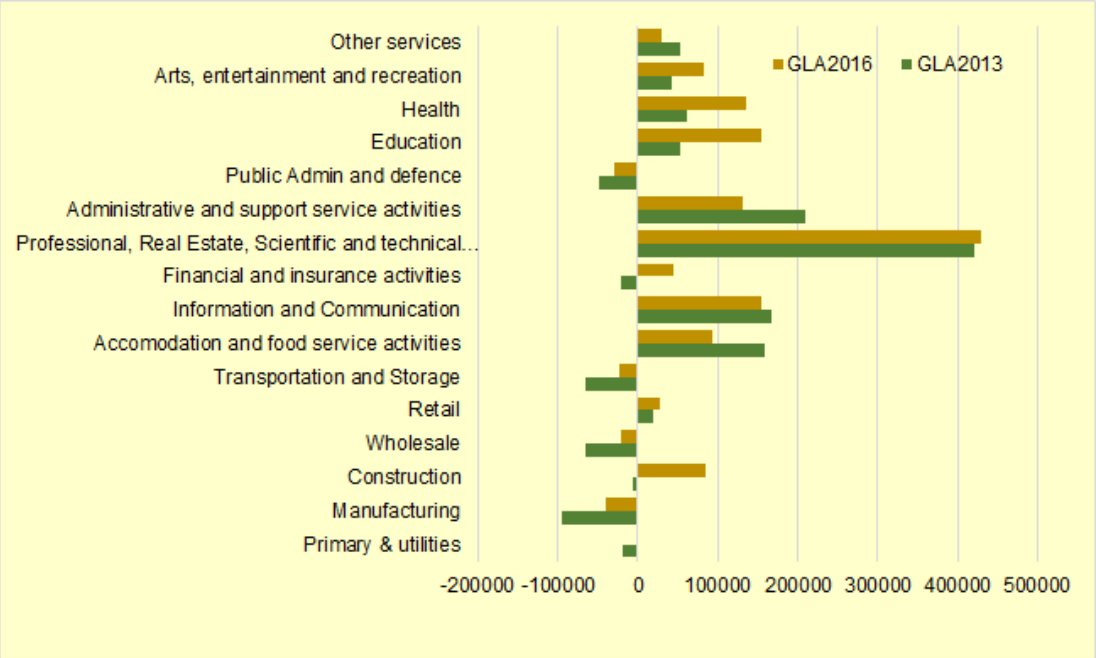
9.1.1 In June 2016 GLA Economics published their latest employment projections for London at sector level.[113] These projections showed a significant upward revision from the previous projections which were used to inform the office forecasts contained in LOPR 2012. This reflected recent growth in the London economy and the extent to which London had shown great resilience in bouncing back from the recession.

9.1.2 If the current projections are compared with the previous round then, for London as a whole, the projected growth over the period 2011-36 was 1.25 million compared with 860,000 as previously projected, an additional 390,000 jobs. The largest growth was, as before, expected to be in the Professional Scientific and Technical Services sector, which was projected to grow by 429,000, similar to the 422,000 under the GLA's 2013 projections. Growth in other sectors with significant office component such as Administrative and Support Services and Information and

[113] London Labour Market Projections 2016 – GLA Economics

Communication have been revised down, though this is largely offset by Financial Services which has been revised up. The largest upward revisions have been in Education, Health and Construction, which are not primarily office-based sectors. The projections are illustrated in Figure 9.2.

Figure 9.2 Comparison of 2013 and 2016 GLA employment projections. London employment change by sector 2011-36



Source: GLA Economics (2016)

9.1.3 At the same time GLA Economics also published a set of borough-level employment projections using a revised version of their previous 'Triangulated' method.[114] These projections are generated by developing a set of rules to integrate three separate projections for borough jobs, including:

- continued historic trends, prepared by GLA Economics;
- transport accessibility, based on a relationship for each borough between employment density and transport accessibility, and
- workplace capacity using data from the London Employment Sites Database.

9.1.4 As the transport accessibility analysis will inform future investment decisions by TfL, the transport accessibility projections do not feature in the rules to allocate employee jobs across boroughs for this round of borough projections. It is these 2016 GLA employment projections that form the basis of the office employment projections set out in this section.

[114] GLA Economics (2016) *London Labour Market Projections*

9.1.5 **Borough-level sector forecasts** The GLA do not produce sector forecasts at borough level. We generate borough sector forecasts by initially assuming that each sector grows at the same rate as the London sector forecasts. The London sector growth rates are applied to the 2014[115] borough sector data (for the 16 sectors at which GLA Economics produce their London forecasts). The input data for this is BRES 2014 employment data which are grossed up to the GLA 2014 borough employment totals to account for self-employed.

9.1.6 These initial borough-level sector forecasts are calibrated to ensure consistency with both the GLA's London sector-level forecasts and with the GLA's borough-level forecasts through a process of reiterations to these dual constraints.

9.1.7 The output of this stage produces borough-level forecasts for the sixteen sectors shown in Figure 9.2. The employment projections are for workplace employment consistent with the workforce jobs definition.

9.1.8 **Sector use class mapping** In order to produce office forecasts by borough we analyse the proportion of each borough's employment that is likely to be in office activity. To do this we examine the most detailed 5-digit SIC data and decide whether this is likely to be predominantly office activity. The Central projection uses the same definitions as applied in LOPR 2012. Sensitivity tests are carried out by varying this definition.

9.1.9 These definitions are applied to the 2014 BRES data to calculate for each borough the proportion of office employment in each of the GLA's 16 forecast sectors. The resulting coefficient is applied to the future borough sector forecasts to produce a forecast for office employment.

9.1.10 **Office employment forecasts** The resulting office employment forecasts, on a borough-by-borough basis are set out in Figure 9.3.

9.1.11 **Density ratios** Employment projections are converted into floorspace projections by application of employment density ratios – the average amount of floorspace occupied per worker. There are two principal measures of floorspace commonly used. Gross Internal Area (GIA) refers to the entire area inside the external walls of a building, including corridors, lifts, plant rooms and service accommodation. Net Internal Area (NIA), which is commonly referred to as the net lettable or usable area of offices, refers to the GIA less plant, escape routes and other common areas.

9.1.12 The London Office Floorspace Projections 2014[116] recommended use of an employment density ratio based on a research study published by the British Council for Offices.[117] This remains the latest large-scale survey data of which we

[115] 2015 BRES data is the latest available, but 2014 is used as it is consistent with the base data for the GLA Economics projections
[116] Peter Brett Associates (2014) *London Office Floorspace Projections* https://www.london.gov.uk/file/18777/download?token=9lnaCBWe
[117] Bedford M; Harris R & King A (2013) *Occupier Density Study 2013* British Council for Offices

are aware. The BCO study comprised a sample of 2,485,484 sq m NIA, across 381 properties, across the country, making it one of the most extensive studies of occupancy densities undertaken.

Figure 9.3 Office employment projections by borough

Borough	2014	2016	2021	2026	2031	2036	2041	2046	2050
Barking and Dagenham	6,043	6,444	6,514	6,656	6,952	7,265	7,647	7,851	8,009
Barnet	34,607	34,369	35,413	36,923	39,339	42,034	45,238	47,500	49,353
Bexley	10,093	10,681	11,010	11,482	12,249	13,079	14,074	14,763	15,324
Brent	17,699	18,089	18,653	19,453	20,728	22,115	23,768	24,886	25,787
Bromley	25,465	25,560	26,051	26,964	31,089	33,101	35,557	37,735	39,549
Camden	163,093	171,841	176,435	182,709	198,301	203,988	218,887	229,386	237,978
City of London	379,833	401,716	425,523	452,346	456,499	463,768	486,768	507,234	523,987
Croydon	35,062	36,235	37,564	37,092	37,617	38,243	39,239	39,711	40,072
Ealing	30,593	32,190	33,173	34,543	36,687	38,991	41,701	43,499	44,926
Enfield	16,944	17,358	17,568	17,994	18,872	19,800	20,935	21,595	22,119
Greenwich	13,380	12,795	12,918	13,207	13,797	14,473	15,327	15,819	16,217
Hackney	42,883	43,438	50,343	54,622	56,075	57,775	59,972	63,703	66,806
Hammersmith and Fulham	45,411	47,022	51,535	54,045	55,889	68,231	79,597	87,782	94,834
Haringey	15,031	15,444	15,882	16,514	17,529	18,636	19,954	20,852	21,577
Harrow	20,642	21,014	21,218	21,664	22,573	23,584	24,817	25,492	26,023
Havering	11,691	12,005	12,137	12,445	13,116	13,832	14,722	15,243	15,665
Hillingdon	36,154	37,788	40,135	43,142	51,880	57,082	63,325	69,577	74,921
Hounslow	49,977	51,119	53,364	56,337	60,544	65,144	70,610	74,705	78,050
Islington	105,523	111,417	117,277	124,828	130,990	137,194	141,978	148,405	153,657
Kensington and Chelsea	35,945	37,228	38,425	40,124	41,418	42,982	44,905	46,381	47,561
Kingston upon Thames	17,020	17,350	17,272	17,406	17,925	18,524	19,302	19,613	19,853
Lambeth	43,199	43,834	46,626	47,216	50,163	53,488	57,356	60,225	62,586
Lewisham	11,837	11,077	11,235	11,547	12,147	12,827	13,672	14,192	14,615
Merton	21,014	21,895	22,641	23,667	27,279	29,138	31,340	33,419	35,147
Newham	17,327	17,775	20,661	25,438	28,544	30,798	32,691	36,768	40,371
Redbridge	16,730	17,093	17,584	18,305	21,084	22,469	24,151	25,736	27,065
Richmond upon Thames	27,284	28,465	29,670	31,257	36,175	38,884	42,080	45,189	47,799
Southwark	111,782	114,957	120,391	130,513	143,896	150,998	156,484	166,471	174,781
Sutton	13,159	13,347	13,521	13,870	14,543	15,287	16,212	16,750	17,179
Tower Hamlets	146,120	158,200	191,824	215,453	224,032	248,354	256,073	281,424	303,344
Waltham Forest	9,305	9,969	10,243	10,642	11,305	12,033	13,960	14,833	15,560
Wandsworth	28,873	31,097	31,590	32,680	36,851	38,944	40,736	42,791	44,476
Westminster	344,958	354,036	361,206	372,951	391,678	413,990	429,094	443,877	455,807
Total	**1,904,674**	**1,982,847**	**2,095,600**	**2,214,034**	**2,337,766**	**2,467,054**	**2,602,172**	**2,743,407**	**2,861,001**

Source: CAG/GLA Economics[118]

9.1.13 The overall finding was a mean of 10.9 sq m per desk across the UK, with 38% of the sample falling within the 8-10 sq m range; and 58% falling in the 8-12 sq m range. Within the overall UK, the London average density was found to be lower at 11.3 sq m per desk. However, it is important to stress that the sample includes older properties as well as new. As the purpose of the London Office Floorspace Projections is to understand the demand for new space generated by employment change, the study adopted the higher density figure of 10.9 sq m per desk to reflect the greater efficiency of new buildings. One caveat to note is that whilst this is appropriate for most new floorspace, which will be large floorplate Central London offices, the BCO sample was biased towards such types of property and the higher

[118] This Table uses unpublished employment projections to 2050 provided by GLA Economics

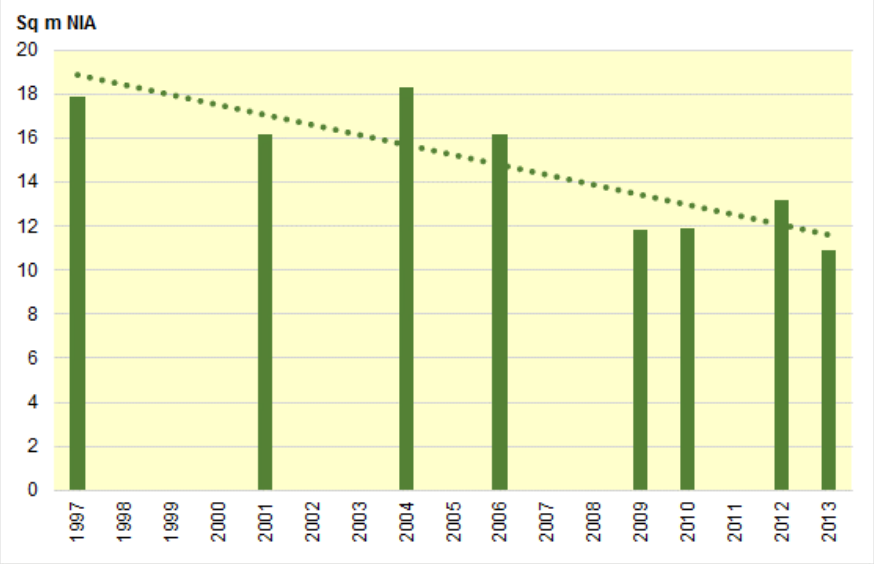
density may not hold for smaller premises. However, this in turn may be offset by a trend to higher densities as we note below.

9.1.14 The BCO study uses the metric of 'floorspace per desk'. For the purposes of the LOPR 2017, our interest is in floorspace per worker. The benchmark ratio used for converting to workers is 1.2 - i.e. 1.2 workers per desk.[119] Applied to 10.9 sq m per desk this gives an overall density rounded down to 9.0 sq m NIA per worker.

9.1.15 In planning, floorspace is commonly measured by GIA, and so it is helpful to convert the NIA benchmark to a GIA figure. NIA is usually estimated at around 80% of GIA.[120] This then provides a ratio of 11.3 sq m GIA per worker. This is an average density ratio and past evidence has found that densities are lower in older stock and higher in modern stock that is designed for modern occupational requirements.

9.1.16 There was an increase in density between the BCO's 2013 study and its earlier 2009 study: average floorspace per desk fell from 11.8 sq m (NIA) in 2009 to 10.9 sq m (NIA) in 2013. Evidence from past surveys has shown the trend in declining floorspace to worker ratios (higher densities) and this is illustrated in Figure 9.4. However, there is growing evidence that the rate of increase in densities is levelling out. This is to be expected, given the physical limitations of buildings.

