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Spotlight | 2017

Cambridge: building its global future

Summary Cambridge is already a globally successful city. Yet its success risks being held back by looming shortages in the commercial and residential markets, and by infrastructure bottlenecks

Cambridge continues to grow as a hub of global importance for bioscience and technology research and development. It can maintain a competitive edge as labour costs are up to 32% lower than in the US. See p2

The commercial development pipeline is undersupplied with only 1.3 years of office/lab space remaining. The challenge is to provide the right space for more larger-scale occupiers. There is also a shortage of startup and grow-on space. See p5

Median house prices in the city are 13.5 times more than median earnings, almost twice the national average. Values are equivalent to parts of London. With no obvious trigger for a correction in prices, there is a case for extending the 40% Help to Buy equity loan scheme to Cambridge. See p8

Both the city and surrounding area need to continue to provide more housing at a range of price points, particularly as housing affordability becomes stretched. Economic growth will be hindered if employees of all levels are priced out of the area. See p9

Local and central government has a crucial role to play. Future commercial and residential growth needs to be supported by strong and timely new infrastructure. There is scope for further action with newly devolved powers and funding. See p10

A global player

Cambridge is undoubtedly a successful and world-leading research centre, particularly for biosciences. However, more of the right space must now be delivered to enable the city to maintain its competitive edge in a global market

Pressures on office space

The city has seen 262,000 sq ft of office and laboratory space take-up in the first half of 2017. This includes major deals with Amazon, Heptares and Astex Pharmaceuticals. Average annual office and laboratory take-up has reached 620,000 sq ft over the past three years, a 59% increase over the 10-year annual average.

This structural shift has been driven by both inward investing and expanding global R&D businesses, which has left the market with only 1.3 years of supply. We classify this as a shortfall.

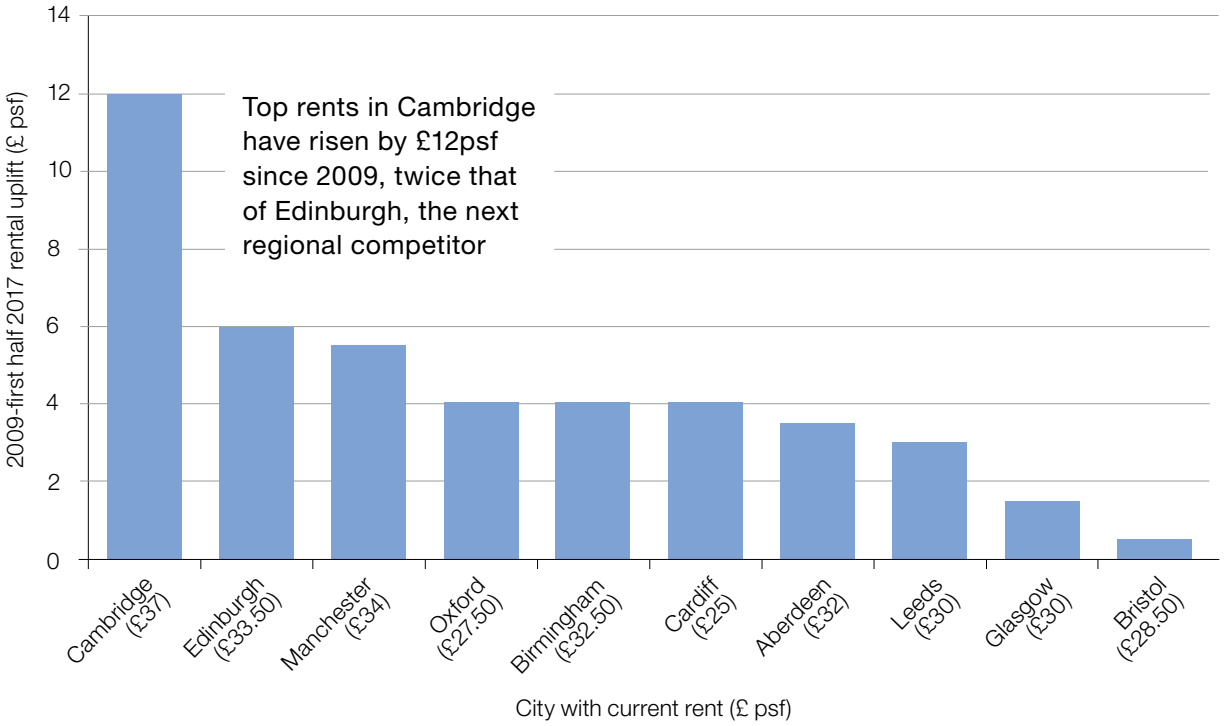
If this is not addressed promptly, Cambridge could struggle to attract new projects that might be drawn to other competing centres worldwide. With an additional 2,200 office- and laboratory-based jobs forecast over the next five years, this indicates a need for more than 300,000 sq ft of additional space. This has added further upward pressure on top rents, which now stand above all other UK cities outside London at £37psf for offices and £32psf for laboratory space. We expect Cambridge to see further rental growth, driven by unprecedented levels of take-up and a shortage of speculative development.

Competitive salaries

Although rents are a factor, global occupiers are more concerned with wage costs than commercial property costs, as they are a comparatively smaller part of overall operating costs.

