

The Beehive Redevelopment

Economic Impact Assessment

August 2024

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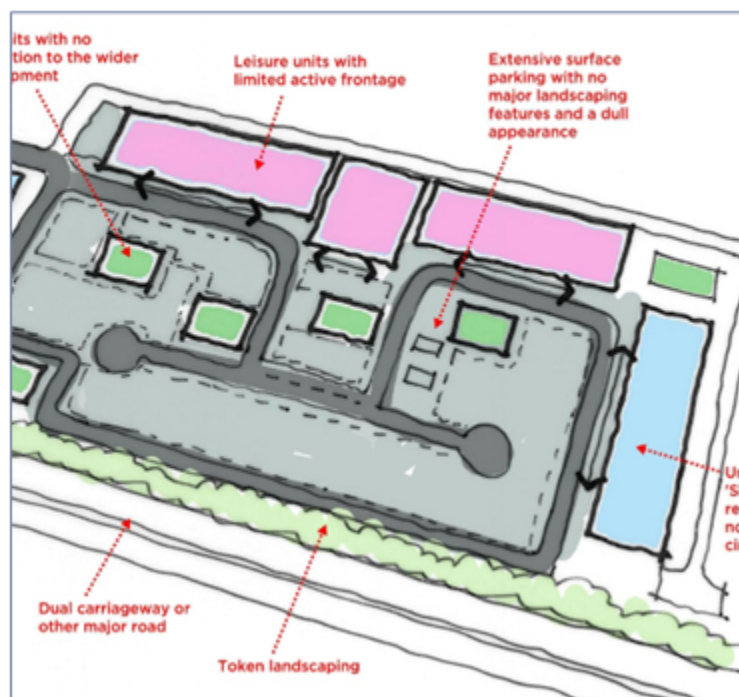
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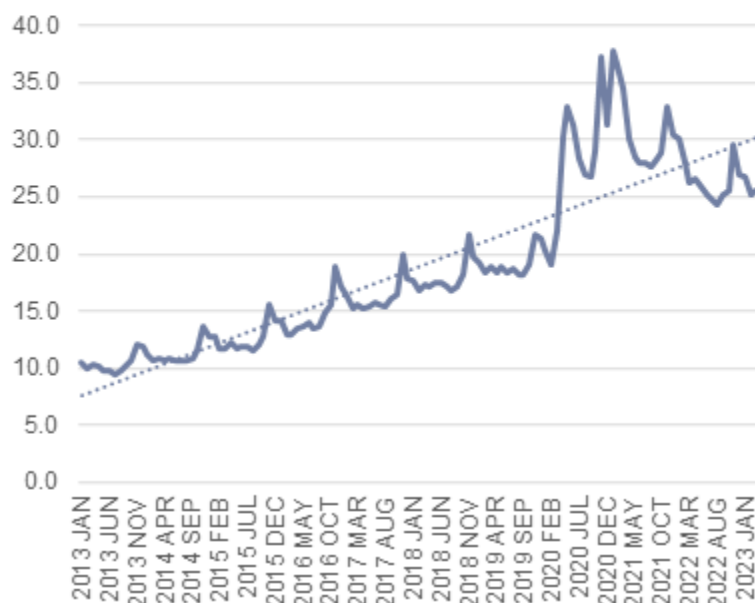
The Proposed Development

There is a significant opportunity to redevelop and repurpose the Site from solely retail to a more efficient and productive development. The proposals would deliver a commercial-led development nearby to Cambridge city centre. The plans include the development of lab and office space and supporting retail and community space.

The Proposed Development will create a new local centre, workplace and innovation cluster. Eleven new buildings for life science, innovation and office use come together to create a masterplan organised around a series of connected open spaces, providing a vibrant mixed-use environment.



Internet sales as a percentage of total retail sales



Challenges for physical retail

Prior to the COVID-19 pandemic, vacancy rates across the national industry have increased from 10.9% in Q1 2017 to 12.2% in Q1 2020.

Online sales as a proportion of all retail sales has risen from 10% in 2013 to 25% in 2023 (see chart above). By 2035, the share of online sales is expected to make up 35% of all retail sales.

Consumers are demanding mixed use spaces, which involves the consolidation of assets and diversification of uses.

Poor performance of the Beehive Centre

The Beehive Centre follows the typical retail park model shown in figure to the left. The performance of the Beehive Centre is considered poor. It underperforms in terms of sales per sqm when compared to the adjacent Cambridge Retail Park. Its stores such as Asda perform below the company average.

A mixed use offer

The Proposed Development is a significant opportunity to redevelop and repurpose the Site from retail to a more efficient and productive, mixed-use development.

Meeting local policy

The removal of surface level car parks will allow for a significant increase in public realm, and more space for higher density employment uses. This meets net zero and efficient use of land policies outlined in the existing and emerging local plans.

Improving the vitality of existing assets

The Proposed Development will support the offer at the opposite Cambridge Retail Park from increased footfall from new workers, improved connectivity, and providing a mixed use offer of public realm and space for customers to use, relax, and enjoy.

Why Cambridge?

The Cambridge cluster



608 life sciences and healthcare firms

- The life sciences and healthcare firms within the Cambridge cluster support over 22,780 jobs.



2.6% growth since April 2022

- The cluster has grown 2.6% over the last year and generated over £48bn in turnover.



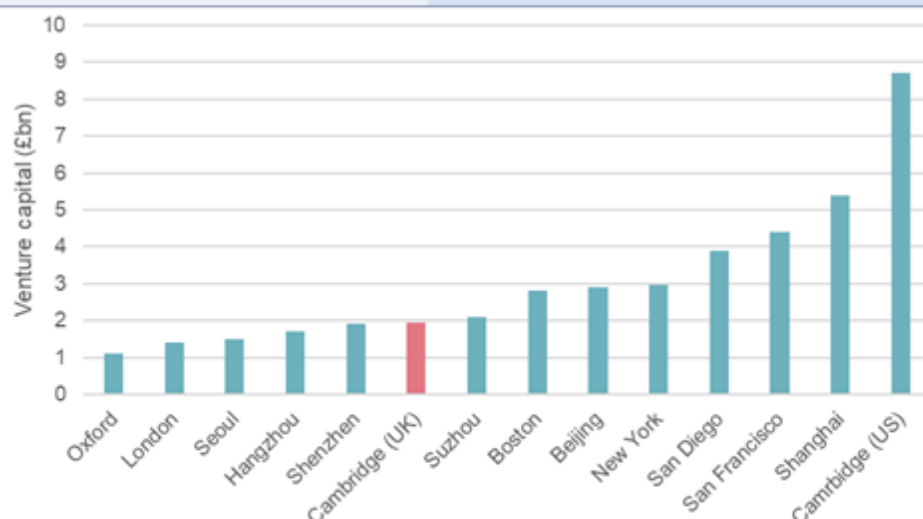
University of Cambridge

- The cluster benefits from its proximity to the University of Cambridge; a global leading research institute in life sciences.

Venture capital (VC) investment - €1bn VC supports 46,000sqm

Venture capital is a key indicator of future growth within the life sciences sector. It is commonly used to raise funds for start ups and by businesses looking to expand (scale ups).

In 2021, Cambridge firms had the highest level of venture capital investment than any other city in the UK (including London) and, on a global scale, it ranks 9th out of all the worlds cities (see figure on the right).



37,345 jobs within research institutions

The cluster supports 37,345 jobs within global research institutions. This includes Medical Research Council of Molecular Biology, the European Bioinformatics Institute, and the University of Cambridge.



Lack of grade A lab stock

There is limited grade A lab space available in Cambridge and only 12% of available office stock is grade A.



4.0% availability rate

There is limited vacant laboratory floorspace in Cambridge: availability rate of just 4.0%



Triple Helix

The Triple Helix relationship between the university, research institutes and the business community make the city a highly attractive place for the commercialisation of science



ESG and transport

Bidwells/YouGov R&D Business Survey (2021) demonstrates that companies prefer urban science or city district locations, which are amenity rich, have strong public transport links, and are sustainable.



Take up

Since 2016 all new building completions within Cambridge have been pre-let or let soon after practical completion. This is unique to Cambridge. It highlights its popularity but also amplifies lack of supply to support growing businesses in the city.

Why Cambridge needs more office and lab space



690,500sqft of lab demand

At the end of H1 2024 immediately available lab space remained very constrained at c.128k sq ft with demand at the same date point of c.691k sq ft.



Location

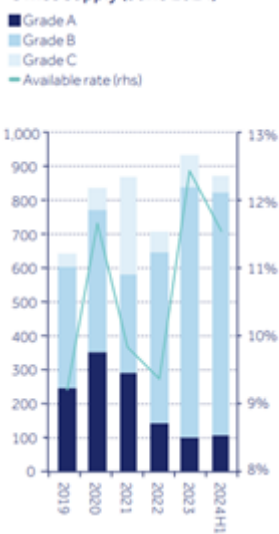
The majority of Cambridge's lab and office space is in business parks outside of or on the edges of the city. These have limited connectivity to the centre in terms of public transport and lack ESG credentials



Pipeline

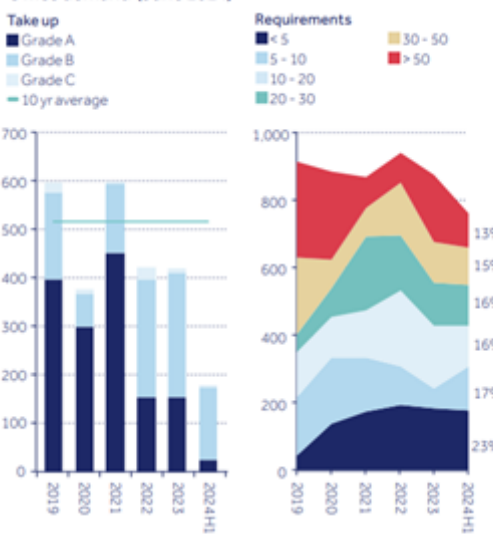
The forecast pipeline should improve in 2025-2028 and will begin to alleviate the supply shortage but is not expected to meet existing/expected demand.

Office supply (June 2024)



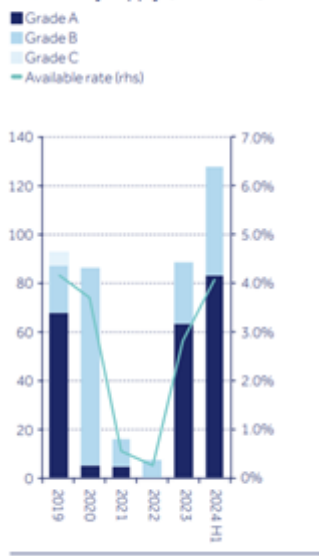
Availability 000s sq ft 873.6 ▼
Availability rate 11.6% ▼

Office demand (June 2024)



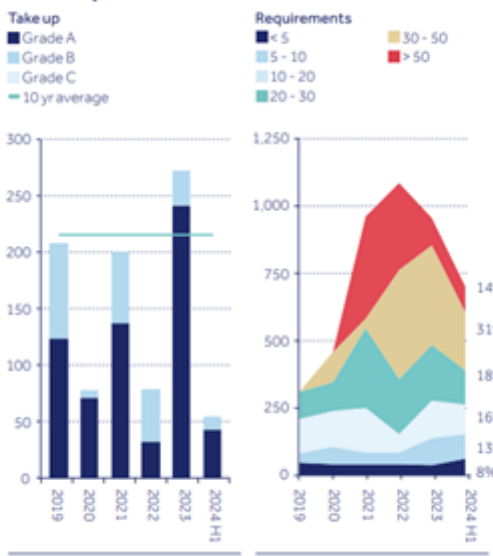
2024 H1 Take up 000s sq ft 177.9 ▼
Requirements 000s sq ft 754.7 ▼

Laboratory supply (June 2024)



Availability 000s sq ft 128.4 ▲
Availability rate 4.0% ▲

Laboratory demand (June 2024)



2024 H1 Take up 000s sq ft 54.5 ▼
Requirements 000s sq ft 690.5 ▼

The urgent need for space and scale

- According to Bidwells, 13% of the 754,700 sqft of live requirements is for spaces 50,000 sqft or larger, and 28% is for spaces exceeding 30,000 sqft. This contrasts with 2018, when no companies sought spaces larger than 50,000 sqft.
- Supply is low with only 128,400 sqft of lab and only c.100k sqft of grade A office space available.
- The continuous lack of suitable space in Cambridge has driven up rental prices. Prime office rents are at the highest rate ever. Prices for prime lab space in Cambridge increased from £58.50 to £71.50 per sqft between December 2022 and June 2024. Office rents are also at a record high of £60 per sqft.
- Almost all of the development pipeline is located outside of the centre of Cambridge, which goes against the ESG requirement and desires for companies in the sector.

