ED-OFF2

City of London Corporation

Future of Office Use

Final Report

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Contents

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Glossary

Term	Definition
Best in Class (Grade A+)	New or refurbished space that is Grade A+ in the British Council for offices (BCO) Office Specification. Additional services added to enhance the tenant offering. Typical building ratings including BREAAM Outstanding, Energy Performance Certificate (EPC) A, Well Platinum, Cycling Score Platinum, NABER 5*+.
City of London office sub-markets	Office sub-markets located in the central area of London, defined by Knight Frank. Composed of: City Core, Aldgate/Whitechapel, Midtown and Clerkenwell/Farringdon.
Grade A	New or refurbished space that meets the criteria of the BCO Office Specification. Typical building ratings include EPC B, Wired Scored Platinum, and BREEAM Excellent.
Grade B or Second-Hand	Previously occupied office space, that either does not meet the Grade A specification, or it does, but wear and tear has triggered a need for substantial refurbishment.
Institutional grade	A building with over c. 5,000 sq ft (Net Internal Area, NIA, see below) which accommodates blue chip (nationally recognised, well-established and highly capitalised) occupiers and can be traded by institutions such as pension funds, banks, hedge funds or insurance companies.
Net Internal Area (NIA)	Net Internal Area (NIA) is the usable area within a building measured to the internal face of the perimeter walls at each floor level. NIA covers all areas which are used for a specific purpose.
Office attendance	The proportion of employees attending the office as a share of the total workforce based there.
Office-based jobs	Emerging and traditional office-based jobs as defined by the SIC (Standard industrial classification of economic activities) 2 code categories in the Appendix.
Office-based jobs - traditional	Office jobs that belong to sectors: finance, legal, real estate, headquarters and management.
Office-based jobs - emerging	Office jobs that belong to emerging or growing business markets: media, architecture and creative, IT and communications, science, marketing.
Office occupancy	The proportion of desks occupied for any given time of the day, relative to the total number of desks in an office.
Prime	Best in Class and Grade A buildings greater than 10,000 sq ft (NIA) and in the best quality locations.
Prime rents	The rent for 10,000 sq ft (NIA) office floor in an extensively refurbished or new building, with a lease term of 10 years.

Executive summary

Arup and Knight Frank were commissioned to undertake an assessment of the City of London's office market, covering the current and anticipated office-use behaviours, the qualitative and quantitative demand for net additional office floor space and an assessment of the extent of risk of stranded assets.

The research suggests that:

- City-based office jobs, and to a lesser extent, office attendance, are expected to grow in the future.
- As such, long term growth prospects appear good in our scenarios, with the City requiring 6 – 20 million sq ft of additional office space by 2042. Much of this will be high quality office space for smaller employers.
- Demand for best in class is higher now than pre-pandemic, but growth may soften in the next few years as existing occupiers look to right-size their real estate footprint for hybrid working as leases expire.
- Greater home working could allow for more office jobs to be sustained from the same City real estate footprint.
- But, a proportion of the City's existing office stock, will require investment to meet new energy regulation and market demands.
- As such, our projections for higher overall demand for office space do not account for the challenges faced by some existing lower grade stock in the City. We suggest that intervention is needed to allow for fewer obstacles for older stock to be updated to meet office market needs, or to convert to other uses.

City-based office jobs, and to a lesser extent, office attendance, are expected to grow in the future.

Traditional-office jobs are the dominant sector in the Square Mile, representing 59% (346,000) of all jobs in 2021. However, emerging office-based firms are faster-growing with 41,600 new jobs (+80% from 51,700 to 93,300) between 2015 and 2021 (compared to a 25% increase over the same period for traditional office-based jobs). Emerging office-based firms (information and communication and professional, scientific and technical activities) tend to value different typologies of office spaces including more agile working environments with lower workplace densities and higher-amenity offices[1], implying a shift in the market in terms of demand for best in class office spaces.

Emerging office-based jobs grew by **80%** between 2015 and 2021

Concentration of attendance between **Tuesday to Thursday**

Tube ridership in the City stood at 69% of pre-pandemic levels by the last week of April 2023, and was busiest in the middle of the week (Tuesday-Thursday) at around 75% of 2019 levels[2]. An increased focus on corporate culture and business performance pressure indicates that office attendance may move upwards in the future.

[1] British Council for Offices, 2022. Guide to Specification – 2022 Update.

[2] TfL, 2023. Demand by Station Type (City stations).

Moving forward, office jobs in the City are projected to continue growing, with an additional 60,000 office jobs (or +13%) expected in the City by 2042[3].

Additional +**60,000 office jobs** in the City by 2042

Demand for best in class space is now higher than pre-pandemic, but growth may soften in the next few years as existing occupiers look to right-size their real estate footprint for hybrid working as leases expire. Long term growth prospects appear good, in our scenarios.

Increased focus on **"Flight to Quality"**

Employers are placing greater value on high-quality sustainability credentials, quiet spaces for phone calls or working, an abundance of meeting spaces and places for collaboration, good access to public transport and food and beverage amenities as well as design which communicates the company's brand and values[4]. Tenants are seeking a step-change in the quality of space, and the quality of offer outside the 'office door' to entice people back to in-person work, to differentiate themselves in a competitive labour market, and to drive up utilisation. This is often referred to as the 'flight to quality'.

A new standard of office space has emerged that exceeds the standards of those previously classified as Grade A, termed 'best in class'. Since 2017, rental price growth for best in class buildings has been twice the rate of secondary/average quality buildings[5].

Rental price growth for best in class buildings are **2 times higher** than average quality buildings

Demand for best-in-class (i.e. new and refurbished buildings) is now higher than pre-pandemic, with these buildings representing the majority (70%) of all lettings in the City in Q1 2023 (see **Figure 1** below), which is over 20% above the average of the five years before the pandemic. Demand for Grade B space has slowed post-pandemic. However, demand for the office space may soften in the next few years as existing occupiers look to right-size their real estate footprint for hybrid working as leases expire.

[3] GLA, 2023. London Long Term Labour Market Productivity Trend-based Projections by Borough ; Arup analysis 2023.

[4] Arup, 2022. The future of the office in Central London.

[5] Knight Frank, 2023. Knight Frank Research and MSCI.

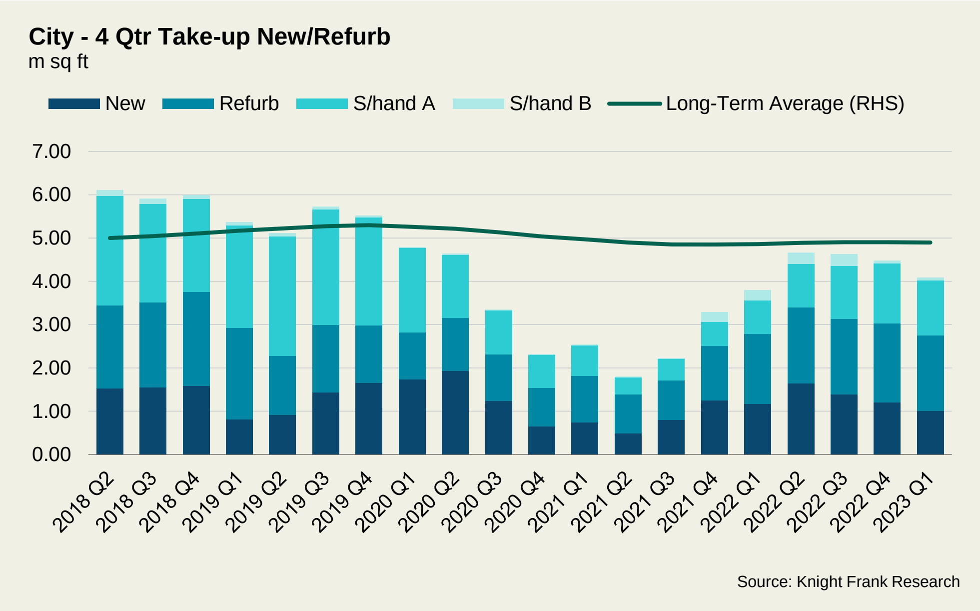


Figure 1: Take up by Quality - *Knight Frank Research, 2023*

Employment is projected to grow.

The employment trends by sector are highlighted in **Figure 2** based on GLA Economics London Long Term Labour Market Projections[6]. Information and communication jobs (+67,600) as well as Professional, Real Estate, Scientific and Technical Activities (+335,000) - all part of emerging office-based jobs - are projected to drive growth in London. Meanwhile, the number of traditional office-based jobs and public sector office-based jobs across London are projected to decline, mainly due to reductions in finance and public administration sectors. The GLA projects employment in the City to grow by an additional 85,000 jobs (+13%), out of which around 60,000 could be office jobs by 2041[7] with consistent growth until 2035 which then stabilises until 2041.

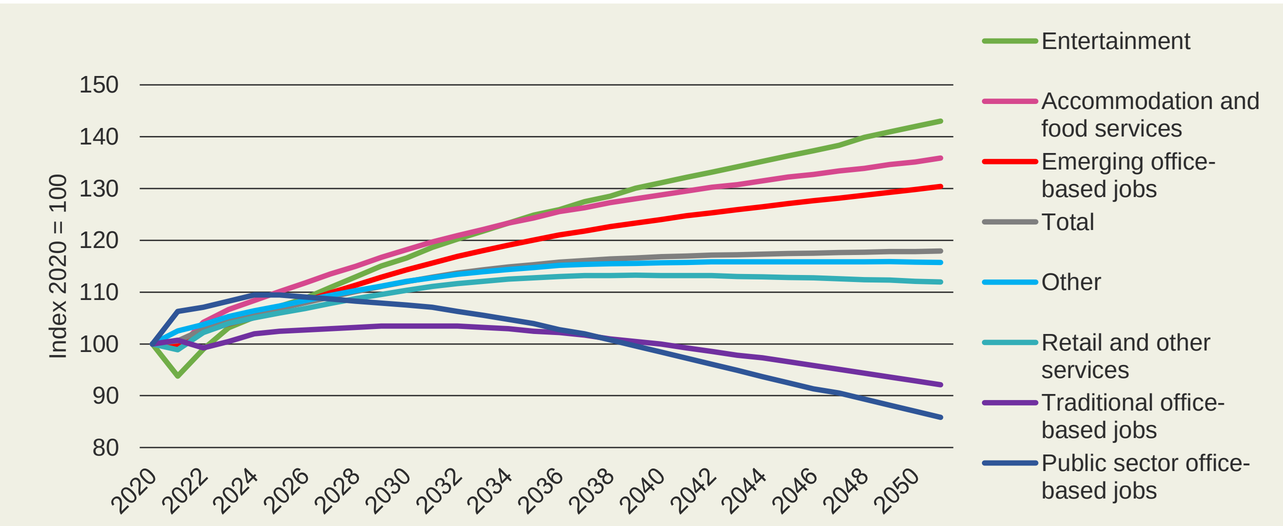


Figure 2: London-wide Long Term Labour Market Projections – Sector projections - *GLA Economics, 2022*

[6] GLA, 2022. London Long Term Labour Market Sector Projections; Arup analysis, 2023.

[7] GLA, 2023. London Long Term Labour Market Productivity Trend-Based Borough Projections; Arup analysis, 2023.

Long term growth prospects appear good in our scenarios, with the City requiring 6 – 20 million sq ft of additional office space by 2042. Much of this will be high quality office space for smaller employers.

The City will remain desirable as a place for employers to locate or grow, going forwards. The Square Mile's labour market access, availability of different spaces, supporting transport network, and 'outside the office door' offer place it in the top tier of the London office market hierarchy, meaning that it is potentially more resilient to a softening of demand than more peripheral locations.

We modelled future demand for *overall* office floor space in the City using three scenarios (*Return of In-Person*, *Hybrid Peak* and *New Diverse City*). All three scenarios suggest a slowdown overall in office floor space demand during the next few years (i.e. if employers *immediately* right-size for their needs), with *Hybrid Peak* and *New Diverse City* suggesting lower implied overall demand for much of the rest of the 2020s (**Figure 3**). The inertia caused by long leases means that, in reality, this is likely to manifest as a soft landing. Within the overall picture of demand, there is a more upbeat market for best in class space, and a weaker one for lower grade space.

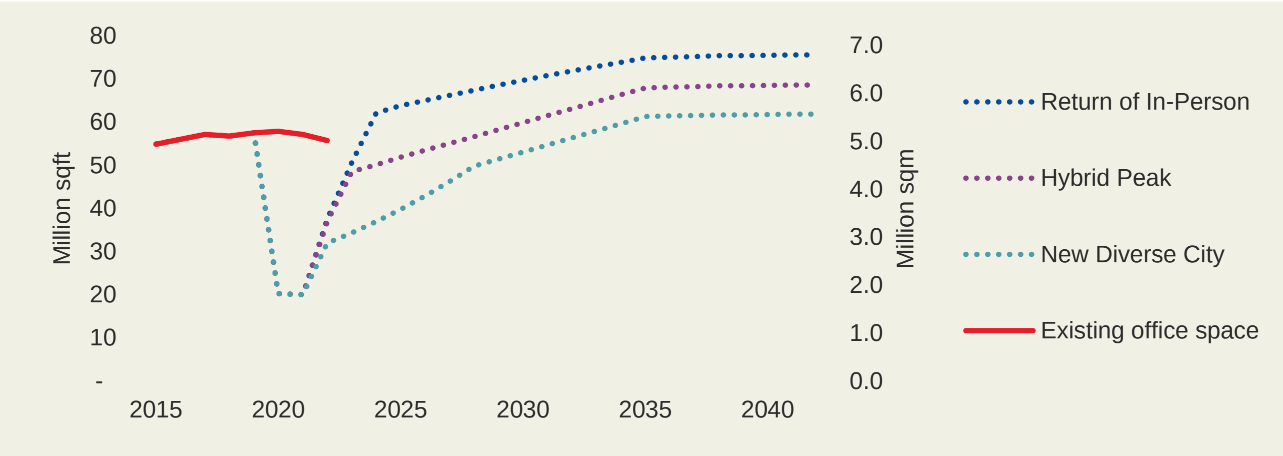


Figure 3: Underlying demand for office space in the City of London by scenario – *Arup analysis, 2023*

All three scenarios return to higher levels of implied overall demand for office space in the City in the long term. The key findings from the model compared to 2022 levels[8] include:

Return of In-Person

+ 20 million square feet of net office-space needed by 2042

+ 60,000 office-based FTE jobs accommodated in the City by 2042*

* using GLA forecasts

Hybrid Peak

+ 13 million square feet of net office-space needed by 2042

+ 60,000 office-based FTE jobs accommodated in the City by 2042*

* using GLA forecasts

New Diverse City

+ 6 million square feet of net office-space needed by 2042

+ 147,000 office-based FTE jobs accommodated in the City by 2042 compared to Return of In-Person and Hybrid Peak scenarios*

* using Arup's forecast based on historic BRES employment figures (2015-2020) to account for more efficient use of office space in a new hybrid era.

[8] Based on 2022 Valuation Office Agency data (NIA) for office floorspace in the City of London.

2 out of 3 scenarios (Return of In-Person and Hybrid peak) are broadly aligned with the draft City Plan 2036 target in terms of net office space development needed.

The *Return of In-Person* scenario projects additional need for 20 million sq ft of net office space by 2042 (in addition to the net 8.7 million sq ft delivered between 2016-2022), aligning with the draft City Plan 2036 target which is around 21 million sq ft of office space. This scenario implies that the supply of high-quality office stock may struggle to meet demand in the short term, if the flight to quality continues.

The *Hybrid Peak* scenario projects a more gradual increase in demand for additional office space in the City. In the short term, levels of underlying demand are lower than pre-pandemic levels until around 2029, after which demand picks up to reach around an additional need for 13 million sq ft by 2042 (which added to the 8.7 million sq ft delivered between 2016-2022 align with the City Plan 2036 target).

Longer term, both scenarios require lower grade assets to be quickly refurbished to keep up with demand for higher quality spaces.

Greater home working could allow for more office jobs to be based in the City.

The *New Diverse City* scenario, which includes the highest rates of home working, demonstrates that the City has the ability to host a much greater number of jobs through less frequent office attendance. The results suggest that the Square Mile could service around an additional 147,000 office jobs by 2042 (compared with the other scenarios, and an increase of 48% on today). This scenario does imply a deeper trough of office demand in the 2020s, but in the medium to long term, as the economy grows, new organisations would be expected to take the place of those that were there previously, provided that suitable office space were (still) available. The organisations filling the space would be more likely to be smaller, emerging office-based firms. A holistic approach to curating sustainable business districts will attract a diverse occupier base, particularly from innovation-led growth sectors such as tech, life sciences and education.

Implicit in the *New Diverse City* scenario is that whilst future footfall may be slightly lower than in other scenarios, a higher number of individuals would access the Square Mile for work. This may result in higher net levels of local spend, given that hybrid workers are likely to 'splurge' on their days in the office[9].

But, a proportion of the City's existing office stock will require investment to meet new energy regulation and market demands.

Based on EPC data, refurbishment and investment will be required by owners and occupiers to bring buildings in line with standards for businesses in the City. A proportion of institutional grade leases (approximately 32m sq ft in the City of London[10]) may not currently comply with EPC regulation, with a rating below C (as illustrated by **Figure 4)**. It is anticipated that many businesses will implement changes required to adhere to EPC changes.

Conversion of Grade B stock to Grade A, or to best in class is possible in some cases, however this can be challenging. Many assets in the City are historic, including over 600 listed buildings and 26 conservation areas. Heritage assets can impose additional constraints on development, and the financial case for retrofit can be difficult to make, particularly in terms of limitations on the potential to deliver modern office requirements, whilst at the same time conserving or enhancing the significance of the building[11].

We note that lower EPC-rated offices may face a 'perfect storm' from the market's aversion to lower quality, less sustainable, less accessible amenity-rich spaces, although in the wider London and UK context, City-

[9] Arup, 2022. The future of the office in Central London.

[10] Estimated as the share of premises below EPC C office floorspace (GIA) on total office floorspace (GIA) in the City of London from the Department for Levelling Up, Housing and Communities EPC rating data, applied to 2022 total office floorspace stock (NIA) from the Valuation Office Agency.

[11] City of London, 2015. Office Use – Supplementary Planning Document.

based offices perform well in terms of amenities. In addition, whilst EPC ratings provide a measure for understanding potential stranded assets, our work should also be complemented on a site-by-site basis with specific NABER rating data for individual premises, to accurately understand a building's real energy performance across energy, water, waste and indoor environment.

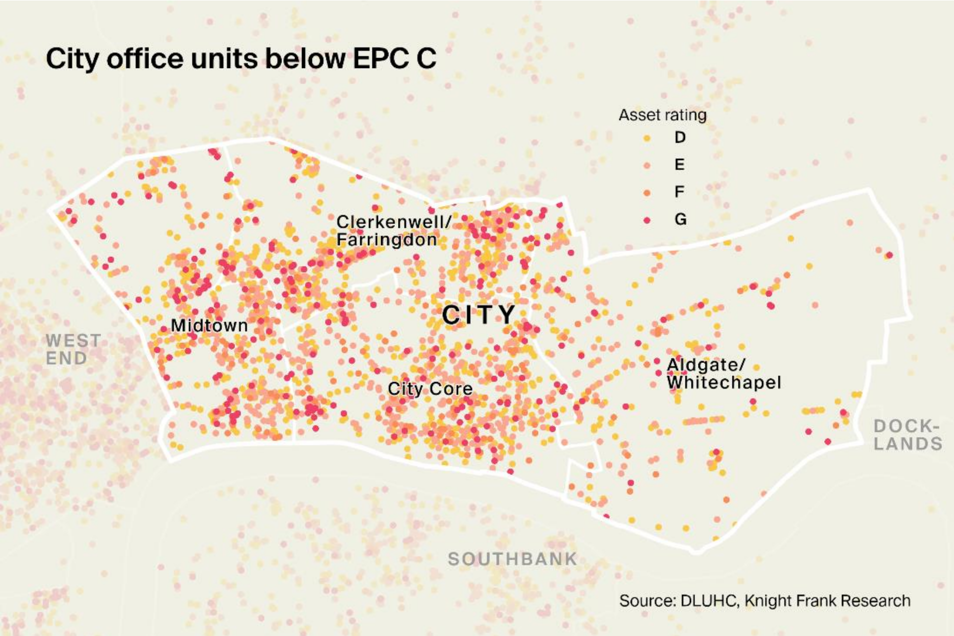


Figure 4: Central London office units below EPC Rating C – *Knight Frank Research, 2023*

As such, our projections for higher overall demand for office space do not account for the challenges faced by some existing lower grade stock in the City. We suggest that intervention is needed to allow for fewer obstacles for older stock to be updated to meet office market needs, or to convert to other uses:

Planning Policy Recommendations *– for consideration when updating the City Plan:*

1. *Increase the supply of the best-in-class spaces*

- **Review the existing portfolio of office assets in the City**: review the portfolio of office assets in the City and identify potential sites that can be developed to increase the total supply of high quality, sustainable spaces. Consider providing direct support in the form of supporting advice for individual sites.

- **Consider area additions under certain circumstances:** consider area additions more positively when linked to broader outcomes, such as sustainable upgrades.

2. *Encourage conversion of existing Grade B stock to high quality office spaces*

- **Promote good practice refurbishment**: alongside existing SPDs, the City should consider building on the retrofit case studies work, to promote and share good practice of refurbishment that has led to upgraded office stock. The City could share these case studies with the broader construction industry.

- **Support policies that encourage retrofit**: City planning policy should encourage and promote retrofit and refurbishment to improve EPC ratings.

3. *Encourage alternative uses for Grade B stock for which conversion is not feasible*

- **Take a flexible approach to planning consents for heritage and stranded assets**: the City contains a large number of historic assets. For some of these specific, protected historic sites and conservation areas in the City, there may be cases where it may not be financially viable to refurbish existing office space to meet regulation. The City could explore the implications of amending policy that requires 'viability assessment' when considering change of use, where this would incentivise the retention and improved environmental performance of existing buildings.

***General recommendations** – for broader City consideration:*

1. *Increase the supply of the high quality, sustainable office spaces*

- **Identify opportunities within the market**: the City should continue to work in partnership with occupiers, developers, landowners to help promote and facilitate opportunities for investment and development opportunities.

- **Continue to promote and invest in amenity, urban and workplace experience in the City to attract employers, office workers and tourists**: continue to invest and improve amenity within the City, for example public transport and active travel accessibility and office-supporting sectors – including food and beverage. Together with a focus on the workplace experience, consider ways to encourage employees back to offices and support high attendance rates. The workplace experience for employees needs to focus not only on the office building, but also wider amenity including improvements in public realm, retail as well as programmatic interventions such as an arts, culture and entertainment programmes for example.

2. *Encourage conversion of existing Grade B stock to high quality office spaces*

- **Continue to monitor closely assets at risk of becoming stranded**: following changes in regulation and market demand, relevant refurbishments are anticipated by owners and occupiers to bring buildings in line with standards for businesses in the City. Based on EPC data, a proportion of stock (approximately 32m sq ft) may not currently comply with EPC regulation. Work closely in partnership with developers and landowners to understand future plans and uses for these assets, identifying any potential blockers to convert these (primarily Grade B stock) to best-in-class or Grade A spaces.

- **Form a City Advisory hub to provide expert advice**: the City should form a City Advisory hub to actively connect developers, business owners and other stakeholders with potentially challenging stock to experts, both within the City and externally to support them with upgrading their existing stock. For example, the City could join together with English Heritage to share skills and cost effective methods of retrofit for historic and listed buildings to upskill the broader construction sector.

- **Protect office space during a potential period of softening of demand in the short-term through enabling meanwhile uses**: the 'flight to quality' trend, coupled with EPC regulation is driving demand for higher quality best-in-class and Grade A space. Engage with investors and landowners to understand how low grade stock could become more attractive or could be repurposed for meanwhile uses, with a focus on population-serving sectors such as cafes, bars and restaurants.

- **Support broader construction industry campaign for low cost, carbon retrofit:** the City could work with other stakeholders to address the costs of low carbon retrofit, including matters such as campaigning for VAT relief - particularly for buildings deemed stranded assets.