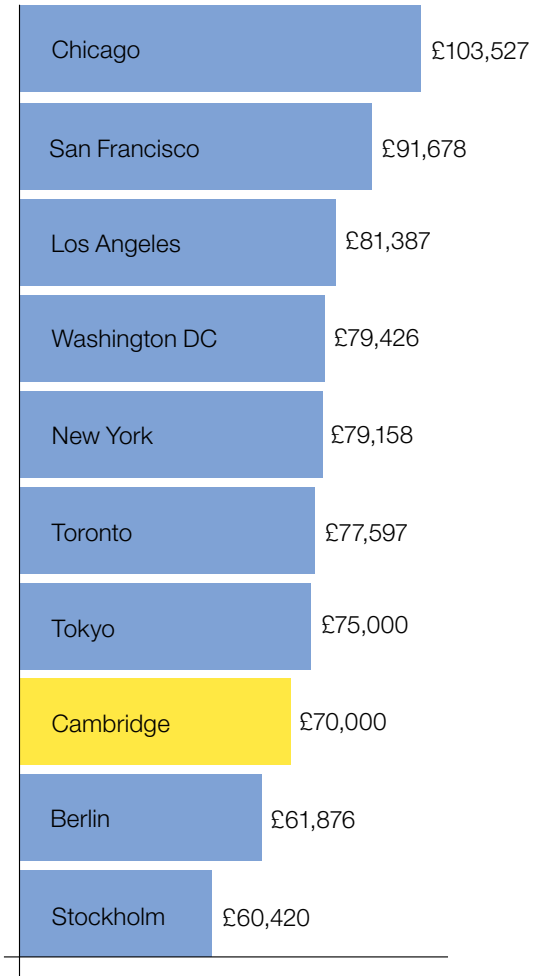
Despite average weekly earnings in Cambridge now standing 13.6% above the UK average, the city's workforce remains cost effective in global terms. Accounting for exchange rates, the average salary for a software development engineer in Cambridge is 32% below that of the equivalent role in Chicago.

Rising rentals Cambridge has had the highest rental uplift since 2009 and has the highest rent. With increased take-up and a shortage of development, further rental growth is expected



Source Savills Research

Skilled labour The average annual salary for a software development engineer in Cambridge is 32% less than in Chicago



Source Glassdoor

As we covered last year, Cambridge is still more affordable for bioscience companies, with average scientist salaries 40% below the equivalent role in Boston, USA. Multinational occupiers will continue to seek skilled labour at value, and salaries within Cambridge remain attractive.

Talent pool pipeline

Occupiers are also concerned about where future pools of talent will come from. Education accounts for around 15% of Cambridge's Gross Value Added (GVA), more than twice the UK average, which is largely driven by research and development at the University of Cambridge. However, Cambridge currently retains only 17% of its graduates in the city after graduation. London retains 77%. Cambridge must retain more of its homegrown talent in order to expand further.

One major challenge for the education sector is the UK's relationship with the European Union. Typically, 10% of Cambridge's undergraduates come from other EU countries, but the university recently revealed that >

Cambridge in focus

Patents granted (per 100,000 population)
Cambridge: 341
UK: 18

Commute by bike
Cambridge: 29%
UK: 2%

Qualified at NVQ4 or above
Cambridge: 67%
UK: 37%

Average weekly earnings (£)
Cambridge: £600
UK: £528

Graduate retention rate (%)
Cambridge: 17%
London: 77%

Cambridge University research grants and funding
EU sources: 13%
UK sources: 87%

£46bn of corporate investment transactions since beginning of 2012

Source Intellectual Property Office 2015, ONS, NOMIS, HESA, University of Cambridge, Company Database

2016 applications from member states had fallen 14% on the previous year. The potential of higher fees for European students and uncertainties over post-Brexit R&D funding could pose a threat to the city's growth.

In 2016, 13% of the University of Cambridge's research grants were provided by EU funding. Although uncertainty surrounds the EU funding gap into UK universities post-Brexit, the UK will continue to benefit from Horizon 2020 funding.

So, unless Brexit causes an investment hiatus, the outlook for Cambridge remains positive, but short supply in the office and laboratory pipeline means there is a risk that some investment might be deflected elsewhere.