The Proposed Development contribution

The Proposed Development provides the requisite scale to accommodate flexible lab space for R&D activities, with the necessary indoor and outdoor collaboration areas and co-located write up and office space.

It represents a rare opportunity to address the chronic undersupply of laboratory and office accommodation with high-performing ESG credentials in location nearby to Cambridge city centre. The Site is within walking and cycling distance from Cambridge station and the city centre.

Economic impacts

Summary

There is an urgent need for high quality science space in accessible locations, with the necessary sustainability credentials. If high quality space is not provided in the right location, then Cambridge and potentially the UK will lose out to other international innovation districts.

Construction phase



- **990 jobs** supported per year over the 96-month construction period.
- **£11.9m** construction worker expenditure over the construction period, equivalent to £1.5m per year.

Operational phase



Making better use of a great location

The current site supports low densities of retail warehouse units. Existing employment on Site is estimated to be 855 jobs.

6,450 jobs supported onsite



The Proposed Development is expected to support 6,450 jobs. This is equivalent to 5,590 gross additional jobs above the existing employment onsite.

£9.6m in additional annual worker expenditure



Workers supported at the Proposed Development are expected to support £10.2m in worker expenditure each year. Of which £9.6m would be additional.



£600m in additional economic output

The jobs onsite at the Proposed Development are expected to generate £660m in economic activity, equivalent to £600m above the existing uses.

£180m - £240m in additional tax revenue



The Proposed Development is expected to generate between £200m – £260m in tax revenue. The vast majority of which would be additional.



Up to £11.4m in business rates

The Proposed Development is expected to generate £11.4m in business rates each year, equivalent to an additional £8.5m. Of the additional payments, Cambridge City Council would retain approximately £3.4m.

Executive summary

- 1.1 This report provides an economic assessment of Railway Pension Nominees Limited's proposals to redevelop the existing Beehive Retail Centre. There is a significant opportunity to redevelop and repurpose the Site from solely retail to a more efficient and productive development. The proposals would deliver a commercial-led development nearby to Cambridge city centre. The plans include the development of lab and office space and supporting retail and community space. The Proposed Development will create a new local centre, workplace and innovation cluster. Eleven new buildings for life science, innovation and office use come together to create a masterplan organised around a series of connected open spaces, providing a vibrant mixed-use environment.
- 1.2 This report shows that the Proposed Development will result in significant economic benefits and play a key role in responding to market needs in Cambridge.

The evolving needs of retail

- 1.3 The structure of the retail industry has transformed in recent years. Even before the pandemic, retail parks and warehouse units were struggling, primarily due to the popularity of online retail, which increased **as a total share of retail sales from 10% in 2013 to 25% in 2023**. Prior to the COVID-19 pandemic, vacancy rates across the national industry have increased from 10.9% in Q1 2017 to 12.2% in Q1 2020. Whilst recovery has taken place, the vacancy rates still remain below pre-pandemic levels.
- 1.4 It is now clear that the physical retail market is **stagnating and, in some cases, declining** across the UK. As a result, instead of pursuing continued growth in the sector, the focus is now on shifting towards the **consolidation of high quality assets and diversification**.
- 1.5 In this wider context, the **Beehive Centre is not performing well**. The expenditure per sqm less than half the equivalent amount in the adjacent Cambridge Retail Park (CRP). Even the performance of the most popular store, the Asda superstore, is below the companies' nationwide average.
- 1.6 The **decline of physical retail, coupled with the declining performance of the retail park**, demands new investment in the area. Without investment, the Site will continue to underperform, contributing to a further decline of the retail environment and damaging better retail locations in Cambridge. There is a significant opportunity to redevelop and repurpose the Site from solely retail to a more efficient and productive development.
- 1.7 The emerging local policy finds that the Beehive Centre does not make efficient use of the space and the Site offers a unique opportunity densify an area within the heart of Cambridge. It would also **benefit other retail locations** through the redistribution of expenditure to further support their vitality and viability.

The national significance of life sciences

- 1.8 Life sciences is a nationally significant sector. It is recognised as one of the **most valuable and strategically important sectors in the UK economy**. It is critical to the country's health, wealth and resilience. Two of the three top higher education centres for science and research globally are based in the UK, including the University of Cambridge. UK researchers produce the **third highest number of life science papers** in high quality journals, after the USA and China.
- 1.9 Life sciences is a rapidly growing sector. This can be seen through the rising levels of venture capital investment raised by firms in the sector. Savills report that in 2021, there was a total of **£5.6bn of venture capital investment in UK life sciences firms**, a 120% increase compared with the previous year, and a

near fivefold increase on the 2017 total. The UK is the third most popular destination for foreign direct investment (FDI) in life sciences.

- 1.10 Life sciences is one of the UK's most productive sectors. It supports **average gross value added (GVA) per worker of £104,000 each year**. UK life sciences exports reached £24.2bn in 2021. Pharmaceutical and medicinal goods are among UK's top 3 exports, and the UK is the 5th largest life sciences exporter worldwide as of 2021.

Why Cambridge?

- 1.11 The Golden Triangle of Cambridge, Oxford and London is a **world-renowned R&D cluster**. It is the centre of the UK's R&D and life science sector, and the third biggest biotech hub in the world. The triangle supports five of the seven UK academic health science centres, **six of the top 10 most productive cities** in the UK and several nationally leading medical research institutions. The East of England is the second highest region for employment within the life sciences industry. It is also part of the Oxford Cambridge Pan Regional Partnership, supporting two million jobs and £111bn of economic output per year.
- 1.12 Cambridge is one of the key life science hubs in the UK. Cambridge city region (a 20-mile radius from the Cambridge city centre) is home to the **Cambridge cluster which supports 22,780 jobs in the life sciences sector**. In 2017, Cambridge's life sciences sector generated £2.9bn to the national economy, equivalent to over 25% of the total scientific research and development GVA generated in England. The life sciences employment share in Cambridge is around **eight times the national average**.
- 1.13 Cambridge has experienced **unprecedented growth in its science and technology sectors**. The relationship between the university, research institutions and the business community (the triple helix) make the city a world-leading location for research and commercialisation of science and technology.
- 1.14 Venture capital is a key indicator of future growth within the life sciences sector. It is commonly used to raise capital by start ups and by firms looking to expand (scale ups). Savills indicates that for **every €1bn of VC investment creates 46,000 sqm of life science real estate demand**. In 2021, Cambridge firms had a higher level of venture capital investment than any other city in the UK (including London). Globally, **Cambridge ranks ninth out of all world cities on venture capital investment**.

Why this location?

- 1.15 Clusters are **ecosystems of interconnected firms, individuals and institutions** within a particular field. The economic and social benefits of clusters are widely acknowledged – they are recognised as **drivers of economic growth in the modern economy**. Participants in research and development place more weight on the importance of collaboration and cooperation than ever before in order to solve some of the world's most pressing issues. Innovation is a contact sport.
- 1.16 Over the past 50 years innovation has been spatially dominated by clusters such as Silicon Valley – **suburban corridors of isolated campuses, accessible only by car and with limited emphasis on quality of life**. But the geography of innovation is changing – a new model, **innovation districts**, urban areas with clusters of knowledge-producing organisations, has taken over. Out of town business and science parks are still important to the economy but they are increasingly legacy models of growth. Innovation districts, such as Boston's biotechnology cluster and the emerging Kings Cross innovation district in London, are the modern way of developing clusters, and are an important step towards **building stronger, more sustainable and more inclusive hubs of innovation**.
- 1.17 The Bidwells/YouGov R&D Business Survey (2021) and bespoke Bidwells occupational need report demonstrates that **companies prefer urban science or city district locations**, which are amenity rich and have strong public transport links. Such locations extend recruitment reach and create an attractive work

environment to entice high skilled staff, as well as underpinning a collaborative culture. Demand for laboratory and office space is increasingly focused on **highly sustainable modern buildings** which provide flexible space for processes to evolve as R&D advances, in an environment that meets the ESG standards of investors and skilled workers alike.

- 1.18 The Cambridge market has a total of 11m sqft of commercial office and laboratory floorspace. The laboratory floorspace is a small proportion of this total at 3.2m sqft. The **supply of lab space was nil throughout much of 2022** against demand of over 1m sqft. Any lab space released during that period was re-let immediately with rents rising sharply. Tightening of funding over the past 2 years has then the acute shortage ease a little but there remains a significant supply versus demand mismatch. At the end of H1 2024 immediately **available lab space remained very constrained at c.128k sq ft with demand at the same date point was c.691k sq ft**. There is c.140k sq ft of lab space being delivered in H2 2024 the of which a quarter has been pre let and other spaces in advanced negotiations. With occupier demand stabilised and expected to return to growth with improving funding environment the **supply demand imbalance is expected to remain a feature for the coming years**.
- 1.19 There is currently **no available modern large floorplate commercial laboratory or office stock with meaningful sustainable credentials in central Cambridge**. Suitable, sustainable locations where new space can be delivered are limited. The development pipeline for laboratory space to 2024 will not meet the current requirements. The forecast pipeline supply should improve for occupiers in 2025-2028 and will begin to alleviate the supply shortage and provide occupiers with choice but is not expected to meet existing and expected new demand.
- 1.20 The vast majority of existing laboratory provision is located on the periphery and outside of Cambridge's local authority boundary. Known as out of town science parks, this is also where the bulk of future development is anticipated. This presents connectivity challenges for businesses with some parks having **limited accessibility** to public transport provision and poor connectivity for other sustainable transport methods. This means that whilst increased development will be welcomed by Cambridge's life science occupiers, it often **does not meet needs or aspirations of occupiers from an operational or sustainability perspective**. This is **counter to documented business demand preferences** and the understanding of innovation which underlines the importance of critical mass to enable cross collaboration between organisations. Given the lack of sites that can be delivered centrally, the Site is one of the most **sequentially preferable locations** for development in Cambridge.
- 1.21 The Proposed Development is **a rare opportunity** to address the **chronic undersupply** of laboratory and office accommodation with **high-performing ESG credentials** in a location nearby to the centre of Cambridge, within walking and cycling distance from Cambridge station and the city centre.

Why this scale?

- 1.22 The scale of laboratory space required by firms in Cambridge over the last five years has changed. In 2018, there was no demand for space over 50,000 sqft. Whereas in June 2024, around **13% of the 754,700 sqft of live requirements is for these larger spaces and 28% is for spaces larger than 30,000 sqft**. In order to attract the market leaders in life sciences, Cambridge needs **purpose-built, flexible lab and office buildings with significant massing that provide collaborative space**. It is not possible to attract the top companies, or to keep the growing companies, with small and outdated lab and office units. The extent of the Proposed Development provides the **requisite scale** to accommodate flexible laboratory space for life sciences research and development activities, with science action areas and write up accommodation. Scale is important to allow the space to evolve with business needs.
- 1.23 The Proposed Development has the potential to make an important contribution to this **critical mass in a location nearby to the city centre with an amenity rich offer**. This has the potential to create a world class science quarter of sufficient mass to create a productive urban innovation district.

Why now?