Figure 9.4 Surveys of employment density ratios over time (sq m per worker)



Note: Bars are for years at which survey data are available. Sources from Figure 9.5

[119] See LOPR 2012 Figure 5.3 and para 5.5.9. 1.2 workers per desk was adopted as the most typical benchmark. There are instances of higher utilisation ratios being applied.

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

9.1.17 The research sources of the survey results shown in Figure 9.4 are shown in Figure 9.5. Different surveys have used different units of measurement so we have standardised to a single metric of floorspace per worker (NIA).

Figure 9.5 Surveys of office employment ratios

Survey	Date	Unit of Measure	GIA	NIA	Revised unit of measure	Estimate NIA per worker
British Council for Offices	2013	Sq m/desk	-	10.9	Sq m/worker	9.0
National Audit Office	2012	Sq m/FTE	-	13.2	Sq m/worker	12.0
Homes and Communities Agency	2010	Sq m/FTE	-	11.9	Sq m/worker	10.7
British Council for Offices	2009	Sq m/desk	-	11.8	Sq m/worker	9.8
Roger Tym & Partners/Ramidus	2006	Sq m/worker	-	16.2	Sq m/worker	16.2
DTZ	2004	Sq m/worker	-	18.3	Sq m/worker	18.3
English Partnerships	2001	Sq m/desk	19.0	16.2	Sq m/worker	13.5
South East Regional Planning Conference	1997	Sq m/worker	-	17.9	Sq m/worker	17.9

9.2 Office employment forecasts

9.2.1 Application of the density assumptions set out above provide the forecast of office floorspace demand by borough for the period 2016-41 as set out in Figure 9.6.

9.2.2 **Adjustment for vacancy** The above projections need to be adjusted to take account of the equilibrium starting point. Past London Plan EiPs have recommended adding 8% additional to the floorspace projections to allow for a frictional rate of vacancy.

9.2.3 Available information suggests that most boroughs are now operating at well below this frictional vacancy rate and therefore additional supply needs to be added to meet this equilibrium level.

9.2.4 Comprehensive data on vacancy rates by borough is not available, though where information exists it suggests vacancies are below 3% for many core office areas, with the exception of Croydon where it is 14%.

9.2.5 This would suggest that for many boroughs additional capacity is required to bring current stock levels back to equilibrium. In the absence of comprehensive vacancy data, we have not made this adjustment but it should be taken into account when boroughs are estimating their employment floorspace requirements.

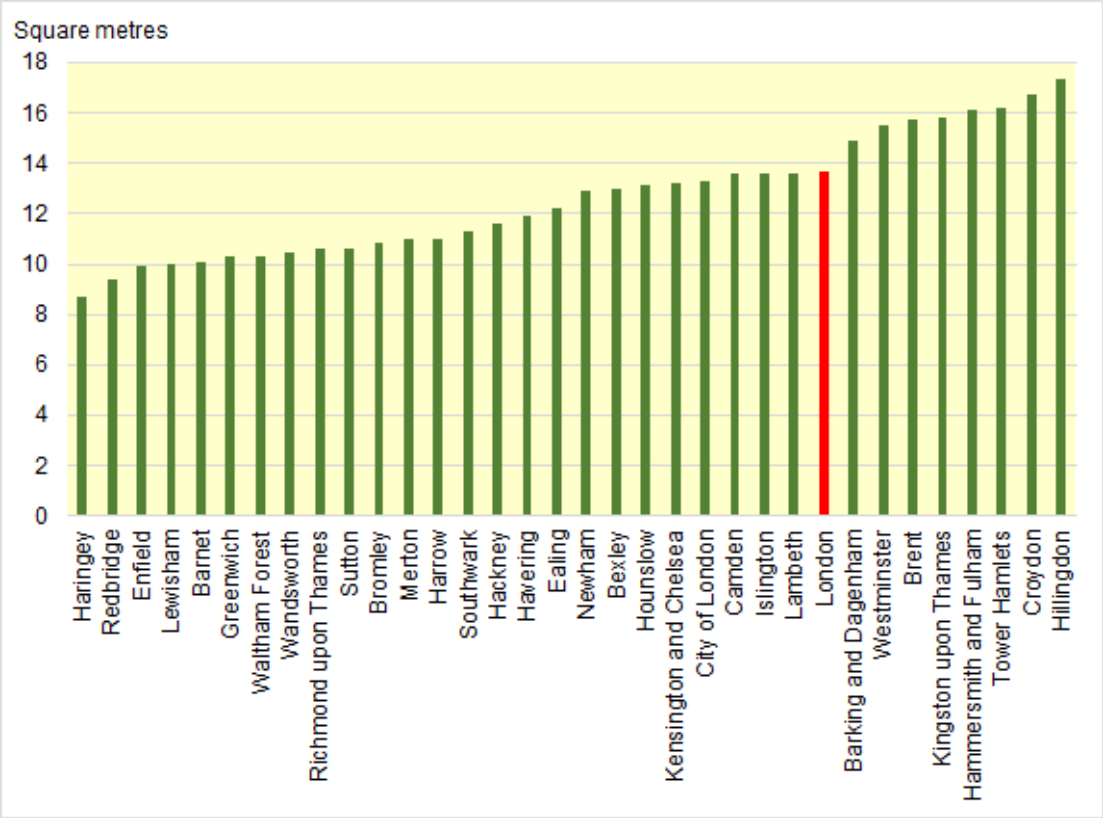
9.2.6 An alternative approach is to adjust for under-occupation of existing stock, which will include vacant premises and those that are under-occupied.

Figure 9.6 Borough-level office employment forecasts and floorspace demand

Borough	2014-41 Jobs	Sq m	2016-41 Jobs	Sq m	2016-50 Jobs	Sq m
Barking and Dagenham	1,605	18,132	1,203	13,599	1,565	17,684
Barnet	10,630	120,124	10,869	122,821	14,984	169,322
Bexley	3,981	44,985	3,392	38,335	4,643	52,463
Brent	6,068	68,571	5,679	64,170	7,698	86,989
Bromley	10,093	114,050	9,997	112,971	13,989	158,078
Camden	55,794	630,471	47,046	531,616	66,137	747,343
City of London	106,935	1,208,365	85,051	961,081	122,270	1,381,654
Croydon	4,178	47,207	3,004	33,945	3,837	43,355
Ealing	11,108	125,525	9,511	107,478	12,736	143,922
Enfield	3,992	45,108	3,577	40,424	4,761	53,800
Greenwich	1,947	22,005	2,532	28,607	3,422	38,667
Hackney	17,089	193,107	16,534	186,839	23,369	264,069
Hammersmith and Fulham	34,187	386,309	32,576	368,104	47,812	540,279
Haringey	4,923	55,625	4,510	50,963	6,134	69,313
Harrow	4,175	47,181	3,803	42,975	5,009	56,603
Havering	3,030	34,244	2,716	30,694	3,660	41,353
Hillingdon	27,171	307,028	25,537	288,569	37,134	419,610
Hounslow	20,634	233,159	19,492	220,255	26,931	304,322
Islington	36,455	411,942	30,561	345,339	42,240	477,315
Kensington and Chelsea	8,961	101,255	7,677	86,753	10,333	116,762
Kingston upon Thames	2,282	25,786	1,952	22,053	2,503	28,283
Lambeth	14,157	159,973	13,521	152,793	18,752	211,892
Lewisham	1,835	20,737	2,594	29,315	3,537	39,972
Merton	10,326	116,681	9,446	106,735	13,252	149,750
Newham	15,365	173,620	14,917	168,557	22,596	255,339
Redbridge	7,421	83,861	7,058	79,756	9,972	112,683
Richmond upon Thames	14,796	167,193	13,615	153,852	19,334	218,475
Southwark	44,702	505,131	41,526	469,249	59,824	676,014
Sutton	3,053	34,500	2,865	32,380	3,833	43,310
Tower Hamlets	109,953	1,242,467	97,873	1,105,965	145,145	1,640,136
Waltham Forest	4,654	52,595	3,990	45,090	5,591	63,177
Wandsworth	11,863	134,051	9,640	108,927	13,380	151,192
Westminster	84,136	950,738	75,058	848,160	101,771	1,150,014
London	**697,498**	**7,881,725**	**619,325**	**6,998,371**	**878,154**	**9,923,139**

9.2.7 To do this we first calculate an estimate of the existing borough-level floorspace per worker ratio. This is done dividing VOA data on borough floorspace office stock at 2014[121] by our estimate of borough office employment at 2014. The implied floorspace per worker ratios by borough are illustrated in Figure 9.7.

Figure 9.7 Estimated floorspace per worker by borough, 2014



Source: CAG/BRES/VOA

9.2.8 The lowest floorspace per worker ratios are to be found in Outer London boroughs such as Redbridge, Haringey and Barnet. As we show below, many of these boroughs have relatively high rates of self-employment in office sectors such as business services and hence a high proportion of our estimated office employees are not occupying office stock and hence deflate the floorspace to worker ratio.

9.2.9 Another potential explanation is that in some Outer London boroughs some activities that might usually be thought of as occupying office space are in fact occupying industrial or hybrid premises. This is explored further under the sector sensitivity testing in Section 9.3 below.

[121] VOA (2016) *Commercial Floorspace Statistics*

9.2.10 The highest ratio is Hillingdon, where much of the stock is in lower density business park accommodation, and secondly in Croydon, where we know there is a high level of vacancy. For London as a whole, the ratio averages 13.6 sq m per worker. This is above the figure of 11.3 sq m we have adopted as the standard employment density figure but we would expect it to be higher for two reasons:

- it includes vacant stock, and
- it includes older stock that was not designed to be occupied at such efficient employment densities.

9.2.11 By 2016, our estimate is that the floorspace per worker for offices in London has fallen to 13.2 sq m on average as a higher number of workers are accommodated in what is now a declining office stock.

9.2.12 For the projections, we assume that where existing borough floorspace per worker ratios are in excess of the London average, then this excess stock is subtracted from forecast demand. No adjustment is made where 2016 employment to floorspace ratios are at or below the London average.

9.2.13 In addition, 8% is added to the forecast net additional floorspace growth projection for all boroughs to allow for frictional vacancy. The resulting forecasts are set out in Figure 9.8.

Figure 9.8
Forecast demand for net additional office floorspace, (based on office employment projections with allowance for vacancy), 2016-41 (sq m GIA)[122]

Borough	Sq m GIA
Barking and Dagenham	7,747
Barnet	132,647
Bexley	41,401
Brent	28,077
Bromley	122,009
Camden	574,145
City of London	1,037,967
Croydon	-27,034
Ealing	116,076
Enfield	43,658
Greenwich	30,896
Hackney	201,786
Hammersmith and Fulham	272,241
Haringey	55,040
Harrow	46,413
Havering	33,150
Hillingdon	177,454
Hounslow	237,875
Islington	372,966
Kensington and Chelsea	93,694
Kingston upon Thames	-13,159
Lambeth	160,627
Lewisham	31,660
Merton	115,274
Newham	182,041
Redbridge	86,136
Richmond upon Thames	166,160
Southwark	506,789
Sutton	34,970
Tower Hamlets	815,678
Waltham Forest	48,698
Wandsworth	117,641
Westminster	213,289
London	**6,064,013**

Source: CAG

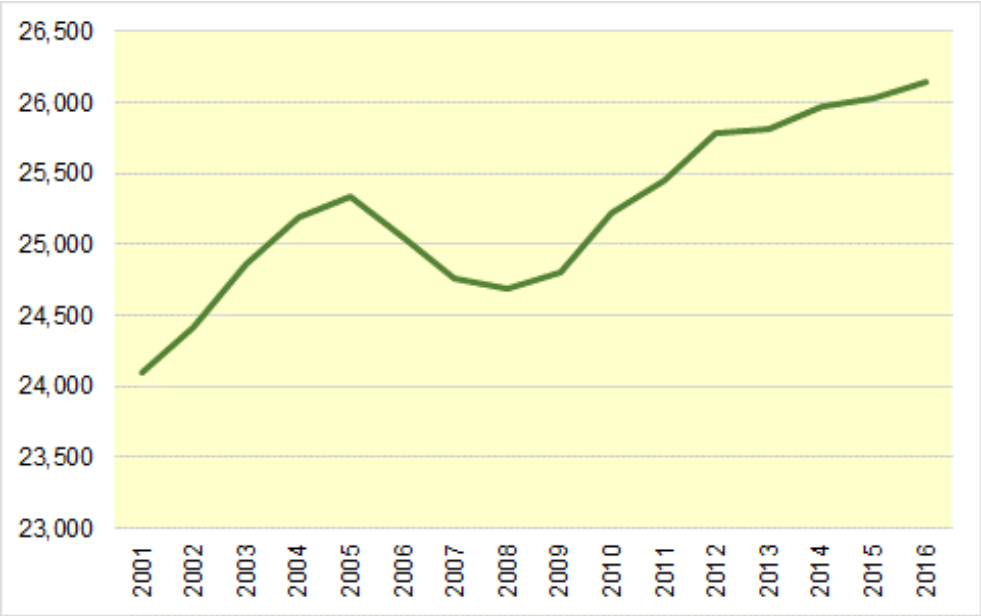
9.2.14 **Trend change in stock** Analysis of past trends in office stock provides a reality check on the floorspace forecasts derived from the employment projections.

[122] Allowance for vacancy adds 8% to forecast additional stock and subtracts capacity in boroughs where 2016 floorspace per worker is greater than the London average of 13.2 sqm

2016 VOA Commercial Floorspace Statistics[123] provides data on office floorspace stock by borough, for the period 2001-16.

9.2.15 The VOA 2016 data show that, over the period 2001-16, total office floorspace stock in London grew by 2.0m sq m, an average of 136,000 sq m per annum or an average annual rate of 0.5% (Figure 9.9).