Boost in commercial investment

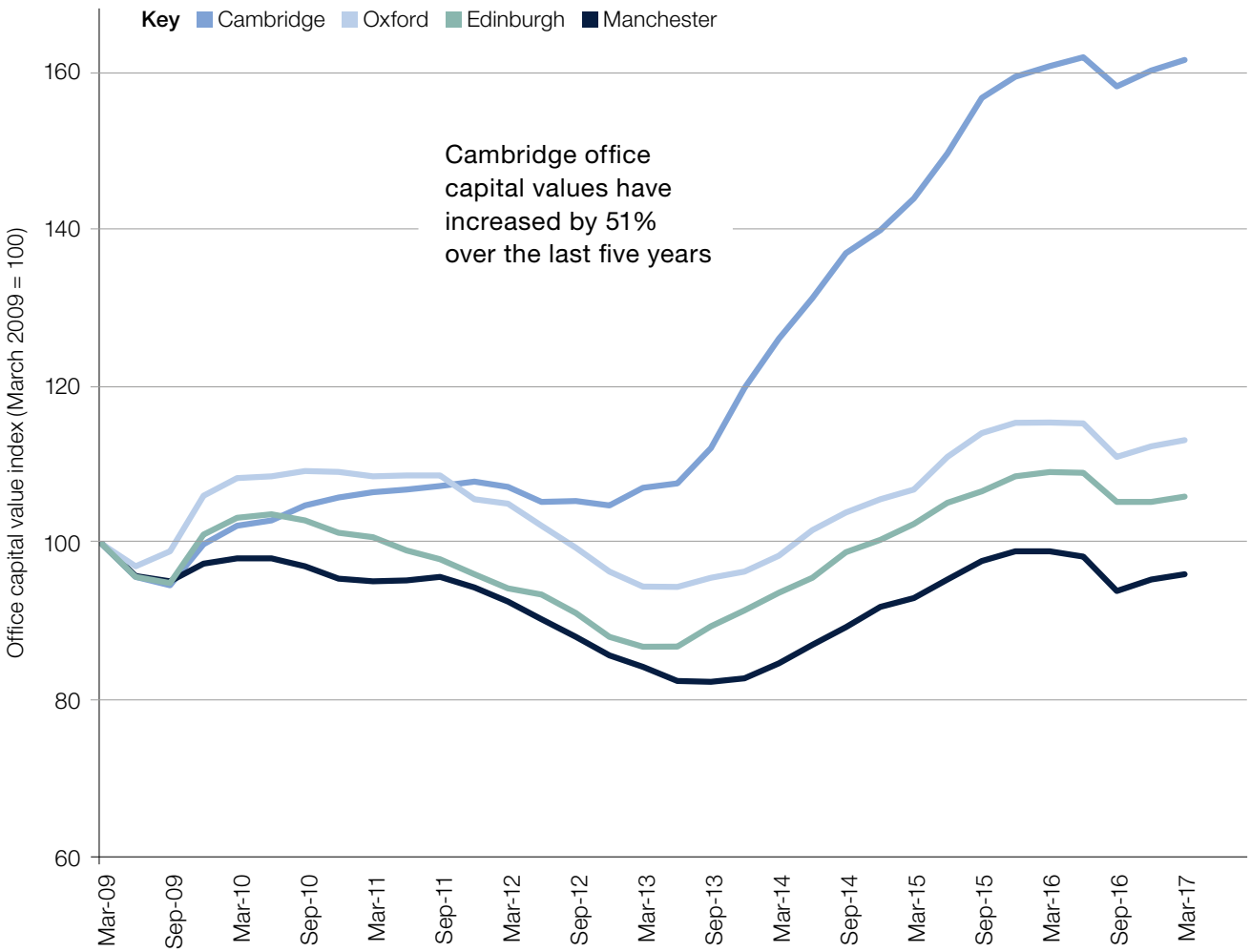
There has been a stepped increase in commercial investment volumes in Cambridge in recent years, with the five-year average reaching £241 million; 65% above the long-term annual average. Notable transactions have included Aviva Investors' acquisition of 50 and 60 Station Road in the CB1 District for £80 million, and the purchase of 14-15 Market Street for £18 million by a private Saudi Arabian investor.

The UK Institutions have historically preferred prime assets in the city and are under increasing pressure to buy following strong inflows of capital.

Strong investment levels have driven capital value growth; Cambridge's office/laboratory capital values stand 62% above the March 2009 levels. Comparable UK cities have not seen the same growth. Values in Oxford, for example, have only grown by 13% in the same period, whilst Manchester's office capital values have still not yet recovered to its 2009 values.

Strong international demand and the return of the UK institutions during 2017 has seen prime office yields fall from 5.25% to 5% over the past six months. This being said, yields remain attractive relative to the City of London and West End, at 4% and 3.25% respectively. ■

Rising values Cambridge's office capital value growth has significantly outperformed comparable UK cities, such as Oxford and Edinburgh



Source Savills Research, MSCI

Investing for business growth

With strong levels of venture capital investment, the challenge for Cambridge is to provide the right space for start-ups, growth companies and large international corporations

Cambridge's ability to attract multinational office and lab occupiers in recent years has allowed it to compete with other global cities as a biosciences and pharmaceutical hub.

The flow of investment capital is a lead indicator of future commercial real estate growth. Venture capital (VC) investment, with its focus on the start-up community, is therefore a good indicator of future intentions. Since 2012, £790 million of VC funds has been invested in Cambridge. Of this, £270 million was in the first seven months of 2017.