3. *Encourage alternative uses for Grade B stock for which conversion is not feasible*

- **Support a more efficient use of office stock for long-term vacant sites**: there may be some cases where a change of use may be the best option to optimise the use of space due to other constraints (i.e. a site having compounding factors such that it may be a historic asset and a current grade B space), in which case – the City should work with landowners and developers to ensure that transition is done in a way which is planned. The City should also monitor the amount of properties that are left long-term vacant. If this increases significantly over time, the City should look to identify potential alternative uses, or tax incentives (i.e. business rate relief to businesses that benefit the local community or economy) to bring buildings back into use, increasing provision of affordable spaces for example.

4. *Strengthen the City's role as a premium office market location*

- **Encourage growth in emerging sectors**: the City could consider providing support to encourage emerging sectors. This includes providing marketing, space, skills and incentives to encourage growth, and ensure the City remains a premium office market location that can accommodate emerging-office sectors in particular.
- **Develop targeted marketing campaigns**: develop targeted marketing campaigns to reemphasise the City as a leading global financial hub and office market and attract office market investment. This could include:
  - A) Local marketing campaign – a localised marketing campaign focussed on the City set to become the first zero carbon office market in London. This campaign would aim to differentiate the City from other neighbouring office markets, highlighting the abundance of low carbon, best-in-class offices available.
  - B) Foreign marketing campaign – a targeted campaign focussed on foreign investors to capitalise on the significant investor appetite for high-quality, best-in class space. This campaign would focus on influencing the investment pipeline in the City.
- **Leverage Business Improvement Districts (BIDs)**: leverage BIDs including including Fleet Street Quarter, Cheapside, Eastern City Partnership and Aldgate BID in the City as the convenor for neighbourhoods to develop a programme of activity to strengthen the City's role and function as a premium office market.

1. Introduction

1.1 This study

Arup and Knight Frank were engaged on behalf of the City of London Corporation to provide advice on the future of office use within the Square Mile, in light of the pandemic, other economic shocks, and further consultation on the Local Plan in early 2023.

The purpose of this study is to articulate the trends and drivers of office use in the City of London, providing an evidence base to help to shape local policy. The findings will also contribute to statutory duties for the Square Mile's planning authority. As such, this report helps answer three key research questions, including:

- *What are the current and anticipated office-use behaviours in the City?*
- *What is the qualitative and quantitative demand for net additional office floor space in the City?*
- *To what extent are parts of the City's existing office stock at risk of becoming stranded assets, and is there any associated geographical context?*

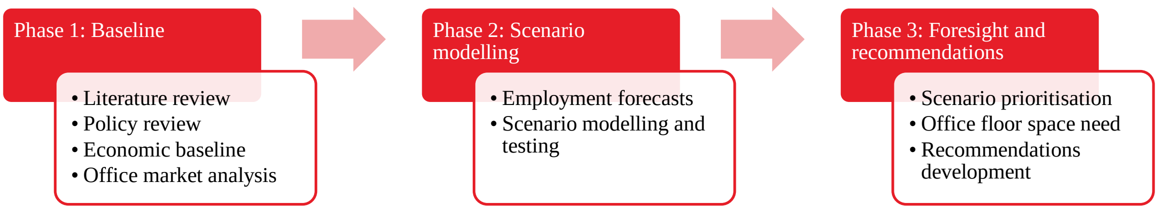
This technical work and evidence gathering will inform the next stages of the Local Plan development (which was previously adopted in 2015). The focuses of this study are specifically on office uses. Demand modelling for floor spaces refer to office floor space, and not total floor spaces. It does not account for ancillary uses, including ground floor retail for example.

The document is structured as follows:

- **Chapter 1 – Introduction**: An overview of the study, objectives and approach.
- **Chapter 2 – The Office market in 2023**: An overview of the economic baseline and office market analysis.
- **Chapter 3 – Strategic and policy context**: Strategic and policy review, including a literature review of the emerging office trends and drivers.
- **Chapter 4 – Future scenarios**: An overview of the demand scenario modelling and findings.
- **Chapter 5 - Summary and recommendations:** Recommendations for the future of offices in the City.

1.2 Approach

The study took a three-phased approach, including baselining, scenario modelling and foresight and recommendations to answer the three research questions as shown below.



2. The City office market in 2023

2.1 Overview

The City of London, commonly referred to as the Square Mile or City, is the financial district of London. It is approximately 1.12 square miles in area, with over 8,000 residents, approximately 590,000 workers and 10 million annual visitors[12].

This section of the report provides a socio-economic overview of the City and the office market. Further analysis and information can be found in the Appendix (A.1 - A.3).

2.2 Recent trends in the City's office-based sectors

The City is a leading global financial hub

The City is a global hub for financial and professional services, which currently produce £278 billion in economic output, exporting over £128 billion, and with the City accounting for one in every five financial jobs in Great Britain[13]. The City has the highest density of jobs in the United Kingdom, with up to 230,000 jobs per square kilometre[14], concentrated near Bank and Moorgate.

Gradual return to the office and new working patterns

The City is experiencing a gradual return of its office-based workforce, with London Underground ridership into the City in the last week of April 2023 showing average levels around 69% of pre-pandemic levels and up to 75% in the middle of the week[15]. This trend has been stable since January 2023. Tuesday, Wednesday and Thursday are the busiest days with growing attendance levels on Mondays[16]. Increased focus on corporate culture and business performance pressure might imply a progressive upward trend of return to the office in the near future.

Rapid growth in emerging office-based jobs

The City experienced high levels of growth in population and employment figures in the lead up to the pandemic. The City accommodates over 440,000 office-based jobs[17] in an estimated net 56 million square feet of office space[18]. Over the period from 2015 to 2021, there was rapid growth of "emerging" office-based jobs (See Glossary for definition), corresponding to 41,600 new jobs (or +80%), and accounting for 93,300 jobs in 2021[14]. However traditional-office jobs are still dominant, representing 59% (346,000) of all jobs. During this period, there was also continued growth of population-serving sectors, including entertainment, accommodation and food services and retail and other services.

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[12] City of London, 2023. Our Role in London.

[13] City of London, 2023. City Statistics Briefing.

[14] BRES, 2021. City of London Employment Figures – LSOA.

[15] TfL, 2023. Demand by Station Type (City); Arup analysis, 2023.

[16] Arup, 2022. The future of the office in Central London.

[17] Business Register and Employment Survey (BRES), 2023. Employment in the City of London.

[18] Valuation Office Agency, 2022. Non-domestic rating: stock of properties including business floorspace.

But traditional office-based firms still dominate

Traditional office-based firms represent almost half of all firms in the City (49%)[19], a proportion which has largely remained the same over the 2015-2022 period. The number of emerging office-based firms has grown by 62% since 2015, now accounting for 25% of office-based businesses.

The average size of emerging office-based firms has grown

Approximately one in five (22%) medium to large firms (50+ employees) in the City belong to the emerging office-based sector, increasing from 15% in 2015[20]. Between 2015 and 2022, the total number of emerging office-based firms also grew by 62% compared to a 35% growth for all firms. As emerging office-based firms tend to value different typologies of office spaces compared to traditional office-based firms, their growing number and size might imply a new shift for the market in terms of demand for best-in class office spaces, with the fastest growing firms over-representing in the micro and small categories.

2.3 Key office market insights

Knight Frank identify four submarkets in the City, including the City Core and parts of Midtown, Clerkenwell/Farringdon and Aldgate/Whitechapel (see **Figure 5**). The section below provides an overview of key office market insights.

The definition of Grade A space is evolving

A new standard of office space has emerged that exceeds the standards of those previously classified as Grade A, termed 'best-in-class'. The best-in-class properties typically have a range of different ratings, with BREAAM Outstanding, EPC A, Well Platinum, Cycling Score Platinum and NABER 5*+, reflecting high-quality and high-amenity buildings. Two examples of best-in-class in the City include 8 Bishopsgate and 60 London Wall as outlined below.

8 Bishopsgate

Source: Knight Frank

8 Bishopsgate is the UK's most sustainable speculative office development providing 562,000 sq ft of workspace over 50 storeys. Currently under construction and due for completion at the end of May 2023, designed by Wilkinson Eyre and developed by Mitsubishi Estate and Stanhope.

Key features include:

High amenity: close to Liverpool Street Mainline and underground, Elizabeth Line, in house café, deli, event space, private terraces and viewing gallery, 961 cycle spaces, 680 lockers and 54 showers.

High quality: founded on the UN Sustainable development goals and follows the guidance of the RIBA 2030 challenge.

1:8 sq m occupational density floors 2-21 and 1:10 on floors 22-50.

1,400 sq m of landscaped outdoor space.

Targeting EPC Rating 'A', WiredScore Platinum, AirScore Design & Operation Gold, BREEAM Outstanding and targeting LEED Platinum.

[19] Inter-Departmental Business Register (IDBR), 2015-2022; Arup analysis, 2023.

[20] Inter-Departmental Business Register, 2022; Arup analysis, 2023.

60 London Wall – Refurbished

Source: Knight Frank

Sixty London Wall offers 328,500 sq ft of office space over ground and 10 upper floors, with five roof terraces offering views over the City. Completion in the lockdown, designed by EPR Architects and developed by LaSalle and Citygrove.

Key features include:

Embodied Carbon: 40% lower than similar newly built office space.

High amenity: External - 8 retailers on the ground floor which are almost fully let. F&B operators such as Black Sheep, Ole & Steen, HOP and Tossed are in occupation. Internal - auditorium, café, wellness rooms, fitness studios and bike maintenance area and will be accessible to all occupiers in the building.

Building designed to 1:8 occupancy throughout with enhanced spec of 1:6 on levels 1 and 2.

Smart Technology Enabled - Smart Spaces. 8 lifts (four scenic / four internal) - Otis e-call system (app). First building in London where Otis have installed.

Targeting EPC Rating 'B', WiredScore Platinum, Cycle Score Platinum, BREEAM Outstanding and Fitwell Certification – 2*.

Prime rents are lower in the City than neighbouring areas

The term 'prime' (comparative category to 'best in class') is used to describe the best quality buildings of a scale greater than 10,000 sq ft located in the best quality locations. Prime rents for the City's submarkets and surrounds is shown in **Figure 5**, with prime headline rents ranging from £60-85 per sq ft. Compared to neighbouring areas, prime headline rents are lower in the City than employment areas to the west, in West End Core, Fitzrovia and Soho for example. Historically, prime rents in the core City areas have been more volatile than the West End due to greater levels of speculative development and greater correlation with the health of the financial sector. The West End commands higher rents, due to the market being more supply-limited due to strict planning constraints.

Rents in the City differ from East London markets such as Canary Wharf for a number of reasons. The City is a more mature market than Canary Wharf which has historically been viewed as a finance hub and as a result developed a very narrow occupier base with financial occupiers. Developments have also been limited in Canary Wharf historically, which has prevented significant uplift in the rental tone. There is evidence that this is beginning to change but currently Canary Wharf remains a less mature market with lower rents than in the City.

Figure 5: London Submarket Headline Rents – *Knight Frank Research, 2023*

Demand is currently being driven by the 'Flight to Quality'

The post pandemic recovery in the London office lettings market continued in 2022 with 4.5m sq ft of take-up, a rise of 37% compared with the previous year and only 9% below the annual long-term trend of 4.9m sq ft. A key feature of the post-pandemic office market has been the acceleration in take-up of buildings with best-in-class characteristics including environmental, social and governance, health and wellbeing, amenity provision and transport connectivity. In addition, occupiers require flexible floorplates that can accommodate the changing nature of employee working patterns, with a focus on social and collaboration spaces.

In the City, take-up of new and refurbished buildings as of Q1 2023 accounted for almost 70% of all letting transactions which was 20% above the average of the five years before the pandemic (**Figure 6**). Take-up in the City has been driven by traditional office sectors including professional service occupiers in recent years and 2022 was a record-breaking year for transactions by this sector. This reflects 42% of all transactions in the City. Professionals in the City Core represented three-quarters of this total at 1.68m sq ft, exceeding their trend level of take-up in the submarket by 122%[21].

Short-term demand is also underpinned by a strong level of active demand for the City and London as a whole. In Q1 2023, there is 4.59m sq ft of requirements over 10,000 sq ft for potential occupation in the next 18 months, an increase of 7.1% against Q1 2022 and compares to a long-term average of 4.26m sq ft for the City[22]. There is also a further 1.47m sq ft of deals in the City which are currently under offer[23].

[21] Knight Frank, 2023. Research.

[22] Knight Frank, 2023. Research.

[23] Knight Frank, 2023. Research.

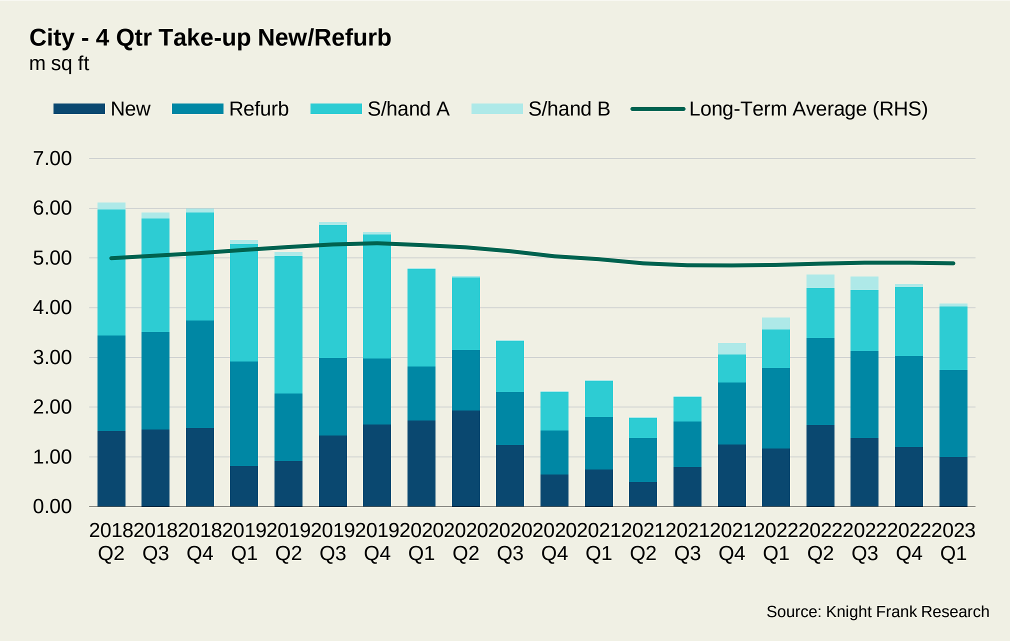

Figure 6: Take up by Quality - *Knight Frank Research, 2023*

Quality space is outperforming

Prime buildings typically have a lower obsolescence risk. In the City, prime office rents have grown by 10% since 2017 compared with only 5% for secondary (comparative category to Grade B) offices as shown in **Figure 7**. This demonstrates that the 'flight to quality' trend had begun even prior to the pandemic.

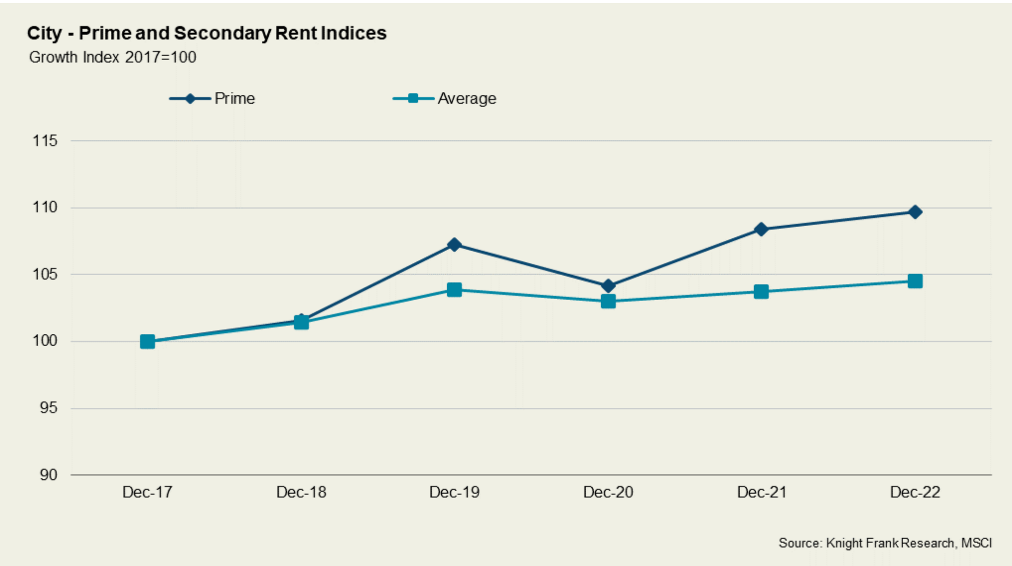

Figure 7: Prime and Secondary Rent Indices – *Knight Frank Research, MSCI, 2023*

Demand for new and refurbished space is not matched by availability

Current levels of availability in the City show a rise of 26% in 2022 to almost 9m sq ft, a vacancy rate of just below 9% which is 1.5% above the long-term trend[24]. The larger floorspace of new build developments can

[24] Knight Frank, 2023. Research.

skew the overall availability figures. Breaking down the availability data by number of buildings shows the availability of new and refurbished is much lower at 40% which is in line with the average for London[25].

For example, in terms of availability for large office spaces (> 80,000 sq ft), there are only 20 buildings which each offer over 80,000 sq ft of new or refurbished space in the City market which compares to 24 current near-term requirements for this office space. The availability of large prime buildings vary by submarket, for example there are currently only 10 new and refurbished buildings that can accommodate demand greater than 80,000 sq ft in the City Core and only four in Aldgate/Whitechapel and Midtown.

Under-construction activity falls short of average new and refurbished take-up
Knight Frank analysis suggests there are currently 7.8m sq ft of development schemes under construction in the City of which just over 5m sq ft is being built speculatively and due to complete by 2026. The average level of take-up of new and refurbished buildings is 3m sq ft which suggests a potential shortfall of almost 7m sq ft best-in-class space by 2026[26]. A further six schemes that have planning consent could potentially complete by 2027, reflecting a further 2m sq ft of speculative developments. Including potential schemes due for completion by 2027, this implies that there is a strong likelihood of future under-supply of the best quality buildings in the City.

The present pipeline for the City includes over 1 million sq ft between 2022/23 and 2027/28 (shown in **Figure 8**), which takes into account schemes currently in the planning pipeline either under construction or permitted. To note, this does not include refurbished spaces or schemes at application and pre-application stage, which based on past observations should smoothen the trend.

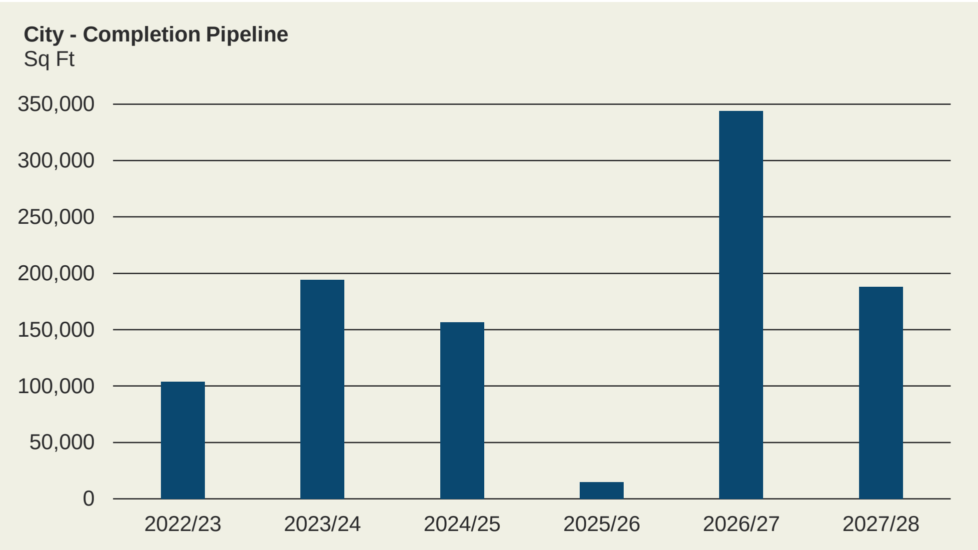

Figure 8: City of London Office Completion Pipeline – *City of London, 2023*

The second-hand (Grade B) office market has declined significantly
Take-up of second-hand stock (comparative to Grade B) has declined significantly in recent years, as part of a wider trend which began before and has been exacerbated by the pandemic. The shift away from second-hand offices has become apparent across central London including the City as shown in **Figure 9**, which has been split between different grades of space. This shows that demand for second-hand grade B space has declined consistently over the last ten years and second-hand grade A space has been trending down since mid-2019.

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[25] Knight Frank, 2023. Research.

[26] Knight Frank, 2023. Research.

In 2014, take-up of second-hand grade B space in the City totalled 1.11m sq ft and represented 14.5% of the leasing market. This has declined to a total of 0.11m sq ft in 2022, accounting for only 2.2% of all transactions. Transactions in City submarkets for this grade of space have remained close to zero since the pandemic, which has been most apparent in Aldgate/Whitechapel where no second-hand grade B space has transacted since 2018, largely due to the low availability rates. As a result, some landlords have opted into rent-free agreements in order to cover operational costs while they consider options to refurbish or repurpose.

Demand for second-hand grade A offices peaked in 2019 Q2 where transactions totalled 3.16m sq ft and reflected over half of all transactions in the City. This demand began to decline before the onset of the pandemic but has accelerated in the years since. Take-up for second-hand grade A stock has totalled 1.52m sq ft in the last twelve months, a decline of 51.9% from the peak and now accounts for only 31% of the market take up.

This trend is likely to reflect a structural shift in demand away from second-hand (Grade B) space and towards prime/best-in-class office space. A core component of this demand is that occupiers are demanding better quality office space which is capable of accommodating hybrid working solutions and collaboration. As many second-hand offices are often not conducive to these objectives, demand is expected to remain low over the coming years.

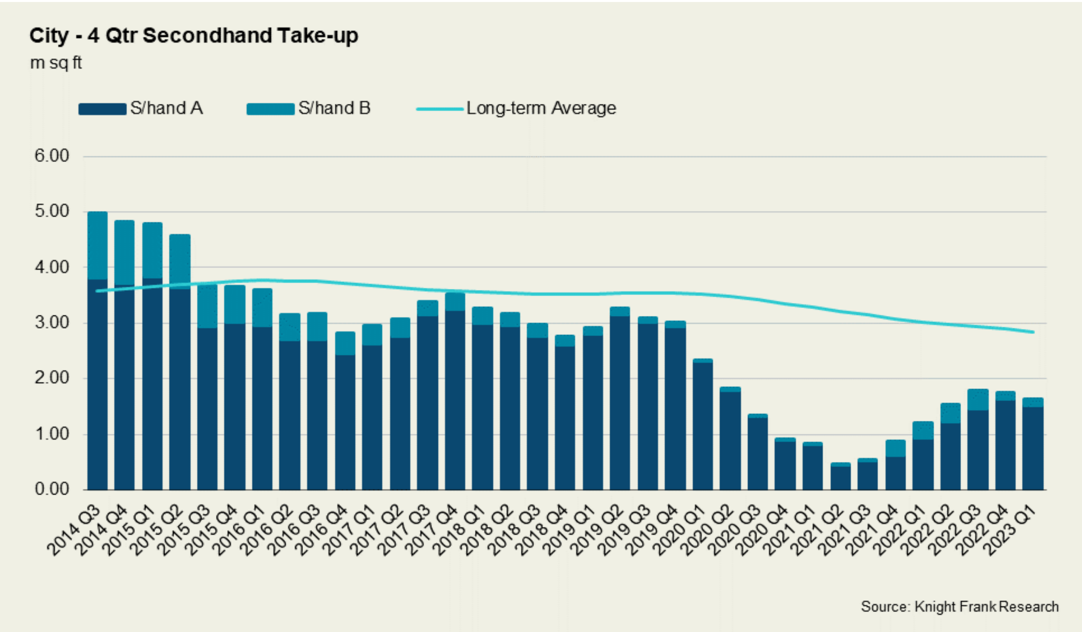

Figure 9: Second-hand Take-up - *Knight Frank Research, 2023*

Lack of demand has led to an increase in second-hand availability

Conversely, this lack of demand has led to a sustained increase in available second-hand space across the City over the last three years as shown in **Figure 10**. In the years before the pandemic both the level of second-hand space and its proportion of the office stock had been declining, with second-hand availability totalling 2.28 m sq ft in 2019 Q4 – 2.2% of all stock in the market. These values now stand at 5.30m sq ft and 4.7% respectively, more than doubling in three years.