Figure 9.9 Office floorspace stock (000s sq m), London, 2000-16



Source: VOA (2016)

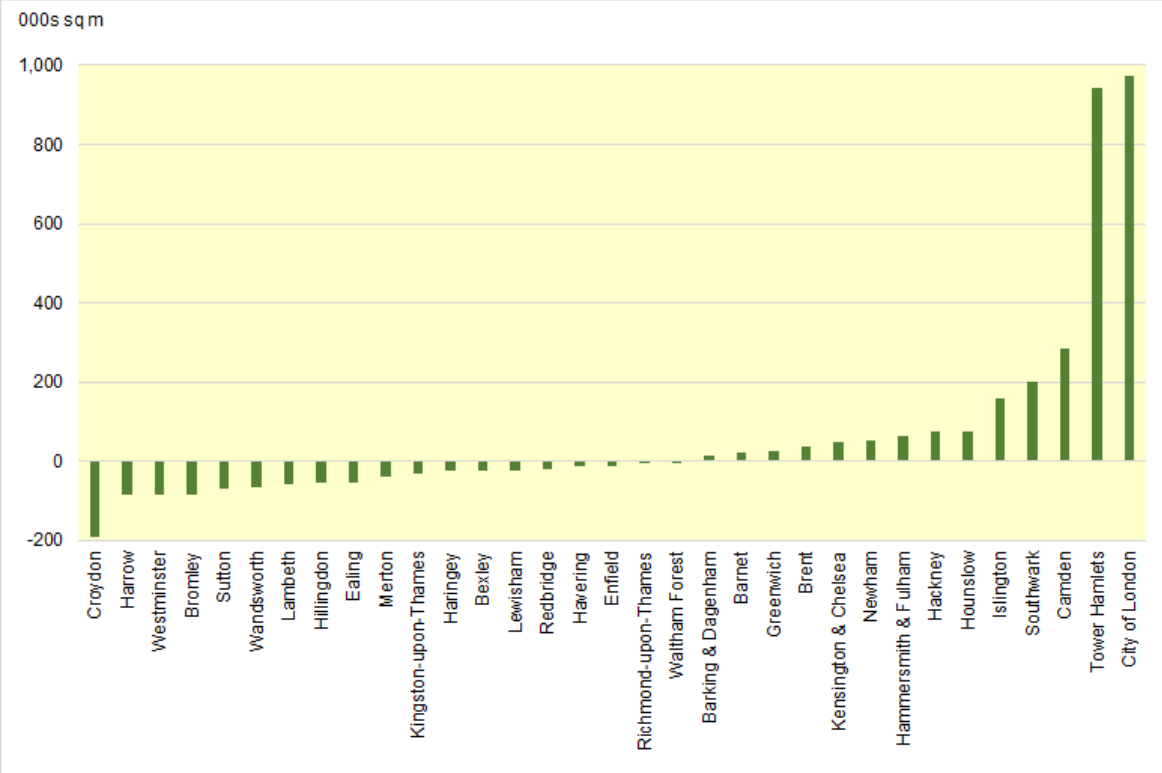
9.2.16 Whilst office floorspace grew overall in London, there were very different spatial patterns exhibited at borough level. The combined increase in City and Tower Hamlets amounted to 94% of net additional growth. In Croydon, stock declined by nearly 200,000 sq m over the period.

9.2.17 Change in office floorspace stock by borough for the period 2001-16, using VOA 2016 data, is illustrated in Figure 9.10. Section 4.4 provides an analysis of the VOA data showing the contrasting fortunes of Inner and Outer London.

9.2.18 To produce a projection of change in office stock based on past trends we have calculated the annual arithmetic average change in stock at borough level from the VOA 2016 data over the period 2001-16. This is then projected forward over the 25 years of the plan period 2016-41.

[123] VOA (2016) *Commercial Floorspace Statistics*

Figure 9.10 Change in floorspace stock, by borough, 2001-16



Source: VOA (2016)

9.2.19 For London as a whole, this trend projection produces an increase in floorspace for London of 3.4m sq m over the plan period 2016-41 (Figure 9.11). This is significantly lower than the employment-based method. There are a number of factors that might explain this, but the two strongest components are likely to be past intensification of office use and the structural factors of the increasing proportion of office based sectors in the employment projections.

Figure 9.11 Trend floorspace stock projection

Borough	Sq m GIA VOA 2016
Barking and Dagenham	23,300
Barnet	35,000
Bexley	-36,700
Brent	60,000
Bromley	-140,000
Camden	476,700
City of London	1,623,300
Croydon	-318,300
Ealing	-88,300
Enfield	-16,700
Greenwich	45,000
Hackney	128,300
Hammersmith and Fulham	105,000
Haringey	-40,000
Harrow	-141,700
Havering	-18,300
Hillingdon	-90,000
Hounslow	128,300
Islington	263,300
Kensington and Chelsea	83,300
Kingston upon Thames	-48,300
Lambeth	-95,000
Lewisham	-36,700
Merton	-66,700
Newham	86,700
Redbridge	-35,000
Richmond upon Thames	-10,000
Southwark	338,300
Sutton	-116,700
Tower Hamlets	1,570,000
Waltham Forest	-8,300
Wandsworth	-110,000
Westminster	-141,700
London	**3,408,300**

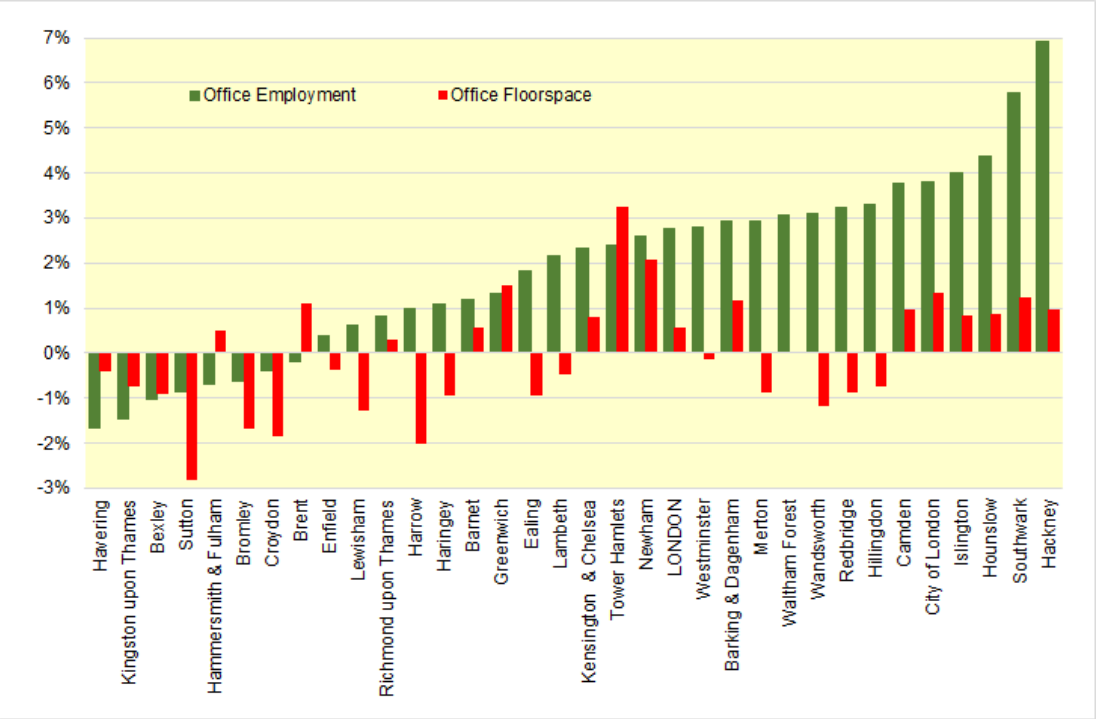
Source: VOA (2016), CAG

9.2.20 **Comparison of office floorspace and office employment change** We have tested the past relationship between change in office stock and change in office employment through analysis of VOA and BRES data.[124] Figure 9.12 shows average percentage change in the two variables change at borough level. Whilst some boroughs have seen a loss in both office floorspace and office jobs, for many

[124] We have used slightly different time periods for the floorspace and jobs in part due to availability of consistent data sources and in part due to cyclical differences in floorspace and jobs change.

there has been a loss of office floorspace whilst jobs in what have traditionally been considered office sectors have grown.

Figure 9.12 Annual Percentage change in office floorspace 2001-15 and office jobs 2004-15 by borough

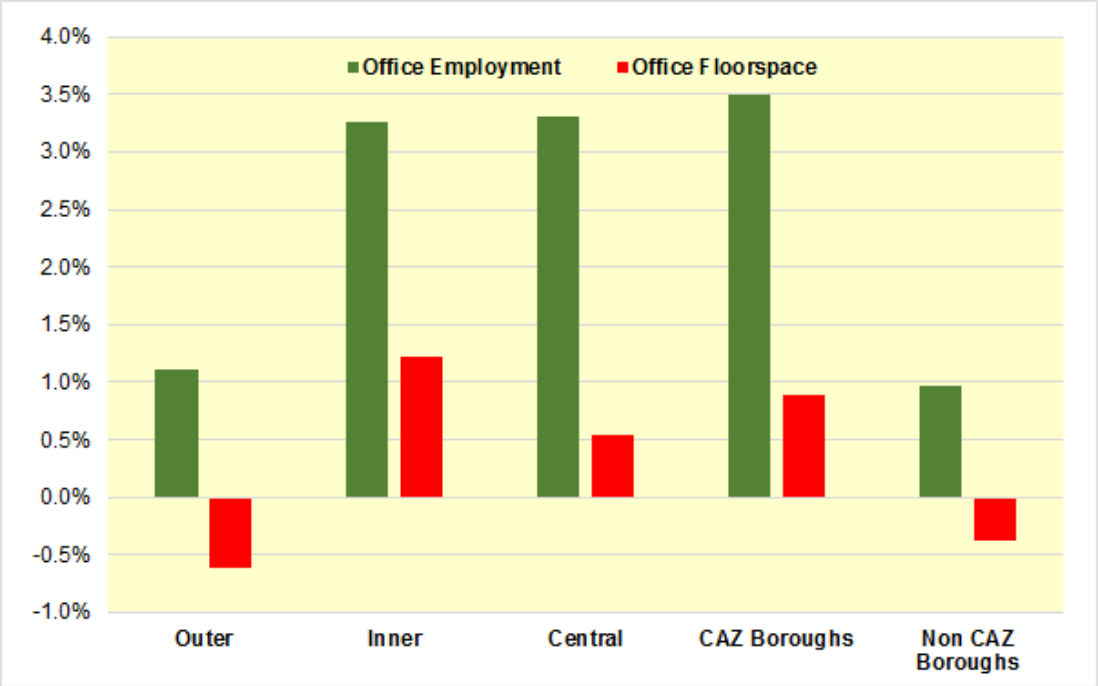


Source: VOA, BRES

9.2.21 The different spatial patterns of change become even clearer when we present the data for the sub-regions of Central[125], Inner and Outer London (Figure 9.13). For Outer London, there has been a fall in office floorspace but an increase in employment in those sectors which would traditionally be thought of as occupying office floorspace. Whilst in Central London the increasing intensity at which offices are being occupied becomes apparent with growth in office employment far outstripping the rate of growth in office floorspace.

[125] Here defined as City and Westminster

Figure 9.13
Annual change in office floorspace 2001-15 and office jobs 2004-15



Source: VOA, BRES

9.2.22 Figure 9.14 compares the trend-based and employment-based projections at borough level. For many boroughs, the employment-based method generates a higher projection than observation of past trends would suggest. In boroughs such as Bromley, Ealing, Harrow and Westminster, the employment-based method shows positive growth in stock, whereas past trends show office floorspace has declined significantly.

9.2.23 It also concludes by showing a composite projection which combines a trend-based projection of what has happened to floorspace stock in the past with an employment-based projection that factors both structural employment projections and takes account of future development plans.

9.2.24 For most boroughs, the composite projection is an average of the trend-based and employment based projections. For the CAZ boroughs, the evidence suggests there are fewer viability constraints on development. So, for the CAZ boroughs we have used the employment-based projections which takes account of underlying structural and development factors. This composite average office floorspace projection is set out in Figure 9.14.

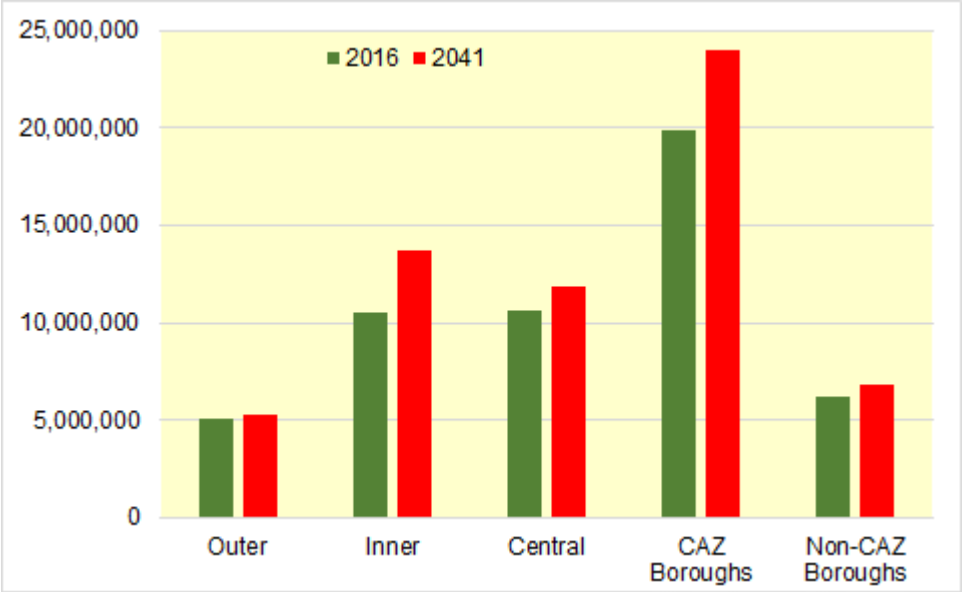
Figure 9.14 Composite of trend-based and employment-based office floorspace projections – change in office floorspace stock, 2016-41 (sq m GIA)