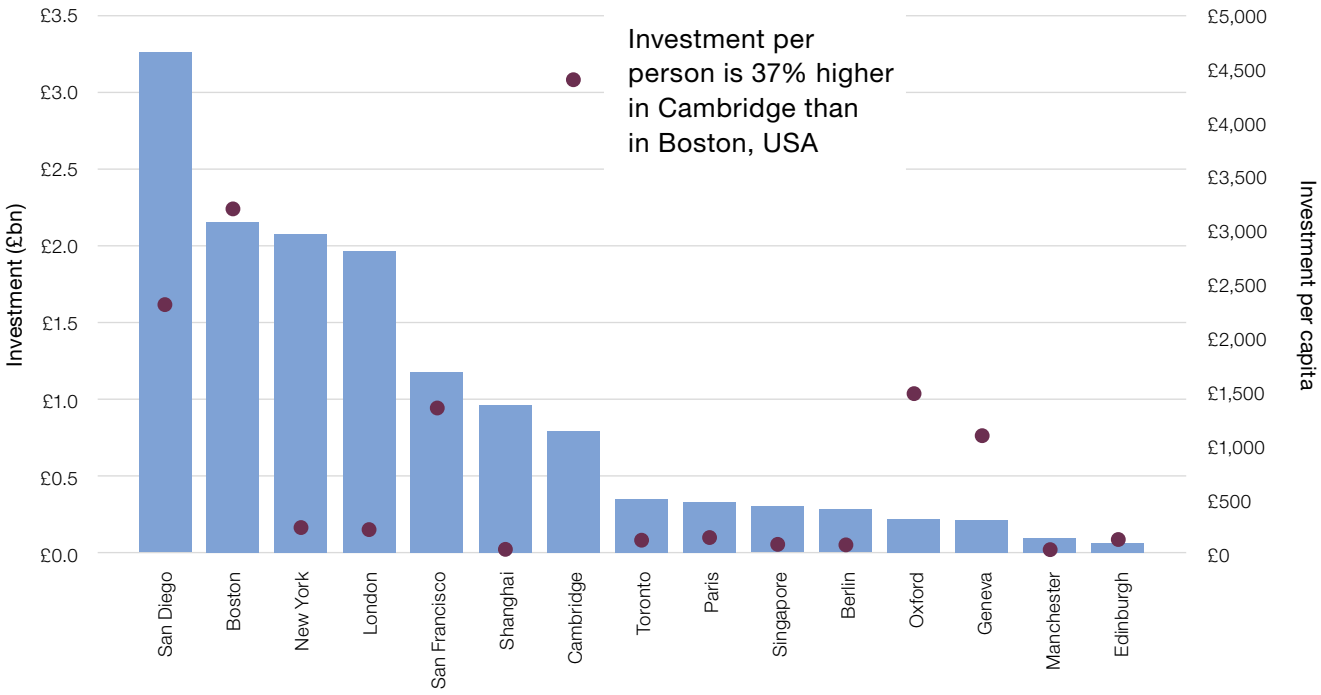
More than 84% of this funding has been invested in the pharmaceutical, biotechnology and software sectors. These have become the key sectors for Cambridge's economy, and will require the further development of start-up, and grow-on, office and laboratory space. The strength of the Cambridge ecosystem reaches beyond the city boundaries. Recently, £40 million was invested in the cancer treatment firm Bicycle Therapeutics, who are based six miles from the city centre at Babraham.

Since 2012, Cambridge has received £4,415 of VC funding per capita – 37% more than its nearest global competitor, Boston, USA.

Of the 10 largest biotech companies in Boston, USA, eight have a Cambridge presence, as the city continues to compete on the global stage.

Over the next three years, around two million sq ft of office and laboratory developments will be delivered in the Cambridge market. However, only >

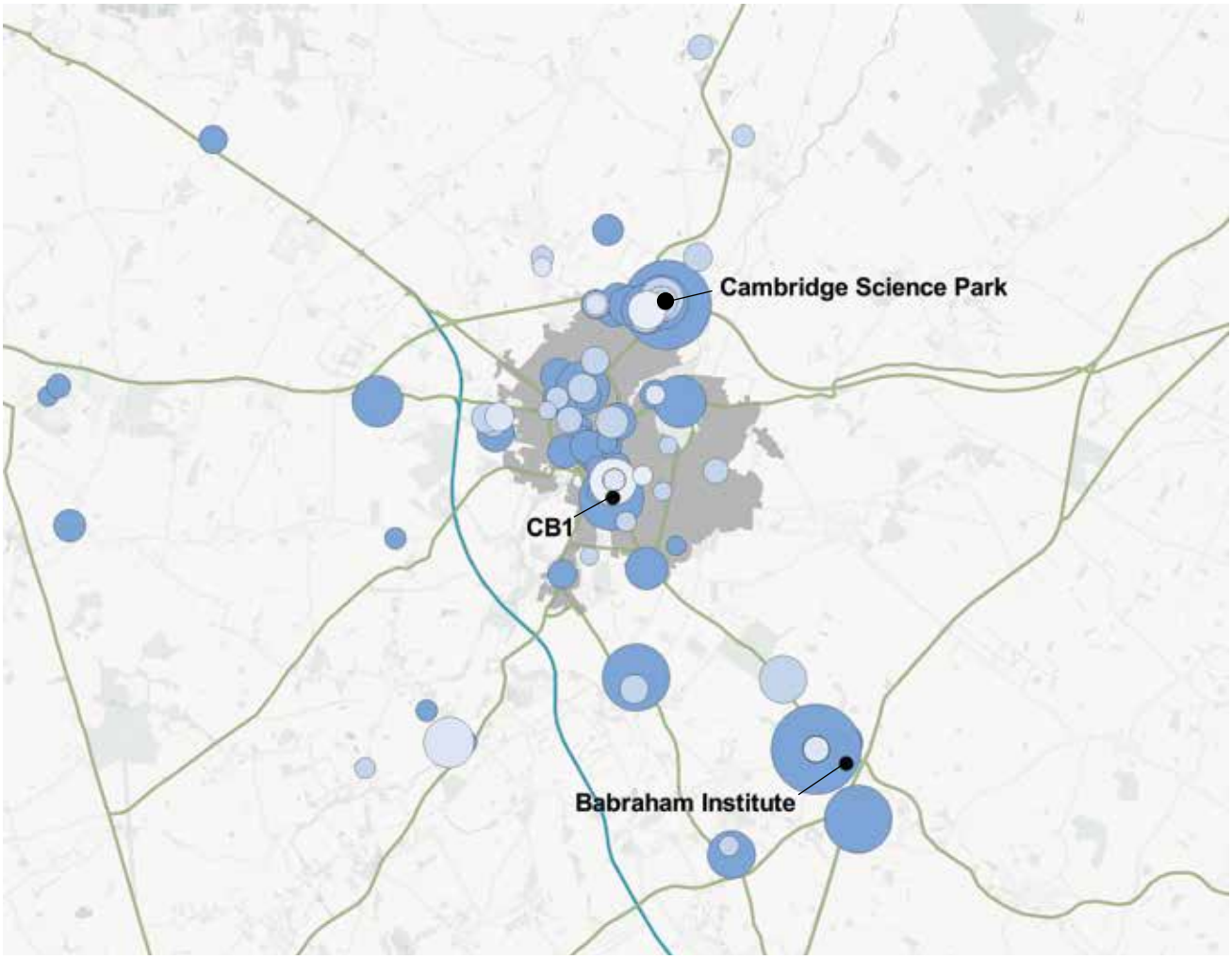
Punching above its weight Cambridge receives a higher volume of venture capital investment relative to its population in comparison with other tech cities