- 1.24 Demand for life science space in Cambridge is currently outstripping supply by some distance. As of June 2024, Bidwells report that demand for lab space in Cambridge is 690,500sqft, whilst there is only 128,400 sqft of available lab space, **an availability rate of 4.0%**. Bidwells estimate demand for office space could be as much 754,000 sqft. The current supply of space is 873,600sqft, but only 12% of is grade A. Therefore Cambridge lacks supply of both quality and quantum of office and lab space.
- 1.25 The chronic lack of supply is **driving up rents**. Prices for **prime lab space in Cambridge increased from £58.50 to £71.50 per sqft** between December 2022 and June 2024. Office rents are also at a record high of £60 per sqft.
- 1.26 The need for new life science space in Cambridge is urgent to ensure that Cambridge can take advantage of its current specialism in related fields. There is 690,500sqft of laboratory requirements currently in the market and the **opportunity exists now to address the supply and demand imbalance**. The UK competes on a global stage for this activity. If high quality space is not provided in the right location then the UK **will lose out to other international innovation districts** and the opportunity will be lost. It is therefore vital that **deliverable sites in sustainable locations are promoted to facilitate the continued growth of Cambridge as a world-leading research centre and the associated economic and social benefit**.

Supporting significant economic benefits

- 1.27 The Proposed Development would support approximately **990 construction workers onsite per year** over the eight year construction period, supporting a **total of £11.9m spend locally**.
- 1.28 The redevelopment will support up to 6,450 jobs onsite, **5,590 more than the existing site**. These workers will support £9.6m in additional spend locally each year. The gross additional jobs will support 25% of Cambridge's job target. The jobs at the Proposed Development would represent an increase in opportunities across all skill levels compared to the existing Site:
- An uplift of 4,010 high level jobs;
 - An additional 1,070 mid-level jobs; and
 - An additional **520 entry level jobs**.
- 1.29 Accounting for displaced jobs from elsewhere and indirect and induced impacts from the supply chain and worker expenditure, the proposals will support up to **7,130 net additional jobs**.
- 1.30 The Applicant is committed to maximising the local employment and skills impact of the Proposed Development and has set out the various commitments in the **Employment and Skills Strategy**. This will enable the economic opportunities offered by the scheme to reach more people and so for the scheme to have a greater and beneficial economic impact within the city.
- 1.31 The economic activity at the site will result in up to an **additional £600m in GVA each year**, supporting **annual tax revenues of between £180m and £240m**.

Introduction

The purpose of this document

- 2.1 This Economic Impact Assessment has been prepared by Volterra Partners LLP ('Volterra') on behalf of Railway Pension Nominees Limited ('the Applicant') in support of a planning application for the redevelopment of the Beehive Retail Centre ('the Site').
- 2.2 The Proposed Development is a commercial-led development nearby to Cambridge city centre. The plans include the development of lab and office space, and supporting retail and community space. The Proposed Development will create a new local centre, workplace and innovation cluster. Eleven new buildings for life science, innovation and office use come together to create a masterplan organised around a series of connected open spaces, providing a vibrant mixed-use environment.
- 2.3 The ground floors of the buildings work together to create a mix of shops, services, leisure spaces and spaces to socialise. A community pavilion sits at the heart of the scheme and will create spaces to be used by local groups.
- 2.4 This report outlines, and where possible quantifies, the potential socio-economic benefits of the Proposed Development.

The Site and the Proposed Development

The Site

- 2.5 The Site is within Greater Cambridge at an edge-of-centre location in proximity to central Cambridge. It lies between two rail stations: approximately 2km from Cambridge North and 1km from Cambridge Station. It is connected to both stations by existing on and off-road cycle routes with the network due to be expanded through city-wide initiatives. The Site is located around a 25 minute walk or 10 minute cycle to Cambridge city centre. The Site is accessed via Coldhams Lane which forms the northern boundary and connects to Newmarket Road which is the main route to the city via car.
- 2.6 The Site is currently known as the Beehive Retail Centre, which comprises of approximately 17 units that are retail focused, this includes an Asda superstore and various home and DIY stores. There is also a leisure facility (a private gym which includes a swimming pool) and some food and beverage (F&B) uses. Adjacent to the site is the Cambridge Retail Park which is also in the ownership of the Applicant. It is expected that the proposals for the Beehive Masterplan will create great opportunity to bolster Cambridge Retail Park's position as one of the leading retail parks in Cambridge.
- 2.7 The geographical definitions in **Table 2.1** are the study areas that will be analysed within this report.

Table 2.1 – geographical definitions

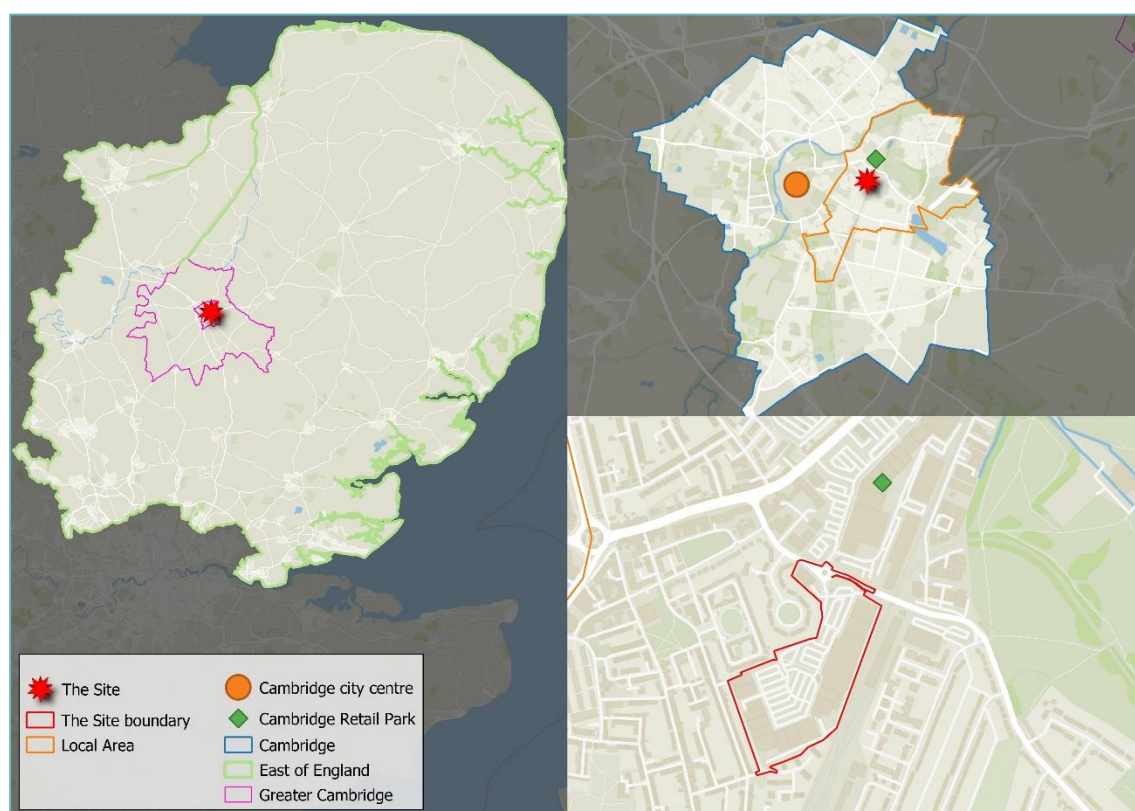
Geographical level	Definition
The Site	Site boundary shown in The below map shows the site in the context of the local and wider area.

Geographical level	Definition
Local Area (ward)	The Cambridge wards: Abbey, Petersfield and Romsey
Local Authority	Cambridge City
District	Greater Cambridge (Cambridge and South Cambridgeshire)
Regional	East of England
National	England

2.8

The below map shows the site in the context of the local and wider area.

Figure 2.1 – site context map



The Proposed Development

2.9

The Proposed Development would be a commercial-led, life science development. There is an opportunity to densify the site, bringing forward a world-class commercial-led mixed-use scheme creating long-term benefits. The Proposed Development would contain a mix of Class A office and lab uses, along with efficient and high quality retail space, and a local centre set within a new area of public realm. A community pavilion will also be provided to offer additional local area benefits.

2.10 The Proposed Development has been sensitively designed to provide a place to enjoy working and living and offers a catalyst for regeneration. The vision is to offer a variety of floorspace options to support a wider range of occupiers and foster a collaborative and people-centric place, which embraces local heritage through its design, and is at the forefront of science and medicine.

2.11 A description of the development is as follows:

the demolition and redevelopment of the Beehive Centre, including in Outline Application form for the demolition and redevelopment for a new local centre (E (a-f), F1(b-f), F2(b,d)), open space and employment (office and laboratory) floorspace (E(g)(i)(ii) to the ground floor and employment floorspace (office and laboratory) (E(g)(i)(ii) to the upper floors; along with supporting infrastructure, including pedestrian and cycle routes, vehicular access, car and cycle parking, servicing areas, landscaping and utilities.

Report structure

2.12 This report is structured as follows and provides an assessment of the economic and social impacts of the Proposed Development:

- **The changing nature of retail:** this section outlines the decline of physical retail over the years which is attributable to the changing demand for retail experiences. It discusses the issues with the Beehive Centre, and demonstrates that redeveloping the Site will result in more productive use of the land, which aligns with local policy needs;
- **The importance of the life sciences sector:** this section explores the importance of the life sciences sector at a national, regional, and local level. It shows that life sciences is critical for the UK economy and that it is in the national interest for investment to continue in this sector. Cambridge is identified as a globally competitive city in the life sciences sector, which makes it a successful place for investment to occur. The benefits of Cambridge's existing life sciences cluster are discussed, and what is required for the cluster to continue to grow;
- **The need for lab and office space:** this section covers the need for lab and office space in Cambridge to support growth in the life sciences sector. The issue of the lack of space facing the sector is outlined and it is demonstrated using various sources that there is currently a lack of supply of high quality lab and office space. The section describes how the Proposed Development would contribute to the local need for space; and
- **Economic impacts:** estimates the economic impacts occurring throughout both the construction and operational phases of the Proposed Development. This includes job creation (in both the construction and operational phases), uplifts in worker expenditure and GVA, as well as additional contributions to tax revenues and business rates. This section will use standard accepted methodology, drawing on data from the Office of National Statistics (ONS) and using the Homes and Communities Agency (HCA) Employment Density Guide.

The changing nature of retail

The structure of the retail industry has transformed over the past decade. The emergence of online retail has had and will continue to have an impact on what consumers demand from an in-person retail experience. Retail parks and shopping centres face pressures of reduced footfall from more online shopping and could make excellent mixed-use sites.¹

Challenges for physical retail

- 3.1 Retail has been on a decline in the UK over recent years. Nationally 16 stores closed their doors every day in the first half of 2019, while only nine opened, resulting in a net decline of 1,234 chain stores on Britain's top 500 high streets.² COVID-19 accelerated this trend. More than 8,700 chain stores shut in British high streets, shopping centres and retail parks in the first six months of 2020, compared with just 3,488 new openings.³
- 3.2 According to the Local Data Company (LDC), prior to the COVID-19 pandemic, retail vacancy rates across Great Britain had risen from 10.9% in Q1 2017 to 12.2% in Q1 2020.⁴ In the fourth quarter of 2022 the overall vacancy rate for retail was 13.8%.⁵ For retail parks specifically, the British Retail Consortium stated vacancy rates were at 9.0%. Whilst vacancies have fallen in recent quarters, the average still remains above historic levels. Between 2016 and 2020, there was a large increase in vacant units in existing retail parks around the UK with the size of available space growing from 770,000 sqm to 1.3m sqm.⁶ Since then, whilst vacancy rates have fallen for a third quarter in a row (up to Q4 2022), which indicates post covid recovery, but they are not yet below the pre-pandemic levels.

Rise of online shopping

- 3.3 The rise of online shopping is one of the major challenges for physical retailers located on highstreets and within retail parks and shopping centres. Online shopping can offer customers convenience, the ease of comparing similar products, and are often lower in terms of price as there are fewer overheads with online shops. Physical retailers are struggling to compete and this has led to a number of large of national companies shutting down or being sold to online retailers. Examples include Debenhams, who closed all 124 of its stores in May 2021,⁷ due to its failure to adapt quickly to the rise of online trading is deemed as a

¹ Savills, 2019. RE:Imagining Retail 2.