Availability of second-hand A offices increased sharply after the onset of the pandemic rising 0.52m sq ft in the first six months of 2020. However, the level of available second-hand grade B space continued to decline to mid-2021 where it reached a low of 0.02m sq ft. Since this point the level of available second-hand grade B space has increased more than twenty-fold to 0.51m sq ft as landlords have struggled to market space and the opportunities for low-grade buildings has diminished. This increase has been sharpest in Midtown where there was no second-hand B space in Q1 2021, which has risen to 0.30m sq ft in Q1 2023.

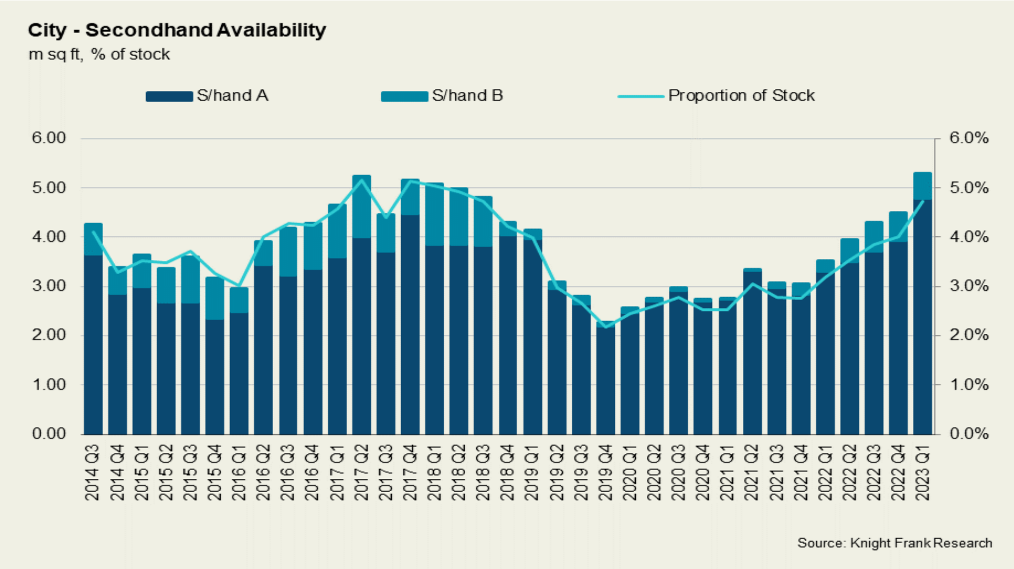

Figure 10: Second-hand Availability - *Knight Frank Research, 2023*

Together with the flight to quality trend, the rise in vacant second-hand stock is also being driven by MEES regulation which requires commercial properties to have an EPC of C or above by 2027, or B or above by 2030. If these standards are not met new leases cannot be signed and the asset is no longer fit for purpose. This is the case in the City where the majority of available second-hand space is contained in smaller offices which mostly have an EPC rating of D or E (**Figure 11**). The decline in take-up and subsequent rise in vacancy is a clear reflection of this obsolescence risk and should act as an indication that improvements are required to incorporate these offices with the effective stock.

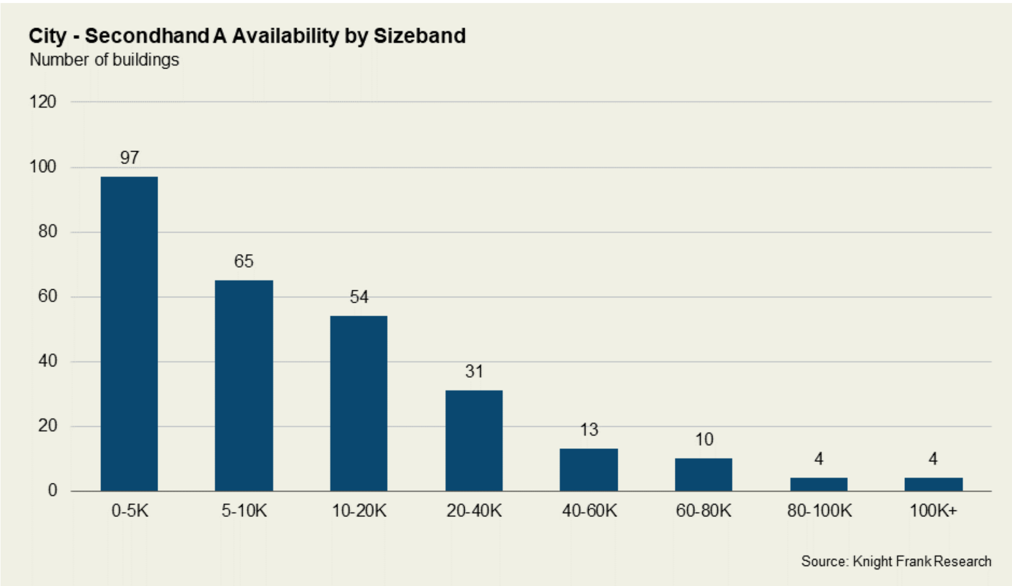

Figure 11: Second-hand availability by size band - *Knight Frank Research, 2023*

2.4 The investor market

Reduction in weight of money targeting London offices in 2023

According to Knight Frank research, the competition for global capital will intensify in 2023 as markets are predicated to be less liquid and as the underwriting of transactions becomes more challenging as central banks continue to increase interest rates. This issue is particularly pertinent to London, as up to three-quarters of transactions in London are from investor groups that require efficiently priced capital to fund transactions[27]. Amid this backdrop, the results of Knight Frank's *2023 Global Capital Tracker Survey* of real estate investors anticipates that the weight of capital targeting London offices will fall by £5.5bn to £43.8bn, with investors concerned about greater levels of market risk.

The Asia Pacific and Greater China regions remain the largest investor groups with capital intended for London with £9.7bn and £9.6bn respectively and almost 45% of the total weight of capital[28]. Investors from Europe account for almost £7.2bn (16.5% share), North American investors with £5bn (11.3% share) and United Kingdom £4.6bn (10.5% share)[29]. Although there has been a fall at the start of 2023, the money earmarked for London office investment is almost seven times the levels of available institutional grade stock, which is currently £6.3bn[30].

Risk aversion can provide opportunity

Historic transactions data shows that periods of risk aversion result in lower levels of transactions from investor groups that are unable to access efficiently priced credit. However, these periods are often accompanied by a rise in transactions from private investors particularly for larger buildings as there are fewer competing bidders. For example, during the global financial crisis and Eurozone debt crisis, private investors increased their share of all transaction volumes to 30%, which compares to an average of 20% in the five years prior[31]. Similar trends are evident during the high inflation period of the early 90s, the period of uncertainty that followed the Brexit referendum and more recently during the pandemic.

The role of private capital in commercial real estate has grown. Private capital investment grew globally by 52% during the pandemic period to $405bn and 38% above the average of the last five years[32]. Moreover, private investors had allocated an average 27% of their wealth to commercial real estate, with almost 25% of investors intending to increase investment in the sector[33].

Lower investment volumes expected in 2023

In Knight Frank's *Active Capital Report*, latest machine learning and regression techniques were used to predict the flow of cross-border real estate capital in 2023. The results show that the office sector is the most active sector globally and countries such as the UK with greater levels of liquidity and inflation hedging have the potential to be the main beneficiaries of cross border real estate investment[34].

Knight Frank's forecasting models include a *London Capital Gravity* model where proprietary deals data is used to forecast actual transaction volumes. The results of the model show an expectation of global investment volumes falling by 17% to £9.5bn. This is slightly below trend levels of transactions in London offices of £9.8bn. This follows two years where the value of actual transactions grew by nearly 50%. The top three investor groups by nationality are the APAC region with £4bn of transactions (42%), Europe with £2.3bn (25%) and North American investors with £1.7bn (18%)[35].

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[27] Knight Frank, 2023. Global Capital Tracker Survey.

[28] Knight Frank, 2023. Global Capital Tracker Survey.

[29] Knight Frank, 2023. Global Capital Tracker Survey.

[30] Knight Frank, 2023. Research.

[31] Knight Frank, 2023. Research.

[32] Knight Frank, 2022. Wealth Report.

[33] Knight Frank, 2022. Wealth Report.

[34] Knight Frank, 2023. Active Capital Report.

[35] Knight Frank, 2023. London Capital Gravity Model.

Private investors have historically accounted for an average 20% of transactions in London. Knight Frank expects this to rise in 2023 to 25% and potentially investing £2.4bn this year[36].

Capital values fall as yields rise but prices adjusting quickly

In response to rising interest rates, prime yields have risen 100 basis points (bps) in the City over the last year. As a result, a repricing is underway to ensure debt is once again accretive to returns. This suggests that yields for prime assets have almost fully corrected and prices have been somewhat resilient to valuation downgrades, with expectations for future rental growth being a key component in upholding values. However, yields and prices for secondary assets are expected to move further and are a further example of the polarisation between asset classes in the London market. This observation is supported by historical performance of offices by grade, highlighting the outperformance of prime assets above secondary (**Figure 7**).

Over the last 20 years, total returns on prime assets have been 8.5% per year compared to 7.9% for secondary assets[37]. During the majority of this time, the spread between the performance of prime and secondary assets has been fairly small due to low interest rates and high levels of rental growth across the market. For this reason, over the past 10 years total returns for secondary assets have been very competitive with those of prime offices in the City. In recent years and especially following the economic dislocation of 2022, this spread has begun to widen to historical norms and prime offices have once again yielded higher returns than the market average. While returns on top-quality assets have declined sharply in the last year, valuers have suggested that the majority of price correction has now occurred, with capital values for prime city offices declining 13.4%[38]. For secondary offices however, the decline is expected to continue, indicating that the short-term outperformance will not persist. Capex costs incurred by lower grade buildings are expected to be a key concern for landlords over the coming years which will weigh against valuations. Returns on prime City offices are expected to be reasonable, with low capex costs, low vacancy, rising rents and the flight to quality supporting the market for best-in-class assets.

The repricing of prime assets is also evident in the capital values implied by yields and prime rents for each submarket in the City (**Figure 12**). These values are shown to have peaked in 2022 Q1 before declining as yields rose over the year. This decline is least pronounced in the Clerkenwell/Farringdon submarket where there has been rental growth over this time. Stability in prime yields and rental growth from 2024 onwards in all submarkets will therefore support rising capital valuations in the coming years.

While financing costs have risen around the world, the volatility in UK money markets during 2022 Q2 means long-term interest rates shifted further in a shorter period of time than other global rates. As a result, prices have had to adjust quicker in the UK than in other comparable business hubs. With the risk-free rate moderating into 2023, this is expected to provide a solid basis for a resurgence in investment volumes later this year. Capital gravity modelling forecasts that this will lead to £9.5bn of cross-border investment into the London market this year and a total of £11.5bn including domestic investment[39].

[36] Knight Frank, 2023. Analysis.

[37] Knight Frank, 2023. Analysis.

[38] Knight Frank, 2023. Research.

[39] Knight Frank, 2023. London Capital Gravity Model.

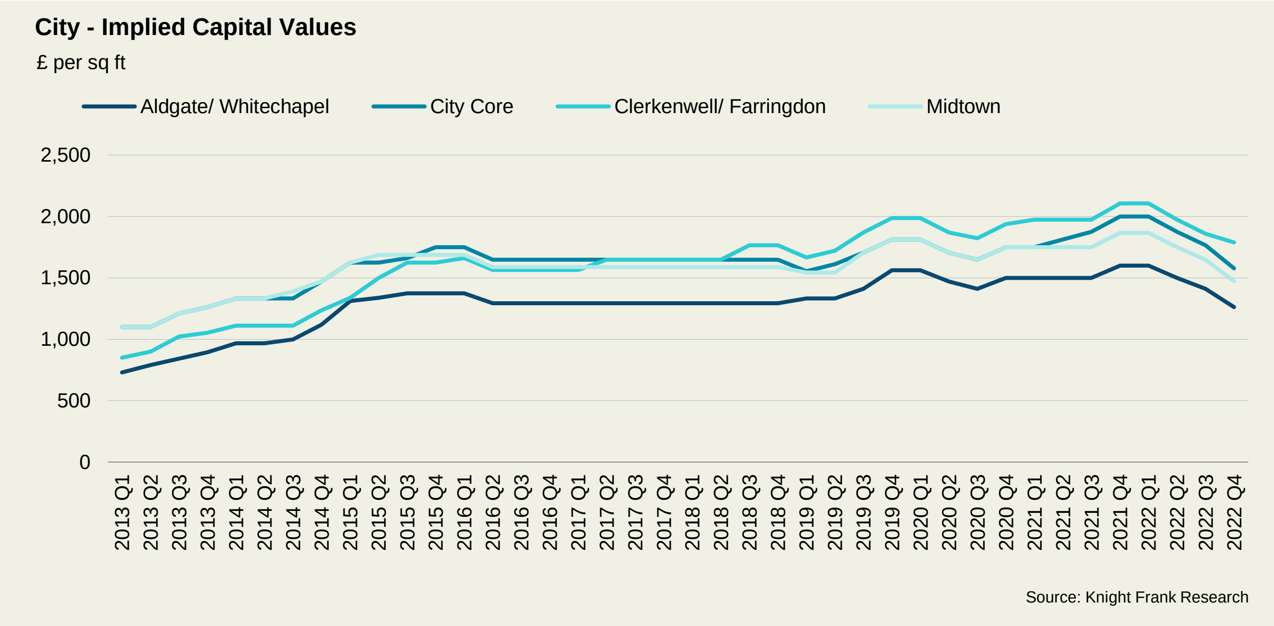

Figure 12: Implied Capital Values - *Knight Frank Research, 2023*

The City's office market analysis suggests that there is a diverging market, that is expected to have a tough 2023-2024 year ahead. Rising interest rates are impacting growth levels, however, there is significant investor appetite, particularly from foreign investors in high-quality, 'best-in-class' space.

3. Strategic and policy context

This section summarises key findings from a rapid review of reports and studies relevant to office use in the City of London. The review included the following documents (**Figure 13**):

- National Planning Policy Framework and Guidance (NPPF/NPPG)
- City of London Local Plan 2015
- City of London Local Plan: City Plan 2036 Proposed Submission Draft 2021
- London Recharged: Our Vision for London in 2025
- The Square Mile: Future City
- London Plan

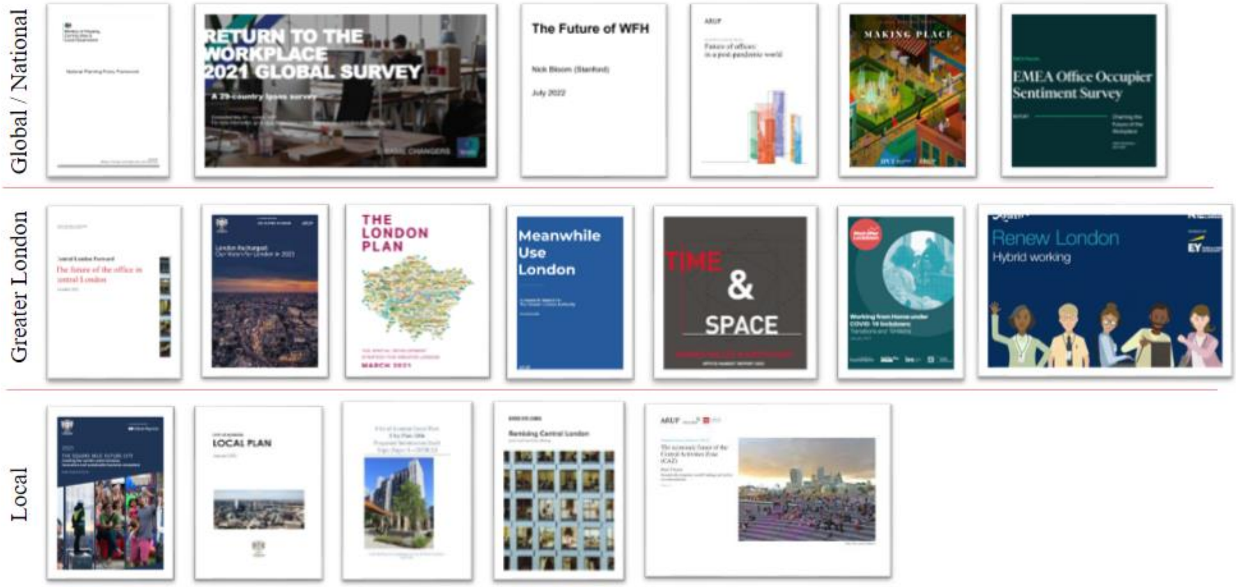

Figure 13: Policy and literature review

A brief overview of each document, and their relevance to this study is outlined in **Table 1**.

Table 1: Literature Review

Document	Summary and relevance
National Planning Policy Framework and Guidance (NPPF/NPPG), Department of Levelling up, Housing and Communities, 2021	The NPPF sets out that the main purpose of the planning system is to achieve sustainable development, where planning policies and decisions should ensure that sufficient land to meet needs is available to support economic growth, innovation and productivity. Offices are listed as one of the main uses of towns and the framework recommends that planning policies should allocate a number of appropriate sites in town centres to meet the anticipated needs for offices, preparing for at least the next ten years. The guidance supports proposals converting retail and employment land to housing in areas of high housing demand, except where proposals would undermine key economic sectors or viability of town centres such as the City of London.
City of London Local Plan 2015, City of	The plan provides a spatial framework laying out the vision, strategy, objectives, and policies for planning the City of London. Offices are the predominant land use in the City (around 70% of floor space), highlighting their significance. Thus, existing office stock remains protected under the plan,

London Corporation, 2015	where Government recognition of the City as a nationally significant area of economic activity protects offices from development into housing. The plan also encourages mixed use developments, including mixing offices with other land uses such as commercial; new and refurbished offices to create high-quality office space; and a flexible approach through alternative temporary uses to manage any short-term over supply leading to vacancy in the City's office market. The plan has relevant implications for the office use behaviours encouraged under local policy and in promoting the protection of offices from stranded asset risk.
City of London Local Plan: City Plan 2036 Proposed Submission Draft 2021, City of London Corporation, 2021	This document sets out the future development of the City of London. The plan has relevant implications for the quantitative demand for additional office floor space with objectives, aiming to increase the City's office floor space stock by a minimum of 2,000,000m^2 net through phased development during the period 2016 to 2036. Flexibility is a key theme of the plan, encouraging flexible floor spaces for different size occupiers with particular demand for Incubator, Accelerator and Co-Working (IAC) floor space to support SMEs, temporary uses of vacant commercial sites, and flexibility in lease arrangements to accommodate growing businesses. The plan has implications for anticipated office-use behaviours in the City, encouraging flexible workspaces.
London Recharged: Our Vision for London in 2025, City of London Corporation with Oliver Wyman and Arup, 2020	This report provides recommendations for businesses, government and academia on the built environment and encouraging its innovation. A key focus of the report is on new and growing businesses, as 20% of office tenants will be new businesses by 2025. The report recommends offering unused office space to artists for pop-up galleries, developing hyper and flexible workspaces, and converting vacant retail spaces into affordable hubs for start-ups. The City of London are recommended to trial small office spaces used for testing. This provides insight into the anticipated office behaviours in the City through the need to meet the requirements for the demand for spaces for new and growing businesses.
The Square Mile: Future City, City of London Corporation with Oliver Wyman, 2021	This report sets out the City of London Corporation's priorities post-Covid of creating an inclusive, innovative, and sustainable business ecosystem, spotlighting creating outstanding environments to produce better locations for offices. A desire to attract the creative class is stated, with plans to improve the leisure sector to create a more vibrant environment, including improving opportunities for creatives to long-term letting of empty and low-use spaces, and improving the City's weekend and nightlife with major events and celebrations to help attract and retain talent from across the UK and globe. Other improvements planned to public spaces in the City of London include improving communications, energy and transport infrastructure, and prioritising pedestrianisation and cycle routes to promote active travel around the City. This report has implications for the geographical context of preventing stranded asset risk in the City, to retain the City as a desirable location for offices.
London Plan 2021, Greater London Authority, 2021	The London Plan provides a spatial development strategy for the development of Greater London over the next 20-25 years. The most relevant policies to offices are E1 Offices, E2 suitable business space, and E3 affordable workspaces. The plan describes offices as going through a period of restructuring, emphasising the need to meet the requirements of the increasing pool of micro and SMEs, changing working styles and new accommodation forms. A focus on increasing office stock and refurbishing current offices to improve their quality, flexibility and adaptability provides some guidance for the net additional office floor space in the City. A spotlight on affordable

	workspaces highlights the ability in defined circumstances, such as in areas identified in local Development Plan Documents where cost pressures have led to the loss of affordable workspaces, for instance the City Fringe around the CAZ, to secure workspace at rents below market rate for specific sectors with social or cultural value or start-ups. Additionally, the plan sets out measures to protect a range of B Use Class workspaces, helping to protect these offices from becoming stranded asset risks. SD4 and SD5 policies on "The Central Activities Zone" (CAZ) and "Offices, other strategic functions and residential development in the Central Activities Zone" respectively are also relevant to future office floor space in the City. In particular, these set out the role of the CAZ in maintaining London's world city status, the role of the City as a nationally important location for globally orientated financial and business services, and the policy requirement in SD5 that residential development is not appropriate in defined parts of the City and that elsewhere in the City greater weight should be given to offices than residential.

3.1 Emerging office trends and drivers of demand

The post-Covid world has given birth to new interactions with offices. Offices are now considered places of socialisation and collaboration and there is a growing sense that employees and employers prioritise in-person interactions when they are in the office. It is seen as key to business and career opportunities, generating new ideas, and supporting staff development. Reduced office attendance, the normalisation of home-working, and flexible working policies have created the conditions for the office to become a choice, rather than an obligation – in certain sectors and organisations. In other words, the office has to be 'commute-worthy' and 'better than home'. The following section outlines emerging trends and drivers of demand which influence the uses of offices and subsequently the demand for office spaces and risk of stranded assets in the City.

3.1.1 Current and anticipated office uses

There is an observed 'flight to quality'

Demand for net additional office floor space in the City is tending to focus on quality best-in-class, Grade A and low carbon offices. A tilt towards refurbishment and new office provision both in policies and demand and the 'flight to quality' will drive stronger demand for best-in-class space in the City of London[40]. There are a number of factors driving this, including the importance now placed on high quality, and amenity rich offices as an important element of recruiting and retaining employees[41] to attract the best staff and encourage their return to the office, as well as the importance of offices as an outward expression of occupier's values and character[42].

The City has long encouraged and supported the renewal of office stock to deliver high quality working environments. Planning policies and documents including the Draft City Plan 2040 (previously City Plan 2036) and the London Recharged document clearly set out targets and recommendations for the evolution of the built environment and investment in sustainable and high quality assets. Policies encouraging this flight to quality also include the new Energy Performance Certificate (EPC) regulation, requiring current offices to have an EPC rating of C or above by 2027. The legislation states that landlords who fail to comply with new EPC regulation could risk fines of a minimum of £5,000 for non-compliant properties let for less than three

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[40] Deloitte, 2022. London Office Crane Survey Winter 2022.

[41] Arup, 2022. The future of the office in Central London.

[42] Arup, 2022. The future of the office in Central London.

months. When non-compliance extends beyond a three-month period, penalties could reach 20% of the rateable value of the property with a minimum fine of £10,000 to a maximum of £150,000.

The 'flight to quality' is further demonstrated in **Figure 6** and **Figure 7** which demonstrates take up and rent indices by quality (prime and secondary), where prime/quality space outperforms secondary/average quality buildings.

Refocus on offices being places for collaboration and socialising

The post-Covid work environment has seen a shift in the perception of offices from places of work to places of working interactions, where collaboration and socialising are a key use of offices[43]. This is supported by a survey of over 2,000 London workers, with the most cited benefit of working in offices being socialising (57%)[44]. Occasional office visits increases the importance of face-to-face collaboration, social interactions and chance encounters to reap benefits of innovation, agglomeration and informal learning[45]. Offices must consider the flows through workplaces to optimise interactions in key areas, such as breakout spaces and kitchens. Conversely, collaboration and socialisation hubs in offices also increases the importance of having quiet spaces for private meetings, phone calls, working or thinking. Almost two thirds (61%) of respondents of CBRE's clients cite private spaces for meetings and conversations as a significant criterion for choosing office building[49].