Key: Investment (£bn) Investment per capita (£)

Source Savills Research

Targeting future demand Venture capital funding provides an early indication of future office demand in the Cambridge market. Large-scale funding has recently taken place to the south-east of the city



Key

Last financing date
- 2012-2013
- 2014-2015
- 2016-2017

Last financing size
- £1 million
- £5 million
- £10 million
- £15 million

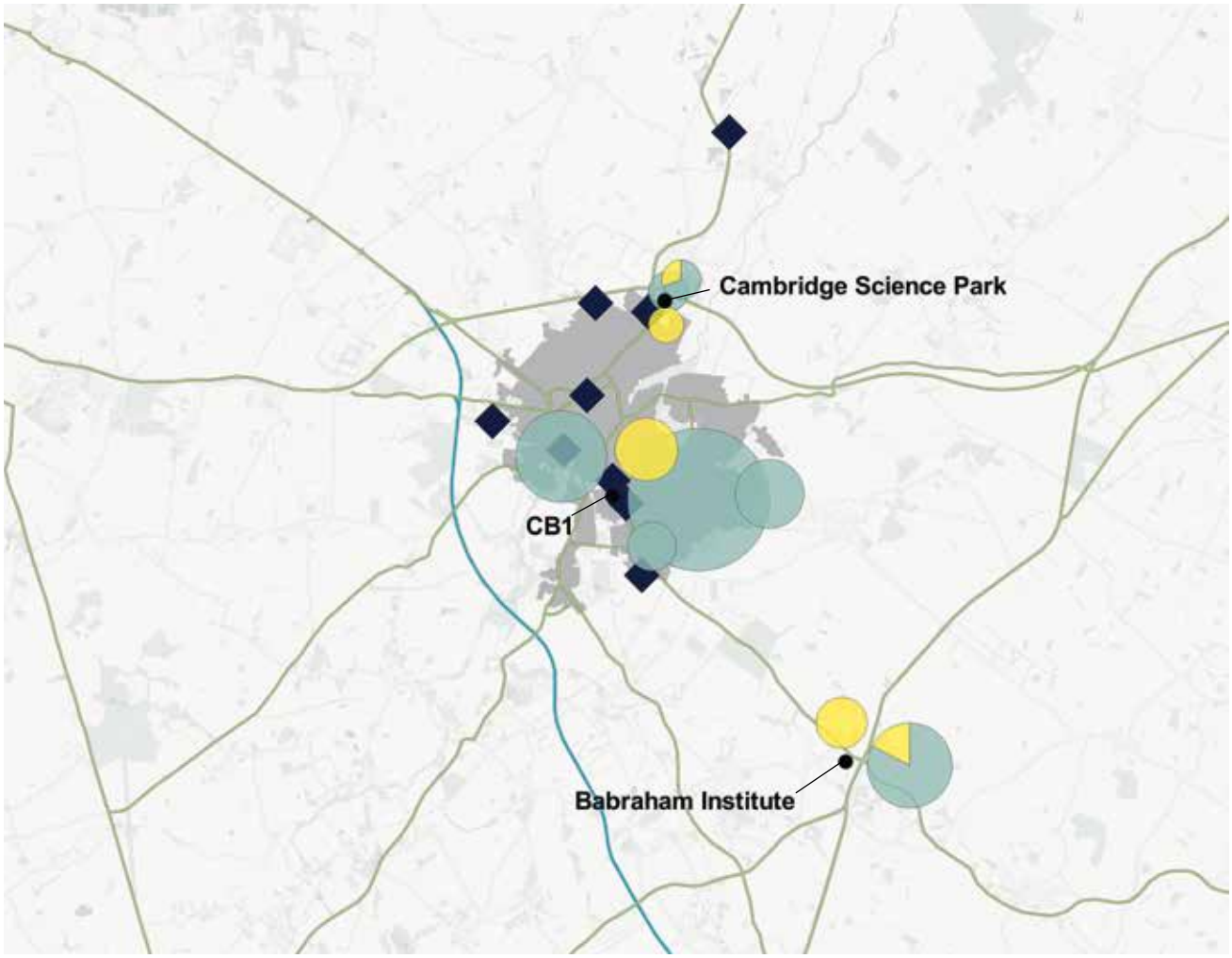
Source Savills Research

385,000 sq ft of this is speculative, most of which is set to deliver during 2019. Despite the regeneration of the CB1 district, it is the out-of-town markets which will see the majority of floorspace delivered, with particular focus towards the south of Cambridge.