Borough	Trend-based	Employment-based	Composite Projection
Barking and Dagenham	23,300	7,700	15,500
Barnet	35,000	132,600	83,800
Bexley	-36,700	41,400	2,400
Brent	60,000	28,100	44,000
Bromley	-140,000	122,000	-9,000
Camden	476,700	574,100	574,100
City of London	1,623,300	1,038,000	1,038,000
Croydon	-318,300	-27,000	-172,700
Ealing	-88,300	116,100	13,900
Enfield	-16,700	43,700	13,500
Greenwich	45,000	30,900	37,900
Hackney	128,300	201,800	201,800
Hammersmith and Fulham	105,000	272,200	188,600
Haringey	-40,000	55,000	7,500
Harrow	-141,700	46,400	-47,600
Havering	-18,300	33,100	7,400
Hillingdon	-90,000	177,500	43,700
Hounslow	128,300	237,900	183,100
Islington	263,300	373,000	373,000
Kensington and Chelsea	83,300	93,700	93,700
Kingston upon Thames	-48,300	-13,200	-30,700
Lambeth	-95,000	160,600	160,600
Lewisham	-36,700	31,700	-2,500
Merton	-66,700	115,300	24,300
Newham	86,700	182,000	134,400
Redbridge	-35,000	86,100	25,600
Richmond upon Thames	-10,000	166,200	78,100
Southwark	338,300	506,800	506,800
Sutton	-116,700	35,000	-40,900
Tower Hamlets	1,570,000	815,700	815,700
Waltham Forest	-8,300	48,700	20,200
Wandsworth	-110,000	117,600	117,600
Westminster	-141,700	213,300	213,300
London	**3,408,300**	**6,064,000**	**4,715,100**

9.2.25 Figure 9.15 summarises the results of the projections for Inner, Outer and Central boroughs and for CAZ and non-CAZ boroughs .[126]

[126] Central boroughs are defined here as City and Westminster

Figure 9.15 Projected stock of office floorspace in London 2016 and 2041 by sub-area (sq m)



Source: CAG

9.2.26 **Supply pipeline** The 2016 LESD provides a comprehensive database on the pipeline of future supply of office stock.[127] It is available at borough level as well as for other geographies such as CAZ. It contains details of potential future floorspace capacity and the number of jobs this development would accommodate.

9.2.27 **Comparison of demand and supply** As a check on the realism of the forecast, and to test where there may be problems in accommodating the forecast demand, we check our demand forecast against the known supply pipeline.

9.2.28 Supply data comes from the LESD, which contains information on recent completions and outstanding consents, but also on some of the longer-term aspirations for bringing sites forward for development. In comparing the forecast demand with pipeline supply, we distinguish between these different categories of the pipeline in order to provide guidance on the extent to which forecast demand is likely to be easily accommodated or whether it is dependent on longer term regeneration realised.

9.2.29 The supply pipeline is compared with the forecast demand in Figure 9.16.

[127] CAG Consultants (2016) *London Employment Sites Database* https://www.london.gov.uk/sites/default/files/lesd_final_report_may-2016.pdf

Figure 9.16 Comparison of forecast floorspace demand and supply capacity

Borough	Composite forecast (sq m)	Capacity (sq m)	Forecast/ capacity (% difference)
Barking and Dagenham	15,500	37,290	27.1
Barnet	83,800	183,060	42.1
Bexley	2,400	40,680	41.3
Brent	44,000	24,860	170.6
Bromley	-9,000	31,640	19.3
Camden	574,100	593,250	114.8
City of London	1,038,000	1,047,510	124.6
Croydon	-172,700	149,160	-118.7
Ealing	13,900	79,100	33.8
Enfield	13,500	74,580	30.7
Greenwich	37,900	206,790	13.7
Hackney	201,800	333,350	62.6
Hammersmith and Fulham	188,600	726,590	31.1
Haringey	7,500	82,490	21.1
Harrow	-47,600	28,250	-217.0
Havering	7,400	19,210	46.9
Hillingdon	43,700	83,620	63.6
Hounslow	183,100	268,940	93.4
Islington	373,000	233,910	189.8
Kensington and Chelsea	93,700	-2,260	-4,840.7
Kingston upon Thames	-30,700	81,360	-43.9
Lambeth	160,600	171,760	99.7
Lewisham	-2,500	92,660	4.5
Merton	24,300	-3,390	-1,398.2
Newham	134,400	986,490	14.0
Redbridge	25,600	3,390	719.8
Richmond upon Thames	78,100	16,950	577.0
Southwark	506,800	385,330	141.6
Sutton	-40,900	41,810	-72.0
Tower Hamlets	815,700	1,387,640	69.6
Waltham Forest	20,200	13,560	174.8
Wandsworth	117,600	161,590	89.6
Westminster	213,300	279,110	133.4
London	**4,715,100**	**7,860,280**	**73.4**

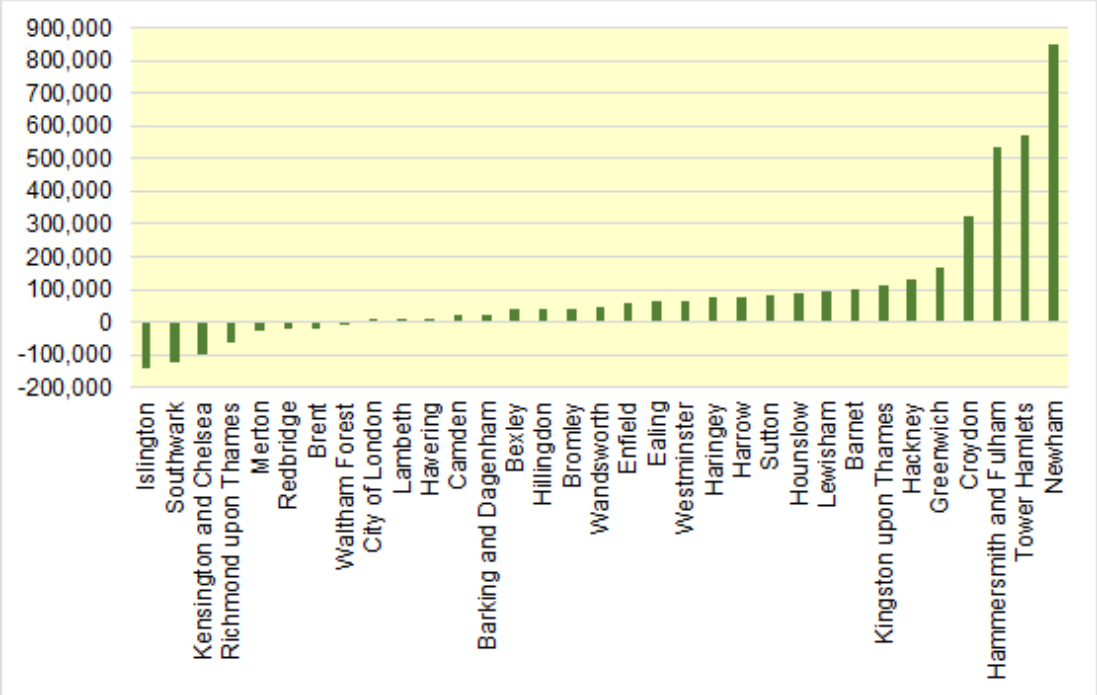
Source: CAG/LESD

9.2.30 At the level of London as a whole, potential capacity exceeds forecast demand. Over the period 2016-41 there is forecast demand for an additional 4.71m sq m of office floorspace and an identified capacity of 7.86m sq m. The Employment-based projection produced a forecast of 6.06m sq m of additional floorspace which is closer to the capacity figure but still significantly below it.

9.2.31 There are however some apparent spatial imbalances for some boroughs, notably Islington and Southwark (Figure 9.17). But this is offset by Tower Hamlets where identified capacity exceeds forecast demand. We would anticipate some spatial substitution within CAZ within demand gravitating to where there is available capacity.

9.2.32 We would not expect all the office development that will occur before 2041 to be in the current development pipeline and would expect further redevelopment proposals to come forward to create additional capacity over the forecast periods.

Figure 9.17 Identified capacity minus forecast demand, 2016-41



Source: CAG/LESD

9.2.33 Capacity substantially exceeds forecast demand in Hammersmith & Fulham, Newham and, to a lesser extent, Greenwich. This is because these contain large Opportunity Areas that seek to significantly grow and change the structure of the existing employment base.

9.2.34 There is also an excess of capacity over projected demand in Croydon. In the case of Croydon this is due to negative floorspace demand being projected as a result of historic trends.

9.2.35 **Sensitivity tests** The Central forecasts set out above contain a number of assumptions and are predicated on a number of variables that it is hard to forecast precisely. In order to present a range of potential outcomes around these Central

projections, sensitivity tests have been prepared around a number of variables, including the following.

- **Employment projections** The scale and composition of projected employment change drives the demand for floorspace and so we look at the impact of variations around the Central employment projection.
- **Definition of office sectors** Sector to land use mapping is not a precise exercise and there has been a trend towards more flexible use of buildings crossing traditional use classes.
- **Density ratios** Assumptions about the density at which future employment space will be occupied determine the floorspace forecast and hence varying the assumptions on the average number of square metres per worker impacts the floorspace forecast.
- **Homeworking and self-employment** A further change in working practices has been the rise in homeworking and self-employment. Such workers are not likely to occupy commercial floorspace in the same way as traditional employees.
- **Density ratios in existing office stock** The benchmark density ratio of 11.3 sq m per worker (GIA) is applied to forecast net addition to stock. But over time the ratio at which the existing stock of office premise is occupied is likely to fall as occupiers seek to make more efficient use of space.

9.2.36 These sensitivity tests have all been applied to the Central employment and resulting floorspace projection, prior to any of the other adjustments set out above.

9.2.37 **Employment projections** The GLA have prepared a 'High' and 'Low' variant around their Central projection. These reflect upside and downside risks described by GLA Economics as follows.

> *The methodology for the two scenarios considered is the same as that for the Central scenario except rather than assume a year-on-year growth rate in London's output of 2.5 per cent the faster growth scenario assumes a growth rate of 2.9 per cent and the slower growth scenario assumes 2.1 per cent up to 2017. Thereafter in both scenarios the growth rate tapers steadily to a 2.5 per cent rate in 2041. The results from the two scenarios show how sensitive our Central projection results are to the growth assumption.*[128]

9.2.38 Thus the 'Low' scenario may reflect some of the downside risks associated with Brexit discussed in Section 2.0.

9.2.39 We have followed the same methodology as set out above, but substituting the GLA High and Low employment projections for the Central projection. (This only compares the pure employment forecast part of the Method – column 4 of Figure 9.6).

[128] GLA Economics (2016) *London Labour Market Projections*

9.2.40 This produces a range from 5.39m sq m on the Low projection to 8.65m sq m on the High projection against a Central projection of 7.00m sq m, a variance of roughly 23% in either direction (Figure 9.18).

Figure 9.18 Forecast net additional office floorspace by growth scenario (excluding allowance for vacancy)

Borough	2016-41 Central	2016-41 High	2016-41 Low	Borough	2016-41 Central	2016-41 High	2016-41 Low
Barking and Dagenham	13,599	18,429	8,885	Hounslow	220,255	265,220	176,360
Barnet	122,821	151,558	94,771	Islington	345,339	435,372	257,460
Bexley	38,335	47,275	29,607	Kensington and Chelsea	86,753	115,142	59,046
Brent	64,170	79,267	49,434	Kingston upon Thames	22,053	34,195	10,203
Bromley	112,971	135,623	90,859	Lambeth	152,793	189,216	117,240
Camden	531,616	670,417	396,136	Lewisham	29,315	37,969	20,868
City of London	961,081	1,268,887	660,659	Merton	106,735	126,728	87,218
Croydon	33,945	58,588	9,898	Newham	168,557	189,635	147,975
Ealing	107,478	133,946	81,643	Redbridge	79,756	95,152	64,725
Enfield	40,424	53,659	27,507	Richmond upon Thames	153,852	180,737	127,605
Greenwich	28,607	38,293	19,154	Southwark	469,249	568,827	372,046
Hackney	186,839	225,029	149,559	Sutton	32,380	42,633	22,372
Hammersmith and Fulham	368,104	419,261	318,155	Tower Hamlets	1,105,965	1,270,235	945,580
Haringey	50,963	63,625	38,603	Waltham Forest	45,090	53,986	36,406
Harrow	42,975	58,645	27,682	Wandsworth	108,927	134,798	83,674
Havering	30,694	40,010	21,602	Westminster	848,160	1,119,500	583,329
Hillingdon	288,569	329,251	248,848	**Total**	**6,998,371**	**8,651,107**	**5,385,109**

Source: CAG/GLA Economics

9.2.41 **Sector sensitivity test** We have carried out sensitivity tests around the SIC sector definition. For many activities, the type of premises occupied are no longer easily categorised into a binary divide between offices and industrial premises. For example a number of activities, particularly in the Administrative and Support services sector, which once may have occupied office premises, now may be found occupying industrial buildings. This may be for reasons of choice, costs or lack of suitable alternatives.

9.2.42 This also has implications for the parallel London Industrial Demand study.[129] In this sensitivity test, we have created an intermediate definition of economic activity that could take place in either office or industrial premises. It is important that demand for this activity is catered for. They cannot be excluded from the office demand calculations because they are not office activities **and** excluded from the industrial demand calculations because they are not industrial activities. Planning for employment land and premises must take account of the needs of these businesses.

[129] CAG Consultants (2016) *London Industrial Land Demand Study* Greater London Authority

9.2.43 It is possible to consider three categories of economic activity in the form of a Venn diagram: those that clearly occupy office premises, those that clearly occupy industrial premises and an overlapping category that may be found in either. In terms of the SIC sectors this 'hybrid' category of occupiers can be drawn from those

- currently classified as office occupiers;
- currently classified as industrial occupiers, and
- not currently classified to either use as they cannot be clearly identified as predominantly office or industrial occupiers.

9.2.44 There is no perfect nor definitive definition of these but we know from observation and local surveys that there are a number of sectors which are usually considered to be predominantly office-based sectors but are frequently to be found in industrial type locations or buildings.