² PwC, 2019. Store closures hit record levels as restructurings drive largest net decline in testing retail climate.

³ PwC, 2021. Local data company.

⁴ Local Data Company, 2023. Available at: <https://www.localdatacompany.com/blog/brc-vacancy-monitor>

⁵ BRC, 2023. BRC-LDC VACANCIES MONITOR

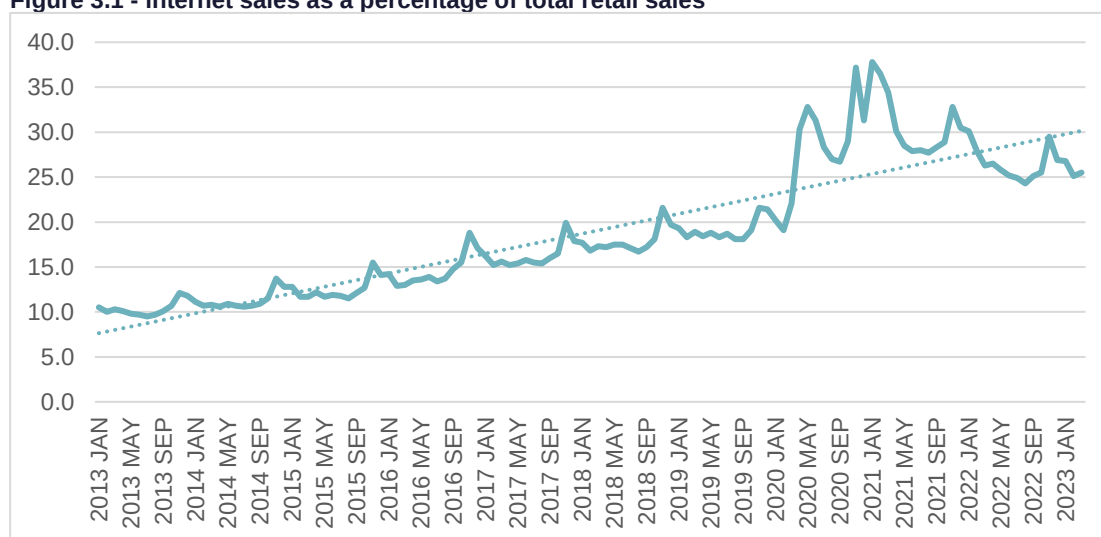
⁶ The Guardian, 2020. The UK's retail parks were once the future. Now they look like drab relics of the past. Available at: <https://www.theguardian.com/commentisfree/2020/oct/04/the-uks-retail-parks-were-once-the-future-now-they-look-like-drab-relics-of-the-past>

⁷ BBC, 2020. What went wrong at Debenhams?

key cause for its failure, and the sale of Arcadia's Topshop, Topman, and Miss Selfridge to online retailer Asos.

- 3.4 The proportion of online retail sales is rising, as shown in **Figure 3.1**. In 2013, 10% of retail sales were made online, compared to the 25% of sales in 2023. The large spike in online sales from March 2020 to December 2021 was the result of the national lockdowns in response to the Covid-19 pandemic. The linear trendline shows the growth of internet sales are close to reverting back to what the pre-pandemic growth trends would have suggested. The recent decline since September 2022 is attributed to the cost of living crisis, the economy is expected to recover from this.
- 3.5 The decline of physical retail is expected to continue. Online sales are expected to increase their market share of total retail sales to 34% by 2035.⁸ Experian expect the share of non-physical retail⁹ sales (including internet sales) to increase for the convenience and comparison goods sectors. Forecasts suggest comparison goods market share for non-physical retail sales will rise to 34% from 25% between 2020 and 2035.¹⁰ Over the same period, convenience goods are expected to rise from 15% to 22%.

Figure 3.1 - internet sales as a percentage of total retail sales



Source: ONS, 2023. Internet sales as a percentage of total retail sales

- 3.6 Another reason why physical retail assets have often struggled to compete with the rise of online retail is the mismatch between the share of tax that physical retailers pay compared to online retailers. For example, research suggests that Amazon UK's business rates equate to 0.7% of its UK turnover, while high street retailers pay between 1.5% and 6.5% of their total turnover.¹¹

Diversifying retail

- 3.7 To address the rise in online shopping, physical retailers are adapting their models in order to offer an experiential retail service. Experiential retail is a broad term which refers to incorporating immersive,

⁸ Experian, 2020. Experian Retail Planner Briefing Note 17.

⁹ Non-physical retail: Sales that are made that are not through a physical retail unit this includes for example online sales, markets and pop-up stalls.

¹⁰ Experian, 2020. Experian Retail Planner Briefing Note 17.

¹¹ House of Commons, 2019. High streets and town centres in 2030.

interactive and shareable experiences into standard physical stores.¹² This is an attempt to engage customers and encourage people to choose in-store shopping as opposed to ordering online.

“A total of 59% of consumers are expecting that more than half of retail space will be devoted to experience rather than product by 2025, while 75% of consumers believe this will happen by 2027. A colossal 81% said they would be willing to pay more for experience.”¹³

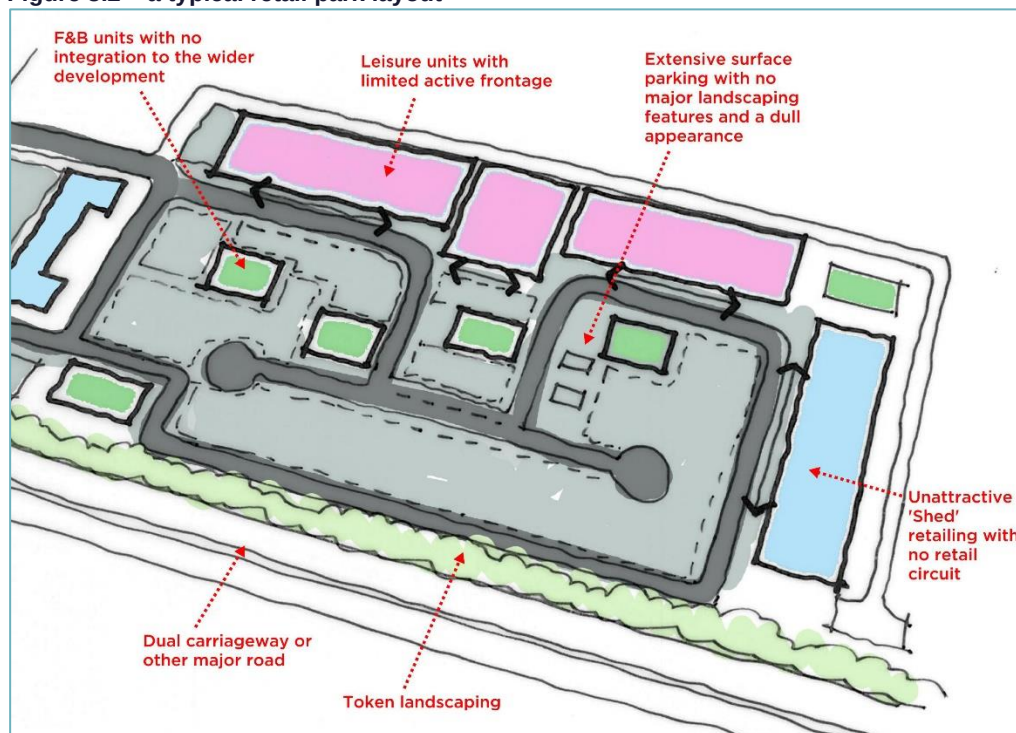
- 3.8 For retail parks, the experiential offer goes further than in-store changes. The most successful retail parks are those that create a sense of experience by creating a sense of place with well-designed public realm and a mix of tenancies, including leisure, community engagement, events, and F&B, that adapts to local needs.¹⁴ The success of a retail park depends on how long it can entice customers to stay for large portions of the day. However, many of the nations retail parks are unable to support this. They are based on the typical layout of retail parks which were designed in the late 1980s and 90s, an example of this is shown in **Figure 3.2**.
- 3.9 This layout is out dated and neglects customer experience, it does not meet the modern standards of efficient use of space and are solely car focused, which goes against net zero policies. Most sites are nearby to highways and wastes vast amounts of space with surface level car parks that are placed awkwardly between supporting F&B units. These types of retail parks offer no space for public realm which can cause a poor sense of arrival, and offer no scope to provide anything other than a place to shop.

¹² UKpos. 2021. Create an interactive shopping experience to boost sales

¹³ Retail Gazette, 2020. Experiential retail will be “tipping point” in 2025 - Westfield

¹⁴ Chapman Taylor, 2018. Reimagining retail parks: How to future-proof and renovate existing assets

Figure 3.2 – a typical retail park layout



Source: Chapman Taylor, 2018. *Reimagining retail parks: How to future-proof and renovate existing assets*

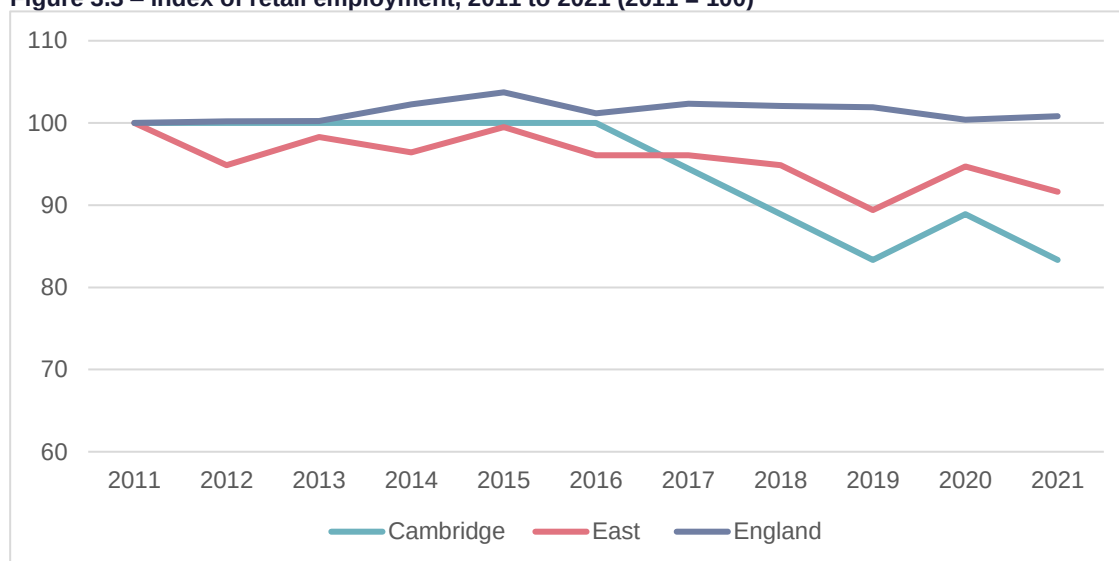
3.10

The typical retail park model is not well positioned to respond to the challenges of growing online shopping and the need to offer a full experience. As online shopping continues to grow, it is likely consumers would prefer to order online rather than visit retail parks that are outdated and only provide an offer of retail and limited F&B. Instead of pursuing continued growth in the sector moving forward, the focus is now shifting towards the consolidation of high-quality assets and providing a mix of uses that makes better use of the space on high-streets, retail parks and shopping centres.