It is not just the multinationals who are competing for space. Cambridge was granted 341 patents per 100,000 people during 2016, almost 19 times the national average. Many of these fast-growth start-up companies require follow-on space, but still need to be located alongside other companies in their industries. SuperX, for example, based on the Babraham Research Campus, operates as a virtual biotechnology company. It uses an established network of outsourced drug development providers. Many of these are also based on the Babraham campus, and will benefit as they grow from continued co-location.

In addition, as seen in Boston, life science companies are beginning to use space more efficiently. It is important, therefore, that Cambridge offers a wide mix and choice of property in order to attract and retain bioscience companies.

Space required Although there is a pipeline of large-scale commercial development, there is still a shortage of incubator space to the south-east of the city. Limited speculative development could hamper growth



Key
- Existing incubator space
- Available
- Pre-let

Commercial development area (sq ft)
40,000
850,000

Source Savills Research

There is also a shortage of business incubator space to the south-east of the city, despite strong levels of venture capital investment during both 2016 and 2017. The East of England provides fewer incubators and accelerators per 1,000 new businesses than all other UK regions.

Biomed Realty are developing 108,000 sq ft of speculative grow-on space at Babraham, set to complete during 2019, while future space at Granta Park should act to ease the shortfall. The Bradfield Centre, currently under construction in Cambridge Science Park, will provide 40,000 sq ft of space to nurture around 500 start-ups.

Part of the reason for a shortfall in floorspace is that high-growth small companies are offered favourable rents and are not moved on to conventional office space quickly enough.

If start-ups were offered subsidised rents in the first and second years, leading to harder commercial terms in subsequent years, this would free up space for new start-ups. Graduation from start-up space is vital to create economic growth in Cambridge. ■

New jobs need new houses

Cambridge is a popular market, but needs to increase housing delivery across a range of price points and tenures to address affordability

Cambridge continues to suffer from significant pressure on housing, and failure to address the problems could impact the market going forward. Ongoing affordability constraints are limiting the number of workers who can live in the city, pushing people out into surrounding areas and putting pressure on the already overstretched local infrastructure.

Affordability constraints

The city of Cambridge has seen rapid house price growth over the last five years of 55%. Growth in South Cambridgeshire has been slightly slower over the same period at 43%, but both have significantly outperformed the England and Wales average of 29%.

Median full time earnings within Cambridge in 2016 were £30,855 per annum, according to ONS. While this is higher than the UK average, the spending power of different residents varies massively. Employees in the professional, scientific and tech sector make up 16% of Cambridge's total employment market, yet contribute more than 20% of the city's total GVA. These industries are fuelling earnings at the top end, but annual pay in the lowest percentile is only £16,460.

In terms of value per square foot, Cambridge behaves much more like London than the rest of the East of England. Central Cambridge, at £630psf, is achieving equivalent values to Zone 2 locations in London, such as Brixton. With the average house price in the 12 months to May 2017 standing at £490,000, homes in Cambridge are currently 13.5 times more than earnings. This makes it one of the least affordable places in the country.

New build market

In last year's report, we calculated that Cambridge and South Cambridgeshire required a combined housing target of 2,415 new homes a year, with affordable housing accounting for 35% of delivery in Cambridge and 30% in South Cambridgeshire. This target is 765 homes higher than the current objective assessment of need.

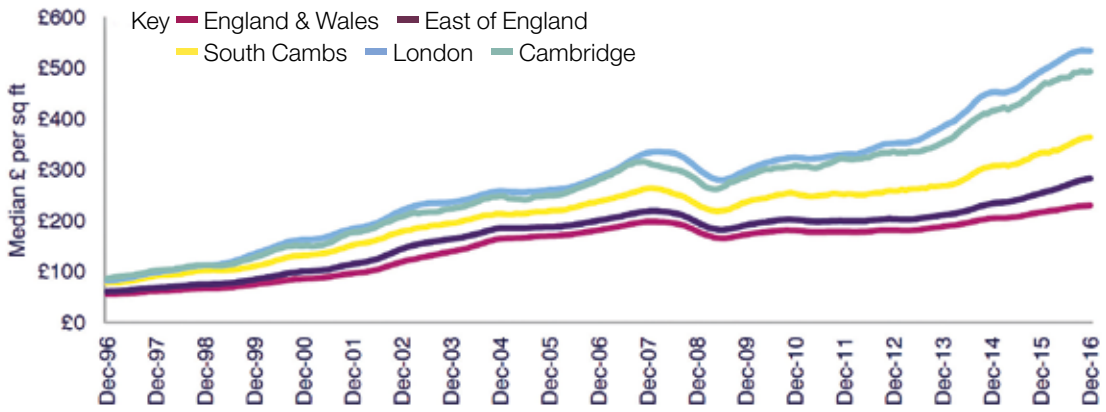
Nevertheless, Cambridge city is delivering above average numbers of new homes – in the 12 months to May 2017, new build homes accounted for 31% of the 1,566 residential transactions recorded by Land Registry. Across England and Wales this number was just 10%.

Yet, current sales of new build stock in Cambridge are more concentrated at the top end of the market compared to secondhand, and above the Help to Buy cap of £600,000. Moreover, demand from investors has dropped over the past year, leaving developers reliant on the owner-occupier market for sales. As a result, asking prices are under pressure – values on the large urban extensions around the city have dropped by 5-7% over the last year.

Rental pressures

A lack of investors also has the potential to reduce rental stock going forward – especially in the prime family market. This market is currently very strong, with values increasing by just under 5% over the last year. Cambridge city has seen high levels of housing delivery over the last couple of years, yet it needs more. Future residential development needs to offer a range of products and tenures at the right price point to ensure that the affordability gap does not widen yet further.