9.2.45 Figure 9.19 lists sectors where some, possibly most, employment will be in offices, but there will be a significant number of jobs in non-office premises. Location might be one clue: if it is in CAZ or other boroughs with a large office stock it is more likely to be in offices whilst outside it may be occupying other premises.

9.2.46 For the boroughs listed below, in the 'Hybrid' scenario for the CAZ boroughs and the boroughs of Croydon, Hammersmith & Fulham, Hillingdon and Hounslow, we assign employment from the sectors in Figure 9.19 to 'Offices'. For all other boroughs, we do not.

Figure 9.19 'Office' sectors that might occupy non-office premises

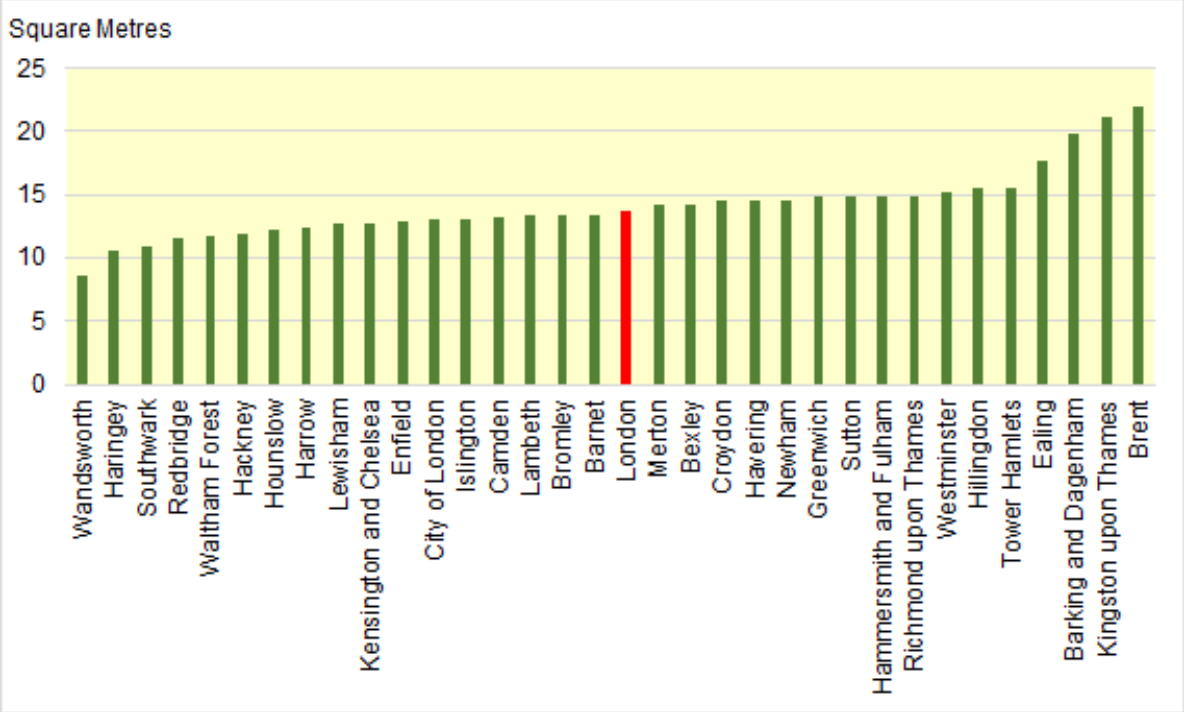
Industry
68310 : Real estate agencies
72110 : Research and experimental development on biotechnology
72190 : Other research and experimental development on natural sciences and engineering
82190 : Photocopying, document preparation and other specialised office support activities
58110 : Book publishing
58120 : Publishing of directories and mailing lists
58130 : Publishing of newspapers
58141 : Publishing of learned journals
58142 : Publishing of consumer, business and professional journals and periodicals
58190 : Other publishing activities
59111 : Motion picture production activities
59112 : Video production activities
59113 : Television programme production activities
59200 : Sound recording and music publishing activities
60100 : Radio broadcasting
62011 : Ready-made interactive leisure and entertainment software development
62012 : Business and domestic software development
62030 : Computer facilities management activities
62090 : Other information technology and computer service activities
63110 : Data processing, hosting and related activities
63120 : Web portals
71111 : Architectural activities
71112 : Urban planning and landscape architectural activities
71121 : Engineering design activities for industrial process and production
71122 : Engineering related scientific and technical consulting activities
71129 : Other engineering activities (not including engineering design for industrial process and production or engineering related scientific and technical consulting activities)
71200 : Technical testing and analysis
74901 : Environmental consulting activities
74909 : Other professional, scientific and technical activities
82110 : Combined office administrative service activities
82200 : Activities of call centres
82301 : Activities of exhibition and fair organizers
82302 : Activities of conference organizers
82911 : Activities of collection agencies
82912 : Activities of credit bureaus
82990 : Other business support service activities

*Denotes sectors that in our standard definition are classified to Office in CAZ boroughs but not elsewhere

9.2.47 Reducing the number of sectors, we classify as office will decrease the overall projections for office employment and hence need for office space. But there would need to be a corresponding addition to forecasts for industrial floorspace as the jobs still need to be accommodated somewhere.

9.2.48 Figure 9.20 illustrates the range of employment densities, by borough, using the alternative sector definitions.

Figure 9.20
Average densities by borough 2016 'Hybrid' sector definitions



Source: BRES/VOA/CAG

9.2.49 **Density ratios** Varying the employment density assumption can have a big impact on the forecast demand for floorspace. We have set out and discussed the reasons for our Central assumption. There are two factors for which we apply a sensitivity test.

- Desk Sharing – it is possible that the trend towards desk sharing will be applied even more widely.
- Non-CAZ densities – we have assumed that all new stock can be occupied at efficient densities of 11.3 sq m per worker. Historically density ratios in non-CAZ and Outer London boroughs have been lower than in CAZ and it is unlikely that Outer London boroughs will experience the same level of redevelopment to bring forward new efficient office buildings.

9.2.50 These two factors would work in opposite directions on the forecast demand for office space.

- For the higher density assumptions, we assume a desk-sharing ratio of 8 workstations per 10 workers, or 1.25 workers per desk.
- For non-CAZ boroughs, we assume that net additional employment occupies space at 13 sq m per worker.

9.2.51 The results of the two sensitivity tests are summarised in the table below and compared to the employment-based projection (excluding allowance for vacancy). These sensitivity tests vary the projected demand 4-5% above and below the Central projection.

Sensitivity	Forecast demand 2016-41 (sq m)
Employment-based projection (excluding vacancy)	6,998,000
Desk sharing at 1.25:1	6,689,000
Non-CAZ borough at 13 sq m	7,330,000

9.2.52 **Self-employment and homeworking** There has been a trend in recent years for an increasing proportion of the workforce to be self-employed and for an increasing proportion of the workforce to work from home. These two trends are partially related but each also has distinct components.

9.2.53 For the UK as a whole, the number of homeworkers increased from 2.9m in 1998 to 4.2m in 2014. This is a national trend but one in which London shares. An ONS paper on homeworking reported that, nationally, 13.9% of those employed worked form home, of which 5% work within the grounds of their home and 8.9% use their home as a base.[130]

9.2.54 Roughly 10% of London's workforce works mainly at or from home. A further 10% has no fixed place of work. Neither of these components of the workforce would be expected to occupy space in the same way as employees with fixed work locations. The highest percentages of those working mainly at or from home are to be found in Central London (Figure 9.21).

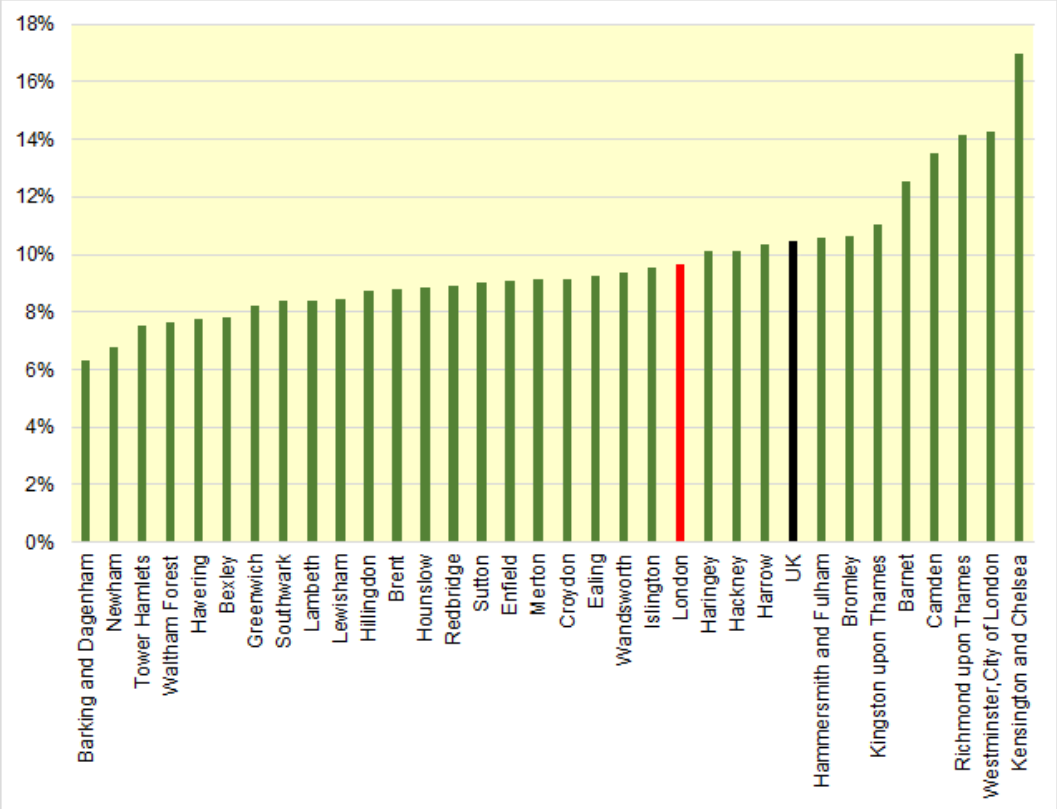
9.2.55 The principal workplace for those working mainly at or from home will be the borough in which they are resident. They are not occupying office space (at least not as extensively as office based workers), therefore they could be subtracted from the demand figures.

[130] Office for National Statistics (2014) *Characteristics of Home Workers*

9.2.56 We do not have data identifying in which sectors these people are working.[131] National data show that some sectors will have a higher propensity for employees working mainly at or from home. 20.7% of those in Business Services, the principal office employment sector, work mainly at or from home.

9.2.57 An alternative default assumption would be they are working proportionately in the sectoral structure of the borough. So, for example, if 10.1% of Hackney residents work mainly at or from home then we can subtract 10.1% from our baseline estimate of Hackney office workers.

Figure 9.21 Proportion of employed residents working mainly from home

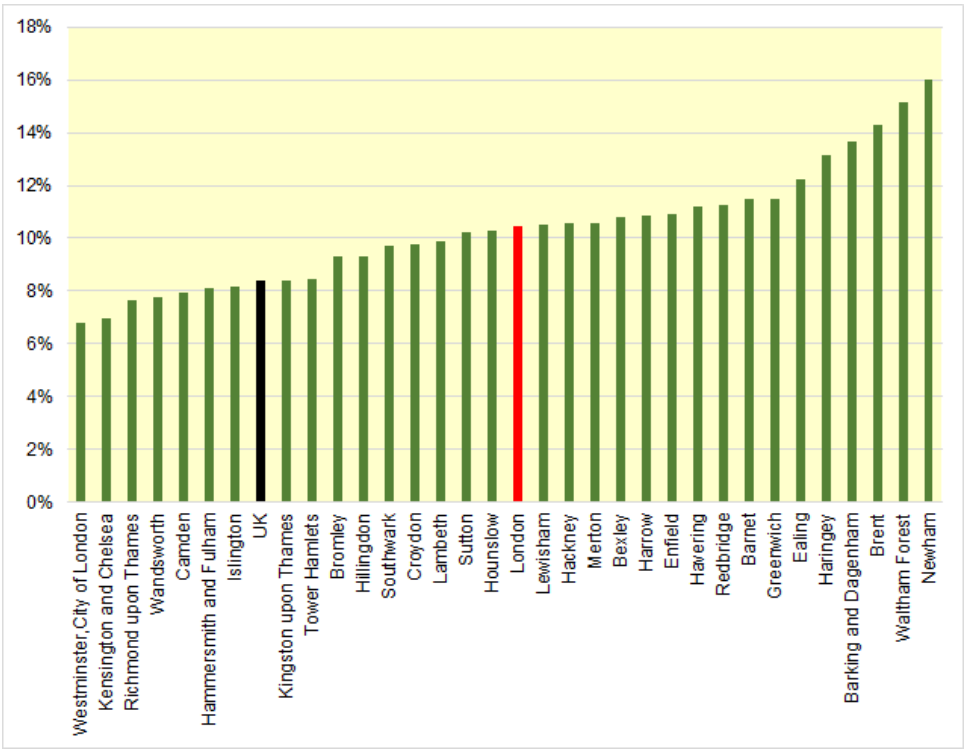


Source: Census 2011

9.2.58 There is likely to be some overlap with assumptions made about desk-sharing ratios under the density assumptions. Desk-sharing is enabled by the fact of people homeworking for part of the time. For those with no fixed place of work the highest percentages are to be found in Outer London (Figure 9.22). These workers will cover a range of jobs and are likely to include occupations such as plumbers, contract workers, drivers.