Flexibility is driving demand

Flexibility is a common need, with flexibility being demanded for both office floor spaces and by workers who desire autonomy in returning to the office. Savills estimated that flexible office space will account for 20% of total office use in the long term in the City of London (2021), which is supported by CBRE's respondents, where 72% cite flexible open space as a significant criterion for choosing office buildings[49]. Recently, the City of London has experienced significant growth in the co-working office market and flexibility of lease arrangements. Demand for Incubator, Accelerator and Co-Working (IAC) floor space is also expected to continue to grow across London[46], which is particularly important for supporting the growth of micro and SME by providing flexible and affordable space as accommodation costs are a major overhead for new businesses and rents in the City can be prohibitive to new occupiers.

Workers want autonomy to choose their office days, with large variation in how many days employees want to work from home[45], which is influenced based on sector, demography and costs (including travel costs from commuting or home energy bills for example). For instance, banking, healthcare, energy and professional services sectors are the most likely to work in offices. In terms of breaking down flexible working patterns, office attendance is highest amongst older individuals, senior staff, those developing their careers and men, and lowest amongst women, younger employees and middle management[47]. Generally, 60% of Londoners hybrid work[44], with average office attendance of twice a week[48], usually peaking between Tuesday and Thursday[49].

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[43] Arup, 2022. The future of the office in Central London.

[44] Kings College London, 2022. The WFH Revolution: How New Ways of Working are Changing London.

[45] IPUT and Arup, 2022. Making Place: The Recalibration of Work, Life and Place.

[46] City of London Corporation, 2021. City Plan 2036.

[47] Greater London Authority, 2021. The economic future of the Central Activities Zone (CAZ).

[48] London First and EY, 2021. Renew London: Hybrid Working.

[49] CBRE, 2021. Will working from home change the Central London Office Market?

Additionally, wider environmental credentials and low carbon offices are now highly sought after, with 62% of respondents of a Lambert Smith Hampton survey and over half of respondents of a CBRE occupiers survey stating that ESG influences their choice of office space[50,51].

Amenity is a key occupier requirement

One study of London workers found cost (65%) and length (60%) of their commutes was the predominant deterrent in coming into the office[44]. London workers are found to consider ideal commutes to be less than 30 minutes (87%) and prefer walking or running (35%), highlighting the importance of accessibility via public and active transport to offices. Companies should provide internal amenities such as bike parking, lockers and showers in offices to help facilitate employees commutes and improve office accessibility[52]. Additionally, employees want to be in thriving locations with multiple amenities and services, where the most important amenities in the environment external to offices include shops, stores and pharmacies; transport connections; green space, parks, gardens; places to socialise; and places to work and collaborate[44].

Traditionally the amenity provision enjoyed by office occupiers was confined to bars and restaurants within close proximity of the workplace. Increasingly, the amenity offer provided within a building has become just as important to occupiers wishing to entice their staff back to the office as well attract and retain a talented workforce. Additionally, wider amenities in the City of London may further make a difference in attracting and retaining workers.

Amenities provided within an office

Table 2 compares the in-office amenity provision of new towers being developed in the City of London with an existing City-based building, based on a range of criterion including retail, public areas, hospitality offering, breakout/collaboration areas, flexible and coworking spaces and event spaces. These are explained further below.

Table 2: In-office Amenity Provision – *Knight Frank Research, 2023*

		New Builds		Existing
Retail	✓	✕	✓	✓
Public Areas	✓	✓	✓	✕
Hospitality	✓	✓	✓	✓
Breakout / Collaboration Areas	✓	✓	✓	✓
Flexible / Co-working	✓	✕	✓	✓
Event Space	✓	✓	✕	✓
End of Trip Facilities	✓	✓	✓	✓
Notes	Central Square, Wellness Suite, Screening Room	Terrace Deli, The Lookout, Private Terraces	Rooftop Dining, Green Growing, reliable business grade high-speed internet and catering upon request	Onsite concierge, Wiredscore Platinum, Basement cycle park with ramp access

[50] Lambert Smith Hampton, 2022. Thames Valley and the Southeast Office Market Report.

[51] CBRE, 2022. Occupiers growing their footprint in London Office market.

[52] K2 Space, 2023. Office Design Trends.

Retail:

- 1-2 Broadgate boasts the largest retail area spanning 90,000 sq. ft across three levels. The development is aiming for an EPC rating of A.
- The existing building under study provides 46,400 sq. ft net of office space. The collection of shops and cafes accessible from the newly created piazza achieved an EPC rating of C.
- 1-2 Broadgate surpasses the existing building in providing a diverse and expansive retail experience in London.

Public Areas:

- 40 Leadenhall and 8 Bishopsgate differentiate themselves from the existing building under study by offering public areas within their premises.
- In the case of 40 Leadenhall, a remarkable 1,000 sq. ft reception and community space serves as a focal point for interaction and collaboration.
- The inclusion of public spaces in 40 Leadenhall and 8 Bishopsgate reflects a strategic approach to creating tenant-centric environments, which can enhance occupant satisfaction.

Breakout / Collaboration Areas:

- The breakout and collaboration areas included in 40 Leadenhall, 8 Bishopsgate and 1-2 Broadgate are on track for an EPC rating of A. The existing building under study currently stands at an EPC rating of B.
- 40 Leadenhall stands out with its unique offering of a library which serves as a dynamic space for intellectual exploration.
- Introducing a distinctive and innovative element such as an experiential space could help the existing City-based building under study enhance its appeal and provide a more memorable experience for its occupants.

End of Trip Facilities:

- 40 Leadenhall emerges as the most comprehensive facility offering 3 saunas, 1,068 cycle racks, cycle maintenance services, 115 showers, and 1,069 lockers.
- The existing building under study could enhance its end of trip facilities by adding saunas, more cycle racks and increased availability of lockers and showers, promoting healthier and more sustainable commuting options.

Amenity provision in office locations

Amenity provision is demonstrated in **Figure 14**, which shows a bespoke ‘amenity provision’ score for London’s office submarkets, with each weighted score being an aggregate of the quantity and quality of key amenity categories, including Arts and Culture, Education, Health and Wellbeing, Hospitality, Retail and Transport. The top five London submarkets with the highest amenity provision scores include two out the four City submarkets - City Core and Midtown.

Using the case study examples above of new builds, **Table 3** shows the location amenity score breakdowns for new towers being developed in the City. The overall amenity scores are amongst the highest for new offices in Central London.

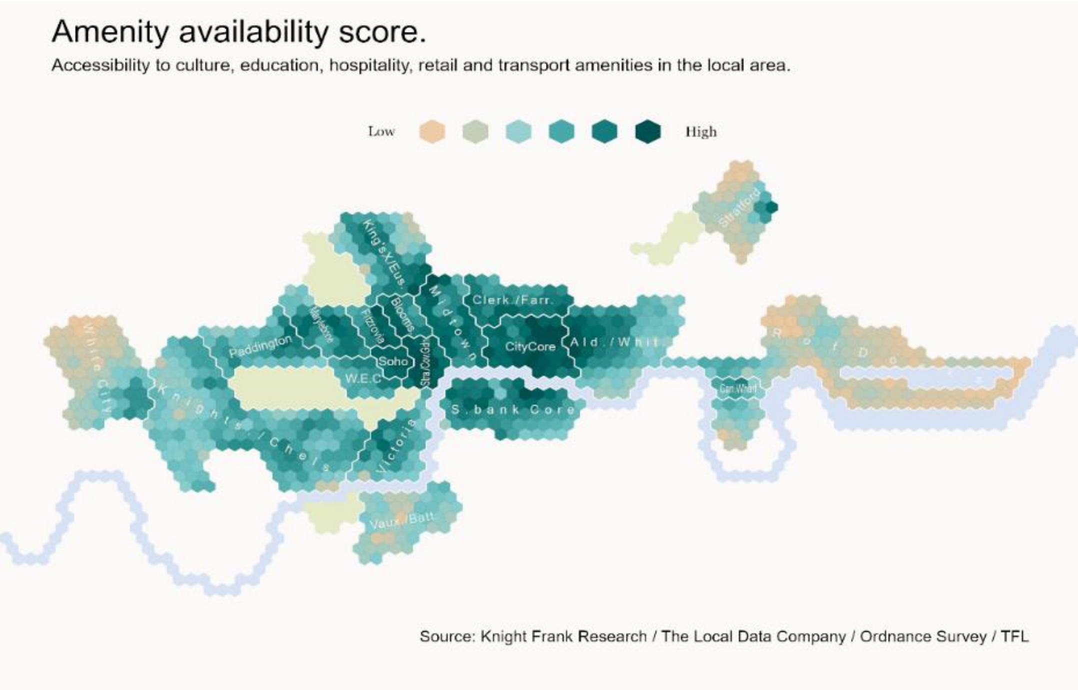

Figure 14: Amenity Provision – *Knight Frank Research, Local Data Company, Ordnance Survey, TfL, 2023*

Table 3: Location Amenities – *Knight Frank Research, 2023*

	40 Leadenhall Street, London, EC3M 2RY	8 Bishopsgate, London, EC2N 4BQ	1 2 Broadgate, London, EC2A 2DQ
Health / Wellbeing Score	0.73	0.76	0.66
Hospitality Score	0.82	0.84	0.83
Retail Score	0.85	0.87	0.88
Transport Score	0.98	0.97	0.91
Amenity Score	0.90	0.91	0.86

Demand is driven by changes in office-use behaviours, with a refocus on offices being places for collaboration and socialising, requiring high levels of amenity, both internally within a building and externally in neighbouring areas to attract employees back to the office.

3.1.2 Demand for floor space

This section analyses the drivers of demand for net additional office floor space in the City. Drawing upon broader market research, this section explores the key dynamics that are driving London office demand, and then models the future anticipated demand for floor space for three plausible futures in the City.

Prospects for global economic growth have diminished over the last twelve months

This in turn has led to reduced expectations around revenue, capital expenditure and headcount growth. This sentiment is expected to act as a brake on expansionary demand over the first half of 2023. Throughout the year, London office demand will be primarily driven by occupiers responding to critical lease events. It is worth noting that there are 23.5m sq ft of lease expiries (484 occupiers) on office space of over 20,000 sq ft in London between now and 2027[53]. It is clear that this structural demand will be sizeable and significant, exacerbated by a rather limited pipeline of quality new supply and the increased number of assets being at risk of becoming stranded (due to EPC regulations).

Occupiers intend on redesigning and reconfiguring their office spaces

In particular, drawing upon greater amenities and services to make their office more compelling to their staff. This will serve to sustain the well-trodden path to quality witnessed in the market over the last eighteen months and has real implications for the market offering emerging from landlords. This will require more than cosmetic meddling. Occupiers are seeking to enhance the physical environment while also generating a more vibrant workplace experience, one that is compelling to staff who now have some choice in where they work. There are two outcomes. One, the reconfiguration of office space to be less about individual, isolated workstations, or private offices, and more about driving connection, socialisation, and collaboration. Two, the use of a greater depth and breadth of amenities (both within the office and nearby) to provide staff with something they cannot readily access remotely[54].

The baseline for occupancy is being reset

The most negative sentiment across the entire sentiment index was in response to the suggestion that occupiers will return to pre-pandemic levels of occupancy, levels typically around 65-70% of office capacity[55]. However, those early stage Covid projections of an occupier’s total floor-space reducing by 40 or even 50%, look increasingly wide of the mark. While the full hybrid model shift of working anytime, anyplace, anywhere, envisaged at the start of the pandemic, is not an outcome for most occupiers, an office first stance, combined with greater acceptance of flexible working is, and this will have implications for office occupancy and utilisation rates.

There is a risk of reduced demand as occupiers require less space

Existing office stock is being protected under current policies including the NPPF, City of London Local Plan and the London Plan. Evidence suggests that organisations do not plan to significantly cut office space as firms want employees to attend on the same day and office scheduling is perceived by managers as a step too far in making people return to work in offices. The trend of de-densification of offices indicates that future demand may not necessarily be lower as the ratio of office space per worker is likely to increase with the importance of providing more collaboration spaces and amenities, from 8sqm/employee to 10sqm/employee[56].

New occupier groups are driving future demand for space

Innovation drives growth and supports the population and wealth needed for well-functioning real estate markets. As we emerge from the global pandemic, it will be innovative organisations - focused on sectors such as fintech, life sciences, med tech and education that will make new breakthroughs, attract new swathes of funding, and generate new demand for space. Knowing that innovation often arises out of economic dislocation and that innovation is a key driver of growth means that identifying innovation-led cities (ILCs) becomes ever more important for real estate investors. In the current economic environment, it will be these innovation-led locations which attract and retain the population and wealth necessary for resilient, well-performing real estate markets.

In real estate terms, this resilience is demonstrated by cities that can sustain tenant demand, support rental levels and capital values, and ultimately returns for investors. Innovation rarely happens in isolation, and agglomeration effects arise from innovators clustering together. These clusters are often centred around

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[53] Knight Frank, 2023. Cresa Global Corporate Real Estate Sentiment Index.

[54] Knight Frank, 2023. Cresa Global Corporate Real Estate Sentiment Index.

[55] Knight Frank, 2023. Cresa Global Corporate Real Estate Sentiment Index.

[56] This refers to net floorspace.

higher education institutions. Successful innovation clusters monetise ideas and generate strong local economic growth. This innovation also attracts and retains the population and wealth needed for well-functioning commercial real estate markets. London ranks as one of the most innovative cities in the world due in large part to the presence of world class leading education providers[57]. A future source of demand arises from this proximity with potential spill over benefits such as an increase in start-ups, incubation hubs and creative industry clusters.

A brief overview of three growth sectors that may drive future demand for space in the City include:

- **MedTech**: MedTech refers to the companies who are developing clinical diagnostics, medical devices and equipment and digital health applications to diagnose and deliver care. The sector experienced one of the highest growths in the City (+140% or an additional 7,000 jobs) between 2015 and 2021[58]. Technological advancements will turbo-charge the growth of dynamo sub-sectors, such as digital health, large tech companies are investing heavily into the sector via equity funding, mergers & acquisitions and partnerships. With the rise of MedTech, the real estate needs of these types of occupiers will need to be assessed in order to accommodate their requirements. Occupiers in both the life sciences and MedTech sectors will favour flexible spaces, as is evidenced across other Technology, Media and Telecommunications sectors. Therefore, it is important that this flexibility in real estate is supported to enable the growth of their businesses. This provides an opportunity for cities which have a deep talent pool in life sciences and technology, such as London, to capitalise on this level of occupier demand.

- **Life Sciences**: The UK life sciences sector is on a fast-growth trajectory and will be a mainstay in the UK's economic growth story throughout the 2020s. However, as this sector grows, so will demand for suitable space and accommodating life sciences in a dense urban environment may present challenges. According to the science industry partnership, a further £80bn of additional public and private sector investment is expected following the government's commitment to increase R&D spending, with a significant portion of this going directly to life sciences. The number of firms classified as "Scientific research and development" grew rapidly in the City with a 160% increase between 2015 and 2022[59] (from 40 firms to 105) and associated jobs followed an even faster trend growing by 185% over the period. With the growth of the sector and a current lack of supply, there is an opportunity to deliver real estate for the growing number of life sciences SMEs. Real estate will be an essential strategic device to support, facilitate or portray this transformation and to engage, attract or retrain talent. For those able to harness next wave technologies quickly and effectively, new revenue streams will emerge whilst new disruptors will appear bringing fresh, high growth occupational demand into real estate markets.

- **Educational institutions**: The presence of world leading universities in the City is a significant draw to attracting talented individuals and innovative businesses creating vibrant micro locations. The City is currently an attractive location for London campuses of regional and international universities, including Coventry, Northumbria and Chicago Business School for example. The education industry is thriving in the City with an increase of 33% of employment related to this sector between 2015 and 2022[58], while the number of firms related to this sector increased by 82% over the period (from 140 in 2015 to 255 firms in 2022). A large number of institutions are also located along the M4 corridor in towns such as Reading, Slough and Oxford, and as a result of the improved accessibility from the opening of the Elizabeth line, the City is a location that could attract these occupiers particularly in lower rent submarkets. Education creates a 24-hour location, which in turn will bring vibrancy to the area and assist in the attraction of good quality entertainment and food and beverage offerings. This perpetuates an ongoing cycle, where office occupiers are continually attracted by the environment and amenity, and excellent amenity providers are attracted by the energy and vivacity that is generated by the site occupiers.

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[57] Knight Frank, 2023. Active Capital Report.

[58] BRES, 2023; assimilating MedTech jobs to the "Human health and social activities" from ONS classification, Life Sciences to "Professional, scientific and technical activities" and Educational Institutions to "Education".

[59] IDBR, 2023; Arup analysis.

It should be noted however that these growth sectors might require specific types of spaces and location (e.g. being close to hospitals for MedTech activities) so further analysis on suitability of sites and appropriateness of these sectors to the City will need to be undertaken.

Employment is projected to grow

The employment trends by sector are highlighted in **Figure 15** based on GLA Economics London Long Term Labour Market Projections[60]. Sector-level projections for London are constructed using productivity trends (London GVA per sector-employment job) and GLA Economics job series for 1998-2020 to inform sector judgements. Results show that the number of traditional office-based jobs and public sector office-based jobs across London are projected to decline, mainly due to job losses in Finance and Public administration. On the other hand, Information and Communication jobs (+67,600) as well as Professional, Real Estate, Scientific and Technical Activities (+335,000) - all part of emerging office-based jobs - are projected to drive growth in London. Entertainment and Accommodation and Food Services jobs, although smaller industries, are also expected to grow exponentially over the period with respectively +72,000 and +96,600 jobs.

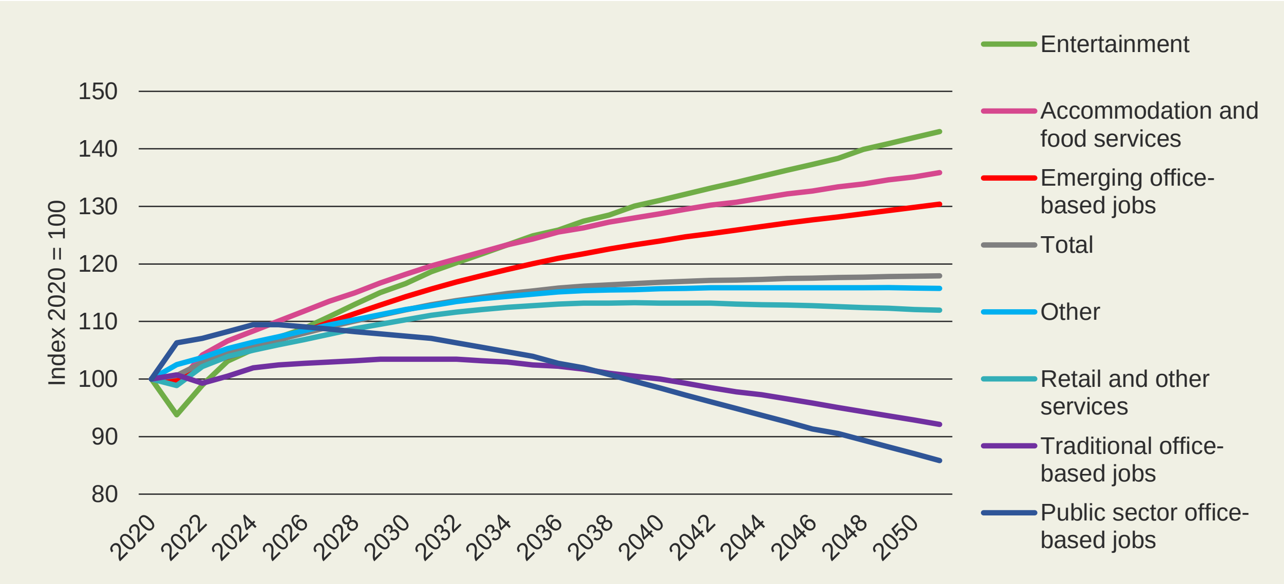

Figure 15: London-wide Long Term Labour Market Projections – Sector projections - *GLA Economics 2022*

The City will remain a desirable place to locate

The City is expected to remain desirable as a place for employers to locate or grow, going forwards. The Square Mile's labour market access, availability of different spaces, supporting transport network, and 'outside the office door' offer place it in the top tier of the London office market hierarchy, meaning that it is potentially more resilient to a softening of demand than more peripheral locations.

Various studies expect the City to see significant growth in jobs, indicating demand for net additional office floor space. For example the GLA projects employment in the City of London to grow to 730,000 (or an additional 85,000 jobs, out of which 60,000 could be office jobs) by 2041[61]. The City is expected to have one of the highest growth in jobs in Central London, where Central London's office-based jobs are projected to grow by 27% from 2022 to 2042[62]. The City of London Local Plan 2036 also outlines plans to increase the

[60] GLA, 2022. London Long Term Labour Market Sector Projections; Arup analysis, 2023.

[61] GLA, 2023. London Long Term Labour Market Productivity Trend-Based Borough Projections; Arup analysis, 2023.

[62] Arup, 2022. The future of the office in Central London.

City's office floor space stock by a minimum of 2,000,000m^2 net through phased delivery during the period 2016 to 2036[63]. GLA Economics has produced trend-based borough level employment projections[64] which provide less granularity on sectoral employment levels but provide job estimates at a local level. Borough employment projections were constructed by applying a similar productivity trend-based methodology to that used for London and sectors (based on GVA by sectors) and historic employment growth (which by definition includes historic policy outcomes) through to 2041. Results of this projection exercise – illustrated for selected boroughs in **Figure 16** show that central areas of London are projected to grow faster than outer London. The City is expected to gain around +85,000 jobs (+13%), with consistent growth until 2035, then stabilising until 2041.

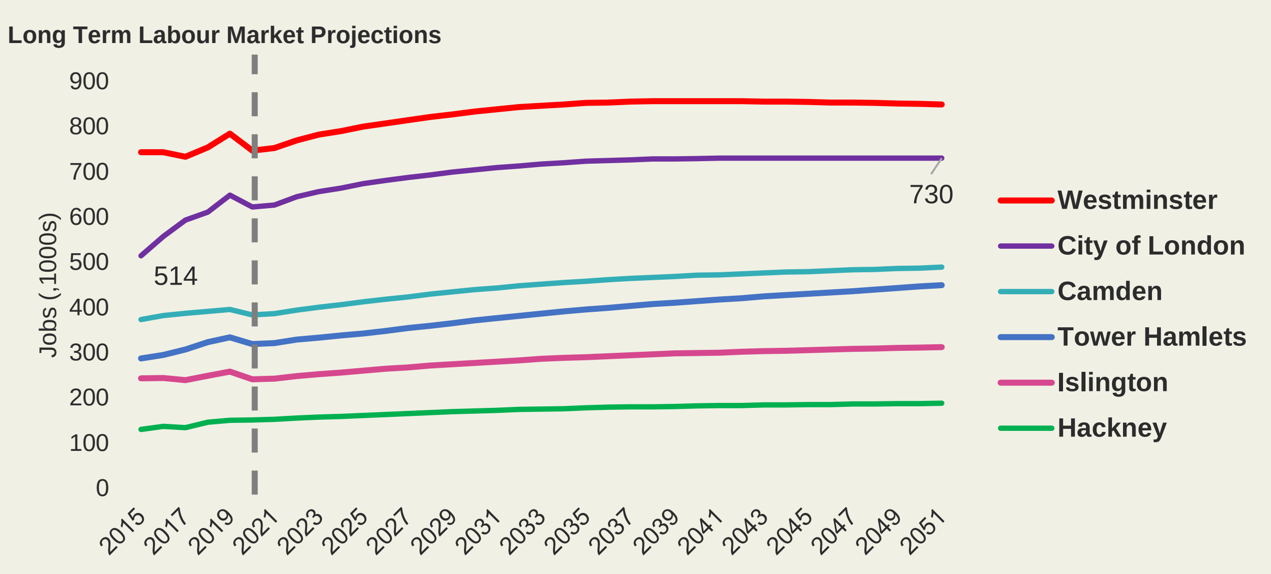

Figure 16: London Long Term Labour Market Projections – Selected borough projections - *GLA Economics 2023*

It is important to note that GLA forecast do not take into account new hybrid working patterns and potential for accommodating more jobs in the same amount of space due to lower attendance levels and more optimised space. For this reason, an additional short-term "faster" employment growth forecast has also been modelled by Arup for the specific purpose of this study to reflect a scenario where current occupiers in the Square Mile release part of their space while employing a similar number of people, which is taken over by new entrants resulting with more jobs in total in the City.