The retail sector in Cambridge

3.11

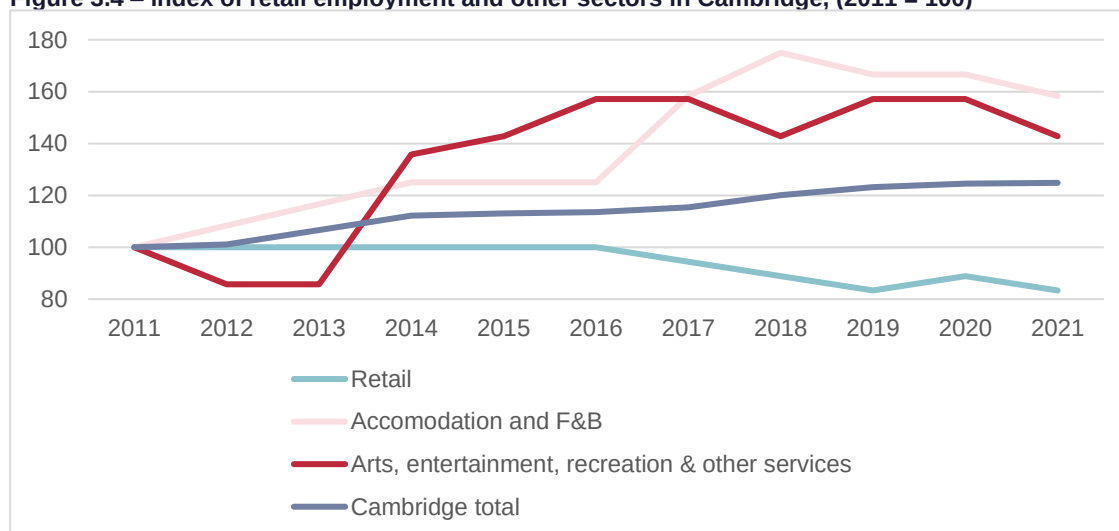
Cambridge's retail sector is in decline. The change in retail employment is shown in **Figure 3.3**. Since 2011, Cambridge has seen the largest fall in retail employment (around 17%), compared to the East (8%) and national average (1% increase). The decline in Cambridge the retail sector has been since 2016. Therefore it is not entirely attributable to things such as the Covid-19 pandemic which resulted in the nation wide closure of many retail units. Instead, the decline is likely due to a wider trends.

Figure 3.3 – index of retail employment, 2011 to 2021 (2011 = 100)

Source: ONS. 2011 and 2021. Business Register and Employment Survey (BRES)

3.12

The above analysis show that retail is becoming less popular within Cambridge. Typically the skills developed by retail workers are transferrable to customer facing sectors such as the accommodation & food and the arts, entertainment, recreation & other services. These are sectors that are becoming increasingly popular within mixed-use developments. They address the experiential trend that is developing within town centres, high streets, and retail parks. **Figure 3.4** shows within Cambridge there has been an increase in employment in these sectors, in comparison to a decline in retail employment (discussed above). This suggests that demand for these sectors is higher than for retail within Cambridge.

Figure 3.4 – index of retail employment and other sectors in Cambridge, (2011 = 100)

Source: ONS, 2011 and 2021. BRES

The Beehive Centre

Performance

- 3.13 The Beehive Centre is underperforming in popularity and spend in comparison to Cambridge Retail Park (CRP), which lies opposite the Beehive Centre. The two retail parks are similar, both follow the typical retail park model as shown in **Figure 2.12**. These are car-focused with vast amounts of space taken up by a floor level car park, and a number of large retail warehouse units. The focus of the retail units within the two parks is mostly home furnishings, kitchens, and DIY stores, which is supported by well known F&B restaurants, such as Pizza Hut (CRP), Nando's (CRP), and Subway (Beehive Centre).
- 3.14 The 2021 Greater Cambridge Retail Study provides data on comparison goods expenditure flows from residents within a study area.¹⁵ Despite having similar types of stores, expenditure per sqm at CRP is significantly greater: CRP supported spend of £5,900 per sqm by residents compared to £2,300 per sqm at the Beehive Centre (a difference of 157%). The Beehive Centre includes an Asda, which has also been identified as having a relatively low performance rating when compared to the company average. Its sales density of £14,952 per sqm is lower than the company average of £17,285 per sqm.¹⁶
- 3.15 The poor performance of the Beehive Centre aligns to the trend that there is a need to move away from the typical retail park to provide a more experiential offer which will entice people to visit and dwell in the area. Investment in offices is also important not just for providing new jobs but for attracting businesses and boosting the economy.

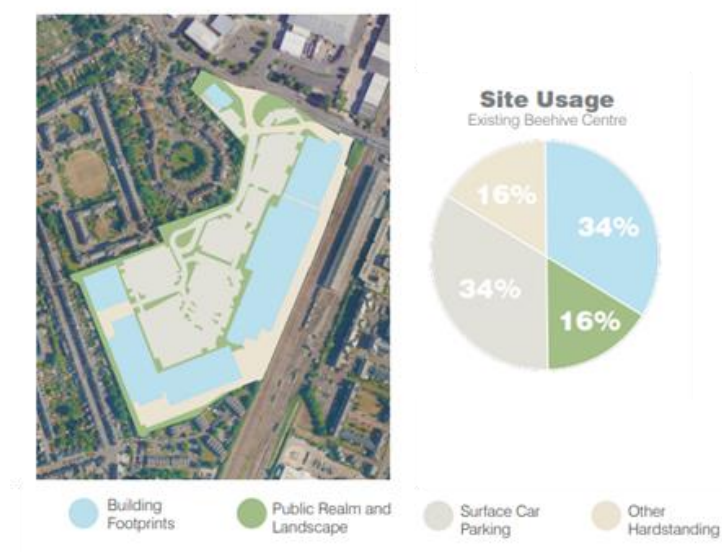
Location and efficient use of space

- 3.16 Both the Beehive Centre and CRP are in proximity to Cambridge City Centre, which is Cambridge's key destination for retail, F&B, tourism and entertainment. The Beehive Centre has an inefficient layout, with the majority of its space taken up by the surface car parking and hardstanding areas which offer little or no public use (**Figure 3.5**). Only 16% of space are used as public realm and landscaping, which is considered very low quality space given most of the space are the walkways between the main building footprints and edges of the car park. The CRP which lies opposite has a very similar layout.

¹⁵ Hatch Regeneris, 2021. Greater Cambridge Retail and Leisure Study 2021.

¹⁶ Hatch Regeneris, 2021. Greater Cambridge Retail and Leisure Study 2021.

Figure 3.5 – site usage at the Beehive Centre



The opportunity for redevelopment

- 3.17 The Site consists of 17 mostly retail units. The development will retain the opportunity to relocate ASDA and other retailers to the nearby Cambridge Retail Park, Newmarket Road, which is also in the ownership of Railpen. The Asda currently supports around 40% of the retail employment within the Beehive Centre. The decline of physical retail, the poor performance and inefficient use of space of the Beehive Centre, and the shift away from the typical retail park, specifically demands new investment in the area.
- 3.18 The Proposed Development will be a commercial-led mixed use development, which is more suitable to the Site in terms of its location and use. The development will help create a new sense of place for workers, residents, and visitors to relax and enjoy. There will be improved connectivity with new pedestrian and cycle routes, alongside an enhanced public realm which includes new tree planting, green areas, a new public square for everyone to use. There will also be a community pavilion for local groups, events and classes. Combined, the elements of the Proposed Development meet the need of the changing consumer market by offering a full experiential offer.
- 3.19 There is also the potential for the Proposed Development to lead to the enhancement of the offer at CRP. CRP will face less competition and benefit from the increase in footfall from the employment supported at the Proposed Development. The Proposed Development also provides an experiential offer of public realm, space to relax, and better connectivity by bike and foot, making the area around CRP more attractive.
- 3.20 Cambridge and Greater Cambridge's current and emerging policy core priorities build the foundation of the future of Cambridge. The Proposed Development directly aligns with these foundations:
- **The efficient use of land:** the Cambridge Local Plan (2018),¹⁷ states that the Council are focused on "promoting renewal and the effective and efficient use of land". The emerging local plans first proposals identifies the Beehive Centre as a potential new opportunity area.¹⁸ The proposal states that the

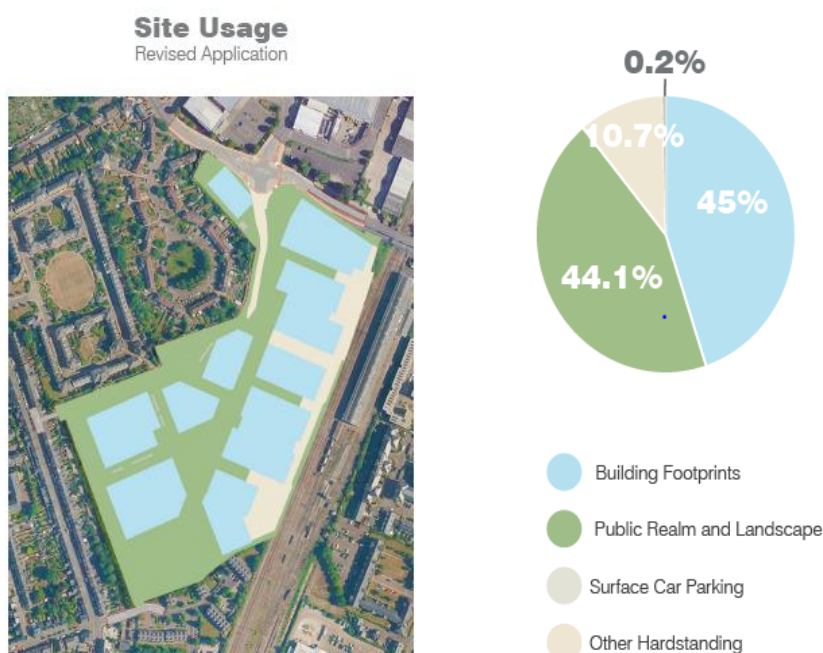
¹⁷ Cambridge City Council, 2018. Cambridge Local Plan 2018

¹⁸ Greater Cambridge Shares Planning, 2023. Greater Cambridge Local Plan – First Proposals, Cambridge urban area. Policy S/OA: Opportunity areas in Cambridge

Beehive Centre does not make efficient use of a large area of land within the heart of Cambridge. The Proposed Development would make a much more efficient use of space, by reducing the amount of surface level car parks, increasing the building footprints, and significantly increasing the amount of public realm available. This is shown in **Figure 3.6**.

- **Net zero and climate change:** The emerging local plan and the Cambridge Climate Change Strategy discusses themes to address climate change and achieve net zero in Cambridge.¹⁹ The Proposed Development would be built to the highest standards of energy efficiency, with an excellent or outstanding BREEAM rating for all buildings. There would also be around 290 new trees planted alongside the 58 retained trees, achieving over 100% BNG improvement onsite.

Figure 3.6 – proposed site usage



The Town Centre Use Retail Planning Statement finds that

“both the employees on the application site and existing residents within the catchment area are able to support the retail and town centre use floorspace (Use Class E(a) and E(b) proposed in the new Local Centre and that the scale of retail floorspace proposed, which is significantly less than that currently on site, is appropriate.

¹⁹ Cambridge City Council, 2021. Climate Change Strategy 2021 – 2026

The qualitative vitality and viability health check assessments of nearby centres demonstrates that all nearby centres display good levels of vitality and viability. There is no evidence to suggest that the centres are vulnerable to impact even if it was considered that the proposed Local Centre had a trading overlap with facilities in them.

Accordingly, the proposals are considered to be acceptable in terms of the test set by prevailing policy insofar as retail impact is concerned.”

The importance of the life sciences sector

The life sciences industry is recognised as one of the most valuable and strategically important sectors in the UK economy. It is critical to the country's health, wealth, and resilience.²⁰ The sector had a crucial role in responding to the COVID-19 pandemic.

Investing in R&D is a national priority. For R&D to be a key focus of an economy, the appropriate space is needed for innovative firms to operate. This consists of high quality, grade A office and lab space in highly accessible locations.