[131] The jobs that home workers carry out tend to be concentrated more in higher skilled roles compared to those who do not work from home – source: ONS

Figure 9.22 Proportion of employed residents who have no fixed place of work

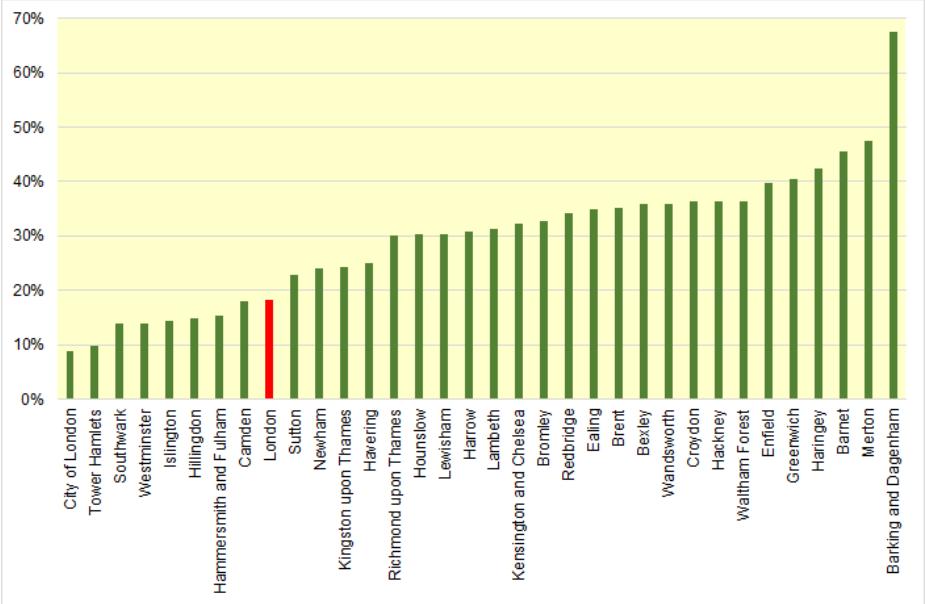


Source: Census 2011

9.2.59 **Self-employment** There is an overlap between self-employment and home workers. Nationally 63.5% of homeworkers were self-employed. Self-employment in the Business Services sector, which is the predominant officer employer, averages 18.3% across London as a whole (Figure 9.23). It is lowest in the major office service clusters in the CAZ. It is lowest in the City at 8.8% and Tower Hamlets at 9.9%. Self-employment accounts for a very high proportion of employment in the sector in many Outer London boroughs, even in boroughs such as Croydon that have relatively high levels of employment.

9.2.60 This is another strong indicator implying a lack of demand for offices in Outer London. Whilst many self-employed workers in the Business Services sector will be occupying office space, many will not. These will range from self-employed professionals like solicitors or accountants who may occupy small offices; workers working mainly at or from home; to contract workers who are employed in offices on a freelance basis. These contract workers enable firms to occupy space at higher densities as this contingent workforce can readily be shed as demand fluctuates.

Figure 9.23 Workplace self-employment in Business Services by borough



Source: APS

9.2.61 **Sensitivity test on homeworking** If we apply the sensitivity test on homework assuming these workers do not require office space then it would reduce the office jobs projections for the period 2016-41 by 66,900 with a corresponding reduction in floorspace over the Central projection of 755,600 sq m, predominantly in the CAZ boroughs.

9.2.62 **Sensitivity test around existing occupied stock** The forecasts above are for additional floorspace demand generated by net additions to floorspace stock. As noted in the section on densities above (Figure 9.4), use of floorspace has become more efficient over time, especially as buildings are designed to be occupied at higher densities. Therefore, existing stock may also be occupied at higher densities than at present.

9.2.63 The total office stock in London in 2014 is estimated at 26.00m sq m and the forecast net addition is 7.88m sq m. (At 2016, stock is an estimated 26.15m sq m and the forecast net addition is a further 7.00m sq m). Given trends towards higher densities we would anticipate that the existing stock would also be occupied at a higher density in 2041. This will be through a combination of replacement of existing stock and existing buildings being occupied at higher densities.

9.2.64 If all stock were occupied at the adopted density of 11.3 sq m per worker in 2041, then the forecast employment at 2041 could be accommodated in 29.40m sq m. In other words, stock would only need to increase by a net additional 3.3m sq m from its 2016 total to accommodate the forecast growth. The effect of applying this sensitivity test by borough is shown in Figure 9.24. However, if an 8% vacancy rate

were factored in on top of this then the total stock at 2041 would need to be 31.8m sq m, an increase of 5.6m.

9.2.65 Whilst we would expect intensification of existing stock to take place to some extent it is unlikely to happen to the totality of the stock as some older premises are not configured for high density occupation and will be in locations that are not viable for redevelopment to current occupational standards.

Figure 9.24 Change in stock 2016-41, if all stock occupied at 11.3 sq m per worker in 2041 (sq m GIA)

Borough	Sq m GIA
Barking and Dagenham	-5,600
Barnet	168,200
Bexley	47,000
Brent	-11,400
Bromley	137,800
Camden	205,400
City of London	274,500
Croydon	-98,600
Ealing	101,200
Enfield	71,600
Greenwich	26,200
Hackney	157,700
Hammersmith and Fulham	153,500
Haringey	102,500
Harrow	74,400
Havering	30,400
Hillingdon	82,600
Hounslow	147,900
Islington	146,400
Kensington and Chelsea	34,400
Kingston upon Thames	-47,900
Lambeth	65,100
Lewisham	43,500
Merton	135,100
Newham	154,400
Redbridge	118,900
Richmond upon Thames	210,500
Southwark	509,300
Sutton	62,200
Tower Hamlets	426,600
Waltham Forest	67,700
Wandsworth	192,300
Westminster	-527,200
London	**3,256,500**

9.2.66 **Summary of sensitivity tests** The results of the different sensitivity tests are summarised in Figure 9.24 for London as a whole and for broad sub-areas of London. This table also makes adjustments for vacancy to make it comparable with the employment-based Central projection set out in Figure 9.8. (8% is added to the growth factor and boroughs with 2016 floorspace to worker ratios greater than the London average have surplus capacity subtracted)

9.2.67 Most of the tests are not mutually exclusive and a combination of factors could be applied.

Figure 9.25 Net additional office floorspace demand, 2016-41, million sq m GIA

Demand	London	Job based central (%)	Outer	Inner	Central	CAZ boroughs	Non-CAZ boroughs
Trend projection	3.41	56%	-0.93	2.85	1.48	4.14	-0.73
Composite projection	4.72	78%	0.26	3.20	1.25	4.09	0.62
Employment-based Central	6.06	100%	1.45	3.36	1.25	4.09	1.97
Employment-based High	7.87	130%	1.80	4.15	1.92	5.44	2.42
Employment-based Low	4.34	72%	1.03	2.63	0.69	2.88	1.46
Hybrid	5.42	89%	0.84	3.33	1.25	4.09	1.34
Homeworking	5.25	87%	1.28	2.99	0.97	3.51	1.74
Density ratio 13 sq m Non-CAZ	6.42	106%	1.71	3.46	1.25	4.09	2.33
Density ratio 1.25 desk share	5.73	94%	1.38	3.19	1.16	3.87	1.86
Intensity all stock 11.3 sq m	5.61	92%	1.91	3.13	0.58	3.20	2.41

Source: CAG

9.3 CAZ projections

9.3.1 Two alternative methods have been tested to generate the CAZ + NIoD office employment projections.

9.3.2 **Method 1: share of office jobs, 2015** The first method estimates the share of office employment in a borough that is in CAZ in 2015 (for example, Camden CAZ office jobs/Camden total office jobs). CAZ is defined by LSOAs where greater than 10% of the LSOA is in CAZ. We would expect major office employment to be disproportionately located in the CAZ part of split LSOAs. This share is then held constant for the projected office jobs. The results are set out in Figure 9.26. The CAZ % is the percentage of total projected office jobs for London as a whole that would be in CAZ.

Figure 9.26 Projected growth in CAZ office jobs, 2016-41: jobs share

Borough	Share of office jobs in CAZ (%)	Projected office jobs (No)
Camden CAZ	85.2	40,074
City CAZ	100.0	85,051
Hackney CAZ	59.9	9,906
Islington CAZ	86.8	26,532
Kensington & Chelsea CAZ	15.0	1,152
Lambeth CAZ	60.6	8,192
Southwark CAZ	91.1	37,818
Tower Hamlets CAZ	20.4	20,001
Wandsworth CAZ	4.8	465
Westminster CAZ	98.2	73,681
CAZ	**48.9**	**302,873**
NIoD	71.8	70,293
CAZ + NIoD	**60.3**	**373,166**

Source: BRES/CAG

9.3.3 **Method 2: shares of LESD office capacity** Method 2 takes the share of identified borough office capacity that is located in CAZ using LESD (2016), so for example, 96.5% of Camden's office jobs capacity is within the CAZ. This share is then held constant for the projected office jobs. The results are set out in Figure 9.27. This also shows the actual total office jobs capacity in CAZ identified in LESD (2016).

Figure 9.27 Projected growth in CAZ office jobs 2016-41: capacity share

Borough	Share of borough LESD office jobs in CAZ (%)	Projected office jobs (No)	Actual LESD (2016) office jobs capacity
Camden CAZ	96.5	45,382	50,661
City CAZ	100.0	85,051	92,667
Hackney CAZ	55.6	9,190	29,457
Islington CAZ	65.8	20,118	13,634
Kensington & Chelsea CAZ	0.0	0	0
Lambeth CAZ	99.7	13,481	15,199
Southwark CAZ	39.7	16,489	13,543
Tower Hamlets CAZ	2.3	2,207	14,322
Wandsworth CAZ	100.3	9,666	14,322
Westminster CAZ	97.8	73,441	24,147
CAZ	44.4	275,024	267,952
NIoD	89.1	87,228	109,470
CAZ + NIoD	58.5	362,252	377,422

Source: LESD/CAG

9.3.4 The two estimates give broadly similar answers for CAZ + NIoD as a whole: 374,000 under Method 1 and 362,000 under Method 2. There are some spatial differences, notably Wandsworth. Both estimates are also close to the actual CAZ + NIoD capacity identified in LESD (2016).

9.3.5 **Hybrid option** An option is to use a hybrid projection that weights equally between the two methods. i.e. the percentage share is set at the mid-point of the Jobs and Capacity share. The results are set out in Figure 9.28.

Figure 9.28 Projected growth in CAZ office jobs, 2016-41: Hybrid option

Borough	Weighted (%)	Projected office jobs (No)
Camden CAZ	90.8	42,728
City CAZ	100.0	85,051
Hackney CAZ	57.7	9,548
Islington CAZ	76.3	23,325
Kensington & Chelsea CAZ	7.5	576
Lambeth CAZ	80.1	10,836
Southwark CAZ	65.4	27,154
Tower Hamlets CAZ	11.3	11,104
Wandsworth CAZ	52.5	5,066
Westminster CAZ	98.0	73,561
CAZ	46.7	288,948
NIoD	80.5	78,760
CAZ + NIoD	59.4	367,709

Source: LESD/CAG

9.4 Conclusions

9.4.1 We prepared projections of the demand for office floorspace derived from sectoral projections of employment published by GLA Economics. We then compared these against past change in stock at borough level. Our Central employment-based projections show demand for 6.06 m sq m of net additional office floorspace over the period 2016-41. This is higher than projections based on past change in stock. The trend-based projection would only suggest an increase of 3.41 m sq m. The biggest difference between the two methods is in Outer London, where the sector-based employment projections suggest an increase of 1.5m sq m compared to a loss of 0.9m sq m based on past change in stock. Whilst many outer London boroughs still have a significant proportion of people working in what have traditionally been considered to be office-based sectors, this has not translated into demand for new office space,

9.4.2 A composite projection combining both employment-based and trend-based methods produces an increase of 4.72m sq m of floorspace over the period 2016-41, an increase of 18.0% or an average of 0.7% p.a.

9.4.3 At the London level, there is sufficient potential capacity identified in the pipeline to accommodate this forecast growth, even for the higher employment-based projections. But there are some spatial imbalances. Capacity is relatively limited in some CAZ boroughs such as Westminster, whereas there is potential spare capacity at untested off centre locations such as Old Oak Common in Hammersmith & Fulham and Stratford and the Royals Docks in Newham.

9.4.4 **Sensitivity tests**

9.4.5 We undertook a series of sensitivity tests around our Central employment-based forecast looking at different levels of employment growth, alternative employment density ratios and the sectors that occupy office space.

9.4.6 Probably the biggest potential impact on demand for office space is through yet further increase in homeworking, which combined with other change in technological and organisational practices has the potential to reduce the demand for office floorspace by around 25%.

9.4.7 Whether satellite locations such as Old Oak Common, Stratford and the Royal Docks become fully developed as major office centres will depend, to a large extent, on how widely adopted these new working practices become. If the traditional office remains the dominant model then the projections would suggest the additional capacity provided by these new locations will be needed. But if more flexible and remote working becomes the dominant trend then the role and function of these Opportunity Areas may need to be reconsidered.

9.4.8 The other factor that has potentially a very large impact on the demand for new office space is the extent to which the existing stock of offices can be utilised at higher density. This may be through better utilisation of existing buildings or replacement of existing buildings with a more efficient product. We would expect that over time the floorspace to worker ratio in existing or replacement stock will fall closer to the benchmark ratio applied to the net additional stock.

9.4.9 Given that this current element of the stock accounts for over 80% of the forecast total at 2041, how it is utilised will have an important bearing on London's future demand for office accommodation.

9.4.10 Partially offsetting these downside risks is the fact that the office property market is currently very tight and vacancy rates are running at below the equilibrium level of 8%, which requires some addition to stock to restore equilibrium at current levels of demand.

9.4.11 **Spatial distribution of office demand** Figure 9.29 presents a summary of forecast office employment for the period 2014-50 for CAZ, NIoD and also for Inner and Outer London.[132]

[132] This is based on the Hybrid option presented at Figure 9.25

Figure 9.29 Forecast office employment by broad policy area, 2014-50

Policy area	2014	2016	2021	2026	2031	2036	2041	2046	2050
CAZ	1,139,300	1,189,100	1,242,500	1,305,200	1,361,700	1,413,000	1,477,900	1,542,400	1,595,200
NIoD	104,900	113,600	140,700	159,700	166,600	186,200	192,400	212,800	230,500
CAZ + NIoD	1,244,300	1,302,700	1,383,100	1,464,900	1,528,400	1,599,200	1,670,300	1,755,200	1,825,600
Inner	245,900	253,800	272,900	292,800	311,900	338,600	363,200	389,300	411,400
Outer	414,500	426,400	439,600	456,400	497,500	529,200	568,600	598,900	624,000
London	1,904,700	1,982,800	2,095,600	2,214,000	2,337,800	2,467,100	2,602,200	2,743,400	2,861,000

9.4.12 The CAZ boroughs and some parts of Inner London will continue to see growth in office employment and development of new office floorspace, driven by agglomeration economies, high value added activities and viability of new space).