The City responds to market demand by growing its current office development pipeline

Historically, the development pipeline serves to replenish the ageing stock reaching the end of its life cycle, providing better quality office space. In the draft City Plan 2036, the City has identified a need for the development of around 21 million sq ft of new office spaces for the period 2016-2036. This underlines the City's focus and commitment to deliver more better-quality office space to respond to an ever growing demand for qualitative, sustainable office spaces within the Square Mile. Over the period 2016-2022, around 8.7 million sq ft (GIA) of net additional office spaces were delivered in the City, in line with the City Plan targets (see **Figure 17**).

The present pipeline under construction contains 11m sq ft of speculative space with a delivery timeframe of 2023-28. However, it should be noted that this total figure includes refurbishment and upgrade of buildings

[63] Based on previous 2017-based GLA employment projections which underpin the London Plan.

[64] GLA, 2022. London Long Term Labour Market Borough Projections; Arup analysis, 2023.

(which is also an essential part in the City's transition to a higher quality stock), and that the net gain over the period is closer to 6.2 million sq ft of new office spaces.

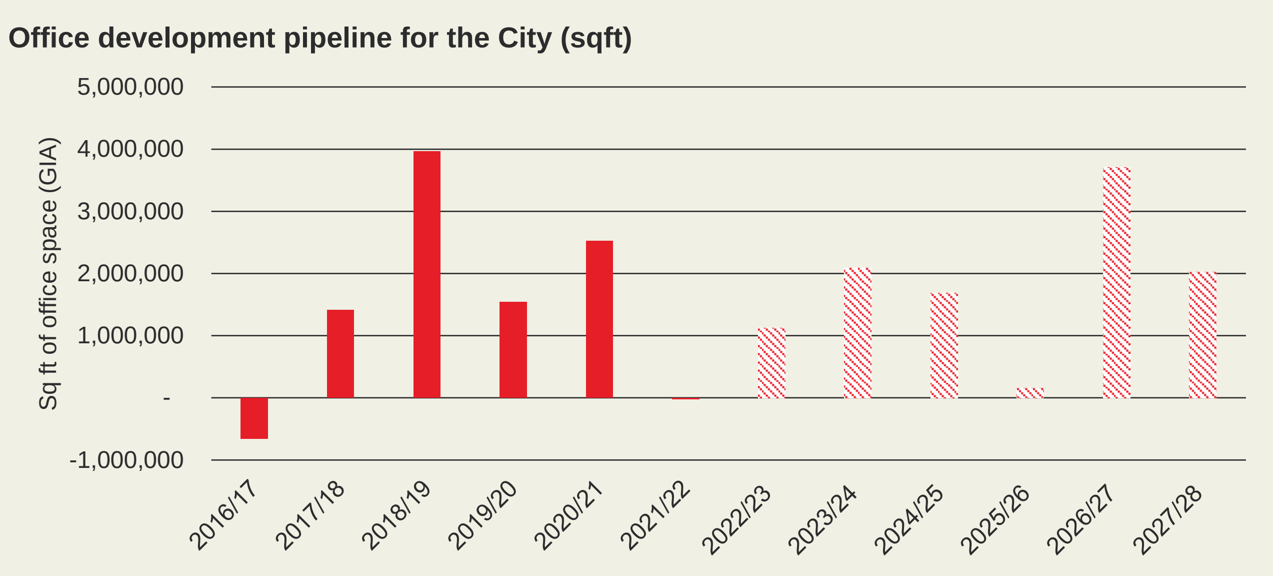

Figure 17: City office development pipeline. Net gain of office spaces (2016-2022) and speculative development of office spaces (2022-2028) - *City of London development schedules 2023; Arup analysis*

With c.15m sq ft of net office space development over the period 2016-2028, the City seems on track to reach its target of 21m sq ft of new office space development set out in the draft City Plan 2036. Ultimately the quantum of space depends on the occupier's requirements and levels of employment growth. It is important to note that each occupier will assess the quantum of space they require from a different starting point, considering their own pandemic experience, growth targets, approach to flexible working and end goal. The scenarios and model developed will provide insight into whether this quantitative target is sufficient to accommodate growth in demand for office spaces, in relation to change of working patterns, occupancy levels, need for higher quality spaces and employment growth forecasted.

3.1.3 Office stock requiring investment to meet new energy regulation and market demand

Assets may become stranded in the City for a variety of reasons, including environmental and economic factors. The Minimum Energy Efficiency Standards (MEES) make it unlawful for a landlord to grant a new tenancy or to extend or renew an existing tenancy below EPC (Energy Performance Certificates) B by 2030, and below EPC C by 2027, as an interim milestone. The flight to quality trend means that existing stock that does not meet environmental regulations may be at risk of becoming stranded assets. It should be noted that whilst EPC ratings provide a measure for understanding assets at risk of becoming stranded at a local authority wide level, a wider range of factors come into play for an asset to become stranded and this measure should also be complemented on a site-by-site basis with specific NABER rating data for individual premises, to accurately understand a building's real energy performance across energy, water, waste and indoor environment.

Figure 18 shows the government's database of Energy Performance Certificates to the central London office market and broken-down EPC ratings by market. Across London, approximately 140m sq ft of office space has an EPC rating below grade C, a figure which represents 51% of total office floor space. An important share of this floor space is in the City, where approximately 32m sq ft is below grade C[65] – representing 60% of the total City office stock, with the majority (almost 60%) of this space contained in buildings greater than

[65] Estimated as the share of premises below EPC C office floorspace (GIA) on total office floorspace (GIA) from the Department for Levelling Up, Housing and Communities EPC rating data, applied to 2022 total office floorspace stock (NIA) from the Valuation Office Agency.

100,000 sq ft[66]. These buildings are spread across the City however, they are largely concentrated in the Midtown and City Core sub-markets as shown below.

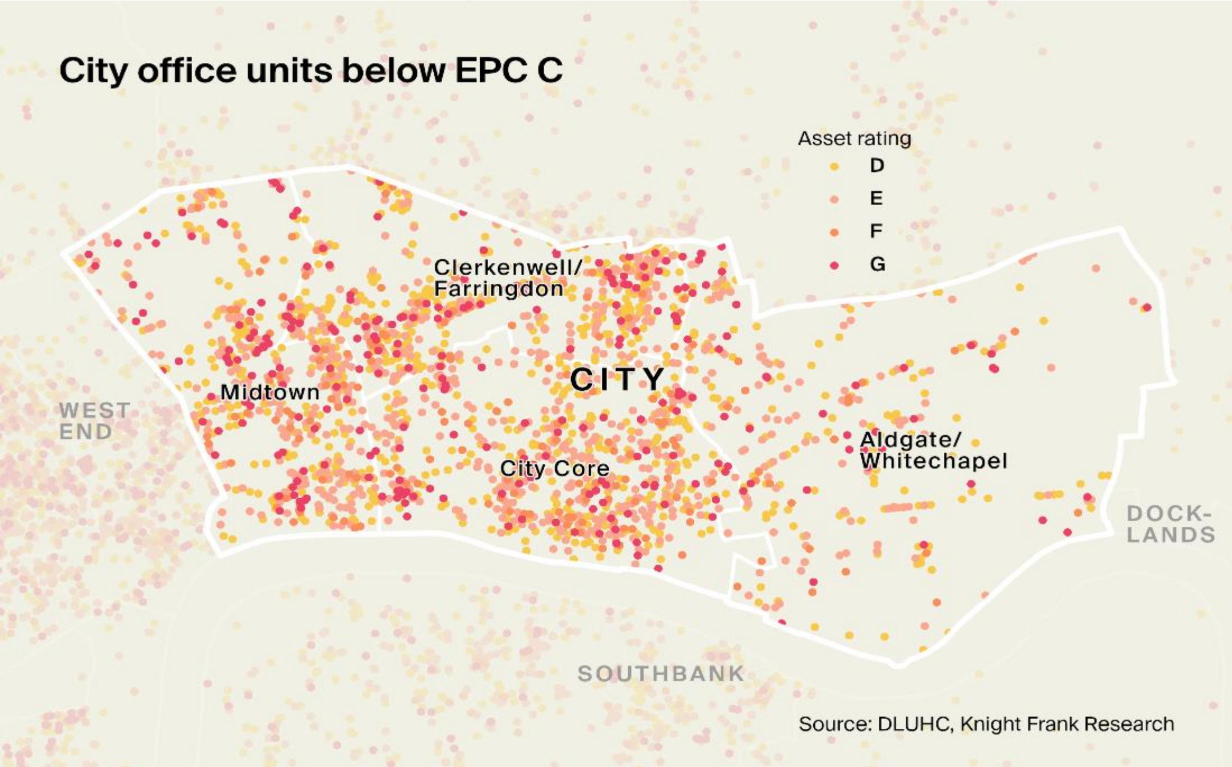

Figure 18: Central London office units below EPC C - *Knight Frank Research, 2023*

Additionally, there is a risk that buildings cannot be easily converted to meet emerging requirements for best-in-class, with characteristics including collaboration and social spaces. Whilst not limited to heritage assets, the City also has a number of historic assets including over 600 listed buildings and 26 conservation areas, which can impose additional constraints on development. The financial case for retrofit can be difficult to make as a result, particularly in terms of additional costs and limitations on the potential to deliver modern office requirements, whilst at the same time conserving or enhancing the significance of the heritage asset[67]. In order to overcome these risks, the City could encourage alternative uses for Grade B stock for which conversion is not feasible by taking a flexible approach to planning consents for heritage and stranded assets. The City could for instance explore the implications of amending policy that requires 'viability assessment' when considering change of use, where this would incentivise the retention and improved environmental performance of existing buildings.

[66] Knight Frank, 2023. Analysis of Government Energy Performance Certificates.

[67] City of London, 2015. Office Use – Supplementary Planning Document.

4. Future scenarios

4.1 Scenario overview

The following section models the demand for office floor space in the City, using three scenarios which each reflect plausible futures for the City. These scenarios consider different hybrid working patterns and evolving office characteristics such increased focus on quality of space, amenities and "hotelisation" of the offer to attract workers. These are outlined below in **Figure 19** and include **Return of In-Person, Hybrid Peak** and **New Diverse City** scenario**.**

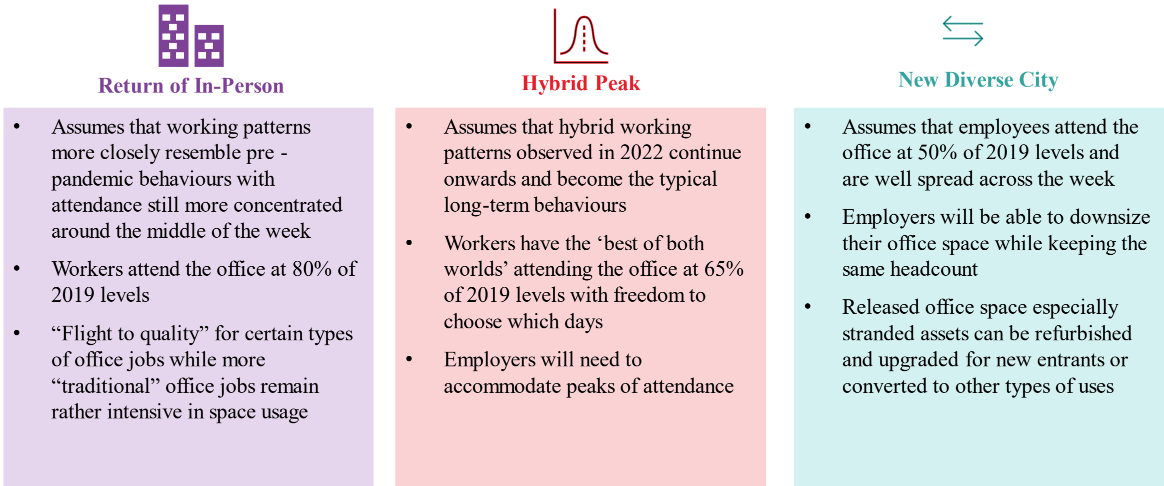

Figure 19: Scenarios for the economic model

A summary of the three scenarios can be outlined as follows:

- **Return of In-Person**: Employee attendance rates return to 80% of 2019 levels for almost all types of office jobs, with people still preferring mid-weekdays, implying that on peak days, attendance can be higher than it was pre-pandemic with people coming for the office buzz and adopting "team days" for example to socialise. As a consequence, densities per office jobs remain similar to 2019 levels with only biggest employers being able to progressively move to best-in class space with lower densities ("Financial and Insurance activities") as well as tech companies ("Information and Communication" sector) which benefit from lower attendance levels of their workforce (as supported by evidence from the AWA Hybrid Working Index[84]).

- **Hybrid Peak**: Employee attendance levels stabilise at 2.5 days a week (or 65% of 2019 levels), with the present hybrid working arrangements becoming the new normal. Employees attendance is concentrated in the middle of the week and employers need to keep enough space for these days. To attract more people into the office, quality of the offer is progressively upgraded with more space per employee led by finance and tech industries, focus on amenities and increased competition to get the best-in class offer within the City.

- **New Diverse City**: Employee attendance levels reach 50% of 2019 levels (around 2 days per week) and spread more evenly across the week. Employers manage to spread the attendance throughout the week and to downsize their office space while keeping the same headcount. More focus is dedicated to quality of space with best in class and grade A being taken up and stranded assets being efficiently refurbished and either put back on the market for new businesses or converted to other uses such as retail, industry, accommodation or even housing. At the same time, the City would be able to service a greater number of jobs through the same real estate footprint through less frequent office attendance. While this would imply potentially lower footfall on a given day due to reduced attendance, a higher number of individuals would access the Square Mile for work. This may result in higher net levels of local spend, given that hybrid workers are likely to 'splurge' on their days in the office[68].

4.2 Main parameters

These scenarios are then used as inputs for the economic modelling exercise as shown in **Figure 20**. The economic model is a demand-driven model, which estimates the future implied demand for office space in the City of London. The implied demand is the level of inhabited floor space one might expect to see if employers were able to right-size for levels of employee attendance, and suitable office supply was able to provide space to meet it.

Four main factors feed into the projections for implied demand: the total number of office-based employees (from the GLA's employment growth projections), the amount of office floor space that is provided for each employee, the number of days per week an employee attends the office, and the attendance patterns across the days of the week.

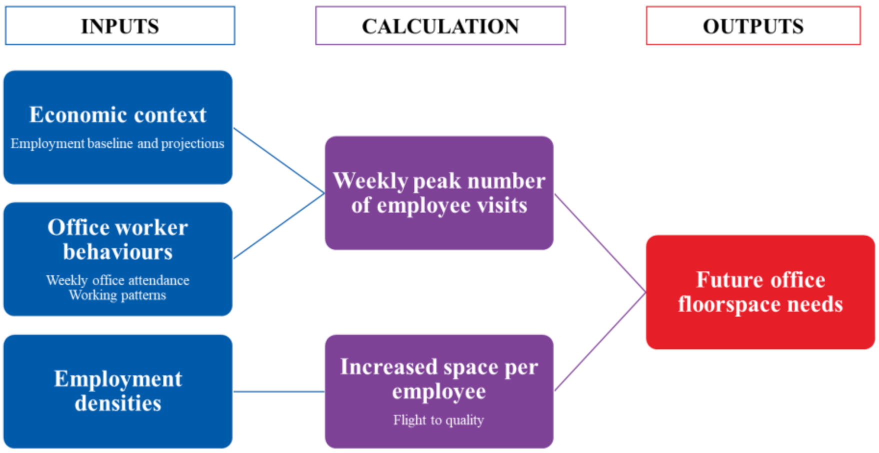

Figure 20: Overview of key economic model parameters

The assumptions and parameters that drive the model are summarised below:

- **Economic context**: Economic growth will increase the number of office jobs. In all three scenarios demand increases over time as economic growth results in a greater number of office-based jobs. We have used the GLA's long-term labour market projections for the City of London (2022) for the "Return of In-Person" and "Hybrid Peak" scenarios. These projections consider sector-based historic trends but do not account for additional capacity of office spaces related to hybrid working patterns as peak days of attendance in these two scenarios are similar to pre-pandemic levels. For the "New Diverse City" scenario, we have projected faster historic growth trends of jobs by office sub-sector in the short-term, to reflect additional "capacity" in the Square Mile related to lower attendance levels allowing for more jobs being accommodated in the same amount of space for existing firms and for new entrant firms to take over newly released space in excess. On the longer term (from 2032) this trend is expected to stabilise and get back to the GLA trend.

- **Office worker behaviours – weekly office attendance levels**: The employee attendance rate is the main source of difference in demand in our three scenarios. These attendance trends have been estimated using a diverse range of data sources including TfL ridership data (present and compared to pre-pandemic), employer surveys (on attendance and occupancy rates) and Arup's own London office attendance.

- **Office worker behaviours – working patterns**: Floor space requirements are also built around peak levels of office attendance and policies to "smooth out" the peaks. Current trends show a concentration of employees coming into the office in the middle of the week, with relatively empty offices on Mondays

[68] Arup, 2022. The future of the office in Central London.

and especially Fridays. We assume that for New Diverse City employees will spread more evenly across the week (similarly to pre-Covid patterns) allowing optimisation of space. For Return of In-Person and Hybrid Peak employer floor space requirements are built around peak levels of office attendance in the middle of the week. This implies that office space is being less well-used throughout the week and employers need to provide office space to accommodate all employees coming on a peak day.

- **Baseline volume of office space**: the model uses VOA data as a basis to estimate the present and future volume of existing office space in the City. Although this dataset does not capture spaces under development (including refurbishment), it represents effectively used or vacant space (over 3 months) and is a reliable data source for long term analysis of the office market demand in the City.

- **Densities**: Several scenarios of future densities (floor space per job when in the office) are modelled. Baseline densities for office jobs in the City were calculated using a ratio of BRES employment data for the number of office jobs and VOA data for office floor space volume. As VOA data broadly represents occupied office space (NIA), this dataset provides a good source to estimate effective densities per office job in the City. When attendance levels are projected to be medium or low, we assume a progressive increase in the office floor space per employee from 12.1 sqm per employee (2021 levels calculated using VOA data for office floorspace and BRES employment numbers) to between 14.6 and 16.7 sqm by 2035, following 2022 British Council for Offices guidance. This is to reflect the "flight to quality" trend identified through gathered evidence and market trends, whereby increasingly office occupiers are seeking prime, high-quality office stock, which will result in an increase in the office floor space per employee in the short-term. The pace and intensity of this trend also depends on sectors (using trends observed in our literature review e.g. financial sectors, life sciences and medtech or more creative and tech industries showing bigger appetite for best-in class as opposed to public administration for instance). For higher attendance levels, it is assumed that office floor space required per job will experience minor changes and comply with the lower bound of the 2023 BCO guidance around 12.5 sqm as demand and competition for space will be high while there will be less opportunities for upgrading space that is continuously leased. Best-in class will only be available to top finance or tech companies within the City. It is expected that for this scenario of attendance qualitative changes, energy optimisation and provision of amenities will still be needed but will be less reflected on the volume of space needed.

Further details on assumptions and data sources used can be found in the Appendix - Economic model parameters.

4.3 Implied demand for net additional floor space

Using the assumptions detailed above, the estimated future implied demand for office spaces in the City of London is shown in **Figure 21**. We assume that with the office market being rather illiquid, supply would meet demand only on the medium-to-long-term and that projected levels of implied demand therefore represent a good estimation of the stock of office floor space needed by 2042 by scenario and of corresponding employment numbers.

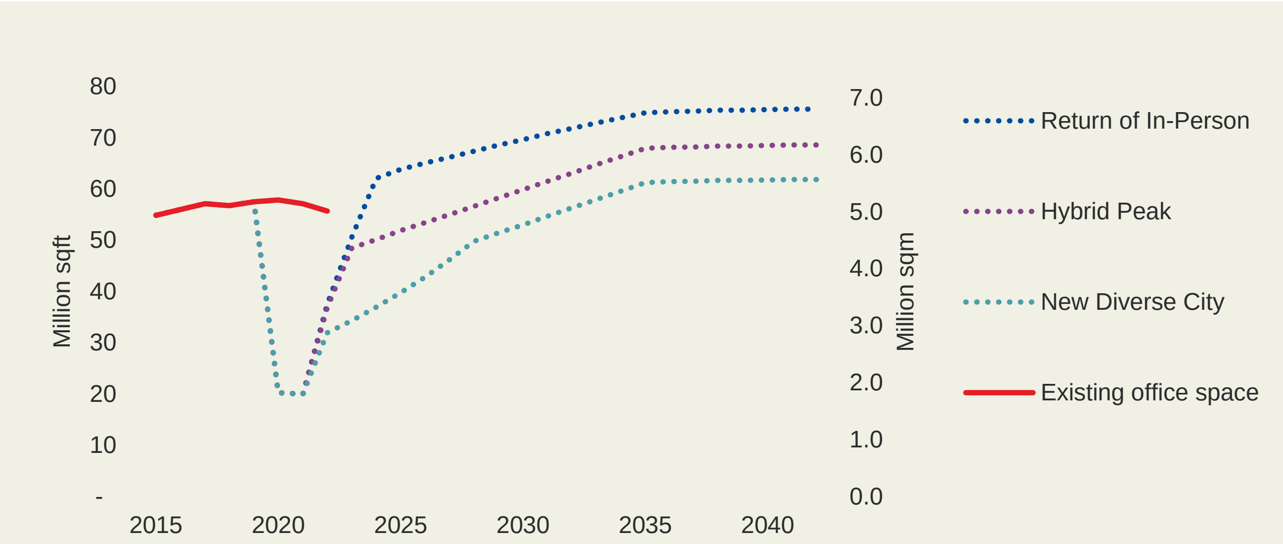

Figure 21: Underlying demand for office space in the City of London by scenario

All three scenarios suggest higher levels of office floor space in the City of London in the long term, after a decrease in implied demand in the short term, due to new working patterns.

Table 4: Underlying demand for office space in the City of London by scenario

Implied demand for office space (million sq ft)	2022 stock *(from VOA)*	2022 (implied demand)	2032	2042
Return of In-Person	55.7	37.5	71.8	75.6
Hybrid Peak	55.7	37.5	63.1	68.6
New Diverse City	55.7	37.5	56.3	61.8

Importantly, this drop in demand is not felt as immediately in the market given the inertia of long lease arrangements. As new working patterns start to bed in from late 2022 and early 2023, and employers begin to right-size for their future demand, we start to see a difference between the three scenarios.

Key findings from the model are as follows:

Return of In-Person

+ 20 million square feet of net office-space needed by 2042

+ 60,000 office-based FTE jobs accommodated in the City by 2042*

* using GLA forecasts

The overall demand for office floor space is expected to exceed 2022 office stock capacity by 2024 progressively increasing until 2035. This is mainly due to return of high attendance, projected employment growth until 2035 which then stabilises according to GLA forecasts with the amount of space per office jobs increasing slowly for specific finance and tech companies. Forecasted office space would grow by +36% (net +20 million sq ft (NIA) or net +1.9 million sqm (NIA)) by 2042 compared to 2022. The Square Mile would witness a growth of +60,000 (+13%) office-based jobs, as per GLA forecasts, with a sectoral mix dominated by traditional office activities similar to the current situation.

This would imply the delivery of new office spaces (with already around 6.2 million sq ft / 575,000 sqm of net gain office floor space being permitted or under development by 2028 according to City of London office pipeline data) on top of the net 8.7 million sq ft delivered over the 2016-2022 period[69] and making it in excess of the draft City Plan 2036 which targeted an additional net 21.5 million sq ft. These new developments would also need to be accompanied by the refurbishment and re-design of consequent existing space to comply with new expectations. This scenario implies that the supply of high-quality office stock may struggle to meet demand in the short term if the flight to quality continues.

Hybrid Peak

+ 13 million square feet of net office-space needed by 2042

+ 60,000 office-based FTE jobs accommodated in the City by 2042*

* using GLA forecasts

The overall office floor space needed would exceed 2022 office stock around 2029 before plateauing around 2035, as a combination of stabilisation of office densities as well as the dampening of projected employment growth according to GLA forecasts. Forecasted office space would grow by +23% (or net + 13 million sq ft or 1.03 million sqm) by 2042 compared to 2022. The Square Mile would witness a growth of 13% of its office-based jobs, as per GLA forecasts, with a sectoral mix similar to the current situation dominated by traditional office activities.