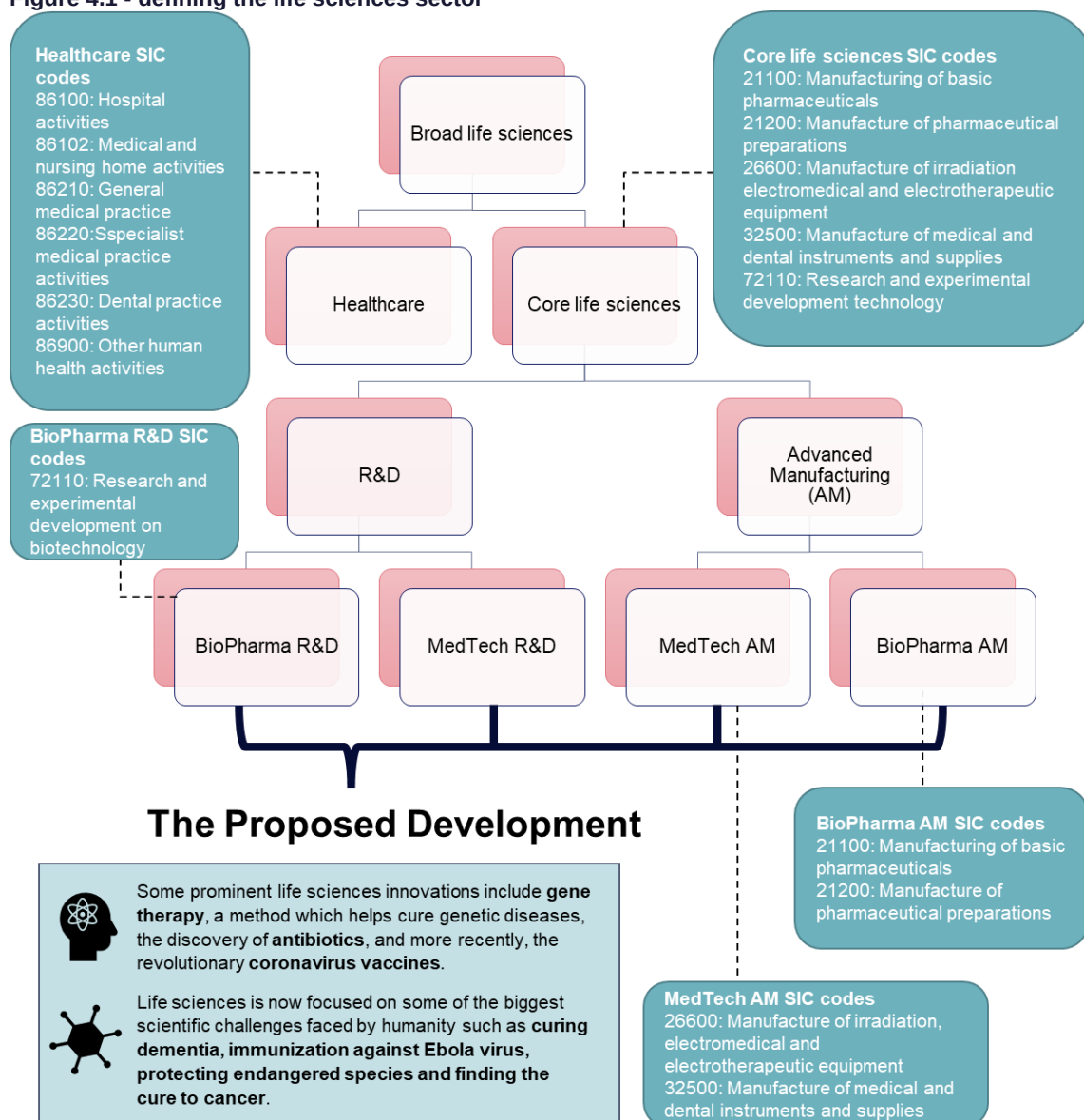
Defining the life sciences sector

- 4.1 In 2022, the government stated that the "life sciences industry is high-tech, innovative and highly diverse, spanning pharmaceuticals, medical technology (devices and diagnostics) and medical biotechnology, and has applications across many other sectors."²¹ This broad coverage does, however, lead to difficulty in accurately defining the sector using Standard Industrial Classification (SIC) codes, which are often used in economic analysis.
- 4.2 **Figure 4.1** shows how the broad life sciences sector has been disaggregated for analysis purposes in this report. Unless otherwise stated, the term 'life sciences' refers to the core life sciences comprised of research and development (R&D) and advanced manufacturing (AM). Healthcare has been excluded as it can heavily skew the data as healthcare is predominately public sector health activities (such as hospitals), which do not represent the targeted occupiers at the Proposed Development.
- 4.3 Given the flexible nature and crossovers between all four sub-sectors of Biopharma AM, Biopharma R&D, MedTech AM and MedTech R&D, it is possible that all of these sub-sectors could be accommodated at the Proposed Development.

²⁰ HM Government, 2021. Life Sciences Vision

²¹ Department for Business & Trade, Department for International Trade (DIT), 2022. Life sciences – what's next for this top UK sector: a Board of Trade paper

Figure 4.1 - defining the life sciences sector



Policy objectives and vision

4.4

The government has made the life sciences sector a key priority. National growth in this sector is considered to be essential for economic growth, health of the population, and prosperity. In 2021, the government published its Life Sciences Vision (LSV) which sets out the strategic objectives for the sector.²² These include an aim to build on the UK's science and research infrastructure and harness the UK's unique genomic and health data and create an outstanding environment for life sciences businesses to start, grow and invest. This commitment is reiterated within the UK Science and Technology Framework, which

²² HM Government, 2021. Life Sciences Vision

describes the plan to solidify the UK's place as a science and technology superpower by 2030.²³ The objectives that relate to the Proposed Development are outlined in **Table 4.1**.

Table 4.1 – LSV and UK science and technology framework objectives

LSV	UK science and technology framework
Build on the UK's science and research infrastructure and harness the UK's unique genomic and health data – Build on the UK's Clinical Research, Genomic and Health Data capabilities to make the UK a highly effective and efficient place in which to test and trial new technologies for the most important healthcare challenges – creating value for industry and early access for NHS patients.	Signalling UK strengths and ambitions – promoting domestic and international recognition of the UK's strengths and ambitions to promote investment.
Access and update – Make the UK the best place in the world to discover, develop, test, trial, launch and adopt new treatments and technologies, by creating a forward-thinking commercial environment where the NHS can strike flagship deals and where clinically proven and cost-effective innovations are rapidly adopted and spread across the country to bolster the health of the nation, deliver greater value for the taxpayer and stimulate economic growth.	Investment in R&D – ensuring there is sufficient investment to match the ambitions, catalysing growth and innovation.
Create an outstanding environment for life sciences businesses to start, grow and invest – Make the UK the most attractive location in Europe to start and grow a life sciences business, with an internationally competitive offer in manufacturing and the world's leading regulatory environment.	Talent and skills – creating an agile and responsive skills system which can drive growth in the science and technology sectors. Access to physical and digital infrastructure – increasing infrastructure capacity to provide the science and technology sectors with diverse, agile and resilient facilities.

Source: HM Government, 2021. *Life Sciences Vision*; DSIT, 2023. *Science & Technology Framework*

4.5 In May 2023, the UK government committed £650m package to supporting growth in life science with new commitments and funding for manufacturing, skills and infrastructure.²⁴ The policy:

brings together 10 different policies including £121 million to improve commercial clinical trials to bring new medicines to patients faster, up to £48 million of new money for scientific innovation to prepare for any future health emergencies, £154 million to increase the capacity of the UK's biological data bank further aiding scientific discoveries that help human health, and up to £250 million to incentivise pension schemes to invest in our most promising science and tech firms.

4.6 The Department for International Trade (DIT) examined the next steps for the UK life sciences industry. It recognised that there is a **need for more affordable wet and dry labs across the UK, to help alleviate critical mass issues facing life sciences clusters**. The report highlights the importance of uplifting the sector on a global scale with various initiatives such as UK Life Sciences Innovator Showcase, UK Export

²³ Department for Science, Innovation, and Technology (DSIT), 2023. *Science & Technology Framework*

²⁴ <https://www.gov.uk/government/news/chancellor-reveals-life-sciences-growth-package-to-fire-up-economy>

Academy and UK Export Finance helping firms to navigate global markets and gain exposure. Although there are significant steps still to be taken to achieve the government's objectives, there has been some progress and further commitments which signal their intentions to further develop the sector, including:

- £119m for phase one of the International Science Partnerships Fund (ISPF);
- Setting up the Advance Research and Invention Agency (AIRA) to fund high-risk, high-reward R&D;
- Dedicated £250m to sustain the UK's global leadership in artificial intelligence (AI), quantum technologies and engineering biology;
- The Chancellor reconfirmed the biggest increase in public R&D investment in the Autumn Statement, rising to £20 billion by 2024/25;
- Commissioning the Pro-Innovation Regulation of Technologies Review, led by Sir Patrick Vallance, Government Chief Scientific Adviser and National Technology Adviser, which will focus on identifying opportunities and enablers for digital technologies, life sciences and green industries; and
- Alongside the Bank of England the government facilitated the takeover of Silicon Valley Bank's UK arm by HSBC. This is noteworthy as the Chancellor has implied that this was done to ensure the continued confidence of current and future investors in the UK, specifically within the tech and life sciences industries.²⁵

4.7 Under the new Labour government, further emphasis has been placed on supporting sustainable growth and innovation in the life science sector, including setting long-term ten-year budgets for key R&D institutions.

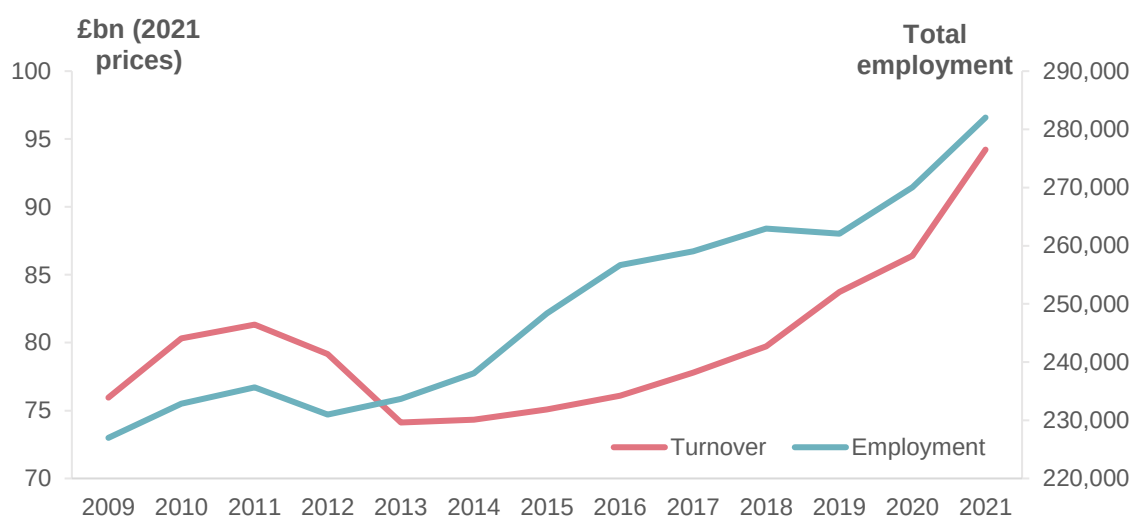
Strength of the UK's life sciences sector

4.8 The UK's life sciences sector has seen rapid growth in recent years. Between 2014 and 2021 there has been significant growth in employment and turnover. The sector generated £94bn of turnover in 2021 and employed 282,000 people (1% of total employment in the UK) across 6,550 companies.²⁶ **Figure 4.2** shows that whilst growth did not occur between 2009 and 2013, since then, there has been a significant increase in both employment and turnover. Overall, between 2009 and 2021 both employment and turnover have increased by approximately 24%, which is significantly higher than the total employment growth of 11% across the UK.

²⁵ Retrieved from [HSBC buys Silicon Valley Bank's UK unit for £1 in rescue deal | Financial Times \(ft.com\)](#). Accessed March 2023.

²⁶ Office for Life Sciences, 2022. Bioscience and health technology sector statistics 2021

Figure 4.2 – total employment and turnover in life sciences (2009 – 2021)



Source: Office for Life Sciences, 2022. Bioscience and health technology sector statistics 2021

4.9

The following figure further demonstrates the economic importance of the sector.