9.4.13 Outer London will see growth in office employment but probably not much growth in development of new office floorspace (Figure 9.30). Apart from selected locations in west and south London office activity tends to be lower value added and as a result values are insufficient to enable new development to become viable. The policy recommendation for these areas is to retain offices in viable locations to accommodate growth in employment. But policy should also support revitalisation of town centres including provision of open workspace/co-working space and support for homeworking and other forms of remote working the growth of which has been enable through widespread adoption of technologies such as cloud computing.

Figure 9.30 Forecast office employment and floorspace change by broad policy area, 2016-41

Office Jobs	**2016**	**2041**	**2016-41**	**2016-41%**
CAZ	1,189,100	1,477,900	288,800	24.3%
CAZ + NIoD	1,302,700	1,670,300	367,700	28.2%
Other Inner London	253,800	363,200	109,400	43.1%
Outer London	426,400	568,600	142,200	33.4%
London	1,982,800	2,602,200	619,300	31.2%
Office floorspace Composite	**2016**	**2041**	**2016-41**	**2016-41%**
CAZ	16,100,500	18,890,900	2,790,400	17.3%
CAZ + NIoD	17,872,300	21,319,300	3,447,000	19.3%
Other Inner London	3,244,700	4,250,700	1,006,000	31.0%
Outer London	5,031,000	5,293,100	262,100	5.2%
London	26,148,000	30,863,100	4,715,100	18.0%
Office floorspace employment-based Central	**2016**	**2041**	**2016-41**	**2016-41%**
CAZ	16,100,500	18,890,900	2,790,400	17.3%
CAZ + NIoD	17,872,278	21,319,280	3,447,002	19.3%
Other Inner London	3,244,722	4,409,141	1,164,420	35.9%
Outer London	5,031,000	6,483,591	1,452,591	28.9%
London	26,148,000	32,212,013	6,064,013	23.2%

Appendix One: Workshop attendees

Name	Surname	Organisation
Joe	Addo-Yobo	Waltham Forest
Gavin	Ball	Haringey
Dominic	Barnett	Waltham Forest
Matthew	Battle	UK Property Forums
Mark	Behrendt	Elmbridge
Alison	Blom-cooper	Epping Forest
Richard	Brown	Centre for London
Tom	Campbell	Hillingdon
John	Cheston	Milton Keynes
Vicky	Clark	Haringey
Michael	Clarkson	Dartford
Hannah	Cook	Spelthorne
Sam	Cuthbert	Ealing
Sophie	Donaldson	Newham
Ian	Dunsford	Watford
Mike	Ebbs	Dover
James	Finnis	Jones Lang La Salle
Peter	Garside	Kingston University
Troy	Hayes	Luton
Kerry	Hobbs	Slough
Chris	Hobbs	Mole Valley
Brian	Horton	South East LEP
David	Hughes	Harrow
Neil	Impiazzi	SERGO
Chris	Inwood	Gravesham
Kingsley	Izundu	Havering
Sue	Janota	South East 7
Claire	Jones	Brent
Andrea	Kitzberger-Smith	Richmond upon Thames
Richard	Longman	Thames Gateway
Nick	Lynch	Barnet
Amit	Malhotra	Telford Homes
Debbie	McLatch	Basingstoke & Deane Borough Council
Dominick	Mennie	Croydon
Alex	Murray	Croydon
William	Myers	Hertsmere
Georgina	Pacey	Runnymede
Kirsty	Paul	Thurrock
Richard	Plant	Develop Croydon
Jonathan	Quilter	Brentwood
Jon	Rawlciffe	South East Midlands LEP
Andrew	Rushmer	Basingstoke & Deane Borough Council
Nick	Searle	Argent
Kathy	Slack	Enterprise M3 LEP
Graham	Thomas	Essex County
Michael	Thornton	Hounslow
Sophie	Timson	Telford Homes
Sean	Walsh	Redbridge
Shanaz	Zaman	Greenwich

Appendix Two: Change in office stock, sq m, by borough, 2000-16

Borough	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	Sq m change	% change
Barking & Dagenham	78	86	81	83	85	87	88	89	89	91	92	90	91	90	92	92	14	17.9
Barnet	322	327	396	396	388	373	376	379	359	358	358	353	356	349	349	343	21	6.5
Bexley	134	133	136	142	142	144	142	141	137	138	137	138	127	131	118	112	-22	-16.4
Brent	244	236	251	255	261	263	241	240	237	243	254	250	257	279	284	280	36	14.8
Bromley	348	329	317	302	305	300	294	294	295	292	290	284	281	277	275	264	-84	-24.1
Camden	1,982	1,980	2,055	2,082	2,106	2,047	2,055	2,020	2,036	2,046	2,078	2,142	2,164	2,212	2,265	2,268	286	14.4
City of London	4,252	4,428	4,524	4,542	4,602	4,625	4,469	4,423	4,548	4,803	4,911	5,007	5,055	5,061	5,123	5,226	974	22.9
Croydon	733	741	738	738	729	688	662	660	646	626	618	612	602	588	566	542	-191	-26.1
Ealing	423	412	419	414	397	409	409	414	398	396	387	379	379	375	371	370	-53	-12.5
Enfield	175	180	181	179	176	166	169	171	178	181	179	177	166	168	166	165	-10	-5.7
Greenwich	120	130	132	135	137	146	144	129	133	126	141	146	139	138	148	147	27	22.5
Hackney	443	460	474	502	471	466	467	457	457	460	470	486	495	498	506	520	77	17.4
Hammersmith & Fulham	683	708	728	792	800	820	791	799	787	789	753	761	738	732	734	746	63	9.2
Haringey	147	147	139	138	138	135	136	137	137	136	135	130	135	131	129	123	-24	-16.3
Harrow	291	283	280	254	252	233	230	219	218	217	211	206	206	227	219	206	-85	-29.2
Havering	147	147	145	154	159	155	155	146	146	143	144	145	143	139	139	136	-11	-7.5
Hillingdon	687	656	658	672	673	646	656	635	630	609	614	624	627	626	620	633	-54	-7.9
Hounslow	573	645	714	715	701	682	684	663	636	628	643	651	650	657	647	650	77	13.4
Islington	1,300	1,419	1,423	1,441	1,437	1,356	1,280	1,277	1,279	1,272	1,338	1,402	1,407	1,436	1,458	1,458	158	12.2
Kensington & Chelsea	423	433	431	440	438	440	446	439	447	467	473	477	477	474	473	473	50	11.8
Kingston-upon-Thames	295	289	300	300	290	279	278	272	259	261	262	263	258	269	266	266	-29	-9.8
Lambeth	640	626	598	594	605	633	601	590	618	618	610	605	590	589	599	583	-57	-8.9
Lewisham	133	136	135	133	132	123	127	126	125	120	118	117	115	118	111	111	-22	-16.5
Merton	259	254	254	252	260	260	258	248	245	247	238	235	233	231	229	219	-40	-15.4
Newham	163	157	161	159	165	189	190	190	220	228	230	217	219	224	217	215	52	31.9
Redbridge	175	174	169	165	163	159	153	148	147	149	151	152	149	157	155	154	-21	-12.0
Richmond-upon-Thames	271	275	282	287	290	287	297	297	292	290	291	291	289	289	282	265	-6	-2.2
Southwark	1,056	1,042	1,029	1,052	1,049	1,058	1,090	1,156	1,165	1,209	1,225	1,254	1,267	1,266	1,253	1,259	203	19.2
Sutton	191	185	181	181	183	176	175	158	148	145	148	151	150	140	128	121	-70	-36.6
Tower Hamlets	1,525	1,525	1,793	2,018	2,082	2,142	2,184	2,222	2,223	2,297	2,336	2,365	2,360	2,363	2,383	2,467	942	61.8
Waltham Forest	95	95	90	86	85	86	87	94	87	90	90	90	89	96	95	90	-5	-5.3
Wandsworth	334	345	344	350	348	338	332	335	326	329	317	308	315	303	283	268	-66	-19.8
Westminster	5,461	5,428	5,308	5,235	5,293	5,135	5,097	5,121	5,156	5,212	5,215	5,276	5,282	5,346	5,353	5,376	-85	-1.6

Note: Red and green font in the chart refer to Inner and Outer London, respectively, as defined by the VOA

Appendix Three: Take-up, Outer London centres, 2005-15

Year	Bexley	Brentford	Bromley	Chiswick	Croydon	Ealing	Enfield	Hammersmith	Heathrow & Uxbridge	Kingston	Richmond	Romford	Stratford	Wimbledon
2005	0	0	2,149	931	20,438		0	17,125	26,942	167	465	0		0
2006	280	6,039	1,861	1,848	18,395		4,093	12,001	25,548	158	2,639	361		1,722
2007	277	8,566	668	4,831	21,368		0	20,140	60,386	0	2,678	342		0
2008	0	904	2,823	8,654	12,077		233	14,976	19,974	237	0	5,163		0
2009	0	123	3,053	6,179	32,962		389	19,775	15,329	0	0	2,187		962
2010	7,979	2,186	5,014	43,421	17,331	2,107	4,508	17,972	36,975	652	2,864	758		0
2011	1,092	2,754	6,065	21,664	5,591	7,833	3,935	33,928	19,881	1,403	7,709	2,334	2,947	5,319
2012	2,306	2,048	4,607	32,807	7,636	2,076	4,185	24,632	25,177	1,561	3,594	9,698	2,968	9,772
2013	1,658	1,687	8,778	4,729	17,871	17,626	1,399	28,279	44,221	1,763	3,779	2,984	3,894	18,934
2014	1,106	3,820	7,895	18,251	21,465	5,286	4,852	22,911	15,050	1,610	4,960	2,706	4,028	8,820
2015	2,240	2,483	8,016	7,609	20,682	1,396	3,267	19,442	18,766	1,687	4,617	2,103	65,584	26,089

Appendix Four: Rental performance in Outer London centres, 2005-15

Period	Bexley	Brentford	Bromley	Chiswick	Croydon	Ealing	Enfield	Hammersmith	Heathrow	Kingston	Richmond	Romford	Stratford	Uxbridge	Wimbledon
Sep-05				23.00	29.00	18.50		£32.00	32.00	18.00	26.00	26.00		16.00	20.00
Sep-06				23.25	32.00	20.00		£32.50	34.00	20.00	28.50	30.00		16.25	28.50
Sep-07				23.50	34.50	20.50		£38.50	36.50	22.50	31.00	31.00		17.25	30.00
Sep-08				23.50	36.50	22.00		£42.50	42.00	23.00	32.00	30.50		17.25	30.00
Sep-09				33.00	20.00	28.00		£31.50	25.50	21.00	27.00	14.00		25.00	28.00
Sep-10				34.75	20.00	29.00		£32.50	26.50	21.00	27.00	14.00		24.00	29.50
Sep-11				39.50	20.00	29.00		£35.00	27.50	20.00	28.00	12.50		26.00	29.50
Sep-12				46.50	20.00	29.00		£45.00	28.00	19.00	34.00	12.00	£35.00	27.50	30.00
Sep-13				47.50	22.00	26.50		£47.00	30.00	19.00	39.00	12.50	£35.00	32.00	35.00
Sep-14				49.00	23.50	31.00		£49.50	31.00	20.00	45.00	12.50	£35.00	32.00	38.00
Sep-15				49.50	25.00	35.00		£52.50	31.75	25.00	50.00	12.50	£38.50	32.00	42.50
Dec-15				52.50	25.00	35.00		£52.50	33.50	25.50	50.00	12.50	£40.00	32.00	54.00

Appendix Five: Supply performance in Outer London centres, 2005-15

Centre	Measure	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Stratford	Availability	-	-	-	-	4,236	0	9,075	2,141	2,141	3,158	31,658
	Stock	-	-	-	-	9,569	9,569	23,226	23,226	23,226	23,226	71,801
	Vacancy rate	0%	0%	0%	0%	44%	0%	39%	9%	9%	14%	44%
Hammersmith	Availability	65,188	58,546	44,622	56,400	73,997	55,260	37,745	39,714	33,285	10,935	17,342
	Stock	702,515	702,515	707,929	707,929	703,749	703,749	703,749	702,113	734,242	734,242	734,242
	Vacancy rate	9%	8%	6%	8%	11%	8%	5%	6%	5%	1%	2%
Bromley	Availability	-	-	-	-	-	12,461	15,829	16,166	14,819	9,430	7,409
	Vacancy rate	0%	0%	0%	0%	0%	4%	5%	5%	4%	3%	2%
Croydon	Availability	67,869	75,188	88,839	82,218	79,814	122,301	144,522	148,631	122,519	104,209	74,544
	Stock	-	-	-	-	-	647,056	641,080	627,408	574,626	568,163	543,478
	Vacancy rate	10%	12%	14%	13%	12%	19%	23%	24%	21%	18%	14%
Kingston TC	Availability	-	-	-	-	-	-	-	-	-	-	2,114
	Vacancy rate	-	-	-	-	-	-	-	-	-	-	1%
Wimbledon	Availability	-	-	-	-	-	-	13,935	21,912	12,726	8,271	2,832
	Vacancy rate	-	-	-	-	-	-	8%	13%	7%	5%	2%
Richmond TC	Availability	24,281	14,806	12,896	14,233	18,202	13,601	11,792	13,091	12,611	11,151	9,937
	Stock	116,128	116,128	116,128	116,128	116,128	116,128	116,128	116,128	116,128	116,128	116,128
	Vacancy rate	21%	13%	11%	12%	16%	12%	10%	11%	11%	10%	9%
Ealing	Availability	18,116	15,608	13,071	16,722	33,880	35,145	29,684	20,138	19,710	21,964	11,572
	Stock	-	-	213,675	213,675	226,217	226,217	226,217	226,217	226,217	226,217	226,217
	Vacancy rate	-	-	-	8%	15%	16%	13%	9%	9%	10%	5%
Chiswick	Availability	23,676	38,047	36,880	38,376	43,433	30,076	23,214	22,296	18,963	10,394	30,546
	Stock	255,481	255,481	287,997	301,932	306,577	306,577	318,655	325,158	343,738	343,738	343,738
	Vacancy rate	9%	15%	13%	13%	14%	10%	7%	7%	6%	3%	9%
Heathrow & Uxbridge	Availability	168,803	172,473	147,520	135,777	146,052	102,285	99,870	100,799	85,842	95,596	71,999
	Vacancy rate	23%	24%	20%	19%	20%	14%	14%	14%	12%	13%	10%
Brentford	Availability	28,208	35,221	19,367	27,643	26,095	25,815	40,497	20,210	23,011	18,744	23,508
	Stock	278,707	278,707	283,352	287,997	307,507	307,507	307,507	307,507	307,507	307,507	307,507
	Vacancy rate	10%	13%	7%	10%	8%	8%	13%	7%	7%	6%	8%
Romford	Availability	-	-	-	-	-	-	-	-	-	-	6,875
	Vacancy rate	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%
Bexley	Availability	-	-	-	-	-	10,455	8,688	8,246	5,890	1,178	1,914
	Vacancy rate	-	-	-	-	-	0	0	0	0	0	0
Enfield	Availability	-	-	-	-	-	13,824	13,601	9,365	6,912	3,122	892
	Vacancy rate	-	-	-	-	-	6%	6%	4%	3%	1%	0%

Appendix Six: Office development potential in Outer London

Annex 2 of the London Plan contains office guidelines for town centres, including an assessment of their office suitability. Three classes are used to classify office centres, as follows.