This scenario is aligned with the level of office floorspace targeted by the draft City Plan 2036 (21 million sq ft between 2016-2036), considering the 8.7 million sq ft delivered over the 2016-2022 period and the additional 13 million sq ft forecasted. Moreover, with a pipeline of around 6 million sq ft by 2028, the City of London seems to be on the right track to deliver the necessary change in terms of volume of floor space needed. However, this is under the assumption that existing stock currently at risk of becoming stranded assets is also refurbished and put back on the market in time for when underlying demand picks up. Results of the modelling exercise show that a window of opportunity to take action exists in the short term, with levels of underlying demand being lower than pre-pandemic levels until 2029, mainly due to medium attendance of workers and progressive employment growth allowing for higher churn and opportunity to refurb space in the short term.

New Diverse City

+ 6 million square feet of net office-space needed by 2042

+ 147,000 office-based FTE jobs accommodated in the City by 2042 compared to Return of In-Person and Hybrid Peak scenarios*

* using Arup's forecast based on historic BRES employment figures (2015-2020) to account for more efficient use of office space in a new hybrid era.

In this scenario, due to extended working from home habits, the underlying demand for office floor space would be more progressive in getting back to levels of 2022 existing floor space. The implied demand would grow to +11% of 2022 stock by 2042 mainly related to faster employment growth implied by new entrant firms taking over released space in the short term and of a generalised flight to quality of main sectors shaping the office landscape. This scenario implies more employment in the City (+43% of office jobs or +207,000 jobs) due to the ability to service a greater number of jobs through the same real estate footprint through better spread-out, less frequent office attendance. This scenario does imply a deeper trough of implied overall office demand in the 2020s, but in the medium to long term, as the economy grows and space is released by organisations optimising their space, new organisations would be expected to take the place of those that were there previously, provided that suitable office space were (still) available. The space would be potentially taken over by more small and medium employers, with more flexible requirements, appetite for amenity and from more diverse industries, allowing for a diversification of the City. Jobs in Information and Communication (broadly considered as the "tech" industry) would grow by 88% from around 73,000 jobs to 137,000 jobs, representing around 1 in 5 (21%) jobs in the City (compared to 16% in 2022). Job

[69] City of London, 2022. Office Floorspace Net Gain data 2016-2022.

growth in this sector would be the result of intensification of office densities, with low attendance levels, meaning little space is needed for the high number of employees working from home, with offices playing the role of corporate headquarters benefitting from the City's prestige and location. This sustained growth in office jobs and the types of employers taking over new space is also reliant on a softening of price which would result in the short term from lower demand for office space from existing occupiers.

In this scenario, office space would be converted to best-in class office space at a faster rate due to shorter-term leases and higher churn. Net additional volume of office floor space needed in this scenario is covered by the current development pipeline (around net 6.2 million sq ft) not accounting however for assets at risk of becoming stranded. Part of the released space in the shorter term could also be converted to other uses or a more mixed usage of space, allowing for the City to pivot to a new model of a 7-days a week late night location within London.

Note: These scenarios have been defined using a sector-driven approach to defining each parameter, including employment forecast, attendance levels and density scenario. However, it should be noted that some office uses will use space more intensively than others. For an example, the legal profession may reflect a lower density occupier, with singular offices, compared to professional services, consulting firms who may have higher-density open floor plans. A broad sector approach was utilised for this study, however there will be individual sectors where densities will vary.

4.4 Implications for the City

This section summarises the key findings in terms of demand for future floorspace in the City and outlines implications for the City:

- 2 out of 3 scenarios (Return of In-Person and Hybrid peak) are broadly aligned with the draft City Plan 2036 target in terms of net office space development needed.
- The **Return of In-Person** scenario projects additional need for 20 million sq ft of net office space by 2042 which is higher than the draft City Plan 2036 target. This scenario implies that the supply of high-quality office stock may struggle to meet demand in the short term if the flight to quality continues, due to sustained high demand and low turnover in office spaces not allowing for refurbishment and upgrade of stranded assets in the City.
- The **Hybrid Peak** scenario projects a more progressive increase in demand for additional office space in the City while still being aligned with longer term targets of delivery of around 21 million sq ft of office space from the draft City Plan (based on the net 8.7 million sq ft delivered between 2016-2022 and the additional net 13 million sq ft required in the scenario). In addition to new developed space, this scenario also implies that identified assets requiring investment to meet new energy standards and market demand are being quickly refurbished for supply to keep up with demand for more qualitative spaces. However, a window of opportunity to take action exists in the short term, with levels of underlying demand being lower than pre-pandemic levels until 2029, mainly due to medium attendance of workers and progressive employment growth allowing for higher churn and opportunity to refurb space in the short term.
- **New Diverse City** forecasts much slower increase in demand for office space (net + 6 million sq ft by 2042 compared to 2022 levels), significantly below draft City Plan targets in terms of development mainly due to much lower levels of office workers attendance. Due to slower return of demand and higher churn, this scenario allows for more effective refurb of office space and a faster flight to quality. At the same time, optimised worker behaviours enable City employers to release space in excess, which is taken over by new entrants, resulting with effective higher number of office jobs and therefore individuals visiting the City although not translating into higher footfall as presence of workers would be well spread-out over the week. This might however translate into higher net levels of local spend, given that hybrid workers are likely to 'splurge' on their days in the office[70].

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[70] Arup, 2022. The future of the office in Central London.

5. Summary and recommendations

Arup, together with Knight Frank, were engaged on behalf of the City of London Corporation to provide advice on the future of office use within the Square Mile, in light of the pandemic, other economic shocks, and further consultation on the Local Plan in early 2023.

The future of hybrid working, job creation in different industries and organisations, priorities of office occupiers, and the rate of return of workers will in turn impact structural demand for spaces but could also shape new ways people experience the City. A summary of key insights of this study include:

- **Current and anticipated office-use behaviours in the City**: Current occupiers have highlighted a need for flexibility, with flexibility in design required. Tenants are taking 'options space' to prepare for future demand. There is also a need for high amenity provision, though the City provides much of this, reducing the need to provide amenity on each-site. With hybrid working patterns being broadly adopted (with variations by sector), the demand modelling suggests that compared to 2022 levels of employment, the City could accommodate **between 60,000 and 207,000 more office jobs** by 2042 with further opportunity for diversification of the nature of these jobs.
- **Demand for floorspace**: There is an overarching trend towards Grade A space in terms of new stock, due to a 'flight to quality' trend. Growth in refurbished space take up has been driven by a range of reasons, including changing occupier requirements for more collaboration and socialising space, sustainability credentials, as well as access to public transport and food and beverage amenities. Additional demand for net office floor space is estimated **between additional 6 to 20 million square feet by 2042** compared to 2022 levels, assuming existing office stock is successfully upgraded and available for use.
- **Assets requiring investment to meet new energy regulation and market demand**: The legal requirement to improve the EPC ratings of buildings may raise the obsolescence risk for c.32m sq ft[71] of floor space in the City with a rating below C due to expire by 2027. Significant improvements are needed for approximately 60 of the City's current buildings, which require improvement to their current energy ratings.

Call to action

Meeting forthcoming EPC sustainability requirements and the appetite of businesses to demonstrate their sustainability credentials whilst providing high amenity to their employees will require a substantial investment in refurbishment and retrofit at scale across the City. If the market does not make these investments at pace, local planning authorities such as the City may need to take a more proactive role in managing the transition in order to maintain premises and retain local businesses. Based on the modelling showing strong demand for net additional office floor space in the City, we suggest the following supporting actions:

***Planning Policy Recommendations** – for consideration when updating the City Plan:*

1. *Increase the supply of the best-in-class spaces*

- **Review the existing portfolio of office assets in the City**: review the portfolio of office assets in the City and identify potential sites that can be developed to increase the total supply of high quality, sustainable spaces. Consider providing direct support in the form of supporting advice for individual sites.

[71] Estimated as the share of premises below EPC C office floorspace (GIA) on total office floorspace (GIA) from the Department for Levelling Up, Housing and Communities EPC rating data, applied to 2022 total office floorspace stock (NIA) from the Valuation Office Agency.

- **Consider area additions under certain circumstances:** consider area additions such as extensions more positively when linked to broader outcomes, such as sustainable upgrades.

2. *Encourage conversion of existing Grade B stock to high quality office spaces*

- **Promote good practice refurbishment**: alongside existing SPDs, the City should consider building on the retrofit case studies work, to promote and share good practice of refurbishment that has led to upgraded office stock. The City could share these case studies with the broader construction industry.
- **Support policies that encourage retrofit**: City planning policy should encourage and promote retrofit and refurbishment to improve EPC ratings.

3. *Encourage alternative uses for Grade B stock for which conversion is not feasible*

- **Take a flexible approach to planning consents for heritage and stranded assets**: the City contains a large number of historic assets. For some of these specific, protected historic sites and conservation areas in the City, there may be cases where it may not be financially viable to refurbish existing office space to meet regulation. The City could explore the implications of amending policy that requires 'viability assessment' when considering change of use, where this would incentivise the retention and improved environmental performance of existing buildings.

***General Recommendations** – for broader City consideration:*

1. *Increase the supply of the best-in-class spaces*

- **Identify capacity within the market**: the City could act as a broker to support organisations finding new spaces, identifying capacity within the market, particularly during periods of refurbishment and retrofit due to MEES regulation in the short-medium term.
- **Continue to promote and invest in amenity, urban and workplace experience in the City to attract employers, office workers and tourists**: continue to invest and improve amenity within the City, for example public transport and active travel accessibility and office-supporting sectors – including food and beverage. Together with a focus on the workplace experience, consider ways to encourage employees back to offices and support high attendance rates. The workplace experience for employees needs to focus not only on the office building, but also wider amenity including improvements in public realm, retail as well as programmatic interventions such as an arts, culture and entertainment programme for example.

2. *Encourage conversion of existing Grade B stock to best-in-class spaces*

- **Continue to monitor closely assets at risk of becoming stranded**: following changes in regulation and market demand, relevant refurbishments are anticipated by owners and occupiers to bring buildings in line with standards for businesses in the City. Based on EPC data, a proportion of stock (approximately 32m sq ft) may not currently comply with EPC regulation. Work closely in partnership with developers and landowners to understand future plans and uses for these assets, identifying any potential blockers to convert these (primarily Grade B stock) to best-in-class or Grade A spaces.
- **Form a City Advisory hub to provide expert advice**: the City should form a City Advisory hub to actively connect developers, business owners and other stakeholders with potentially challenging stock to experts, both within the City and externally to support them with upgrading their existing stock. For example, the City could join together with Historic England to share skills and cost effective methods of retrofit for historic and listed buildings to upskill the broader construction sector.
- **Protect office space during a potential period of softening of demand in the short-term through enabling meanwhile uses**: the 'flight to quality' trend, coupled with EPC regulation is driving demand for higher quality best-in-class and Grade A space. Engage with investors and landowners to understand how low grade stock could become more attractive or could be repurposed for meanwhile uses, with a focus on population-serving sectors such as cafes, bars and restaurants.

- **Support broader construction industry campaign for low cost, carbon retrofit:** the City could work with other stakeholders to address the costs of low carbon retrofit, including matters such as campaigning for VAT relief - particularly for buildings deemed stranded assets.

Case Study – Sancroft, 10-15 Newgate Street, London, EC1A

Before Refurbishment, 2023

The refurbishment of the Sancroft building, St. Paul's, creates a workspace that aligns with many of the key requirements of large occupiers – high level of amenity provision and flexible large floor plates that allow tenants to adapt their space to evolving styles of working.

The amenity offer in the building is provided by the US service office provider Convene who have leased 45,000 sq ft. Convene will provide meeting and event space, a lounge area, cafe with barista and a library. Moreover, the building has been constructed with terraced floors that have iconic views of London.

The law firm, Goodwin Proctor LLP have recently chosen Sancroft as their new London headquarters in contrast to other high profile lettings by the sector around Liverpool Street. The firm have cited the amenities and flexible workspace provided by the building were key considerations in their decision to relocate.

Case Study – Warwick Court, 5 Paternoster Square, London, EC4M

After Refurbishment, 2023

The redevelopment of Warwick Court provides 180,000 sq ft of grade A workspace. The building has many best-in-class characteristics with a highly sustainable construction programme at its core. This comprehensive refurbishment includes an embodied carbon emissions saving of 20,789 tonnes compared with an equivalent new build development. As a result the building has achieved a BREEAM Excellent rating and is EPC rated A. The building is also accredited by WiredScore with a Platinum rating and demonstrates a high level of digital connectivity.

There are a number of amenities provided at Warwick Court which include end of journey facilities such as cycling spaces, showering and locker facilities, individual terraced floors and a communal rooftop terrace overlooking St. Paul's Cathedral. Whilst the Paternoster Square micro business district includes a diverse hospitality offer and is well connected with accessibility to many transport nodes.

3. *Encourage alternative uses for Grade B stock for which conversion is not feasible*

- **Support a more efficient use of office stock for long-term vacant sites**: there may be some cases where a change of use may be the best option to optimise the use of space due to other constraints (i.e. a site having compounding factors such that it may be a historic asset and a current grade B space), in which case – the City should work with landowners and developers to ensure that transition is done in a way which is planned. The City should also monitor the amount of properties that are left long-term vacant. If this increases significantly over time, the City should look to identify potential alternative uses, or tax incentives (i.e. business rate relief to businesses that benefit the local community or economy) to bring buildings back into use, increasing provision of affordable spaces for example.

Case Study – 27 Poultry, London, EC2R

Before – The Grand Banking Hall, c. 1950

27 Poultry is a Grade I listed building, designed by Sir Edward Lutyens and completed in 1939. It was historically the Midland Bank, one of the largest UK banks of the 20th Century. In 2002, it was sold with a 3-year leaseback to encourage a purchaser given a vacant building was unattractive. It was subsequently traded 4 times, each time the purchaser's intention was to undertake development of some form. However, due to the listing the building it quickly became obsolete from an office perspective and a refurbishment to appeal to modern office occupiers was impractical. Alternatives uses were explored and several planning permissions were given for a hotel based scheme.

Today – The Grand Banking Hall, 2023

By 2010, a change in ownership and vacation of the bank caused 27 Poultry to lie empty for ten years. It was a change of use and creative development around its listed status that gave this building a renewed purpose within the City of London. Eventually the property was purchased by a company who entered into a venture with Soho House and New York hotel developer Sydell Group to convert it into a five-star hotel which opened in 2017, known as the 'Ned' with nine restaurants and bars, a rooftop terrace with a swimming pool and another pool and a spa in the basement.

4. *Strengthen the City's role as a premium office market location*

- **Encourage growth in emerging sectors**: the City could consider providing support to encourage emerging sectors. This includes providing marketing, space, skills and incentives to encourage growth, and ensure the City remains a premium office market location that can accommodate emerging-office sectors in particular.
- **Develop targeted marketing campaigns**: develop targeted marketing campaigns to reemphasise the City as a leading global financial hub and office market and attract office market investment. This could include:
  - A) Local marketing campaign – a localised marketing campaign focussed on the City set to become the first zero carbon office market in London. This campaign would aim to differentiate the City

from other neighbouring office markets, highlighting the abundance of low carbon, best-in-class offices available.

  - B) Foreign marketing campaign – a targeted campaign focussed on foreign investors to capitalise on the significant investor appetite for high-quality, best-in class space. This campaign would focus on influencing the investment pipeline in the City.

- **Leverage Business Improvement Districts (BIDs):** leverage BIDs including including Fleet Street Quarter, Cheapside, Eastern City Partnership and Aldgate BID in the City as the convenor for neighbourhoods to develop a programme of activity to strengthen the City's role and function as a premium office market.

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References

Advanced Workplace Associates, 2022. AWA Hybrid Working Index. Available from: https://www.advanced-workplace.com/awa-hybrid-working-index-2-december-2022/

Arup, 2022. The future of the office in central London. Available from: https://centrallondonforward.gov.uk/wp-content/uploads/2022/11/CLF_Future-of-the-Office.pdf

Bloom, 2022. The Future of WFH. Available from: https://www.volckeralliance.org/sites/default/files/2022-07/Future%20of%20Work%20From%20Home%20-%20Nick%20Bloom.pdf

British Council for Offices, 2022. BCO Guide to Specification Key Design Criteria Update 2022: A Position Paper. https://www.bco.org.uk/Research/Publications/BCO_Guide_To_Specification_Key_Design_Criteria_Update_2022_-_A_Position_Paper.aspx

Business Register and Employment Survey (BRES), 2023. Available from: https://www.nomisweb.co.uk/datasets/newbres6pub

CBRE, 2021. Will working from home change the Central London Office Market? Available from: https://www.cbre.co.uk/research-and-reports/UK-Will-Working-from-Home-Change-the-Central-London-Office-Market-March-2021

CBRE, 2022. Occupiers growing their footprint in London Office market. Available from: https://news.cbre.co.uk/occupiers-growing-their-footprint-in-london-office-market/

City of London Corporation and Department of the Build Environment, 2012. City of London Local Plan 2015

City of London Corporation with Oliver Wyman and Arup, 2020. London Recharged: Our Vision for London in 2025

City of London Corporation with Oliver Wyman, 2021. The Square Mile: Future City

City of London Corporation, City of London Local Plan, 2021. City Plan 2036 Proposed Submission Draft 2021. Available from: https://www.cityoflondon.gov.uk/assets/Services-Environment/cityplan-2036-march-2021.pdf

City of London, 2015. Office Use – Supplementary Planning Document. Available from: https://www.cityoflondon.gov.uk/assets/Services-Environment/planning-spd-office-use-2015.pdf

City of London, 2022. Office Floorspace Net Gain data 2016-2022.

City of London, 2023. City Statistics Briefing. Available from: https://www.cityoflondon.gov.uk/supporting-businesses/economic-research/research-publications/city-statistics-briefing

City of London, 2023. Our Role in London. Available from: https://www.cityoflondon.gov.uk/about-us/about-the-city-of-london-corporation/our-role-in-london

Deloitte, 2022. London Office Crane Survey Winter 2022. Available from: https://www2.deloitte.com/uk/en/pages/real-estate/articles/crane-survey.html

Greater London Authority, 2022. London Long Term Labour Market Borough Projections; Arup analysis. Available from: https://data.london.gov.uk/dataset/long-term-labour-market-projections

Greater London Authority, 2023. London Long Term Labour Market Productivity Trend-based Projections by Borough.

Greater London Authority, 2023. Housing-led population projections by borough. Available from: https://data.london.gov.uk/dataset/housing-led-population-projections

Greater London Authority and Arup, 2021. The economic future of the Central Activities Zone (CAZ). Available from: https://www.london.gov.uk/sites/default/files/future_of_the_central_activities_zone.pdf

Inter Department Business Register (IDBR), 2015-2022 and Arup analysis. Available from: https://www.nomisweb.co.uk/datasets/idbrent

IPUT and Arup, 2022. Making Place: The Recalibration of Work, Life and Place. Available from: https://www.arup.com/perspectives/publications/research/section/making-place-the-recalibration-of-work-life-and-place

K2 Space, 2023. Office Design Trends 2023. Available from: https://k2space.co.uk/knowledge/office-design-trends-2023/

Kings College London. 2022. The WFH Revolution: How New Ways of Working are Changing London. Available from: https://www.kcl.ac.uk/policy-institute/assets/wfh-revolution-how-new-ways-of-working-are-changing-london.pdf

Knight Frank, 2022. Wealth Report.

Knight Frank, 2023. Active Capital Report.

Knight Frank, 2023. Analysis of Government Energy Performance Certificates.

Knight Frank, 2023. Analysis.

Knight Frank, 2023. Cresa Global Corporate Real Estate Sentiment Index.

Knight Frank, 2023. Global Capital Tracker Survey.

Knight Frank, 2023. Knight Frank Research and MSCI.

Knight Frank, 2023. London Capital Gravity Model.

Knight Frank, 2023. Research.

Lambert Smith Hampton, 2022. Thames Valley and the Southeast Office Market Report. Available from: https://www.lsh.co.uk/explore/research-and-views/research/22/6/south-east-office-report-2022

London First and EY, 2021. Renew London: Hybrid Working. Available from: https://www.businessldn.co.uk/sites/default/files/documents/2021-06/EYFutureOfWork.pdf

Ministry of Housing, Communities and Local Government, 2021. National Planning Policy Framework and Guidance (NPPF/NPPG)

Office for National Statistics (ONS), 2021. Census. Available from: https://www.nomisweb.co.uk/sources/census_2021/report?compare=E09000001

Office for National Statistics (ONS), 2022. Regional gross value added (balanced) by industry: local authorities by ITL1 region; Arup analysis.

ONS, 2023. Transactions at Pret a Manger; Arup analysis. Available from: https://www.ons.gov.uk/economy/economicoutputandproductivity/output/datasets/transactionsatpretamanger

Remit Consulting, 2023. News Release: Latest data reveals improved UK office occupancy levels. Available from: https://return.remitconsulting.com/resource-centre/35-news-release-latest-data-reveals-improved-uk-office-occupancy-levels

TfL, 2023. Demand by Station Type (City); Arup analysis. Available from: https://app.powerbi.com/view?r=eyJrIjoiMjZjMmQwYTktZjYxNS00MTIwLTg0ZjAtNWIwNGE0ODMzZGJhIiwidCI6IjFmYmQ2NWJmLTVkZWYtNGVlYS1hNjkyLWEwODljMjU1MzQ2YiIsImMiOjh9

Valuation Office Agency, 2022. Non-domestic rating: stock of properties including business floorspace. Available from: https://www.gov.uk/government/statistics/non-domestic-rating-stock-of-properties-2022

A.1 Economic baseline evidence

5.1.1 Demography

The City of London has a relatively small population, with 8,583 residents in 2021[72] and an overall density of 2,960 residents per km², compared to 5,596 people per km² in London overall and 10,936 residents per km² in Central London[73]. **Figure 22** illustrates settlement patterns within the Square Mile, with eastern and northern areas of the City showing higher population densities. City of London residents are rather diverse in terms of identity with 41% of residents having a non-UK identity, highly qualified (74% holding a level 4 qualification or above) and predominantly live in one-person households (51%)[74].

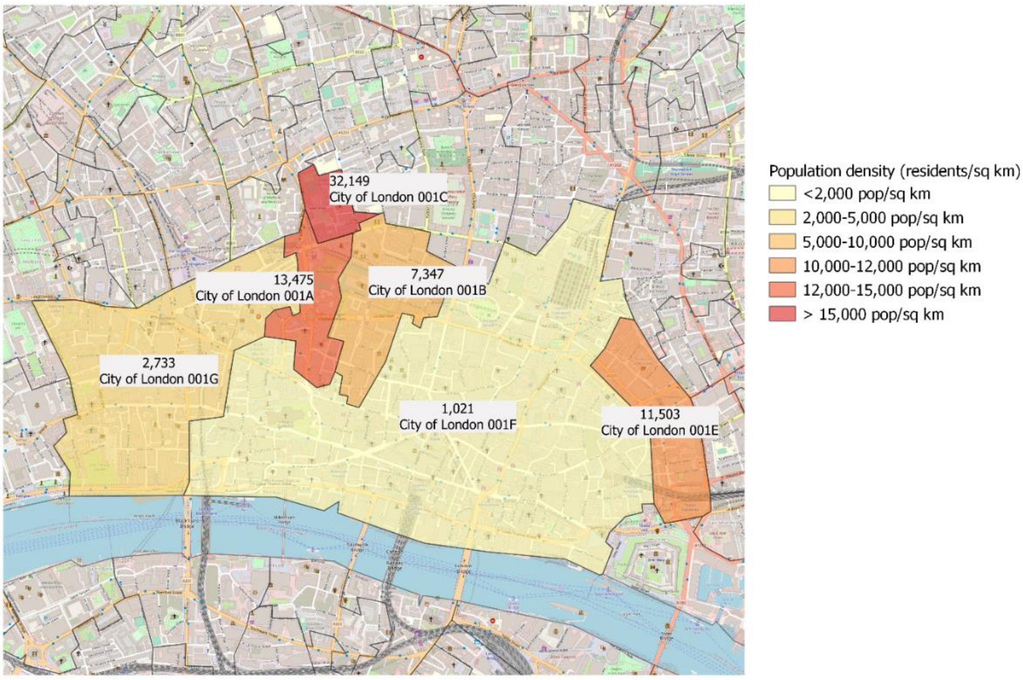

Figure 22: City of London population densities by LSOA – *ONS 2020*

The City's population grew steadily between 2015-2021 (+42%) compared to +3% on average for London overall and is projected to continue growing until 2041 after a small dip in the short-term according to GLA forecasts[75] (**Figure 23**). The historic and forecasted population growth is mainly driven by net flows of migrants into the city and a projected +42% dwelling stock for the period 2021-2041.