Figure 4.3 – strengths of the UK life sciences sector

Investment	Exports	Employment	Education
- The UK is third most popular destination globally for FDI in life sciences: - Between 2012 and 2021, inward Foreign Direct Investment (FDI) in UK life sciences has grown at a Compound Annual Growth Rate (CAGR) of 21% up to approximately £1.9bn, second only to the USA. - Between 2020 and 2021, equity finance raised by the sector grew by 54% (£2.8bn). - Venture capital investment in UK life sciences increased nearly fivefold from 2017 to 2021, reaching £5.6bn – a 120% increase from 2020.	- UK life sciences exports reached £24.2bn in 2021. Pharmaceutical and medicinal goods are among UK's top 3 exports, and the UK is the 5th largest life sciences exporter worldwide as of 2021. - The Department for International Trade runs the High Potential Opportunity (HPO) scheme and works with local partners to attract FDI into emerging fast-growing sectors, regions and clusters.	- Modelling by Science Industry Partnerships estimates that UK employment in life sciences could increase by a further 133,000 by 2030. - Life sciences is one of the UK's most productive sectors. It supports average gross value added (GVA) per worker of £104,000 each year.	The world's top 3 universities for life sciences include the UK's University of Oxford and University of Cambridge. Expanding the life sciences sector would mean leveraging these resources and collaborating with the best research institutions in the world.

Source: BEIS, DSIT, Department of Health & Social Care and Office for Life Sciences, 2022. Life science competitiveness indicators 2022; Savills, 2022. Life Sciences: Trends & Outlook. Science Industry Partnership, 2022. Life Sciences 2030 Skills Strategy; DIT, 2022. Life

sciences – what's next for this top UK sector: a Board of Trade paper; Times Higher Education, 2022. World University Rankings 2022 by subject: life sciences

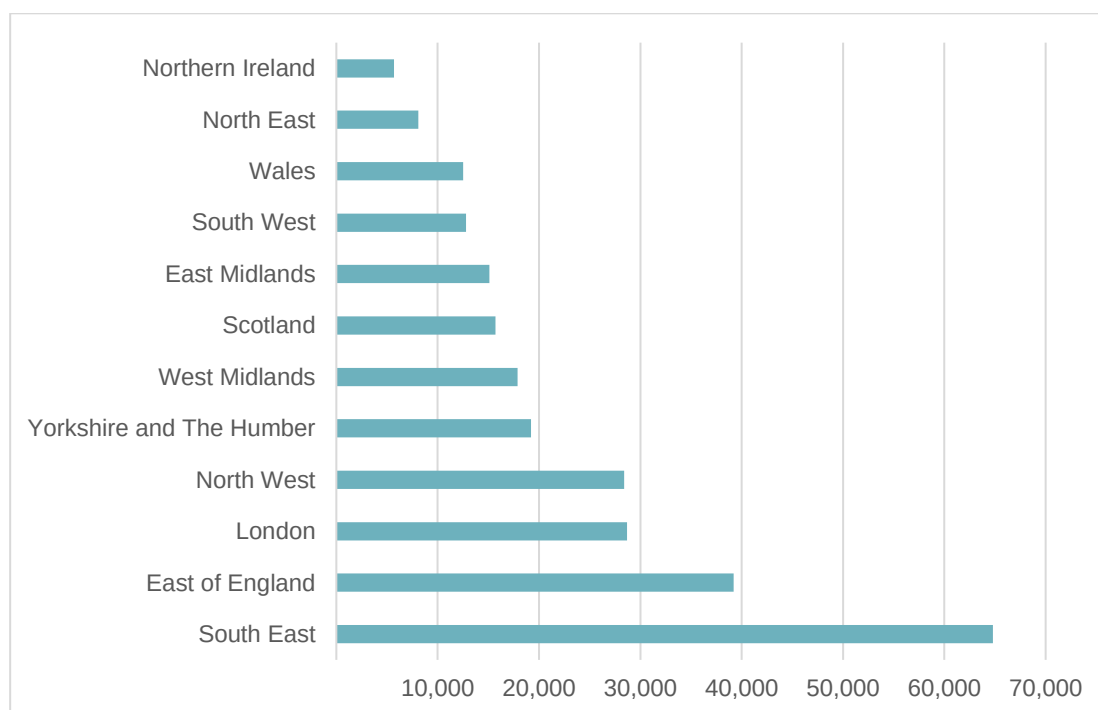
Regional strengths

The East of England

4.10

The East of England is home to the second largest concentration of workers within the life sciences sector.²⁷ The region makes up 15% of the UK's employment in the sector (see **Figure 4.4**), and behind London it has experienced the largest growth in employment in the sector around 4,900 workers. The turnover generated by the East of England life sciences companies is around £6.2bnm, equivalent to 20% of the UK's total in the sector.

Figure 4.4 - life sciences employment by UK regions



Source: Office for Life Sciences, 2022. Bioscience and health technology sector statistics 2021

The Golden Triangle

4.11

The 'Golden Triangle' is a world-leading regional life sciences cluster of London, Oxford, Cambridge and England's greater South East. London and the East of England's life sciences sectors have a combined turnover of £26bn (35% of UK turnover), employing an estimated 63,500 people.²⁸ The Golden Triangle is the focal point of the UK life sciences sector, and 80% of all UK venture capital is directed to the three major

²⁷ Office for Life Sciences, 2022. Bioscience and health technology sector statistics 2021

²⁸ Office for Life Sciences, 2022. Bioscience and health technology sector statistics 2021

cities.²⁹ The investment in the Golden Triangle's life sciences sector in 2022 reached over £2.45bn, which is equivalent to 5% of total investment in the UK across all sectors (£48.5bn).³⁰

4.12 The cluster includes:

- Four of the world's top 10 universities – both overall and for life sciences and medicine;³¹
- Five out of eight of the UK's academic health science centres;³²
- A number of nationally leading medical research institutions including AstraZeneca and Abcam (Cambridge), Medical Research Council (London), and the Centre for Medical Research Discovery (Oxford);
- Six of the top 10 most productive cities in the UK. The cities are described as being European leaders for life sciences in terms of human and physical capital.

The pan regional partnership (PRP)

4.13 In January 2023, the PRP received backing from the government. The PRP replaces what was formerly known as the Oxford-Cambridge (Ox-Cam) Arc. The PRP is a locally-led partnership for the Oxford to Cambridge region which unlocks access to a £2.5m development fund.³³ The partnership will champion the Oxford to Cambridge region as a global leader in innovation and business, acting to achieve environmentally sustainable and inclusive growth which benefits its existing and future communities.

4.14 The PRP includes the economic area which runs along across Oxfordshire, Northamptonshire, Bedfordshire, and Cambridgeshire,³⁴ this is the same economic area as the Ox-Cam Arc. It contains world leading assets which are significant international competitors. The PRP is known for its high quality science, technology and supporting industries which can drive competitive growth. The PRP currently home to four million people and supports around two million jobs and over £111bn in economic output per year has the potential to continue to grow which will secure job creation for the UK economy over the next few decades.

4.15 The economic area of the PRP is one of the fastest growing economies in the UK and is expected to grow to £2.5 trillion by 2050, increasing its contribution to total UK GVA from 6% to 11%.^{35,36} The Arc is also expected to add 950,000 jobs by 2050.³⁷ The PRP has the potential to be a leading and world-renowned hub for business, innovation, and investment in industries such as, this can only be achieved if businesses in these sectors can access the types of spaces they need to operate and grow.³⁸

²⁹ CBRE, 2023. UK Real Estate Market Outlook 2023; JLL, 2023. EMEA Life Sciences Cluster Outlook 2023; Cushman & Wakefield, 2022. Life Sciences: Golden Triangle Lab Report

³⁰ Retrieved from [Total UK investment volumes reached 48.7bn for 2022 \(jll.co.uk\)](https://www.jll.co.uk/news/2023/03/total-uk-investment-volumes-reached-48.7bn-for-2022/) Accessed March 2023

³¹ Quacquarelli Symonds (QS), 2023. QS World University Rankings 2023

³² Retrieved from [NHS Accelerated Access Collaborative » Academic Health Science Centres \(england.nhs.uk\)](https://www.england.nhs.uk/accelerated-access/collaborative-academic-health-science-centres/). Accessed May 2023.

³³ Oxford-Cambridge-Partnership.info, 2023. <https://www.oxford-cambridge-partnership.info/> Accessed June 2023

³⁴ Oxford-Cambridge-Partnership, 2021. The Oxford-Cambridge Arc Economic Prospectus

³⁵ Department for Levelling Up, Housing & Communities, 2021. Oxford-Cambridge Arc Policy Paper.

³⁶ Bidwells, no date. Radical capital.

³⁷ Biopharma Reporta, 2020. Available at: <https://www.biopharma-reporter.com/Article/2020/07/22/Growth-of-UK-golden-triangle>

³⁸ Department for Levelling Up, Housing & Communities, 2021. Creating a vision for the Oxford-Cambridge Arc.

Strength of Cambridge's life science sector

Why Cambridge?

- 4.16 Cambridge is a key contributor to the UK economy. Cambridge is recognised as a global hub of innovation, research and development, and plays a crucial role in growth and prosperity in the country. It is one of the fastest growing cities in the world with a growth rate of 7.3%.³⁹ Cambridge has the most productive economy in the East of England in terms of annual GVA generation. In 2021 it contributed £7.0bn in GVA, which is above the average of £6.0bn for all local authorities.⁴⁰ Cambridge sits within the global top 10 of cities world wide in terms of venture capital raised in 2021.⁴¹
- 4.17 The following list outlines some of the key ways the Cambridge's life sciences sector contributes to the nations economy which are listed here and discussed in more detail below:
- The Cambridge cluster;
 - Investment;
 - Research and development; and
 - The University of Cambridge and spin-outs.
- 4.18 Cambridge is experiencing unprecedented growth in its science and technology sectors. The Triple Helix relationship between the university, research institutes and the business community make the city a highly attractive place for the commercialisation of science.

The Cambridge cluster

The Cambridge Cluster within the Cambridge city region (a 20-mile radius from the city centre) contributes to the national economy by employing over 227,850 people (0.8% of total employment in England),^{42,43} attracts investment and fosters innovation within key sectors such as life sciences, technology and digital, Artificial Intelligence (AI), and creative industries. The following describes the key elements on the size and significance of the life sciences sector within the Cambridge cluster.

³⁹ Bidwells, 2017. What is Silicon Fen?

⁴⁰ Lginform, 2021. Gross value added (GVA): All industries (2021) for All English authorities

⁴¹ Savills, 2022. Spotlight: Life Science Capital Raising in Cambridge

⁴² Cambridgeahead, 2023. [Cambridge Cluster Insights Interactive Dashboard](#) Accessed May 2023.

⁴³ ONS, 2021. BRES

Size and significance of life sciences in the Cambridge cluster

Group of about 608 life science and healthcare firms within the Cambridge city region; supporting over 22,780 jobs.

The cluster has recorded employment growth of nearly 2.6% since April last year and generated £48bn in turnover.

The cluster benefits from its proximity to the University of Cambridge, a global leader in life sciences.

Recently, pharma giant AstraZeneca relocated its headquarters to Cambridge to leverage closeness from hospitals, the university and other firms (GSK, Abcam and Eisai etc.) in the cluster.

Source: Cambridge Ahead, 2023. [Cambridge Cluster Insights Interactive Dashboard](#) Accessed May 2023.

- 4.19 Cambridge continues to be one of the most significant hubs for life sciences within the UK. The role of Cambridge's life sciences cluster was more prominent than ever as it led the pharmaceutical response to the pandemic, from vaccine development at AstraZeneca to genomic sequencing at the Wellcome Sanger Institute.
- 4.20 Cambridge has the third highest employment share in life sciences of all local authorities in England, behind South Cambridgeshire and Vale of White Horse. This finding is not surprising given that Cambridge has one of the largest concentrations of employment in the Biopharma industry in the UK.⁴⁴ In 2017, the Cambridge life sciences sector generated £2.9bn to the economy,⁴⁵ which is over 25% of the total scientific research and development GVA generated in England.
- 4.21 Cambridge Biomedical Campus – located on the southern edge of Cambridge – lies at the heart of Cambridge's world-leading life sciences cluster. The campus is home to large international businesses including AstraZeneca, Eisai (a Japanese pharmaceutical company), Glaxo Smith Kline and Abcam.