- CAZ – in the CAZ.
- A – speculative office development could be promoted on the most efficient and accessible sites in the context of wider schemes to enhance the environment and offer the centre as a commercial location. This might entail some long-term net loss of stock through change of use of provision on less attractive sites.
- B – some office provision could be promoted as part of a wider residential or mixed use development. This would be likely to entail long-term net loss of overall office stock, partial renewal on the more commercially attractive sites and managed change of provision on less attractive sites.

Our recommendations are of three types, as follows.

- No change
- A suggested revision
- Protect Small Units. Note that this does not necessarily mean "no large office development", only that there is no particular call for specific office policy other than to protect small units for SMEs.

Centre	Borough(s)	Class	London Plan Office Guidelines	Recommendation
West End	Westminster/Camden	International	CAZ	No Change
Knightsbridge	Kensington & Chelsea/ Westminster	International	CAZ	No Change
Bromley	Bromley	Metropolitan	B	No Change
Croydon	Croydon	Metropolitan	A/B	A
Ealing	Ealing	Metropolitan	A/B	No Change
Shepherds Bush	Hammersmith & Fulham	Metropolitan	A/B potential	No Change
Harrow	Harrow	Metropolitan	B	No Change
Romford	Havering	Metropolitan	B	Protect Small Units
Uxbridge	Hillingdon	Metropolitan	A	No Change
Hounslow	Hounslow	Metropolitan	A/B	No Change
Kingston	Kingston Upon Thames	Metropolitan	B	Consider upgrade to A/B
Stratford	Newham	Metropolitan	A	Potential CAZ reserve
Ilford	Redbridge	Metropolitan	B	No Change
Sutton	Sutton	Metropolitan	B	No Change
Barking	Barking and Dagenhan	Major	B	Protect Small Units
Edgware	Barnet	Major	B	Protect Small Units
Bexleyheath	Bexley	Major	B	Protect Small Units
Wembley	Brent	Major	B	No Change
Southall	Ealing	Major	B	No Change
Enfield Town	Enfield	Major	B	Protect Small Units
Dalston	Hackney	Major	B	No Change
Fulham	Hammersmith & Fulhar	Major	B	Protect Small Units
Hammersmith	Hammersmith & Fulhar	Major	A/B	A
Chiswick	Hounslow	Major	A	No Change

Centre	Borough(s)	Class	London Plan Office Guidelines	Recommendation
Angel	Islington	Major	B	Treat as CAZ
Kensington High Street	Kensington & Chelsea	Major	B	No Change
Kings Road (east)	Kensington & Chelsea	Major	B	No Change
Lewisham	Lewisham	Major	B	Protect Small Units
Wimbledon	Merton	Major	A	No Change
Richmond	Richmond Upon Thames	Major	A	A/B
Canary Wharf	Tower Hamlets	Major	A	Treat as CAZ
Clapham Junction	Wandsworth	Major	B	No Change
Putney	Wandsworth	Major	B	No Change
Queensway/ Westbourne Grove	Westminster/ Kensington & Chelsea	Major	B	Protect Small Units
Chipping Barnet	Barnet	District	B	Protect Small Units
Church End, Finchley	Barnet	District	B	Protect Small Units
North Finchley	Barnet	District	B	Protect Small Units
Whetstone	Barnet	District	B	Protect Small Units
Cricklewood	Barnet/ Brent/ Camden	District	A/B	No Change
Kentish Town	Camden	District	B	No Change
Southgate	Enfield	District	B	Protect Small Units
Mare Street	Hackney	District	B	B
Stanmore	Harrow	District	B	Protect Small Units
Wealdstone	Harrow	District	B	Protect Small Units
Brentford	Hounslow	District	A/B	No Change
Feltham High Street	Hounslow	District	B	Protect Small Units
Notting Hill Gate	Kensington & Chelsea	District	B	No Change
Surbiton	Kingston upon Thames	District	B	Protect Small Units
Twickenham	Richmond upon Thames	District	A	B
Elephant & Castle	Southwark	District	B	A/B
Canada Water	Southwark	District	B	Protect Small Units
Euston Road	Camden	CAZ Frontage	CAZ	No Change
High Holborn/Kingsway	Camden	CAZ Frontage	CAZ	No Change
Kings Cross/St Pancras	Camden	CAZ Frontage	CAZ	No Change
Tottenham Court Road	Camden	CAZ Frontage	CAZ	No Change
Cheapside	City	CAZ Frontage	CAZ	No Change
Fleet Street	City	CAZ Frontage	CAZ	No Change
Leadenhall Market	City	CAZ Frontage	CAZ	No Change
Liverpool Street	City	CAZ Frontage	CAZ	No Change
Moorgate	City	CAZ Frontage	CAZ	No Change
Lower March/The Cut	Lambeth	CAZ Frontage	CAZ	No Change
Borough High Stree	Southwark	CAZ Frontage	CAZ	No Change
London Bridge	Southwark	CAZ Frontage	CAZ	No Change
Wentworth Street	Tower Hamlets	CAZ Frontage	CAZ	No Change
Baker Street (part)	Westminster	CAZ Frontage	CAZ	No Change
Covent Garden/ Strand	Westminster	CAZ Frontage	CAZ	No Change
Edgware Road	Westminster	CAZ Frontage	CAZ	No Change

Centre	Borough(s)	Class	London Plan Office Guidelines	Recommendation
Marylebone High Street	Westminster	CAZ Frontage	CAZ	No Change
Marylebone Road	Westminster	CAZ Frontage	CAZ	No Change
Victoria Street	Westminster	CAZ Frontage	CAZ	No Change
Warwick Way/Tachbrook Street	Westminster	CAZ Frontage	CAZ	No Change
Vauxhall/Nine Elms/Battersea	Wandsworth	No current classified	Not currently classified	Treat as CAZ/ Append to CAZ
Chiswick Business Park	Hounslow/Ealing	N/A	Not Previousl Classified. Mid-Urban	A
Stockley	Hillingdon	N/A	Not Previousl Classified. Business Par	A
Heathrow Perimeter	Hillingdon	N/A	Not Previousl Classified.	Protect Small Units (where possible)
Bedfont Lakes	Hounslow	N/A	Not Previousl Classified. Business Par	A
Royal Docks	Newham	N/A	Not Previousl Classified.	A
Park Royal	Brent/Ealing	N/A	Not Previousl Classified. Business Par	A

Notes

- The main East London centres, Ilford and Romford, are struggling to maintain viable office markets and there is little to be gained in protecting obsolescent stock. We anticipate that new demand will gravitate towards Stratford and emerging centres around the Royal Docks.
- Even where we see no prospect of a defined office market, the experience of PDR has taught that small units are extremely vulnerable to residential pressure. These provide a crucial service for SMEs and local businesses generally and there should be protection for them.

Appendix Seven: Office Floorspace Change (sq m GIA) 2016-41 – Sensitivity Tests at Borough Level

Change 2016-41	Trend Projection	Composite Projection	Employment Based Central	Employment Based High	Employment Based Low	Hybrid	Homeworking	Density Ratio 13 sqm Non CAZ	Density Ratio 1.25 Desk share	Intensity all Stock 11.3 sq m
Barking and Dagenham	23,300	15,500	7,700	12,100	1,800	-22,200	6,800	10,000	7,100	1,300
Barnet	35,000	83,800	132,600	163,700	102,400	92,800	116,000	152,600	126,800	209,100
Bexley	-36,700	2,400	41,400	51,100	32,000	19,000	38,200	47,600	39,600	59,800
Brent	60,000	44,000	28,100	47,300	15,100	-63,700	22,000	38,500	25,000	10,100
Bromley	-140,000	-9,000	122,000	146,500	98,100	84,000	109,100	140,400	116,600	169,900
Camden	476,700	574,100	574,100	724,100	427,800	573,200	496,500	574,100	548,700	403,300
City of London	1,623,300	1,038,000	1,038,000	1,370,400	713,500	1,036,500	889,600	1,038,000	992,000	714,500
Croydon	-318,300	-172,700	-27,000	-47,900	-100,500	-8,200	-30,400	-21,500	-28,700	-63,100
Ealing	-88,300	13,900	116,100	144,700	88,200	-19,200	105,300	133,500	110,900	138,900
Enfield	-16,700	13,500	43,700	58,000	29,700	28,400	39,700	50,200	41,700	90,500
Greenwich	45,000	37,900	30,900	41,400	20,700	3,600	28,400	35,500	29,500	40,100
Hackney	128,300	201,800	201,800	243,000	161,500	201,600	181,300	201,800	192,900	211,900
Hammersmith and Fulham	105,000	188,600	272,200	338,400	229,200	340,300	230,200	332,000	254,600	225,400
Haringey	-40,000	7,500	55,000	68,700	41,700	38,900	49,500	63,300	52,600	120,500
Harrow	-141,700	-47,600	46,400	63,300	29,900	36,100	41,600	53,400	44,400	96,900
Havering	-18,300	7,400	33,100	43,200	23,300	9,400	30,600	38,100	31,700	43,700
Hillingdon	-90,000	43,700	177,500	221,300	134,500	243,600	150,300	224,300	163,700	139,800
Hounslow	128,300	183,100	237,900	286,400	190,500	249,800	216,800	273,700	227,300	211,700
Islington	263,300	373,000	373,000	469,300	277,200	372,500	337,300	373,000	356,500	274,700
Kensington and Chelsea	83,300	93,700	93,700	124,400	63,800	93,500	77,800	93,700	89,500	75,000
Kingston upon Thames	-48,300	-30,700	-13,200	-600	-26,500	-86,200	-15,800	-9,600	-14,200	-30,400
Lambeth	-95,000	160,600	160,600	202,900	125,100	160,200	146,800	160,600	153,300	117,000
Lewisham	-36,700	-2,500	31,700	41,000	22,500	23,300	29,000	36,400	30,300	55,800
Merton	-66,700	24,300	115,300	136,900	94,200	63,500	104,800	132,600	110,200	163,500
Newham	86,700	134,400	182,000	204,800	159,800	125,500	169,700	209,400	174,000	184,000
Redbridge	-35,000	25,600	86,100	102,800	69,900	63,600	78,500	99,100	82,300	140,700
Richmond upon Thames	-10,000	78,100	166,200	195,200	137,800	73,000	142,600	191,200	158,800	248,500
Southwark	338,300	506,800	506,800	614,300	401,800	506,000	464,300	506,800	484,400	650,700
Sutton	-116,700	-40,900	35,000	46,000	24,200	5,300	31,800	40,200	33,400	76,900
Tower Hamlets	1,570,000	815,700	815,700	996,100	645,500	815,300	725,900	815,700	762,800	658,100
Waltham Forest	-8,300	20,200	48,700	58,300	39,300	35,300	45,000	56,000	46,500	80,400
Wandsworth	-110,000	117,600	117,600	145,600	90,400	117,500	106,600	117,600	112,400	229,100
Westminster	-141,700	213,300	213,300	554,500	-24,600	211,800	82,400	213,300	172,800	-139,300
London	**3,408,300**	**4,715,100**	**6,064,000**	**7,867,000**	**4,339,700**	**5,424,100**	**5,248,100**	**6,421,700**	**5,729,600**	**5,608,900**
As % Employment based	56.2%	77.8%	100.0%	129.7%	71.6%	89.4%	86.5%	105.9%	94.5%	92.5%
	Trend	Composite	Employment Based	High	Low	Hybrid	Homeworking	13 sqm Non CAZ	1.25 Desk share	Intensity
Outer	-928,400	262,100	1,452,600	1,796,900	1,025,500	843,100	1,282,200	1,713,700	1,375,800	1,908,600
Inner	2,854,900	3,201,700	3,360,200	4,145,200	2,625,300	3,332,600	2,993,800	3,456,800	3,189,000	3,125,100
Central	1,481,600	1,251,300	1,251,300	1,924,900	688,900	1,248,400	972,000	1,251,300	1,164,800	575,200
CAZ Boroughs	4,136,500	4,094,600	4,094,600	5,444,500	2,882,000	4,088,300	3,508,600	4,094,600	3,865,400	3,195,100
Non CAZ Boroughs	-728,200	620,500	1,969,400	2,422,500	1,457,700	1,335,800	1,739,400	2,327,100	1,864,200	2,413,900

Employment-based High and Employment-based Low projections differ from 9.18 as adjusted for vacancy