With a low residential population, the City's wider businesses are particularly reliant on office workers and visitors. 43% of spend in local businesses is from office workers, by far the highest of any London local authority.[76] As such, the presence or otherwise of office workers can have a huge impact on the economy of the City, and of neighbourhoods within the square mile.

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[72] Office for National Statistics (ONS), 2021. Census.

[73] Central London defined as the composition of Kensington and Chelsea, Westminster, Camden, Islington, City of London, Southwark and Lambeth.

[74] ONS, 2021. Census.

[75] Greater London Authority (GLA), 2023. Housing-led population projections by borough.

[76] Arup, 2022. The future of the office in central London.

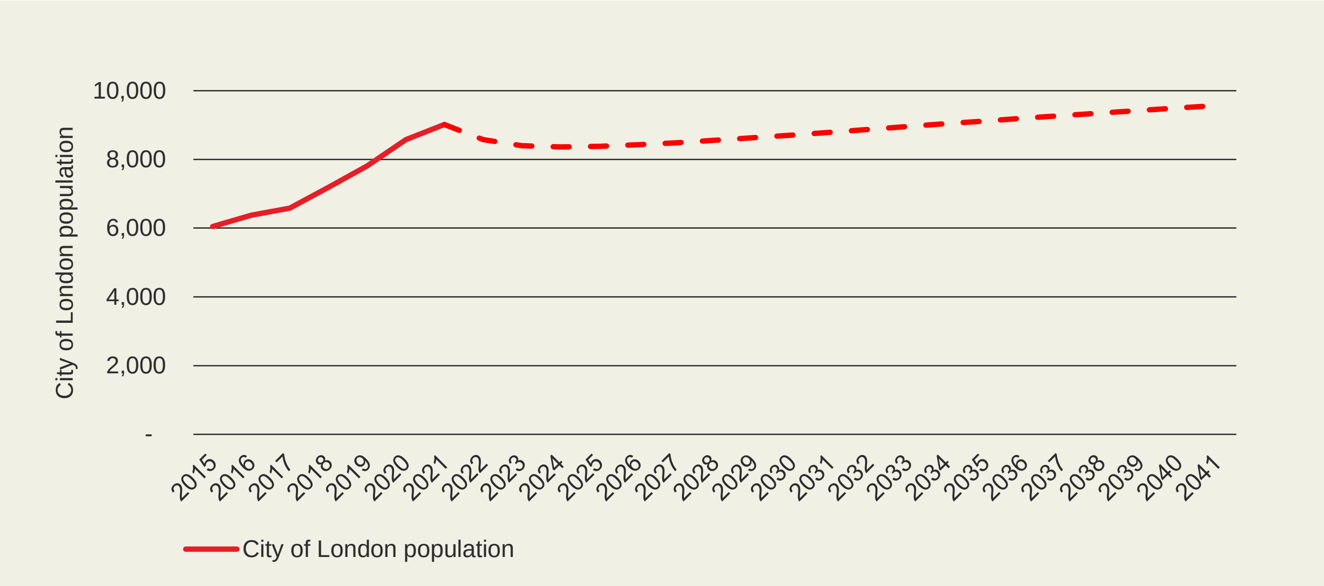

Figure 23: City of London population projection - *GLA 2023 - Housing-led population projections by borough*

5.1.2 Employment

The City of London was home to 586,740 jobs in 2021[77], a 29% increase from 2015 figures. Higher densities of jobs can be found in central and western parts of the City (234,228 jobs per km² and a total of 387,320 jobs in Central London, and above 185,000 jobs per km² for western parts of the City[78]- **Figure 24**). This is the highest density of jobs in the United Kingdom.

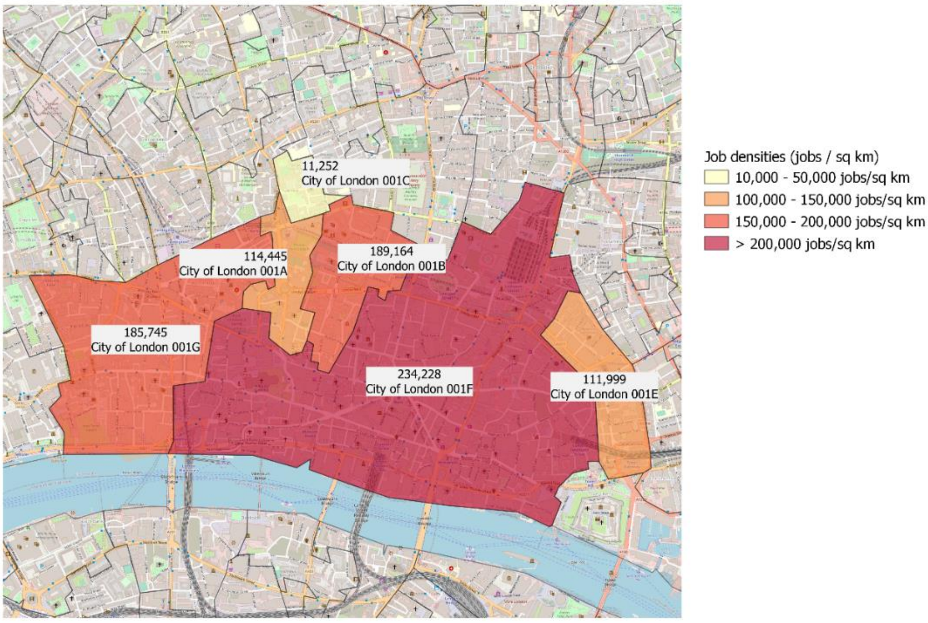

Figure 24: City of London employment densities by LSOA - *BRES 2021*

Interestingly, the spatial divide within the City has intensified during 2015-2021 with the least dense LSOA

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[77] Business Register and Employment Survey (BRES), 2023. Employer Survey.

[78] BRES, 2023; Arup analysis, 2023.

in the City of London (001C) showing the steepest decrease over the period (-42% of jobs or -485 jobs) while the highest density area (001F) experienced highest growth (+38% or =107,150 jobs).

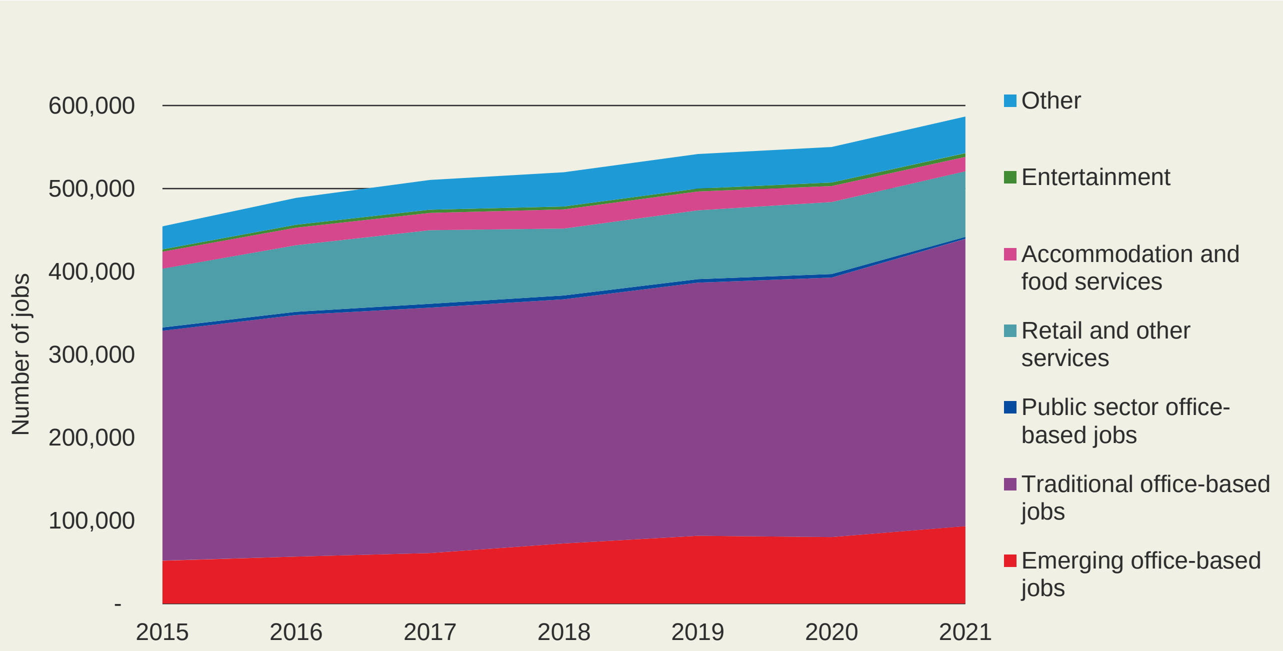

Figure 25: City of London employment breakdown by bespoke sectors - *BRES 2015-2021*

Although traditional office-based jobs (as defined in **Table 5**) are still dominant in the Square Mile, representing 59% (346,000 jobs, **Figure 25**) there has been a rapid growth of emerging office-based jobs (jobs related to research and development, Information, Communication and Technologies and other innovative activities) in the area, with an 80% increase between 2015-2021, corresponding to 41,600 new jobs (total of 93,300 jobs by 2021). The second fastest increase, albeit from a low base, was in Entertainment jobs (+1,700 jobs, +61%). Whilst the pace of transition is slow, this suggests that the City is steadily diversifying away from its core offer of finance and insurance jobs, into new technology and the creative industries.

5.1.3 Businesses

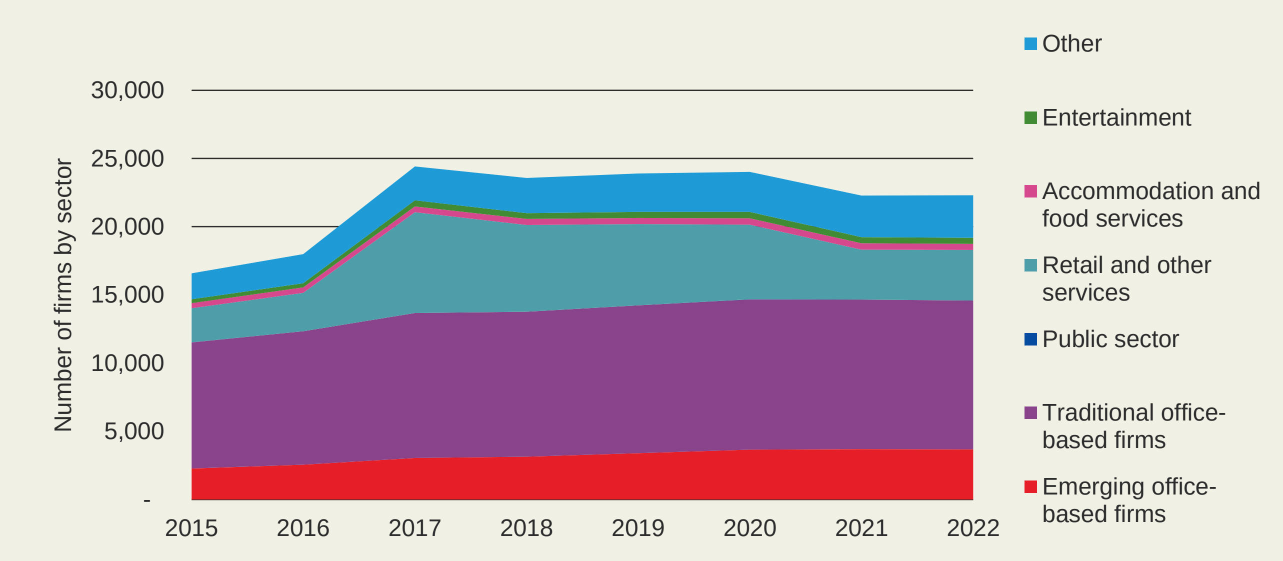

Figure 26: Number of businesses by project sectors - *IDBR 2015-2022*

The number of businesses in the City of London grew by 35% over the period (+5,735), peaking in 2017 mainly due to a steep increase in retail and other services businesses in that year, before stabilising and slowly decreasing until 2022 to a total of over 22,000 businesses[79]. As illustrated in **Figure 26**, traditional office-based firms represent the biggest share of firms in the City (49%), and whilst growing overall over the period 2015-2022, they have decreased slightly since 2020 (-105 businesses). Emerging-office based firms on the contrary experienced a continuous positive trend, with a 62% growth since 2015 (+1,405 firms, highest total behind traditional office-based), accounting for 16% of all businesses in the City in 2022. Despite fluctuation, retail and other services grew by 48% over the period and represent 17% of all businesses in the area.

Figure 27 further demonstrates the composition of firms in the City of London by sector and size. Of particular interest, 22% of medium to large firms (50+ employees) belong to the emerging office-based firms category (compared to only 16% of all firms), from 15% of medium to large firms in 2015 (and 14% of all firms). As emerging office-based firms tend to value different typologies of office spaces compared to traditional office-based firms, their growing number and size might imply a new shift for the market in terms of demand for best-in class office spaces. The fastest growing firms are therefore over-represented in the micro and small categories.

[79] Inter Department Business Register (IDBR) 2015-2022; Arup analysis, 2023.

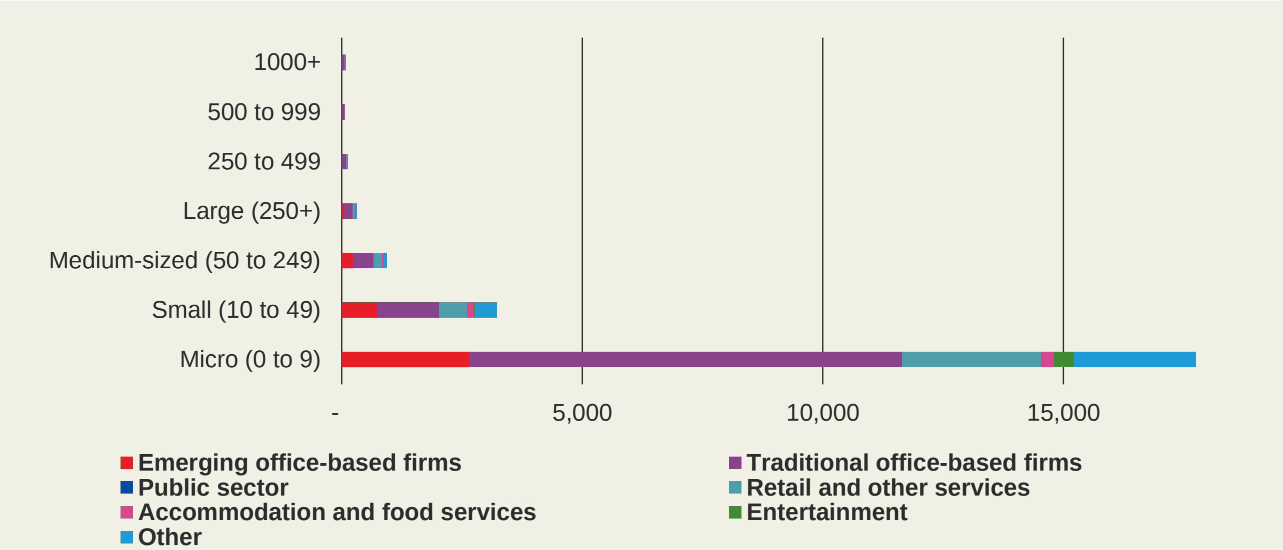

Figure 27: Number of businesses by project sectors and firm size - *IDBR 2021*

5.1.4 GVA

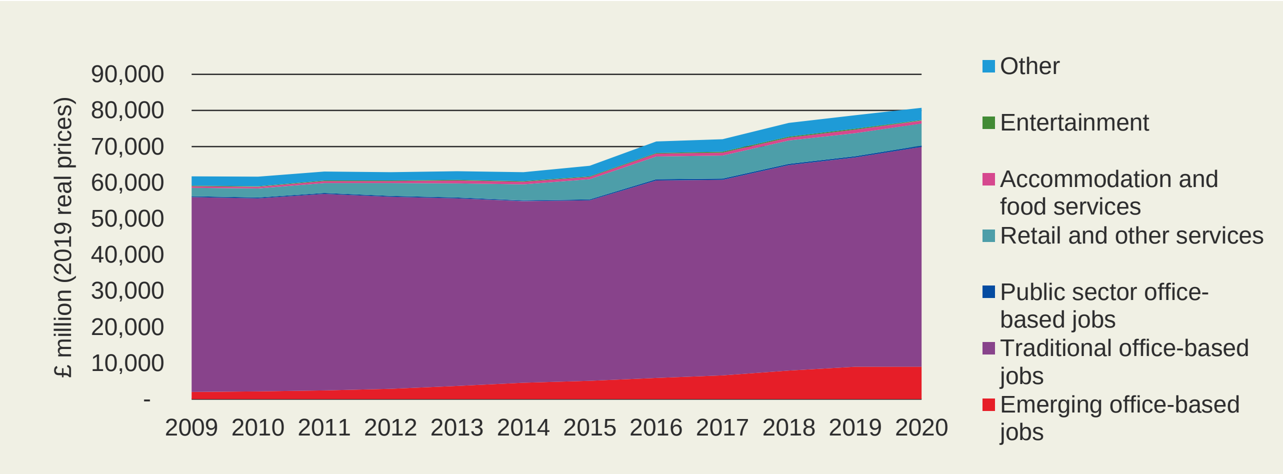

Figure 28: GVA change in the City of London by project sectors - *ONS 2021*

Traditional office-based jobs remain by far the most productive jobs in the area, with an estimated £194,639 GVA per job in 2020 (2019 real prices), compared to £112,541 for emerging office-based jobs and £92,000 for public sector office-based jobs (**Figure 28**). GVA increases between 2009 and 2020 to reach £80,723 million (2019 real prices), a 31% increase[80] have been driven by the growth in emerging office and traditional office based jobs. It is these two sectors together that make up (87) of the City's GVA in 2020. In addition, Retail and other services and Accommodation and food services also experienced sustained growth in GVA generated with +164% and +71% of GVA generated respectively in 2020 compared to 2009.

5.1.5 Post-Covid footfall recovery in the City of London

As a predominantly office-employment oriented area with low population density, the City of London was severely impacted by Covid-19, subsequent hybrid working and the slow return of international tourists. The area has experienced a slower recovery of footfall than any other place in the UK. Pre-pandemic footfall levels have still not been reached.

[80] Office for National Statistics (ONS), 2022. Regional gross value added (balanced) by industry: local authorities by ITL1 region; Arup analysis, 2023.

TfL's ridership data[81] can be used as a proxy to understand office attendance. In early 2023 the number of entries and exits at City stations were below pre-pandemic levels (at 69% on average for weekdays), with usage patterns suggesting a peak at the middle of the week. As shown in **Figure 29**, Tuesday to Thursday represent peak transport usage (with levels between 70-80% of January 2020 levels), while Mondays and Fridays are less busy (63% and 59% of pre-pandemic levels respectively), reinforcing a trend already observed in the City before Covid-19.

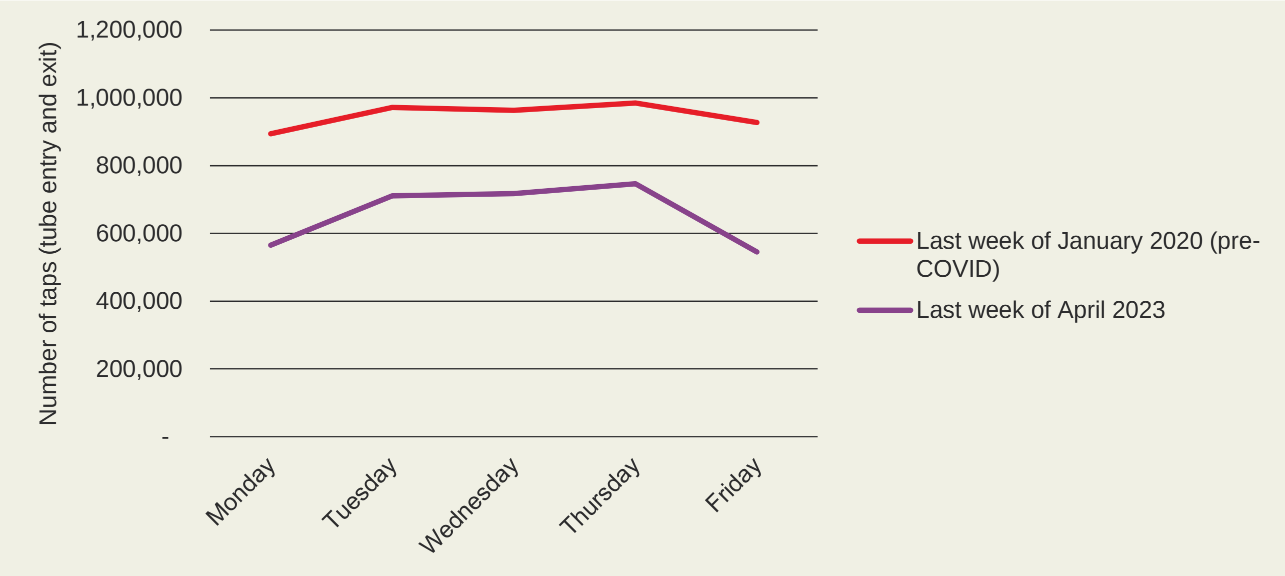

Figure 29: Number of taps (entry and exit) by day in City stations - *TfL data for 15 selected stations 2020-2023*

While ridership data and other office attendance reports detailed in the literature review suggest that footfall and levels of attendance have not yet (and might never) come back to pre-Covid levels, other sources on spending and local consumption suggest that spending levels in the food and beverage economy are back to where they were in January 2020. This is shown in **Figure 30**, where volumes of Pret a Manger transactions in City stores[82], are almost back (98% on the last week of April 2023) to their pre-pandemic levels. Whilst inflation has aided the return, this trend suggests, that while City workers might have changed their attendance patterns, their average consumption levels have not, which might be explained by people saving up lunchtime and after-work spend for days when they are in the office, making the most out of their trip to work to do some shopping or benefit from cultural events. These trends provide a first insight into what opportunities can emerge from new working habits and what assets and types of places can help bring back people to the workplace.

[81] Transport for London, 2023. Network demand by station type, City stations, 2020-2023; Arup analysis, 2023.

[82] ONS, 2023. Transactions at Pret a Manger; Arup analysis, 2023.