Another London Cambridge has seen similar levels of house price growth to London



Source Savills Research

Cambridge buyers

What are the challenges for different buyers in the Cambridge market? We examine the needs of the downsizer, first-time buyer and family upsizer

Downsizer

One feature of the current market is the emergence of the aspirational downsizer. These buyers have built up considerable equity as a result of rapid house price growth in Cambridge and South Cambridgeshire. Cambridge Insights are forecasting that the city's population of over-65s will more than double by 2036.

Analysis of Savills transactions shows that over-60s accounted for 22% of secondhand sales between 2014 and 2016 and yet just 6% of new build sales in Cambridge. This suggests that there is an opportunity to target downsizers in the new build market – if the product, price point and, most importantly, the location is right.

These downsizers want to be close to the city, or to amenities, and are looking for a smaller, more manageable property which allows them to release equity from their home, but still provides spacious living areas and storage. However, there isn't the provision of land within the city centre for such homes – meaning buyers are often looking to low-maintenance secondhand properties such as on the Accordia development, off Brooklands Avenue. Prices here have seen a steady increase over the last 12 months due to sustained demand from downsizers.

First-time buyer

There have been 165 Help to Buy equity loan sales to first-time buyers between April 2013 and March 2017 in Cambridge. This represents just 8% of all new build transactions over the period, according to Land Registry. By comparison, in Bristol, Help to Buy loans to first-time buyers accounted for 24% of all transactions, and this is even higher across England & Wales at 27%.

Cambridge has the demand from working young professionals looking to get on the housing ladder, but the low level of those using Help to Buy suggests the new build market is too expensive for them. With values similar to London, there is a case for extending the Help to Buy equity loan from 20% to 40%.

To combat affordability constraints, we may also see a rise in smaller unit sizes and 'micro living' schemes, such as Pocket Living in London. These are usually high-spec schemes that incorporate communal spaces to attract a millennial buyer.

Family upsizer

Cambridge is popular with families – 28% of Savills buyers were upsizing in the secondhand market between 2014 and 2016. Traditional family-sized housing stock in Cambridge is noticeably small; between 2012 and 2016, the average size of a secondhand terrace sold was 943 sq ft, while new build terraces have averaged 1,495 sq ft – close to the average size of detached secondhand at 1,566 sq ft. New build family homes are larger and have been weighted towards the upper end of the market.

There is a price gap in the new build market for upsizing families who are looking for more space. They are hitting up against the limits of mortgage regulation and a higher stamp duty bill, and need new homes on an affordable scale.

At the top end of the Cambridge secondhand market (in excess of £1 million), our prime index has shown values have softened by -1.7% over the last year.

Like aspirational downsizers, families are focusing on location, and properties close to the city centre and good schools are remaining popular. This is especially true if they have large gardens and space for multiple cars – features not commonly found in new build stock.

Family upsizers New build stock has been large and weighted towards the upper end of the market – stretching affordability

Detached
New build: 1,667 sq ft
Secondhand: 1,566 sq ft

Semi-detached
New build: 1,289 sq ft
Secondhand: 1,085 sq ft

Terraced
New build: 1,495 sq ft
Secondhand: 943 sq ft

Source Savills Research

Trains, planes and cycle lanes

Cambridge's real estate requirements can only be met if they are supported by timely, well-planned and integrated infrastructure that links the city with the world beyond

Whatever form it takes, improved infrastructure is essential for Cambridge to maintain its competitive edge. Congestion in the city is becoming a threat to economic investment as well as quality of life. In the 2014 Cambridge Ahead *Quality of Life Survey*, 42% of respondents identified road congestion as the most important issue facing their local area.

Moving around the city

Congestion will only worsen if the city sees more unmitigated edge of settlement development. This will bring more people who will need to move around the city, particularly at peak times and at already pinched locations.

It is, therefore, essential for new housing development to be linked to employment opportunities. Equally, new employment locations need to be served by good public transport and, where possible, integrated with other amenities. This reflects the growing preferences of workers not to be located on isolated business parks without amenities (see Savills/BCO *What Workers Want Survey 2016*).

The new station now open at Cambridge North will improve access to the business and science parks in that area of the city. A further railway station at Addenbrookes to the south of the city would have a similarly transformative effect, supporting growth at the hospitals and Biomedical Campus. This would link, in due course, to a new Oxford/Cambridge rail link.

Links across the city are important too – for example, between North West Cambridge and the growing focal point at the Biomedical Campus. This suggests a need to look for a network of citywide enhancements, not just connections into and out of the city centre.