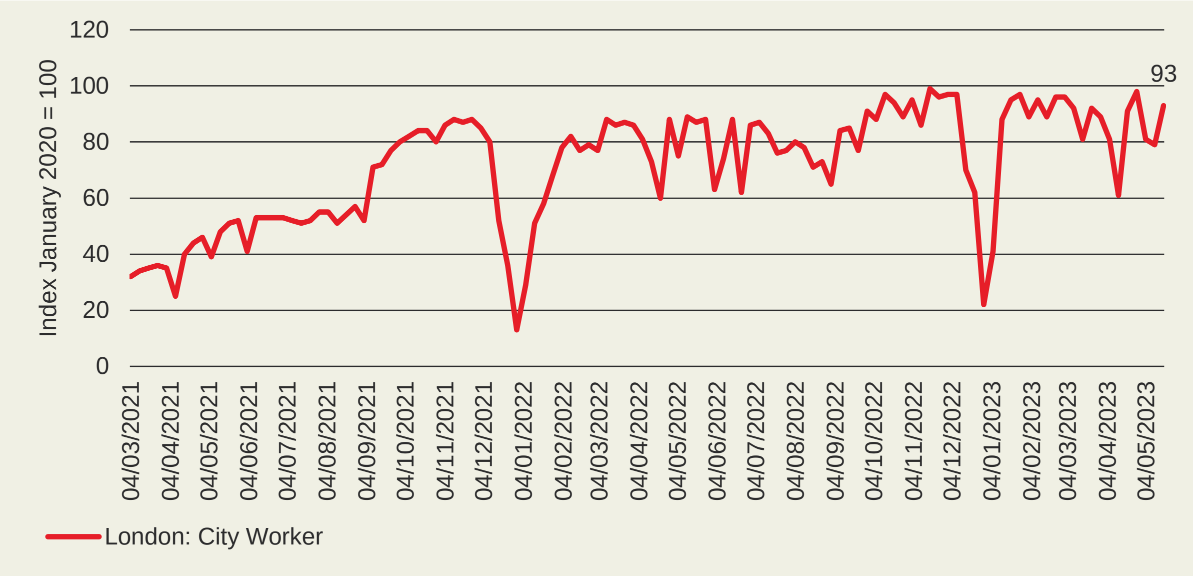

Figure 30: Number of transactions at Pret a Manger stores in the City of London area

A.2 Sector Classification

Sectors classification – industry groups to bespoke categories

Table 5: Sector classification - SIC industry groups to project classification

Project Classification		Broad Industry Groups	SIC 2 code
Emerging office-based jobs	J	J: Information and communication	58: Publishing activities
Emerging office-based jobs	J	J: Information and communication	59: Motion picture, video and television programme production, sound recording and music publishing activities
Emerging office-based jobs	J	J: Information and communication	60: Programming and broadcasting activities
Emerging office-based jobs	J	J: Information and communication	61: Telecommunications
Emerging office-based jobs	J	J: Information and communication	62: Computer programming, consultancy and related activities
Emerging office-based jobs	J	J: Information and communication	63: Information service activities
Emerging office-based jobs	M	M: Professional, scientific and technical activities	71: Architectural and engineering activities; technical testing and analysis
Emerging office-based jobs	M	M: Professional, scientific and technical activities	72: Scientific research and development
Emerging office-based jobs	M	M: Professional, scientific and technical activities	73: Advertising and market research
Emerging office-based jobs	M	M: Professional, scientific and technical activities	74: Other professional, scientific and technical activities
Traditional office-based jobs	K	K: Financial and insurance activities	64: Financial service activities, except insurance and pension funding
Traditional office-based jobs	K	K: Financial and insurance activities	65: Insurance, reinsurance and pension funding, except compulsory social security
Traditional office-based jobs	K	K: Financial and insurance activities	66: Activities auxiliary to financial services and insurance activities
Traditional office-based jobs	L	L: Real Estate activities	68: Real estate activities

Project Classification		Broad Industry Groups	SIC 2 code
Traditional office-based jobs	M	M: Professional, scientific and technical activities	69: Legal and accounting activities
Traditional office-based jobs	M	M: Professional, scientific and technical activities	70: Activities of head offices; management consultancy activities
Public sector office-based jobs	O	O: Public administration and defence	84: Public administration and defence; compulsory social security
Other	P	P: Education	85: Education
Other	Q	Q: Human health and social work activities	86: Human health activities
Other	Q	Q: Human health and social work activities	87: Residential care activities
Other	Q	Q: Human health and social work activities	88: Social work activities without accommodation
Food & Beverages	I	I: Accommodation and food services	56: Food and beverage service activities
Other	I	I: Accommodation and food services	55: Accommodation
Retail and other services	G	G: Wholesale and retail trade, repair of motor vehicles and motorcycle	47: Retail trade, except of motor vehicles and motorcycles
Retail and other services	M	M: Professional, scientific and technical activities	75: Veterinary activities
Retail and other services	N	N: Administrative and support services activities	77: Rental and leasing activities
Retail and other services	N	N: Administrative and support services activities	78: Employment activities
Retail and other services	N	N: Administrative and support services activities	79: Travel agency, tour operator and other reservation service and related activities
Retail and other services	N	N: Administrative and support services activities	80: Security and investigation activities
Retail and other services	N	N: Administrative and support services activities	81: Services to buildings and landscape activities
Retail and other services	N	N: Administrative and support services activities	82: Office administrative, office support and other business support activities

Project Classification		Broad Industry Groups	SIC 2 code
Retail and other services	S	S: Other service activities	94: Activities of membership organisations
Retail and other services	S	S: Other service activities	95: Repair of computers and personal and household goods
Retail and other services	S	S: Other service activities	96: Other personal service activities
Entertainment	R	R: Art, entertainment and recreation	90: Creative, arts and entertainment activities
Entertainment	R	R: Art, entertainment and recreation	91: Libraries, archives, museums and other cultural activities
Entertainment	R	R: Art, entertainment and recreation	92: Gambling and betting activities
Entertainment	R	R: Art, entertainment and recreation	93: Sports activities and amusement and recreation activities
Other	A	A: Agriculture, Forestry and fishing	01: Crop and animal production, hunting and related service activities
Other	A	A: Agriculture, Forestry and fishing	02: Forestry and logging
Other	A	A: Agriculture, Forestry and fishing	03: Fishing and aquaculture
Other	B	B: Mining and quarrying	05: Mining of coal and lignite
Other	B	B: Mining and quarrying	06: Extraction of crude petroleum and natural gas
Other	B	B: Mining and quarrying	07: Mining of metal ores
Other	B	B: Mining and quarrying	08: Other mining and quarrying
Other	B	B: Mining and quarrying	09: Mining support service activities
Other	C	C: Manufacturing	10: Manufacture of food products
Other	C	C: Manufacturing	11: Manufacture of beverages
Other	C	C: Manufacturing	12: Manufacture of tobacco products

Project Classification		Broad Industry Groups	SIC 2 code
Other	C	C: Manufacturing	13: Manufacture of textiles
Other	C	C: Manufacturing	14: Manufacture of wearing apparel
Other	C	C: Manufacturing	15: Manufacture of leather and related products
Other	C	C: Manufacturing	16: Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
Other	C	C: Manufacturing	17: Manufacture of paper and paper products
Other	C	C: Manufacturing	18: Printing and reproduction of recorded media
Other	C	C: Manufacturing	19: Manufacture of coke and refined petroleum products
Other	C	C: Manufacturing	20: Manufacture of chemicals and chemical products
Other	C	C: Manufacturing	21: Manufacture of basic pharmaceutical products and pharmaceutical preparations
Other	C	C: Manufacturing	22: Manufacture of rubber and plastic products
Other	C	C: Manufacturing	23: Manufacture of other non-metallic mineral products
Other	C	C: Manufacturing	24: Manufacture of basic metals
Other	C	C: Manufacturing	25: Manufacture of fabricated metal products, except machinery and equipment
Other	C	C: Manufacturing	26: Manufacture of computer, electronic and optical products
Other	C	C: Manufacturing	27: Manufacture of electrical equipment
Other	C	C: Manufacturing	28: Manufacture of machinery and equipment n.e.c.
Other	C	C: Manufacturing	29: Manufacture of motor vehicles, trailers and semi-trailers

Project Classification		Broad Industry Groups	SIC 2 code
Other	C	C: Manufacturing	30: Manufacture of other transport equipment
Other	C	C: Manufacturing	31: Manufacture of furniture
Other	C	C: Manufacturing	32: Other manufacturing
Other	C	C: Manufacturing	33: Repair and installation of machinery and equipment
Other	D	D: Electricity, gas, steam and air conditioning supply	35: Electricity, gas, steam and air conditioning supply
Other	E	E: Water supply, sewerage, waste management and remediation activities	36: Water collection, treatment and supply
Other	E	E: Water supply, sewerage, waste management and remediation activities	37: Sewerage
Other	E	E: Water supply, sewerage, waste management and remediation activities	38: Waste collection, treatment and disposal activities; materials recovery
Other	E	E: Water supply, sewerage, waste management and remediation activities	39: Remediation activities and other waste management services
Other	F	F: Construction	41: Construction of buildings
Other	F	F: Construction	42: Civil engineering
Other	F	F: Construction	43: Specialised construction activities
Other	G	G: Wholesale and retail trade, repair of motor vehicles and motorcycle	45: Wholesale and retail trade and repair of motor vehicles and motorcycles
Other	G	G: Wholesale and retail trade, repair of motor vehicles and motorcycle	46: Wholesale trade, except of motor vehicles and motorcycles
Other	G	G: Wholesale and retail trade, repair of motor vehicles and motorcycle	49: Land transport and transport via pipelines

Project Classification		Broad Industry Groups	SIC 2 code
Other	H	H: Transportation and storage	50: Water transport
Other	H	H: Transportation and storage	51: Air transport
Other	H	H: Transportation and storage	52: Warehousing and support activities for transportation
Other	H	H: Transportation and storage	53: Postal and courier activities
Other	T	T: Activities of households as employers	97: Activities of households as employers of domestic personnel
Other	T	T: Activities of households as employers	98: Undifferentiated goods- and services-producing activities of private households for own use
Other	U	U: Activities of extraterritorial organisations	99: Activities of extraterritorial organisations and bodies

A.3 Economic model parameters

Employment forecasts

Employment forecasts used for the modelling of future demand for office space is based on projections made by GLA Economics in their London Long Term Labour Market Projections 2022 interim[83] update using borough projections. Borough projections provide a total estimated number of jobs until 2052 by borough but do not break these down by industry sector. For this reason, we used a linear approach applying the same general growth rate to all sectors in order to avoid judgement-based assumptions.

Although the GLA also provides sector projections for London as a whole until 2052, these trends are a good indication to inform trends and possible scenarios for the City of London but should not be applied to the borough level, as dynamics vary between boroughs, and for example a shrink of traditional office-based jobs (e.g. finance jobs) at the London level could mean a concentration of these jobs in the City of London, while specific policies or land use regulations could alter other sector developments.

Following consultation with GLA Economics team as well as internal discussion, an alternative employment forecast scenario has been developed in order to account for possible higher growth in employment not constrained by site capacity and taking into account hybrid working trends. New working patterns imply that the same amount of space, if optimised following office attendance levels, could accommodate more jobs than previously as the same space could be used alternatively by several employees on different days. A proxy for growth for this scenario has therefore been to follow in the short term (until 2032) historic growth trends of jobs by sector in the City before going back to GLA Economics expected trends.

Attendance levels

Attendance levels are a key driver of the model and the main parameter differentiating scenarios. Our assumptions are based on a thorough review of available data sources on attendance levels in offices in London and the UK as well as ridership data to City of London stations with where possible comparison to pre-pandemic levels and patterns.

The below table shows that on average in the last week of January 2023 (not affected by any strikes nor school breaks), ridership levels where 68% of pre-pandemic levels (last week of January 2020), with Thursday being the closest to pre-pandemic levels at **76% of 2020 levels**.

	Monday	Tuesday	Wednesday	Thursday	Friday	Average
Jan-2023 as % of Jan-2020	59%	71%	74%	76%	59%	68%

AWA Hybrid Working Index published in December 2022[84] which surveyed 79 offices for a total employee population of 106,942 found out that the average attendance in the UK was 1.5 days per week compared to 3.8 days per week pre-pandemic, thus highlighting a **40% attendance rate compared to pre-pandemic** (**Figure 31**).

[83] GLA, 2023. London Long Term Labour Market Sector Projections.

[84] Advanced Workplace Associates, 2022. AWA Hybrid Working Index.

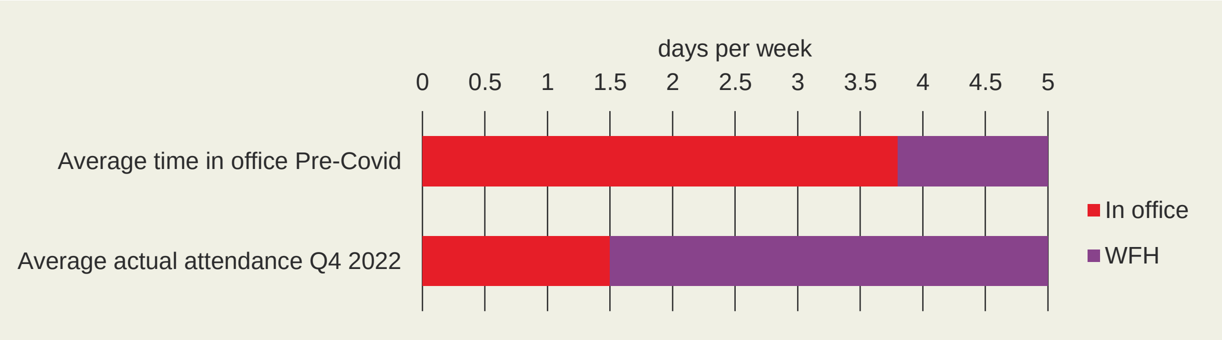

Figure 31: Average attendance levels Pre-Covid and in Q4 2022 - *AWA Hybrid Working Index 2*

Finally, we also used data collected by Remit Consulting for their ReTurn project[85] which is a UK property industry research project, managed by Remit Consulting, that tracks the return of workers to major offices in ten UK cities following the easing of Covid-19 lockdown restrictions. The research is based on the data from major office buildings in Belfast, Birmingham, Bristol, Cardiff, Edinburgh, Glasgow, Leeds, London, Manchester, Newcastle. Latest results published highlight a 54% of occupancy level in the Docklands sub-market (compared to an estimated 70% on average pre-pandemic) which implies a 77% return rate compared to pre-pandemic levels. We consider the Docklands sub-market being a good proxy for the City of London market.

The resulting attendance levels considered for the model are illustrated in **Figure 32**.

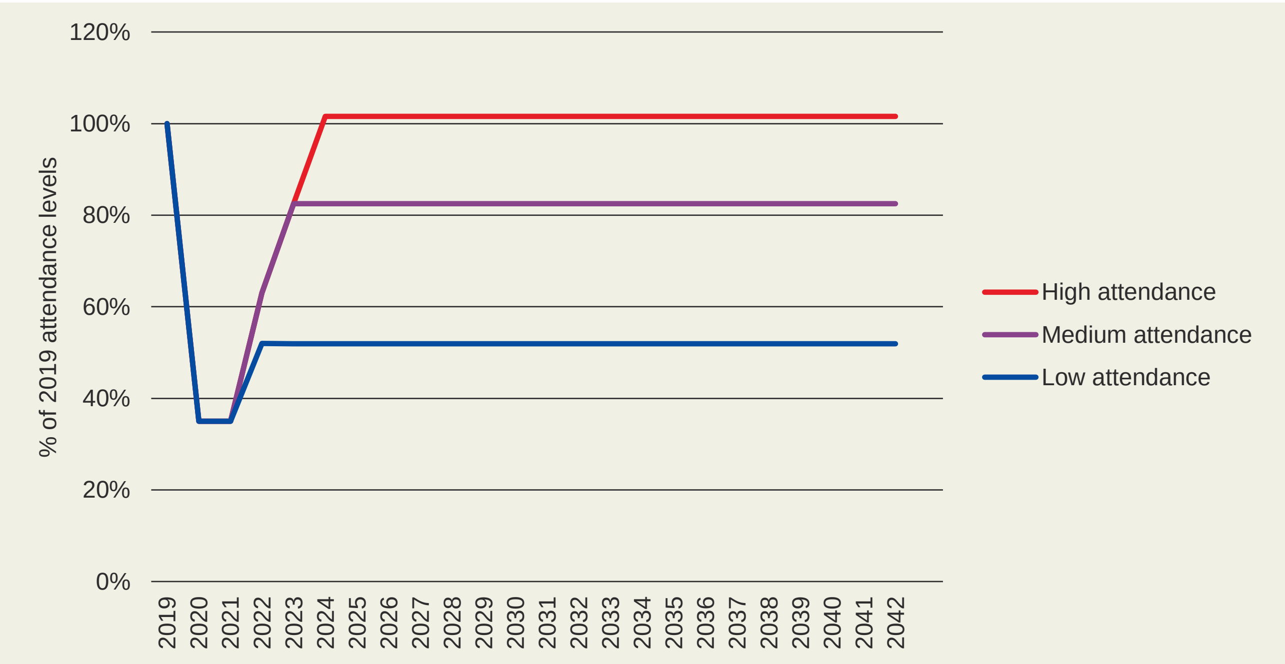

Figure 32: Attendance levels considered for modelling scenarios

[85] Remit Consulting, 2023. News Release: Latest data reveals improved UK office occupancy levels.

Attendance distribution

For attendance distribution of employee throughout the week analysis we have used a combination of data sources from TfL data ridership, AWA Hybrid Working Index and Arup London's office attendance figures.

Figure 33 shows how the attendance to the office is now concentrated around Tuesday-Thursdays, with Mondays gradually filling but being still below mid-week attendance and Fridays looking very low across all sources. Data from pre-pandemic ridership shows that this pattern already existed but was less extreme.

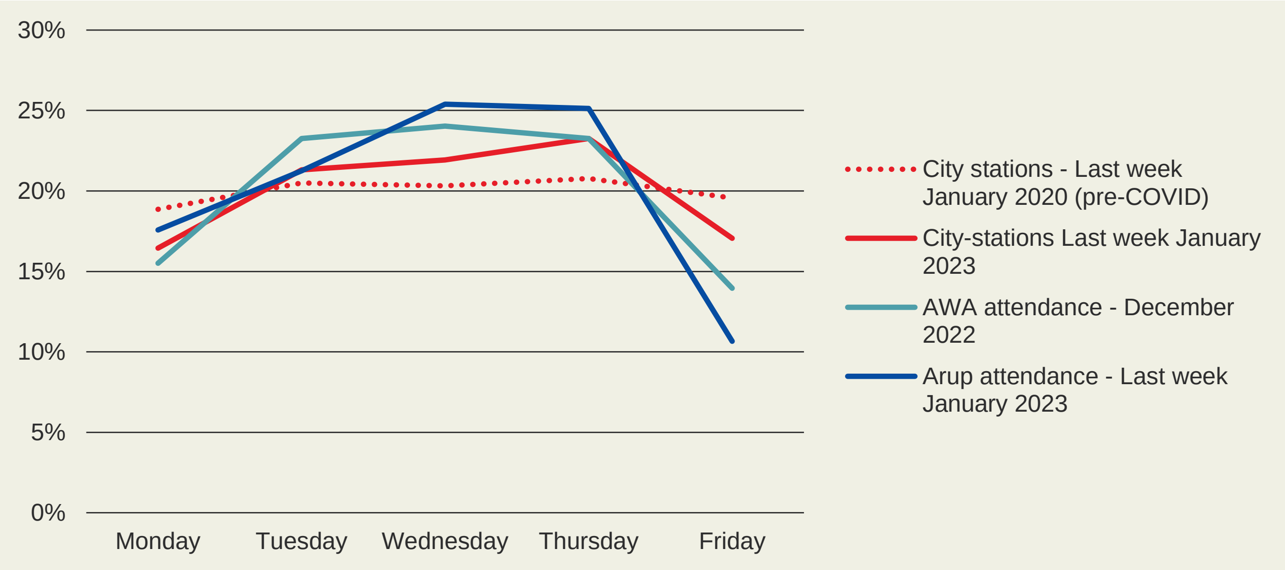

Figure 33: Distribution of attendance across weekdays - *TfL, Arup, AWA*

Employment densities

The amount of office floor space that is provided for each employee is another driver of the economic model to forecast implied demand. Historic levels of this space per employee were estimated using total stock of office floor space from the Valuation Office Agency (occupied or vacant) and the total number of "office-based" jobs (see Sectors classification – industry groups to bespoke categories) estimated based on numbers employment from BRES. Trends show an intensification of office floor space per employee from 2009 to 2022.

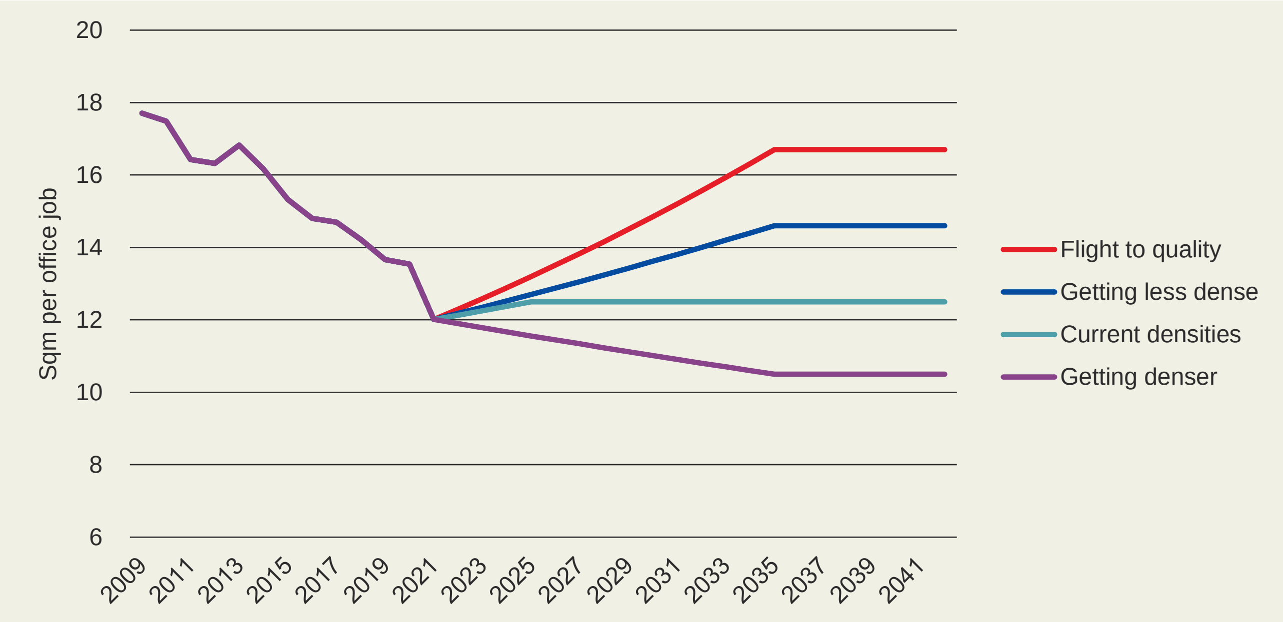

Figure 34: Historic and projected densities for office-based jobs in the City of London – *VOA, BRES, Arup*

For the modelling exercise, these figures were projected in the future to estimate amounts of space needed to accommodate workers. Based on discussion with Knight Frank experts, markets insights gained as well as the British Council for Offices (BCO) 2022 guidance[86], it has been decided to project the "flight-to-quality" trend - that is increased floor space per employee in offices (allowing for more breakout spaces, amenities, meeting spaces etc.) - to reach an average 16.7 sqm (NIA) per employee by 2035 as per BCO guidance (**Figure 34**).

However, as the BCO guidance sets ambitious targets, insights from Knight Frank experts and market research indicated that not all future space in the City might ever reach these targets, and some assets might witness continued higher job densities due to architectural constraints, sectoral practices or price constraints. For this reason, a more balanced scenario has also been projected to account for higher densities. Finally, historic trend rather suggests an opposite trend to the ones described above, as floor space per office job has continuously been intensifying over the last 15 years. One of the density scenarios modelled has therefore been considering this trend as a possible future.

As a result the composition of the following parameters has been used for modelling underlying demand for future office space in the City of London:

	Employment trend	Attendance levels	Density scenario	Sector
Return of In-Person	GLA projections	Medium attendance	Getting less dense	J: Information and communication
	GLA projections	High attendance	Getting less dense	K: Financial and insurance activities

[86] British Council for Offices, 2022. BCO Guide To Specification Key Design Criteria Update 2022: A Position Paper.

	Employment trend	Attendance levels	Density scenario	Sector
	GLA projections	High attendance	Current densities	L: Real Estate activities
	GLA projections	High attendance	Current densities	M: Professional, scientific and technical activities
	GLA projections	High attendance	Current densities	O: Public administration and defence
Hybrid Peak	GLA projections	Low attendance	Flight to quality	J: Information and communication
	GLA projections	Medium attendance	Flight to quality	K: Financial and insurance activities
	GLA projections	Medium attendance	Getting less dense	L: Real Estate activities
	GLA projections	Medium attendance	Getting less dense	M: Professional, scientific and technical activities
	GLA projections	Medium attendance	Current densities	O: Public administration and defence
New Diverse City	Short term historic trends longer term GLA trends	Low attendance	Getting denser	J: Information and communication
	Short term historic trends longer term GLA trends	Low attendance	Flight to quality	K: Financial and insurance activities
	Short term historic trends longer term GLA trends	Low attendance	Flight to quality	L: Real Estate activities
	Short term historic trends longer term GLA trends	Low attendance	Flight to quality	M: Professional, scientific and technical activities

	Employment trend	Attendance levels	Density scenario	Sector
	Short term historic trends longer term GLA trends	Low attendance	Current densities	O: Public administration and defence