Connecting Cambridge

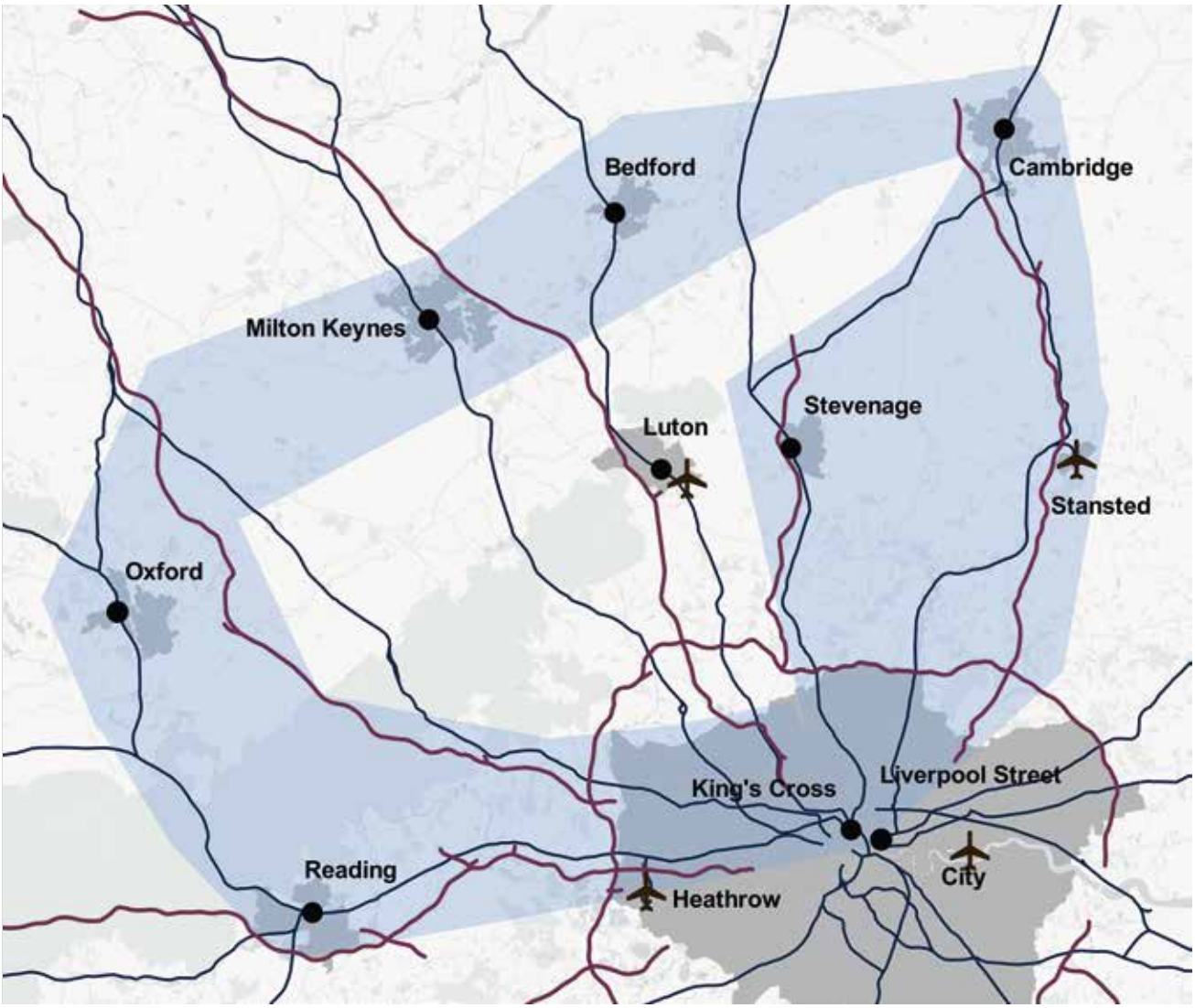
There are currently 68,000 homes in the long-term pipeline on sites within a 20-mile radius of Cambridge, with 14,200 currently under construction. A significant proportion of the residents of these developments are likely to commute into Cambridge, adding to existing rush-hour congestion.

The Greater Cambridge Partnership (formerly the City Deal) believes population growth means journeys on the transport network are likely to increase by 25% by 2031.

According to the 2011 census, more than 75% of commuters in South and East Cambridgeshire travelled to work by car, a clear indicator that infrastructure – including road upgrades, cycleways and increased public transport – needs to be planned and delivered ahead of or alongside new housing, not afterwards.

Significant effort is now going into tackling this problem, including via the new Cambridgeshire and Peterborough Combined Authority with its elected mayor, and the newly re-badged Greater Cambridge Partnership. Much of that effort and funding is rightly focused on connecting the Cambridge hub with the burgeoning ring of commuter towns and new settlements of its hinterland.

Cambridge connectivity Improved road and rail links to other knowledge economies is crucial. Further expansion at Stansted would also improve Cambridge's global connectivity



Key: ■ Motorway ■ Rail network ● Key rail stations

Source Savills Research

More extensive links

Improved national and international links with other major employment centres are crucial to Cambridge's continued success.

There are 4,500 knowledge intensive companies located within 25 miles of the city. Further afield, the bioscience and pharmaceutical companies based in Stevenage, Ware, Welwyn Garden City, as well as London, benefit from good connections to the city. However, links to other knowledge economies, such as Oxford and the Thames Valley, are poor. Proposals such as an East-West rail link could improve the situation, but are several years off. It will require significant investment and co-operation between local authorities and central government bodies to deliver.

Cambridge is a global centre for research and has to have global connections. Aviation capacity is extensive in all of its global competitors. The Boston Route 128 cluster and the San Francisco-Silicon Valley regions are served by 10 runways over a number of airports. In San Francisco, this amounts to a peak departure capacity of more than 200 flights per hour. Cambridge is served by airports with capacity for 160 movements per hour; but some are from Heathrow and Gatwick on the other side of London. Stansted Airport is the UK's fourth busiest airport and further expansion, particularly in long-haul flights, would improve Cambridge's global connectivity.

Savills development We provide bespoke services for landowners, developers, occupiers and investors across the lifecycle of residential, commercial or mixed-use projects. We add value by providing our clients with research-backed advice and consultancy through our market-leading global research team

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