Abcam

⁴⁴ DBEIS, 2022. Bioscience and Health Technology Sector Statistics 2020.

⁴⁵ Medimmune and Astrazeneca, 2018. Cambridge: driving growth in life sciences

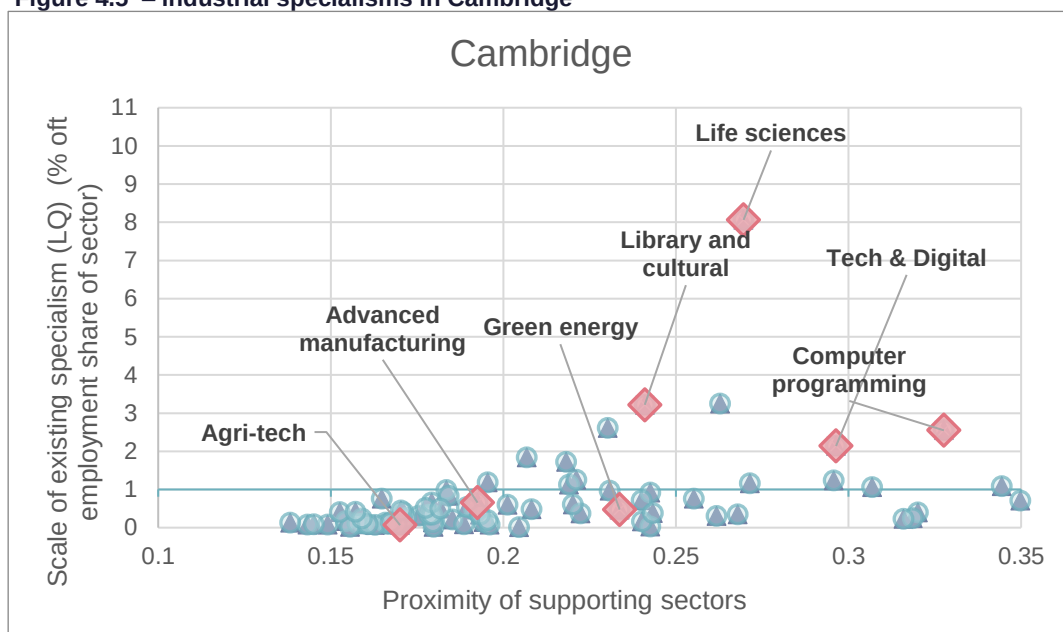
Global life sciences company Abcam is one of the UK's biggest biotech success stories. It operates 12 sites globally, employing 1,800 people, including 790 at the Cambridge HQ on the Cambridge Biomedical Campus.

Industrial specialism - cluster analysis

- 4.22 The following analysis uses recent econometric techniques developed as part of the analytical framework of economic complexity which makes it possible to study the existing specialisms and the presence of supporting industries. The economic complexity framework is an empirical methodology developed to understand the comparative advantage and future growth potential of local areas. By analysing the industries in which a city has an identified revealed comparative advantage, it is possible to assess both the extent of specialism in a given industry, as well as whether the city has specialisms in supporting industries commonly found alongside an industry.⁴⁶
- 4.23 The two graphs below summarise this analysis. Vertically the graphs show a measure of employment share in different sectors (first graph) or life sciences specifically (second). Horizontally it shows the presence of supporting industries. For this measure, a higher value indicates that there is a strong interconnectedness between life science and other supporting industries. The measure of interconnectedness indicates that an area is well placed for the expansion of a cluster. Therefore, the further towards the top right of a graph that a sector or local authority lies, the stronger the chance of developing a global employment cluster in that sector.⁴⁷
- 4.24 **Figure 4.5** shows the degree of the existing specialisms in key sectors in Cambridge. This shows that life sciences has one of the largest existing specialism in Cambridge. Life sciences employment share in Cambridge is around eight times larger than the national average.

⁴⁶ For an example of how this methodology is applied in the context of UK local authorities, see Mealy, P. et al., 2019. Interpreting Economic Complexity.

⁴⁷ The further into the top right quartile a local authority moves, the mathematically more difficult this position becomes to achieve. This is because naturally there is some conflict between life sciences employment and employment in connected sector. It would not be possible to have many connected sectors within the local authority if life sciences employment became totally dominant. It is not, however, as simple as summing the x-axis and the y-axis to 1, given the axes represent different metrics.

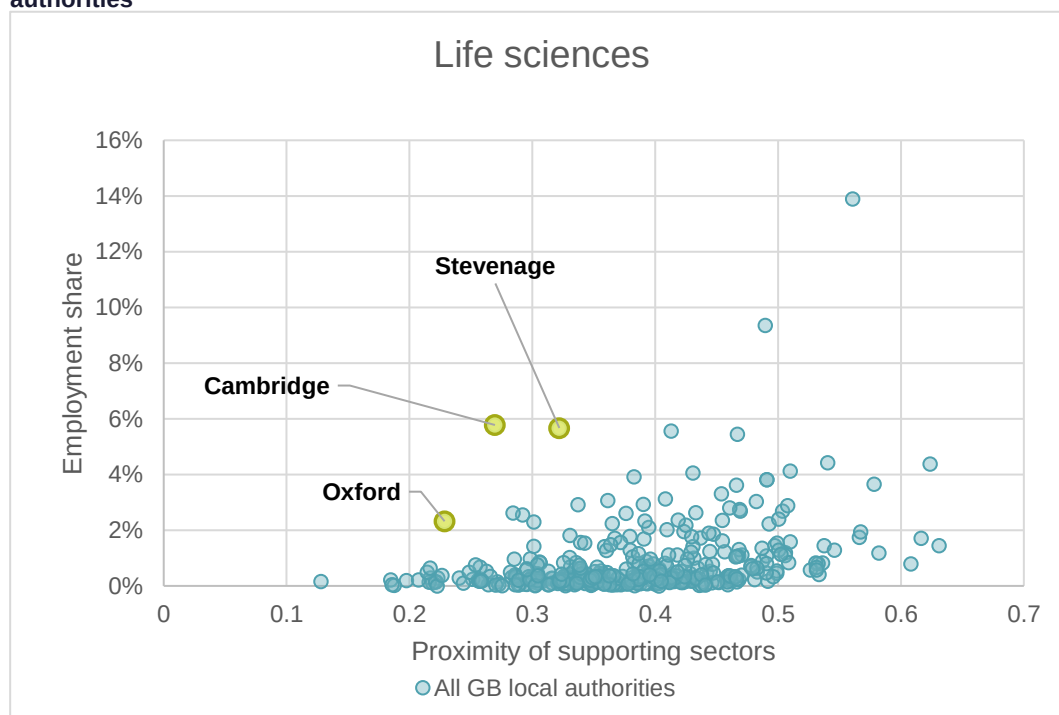
Figure 4.5 – industrial specialisms in Cambridge

Source: Volterra modelling, 2023. Data obtained from ONS (BRES).

4.25

Figure 4.6 shows how strong the life sciences sector in Cambridge is in comparison to the local authorities in the country. In terms of employment share, Cambridge ranks 3rd of all UK local authorities. The provision of more space would help to push Cambridge further into the top-right quartile through two mechanisms. The first is the direct increase in employment in the life science sector would cause a vertical shift upwards. The second is through attracting more firms that support the life sciences industry into Cambridge, such as technology or manufacturing firms. A large amount of new life sciences space would see suppliers or data processing firms move into Cambridge to help support operations. These firms would have a similar industrial specialism in life sciences and would cause a shift to the right of the Cambridge marker.

Figure 4.6 – life sciences employment share and proximity of supporting sectors for all GB local authorities



Source: Volterra modelling, 2023. Data obtained from ONS (BRES).

Investment

- 4.26 Corporate investment in Cambridge which includes Initial Public Offerings (IPOs), mergers and acquisitions (M&A), and venture capital by life sciences related firms, totalled £12.6bn in 2021, which is an increase of over 410% compared to the previous year.⁴⁸
- 4.27 Venture capital (VC) funding is an important tool to understanding the growth and formation of future companies. It is typically used to raise funds by start-ups and by firms looking to expand (scale ups) within the life sciences sector.⁴⁹ It is widely acknowledged that VC investment into the knowledge economy directly translates into increased demand for floorspace. Research from property consultancy Savills indicates that for every €1bn of VC investment creates 46,000 sqm of life science real estate demand.⁵⁰
- 4.28 The ranking of global cities in terms of VC deals are shown in **Figure 4.7**. Cambridge sits 9th in the global rankings for venture capital raised by life sciences companies, accumulating around £1.95bn in 2021. VC raised within Cambridge's life sciences sector was higher than in London and Oxford. London and Oxford generated approximately £1.4bn and £1.1bn respectively.⁵¹ Deals in Cambridge are also much larger than in London and Oxford, with a median of \$6m, compared to \$1.3m in London and \$3.9m in Oxford.⁵² Whilst

⁴⁸ Savills, 2022. Spotlight: Life Science Capital Raising in Cambridge

⁴⁹ Savills, 2022. Spotlight: Life Science Capital Raising in Cambridge

⁵⁰ Savills, 2021. Spotlight: European Life Sciences

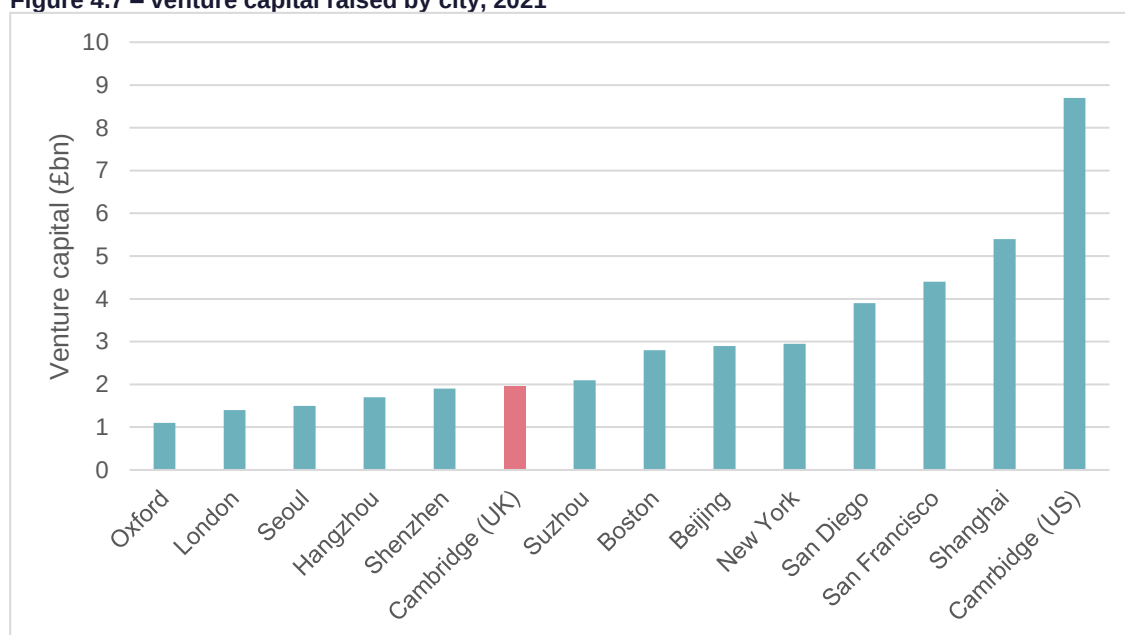
⁵¹ Savills, 2022. Spotlight: Life Science Capital Raising in Cambridge

⁵² Cambridge and Peterborough Combined Authority. 2021. Appendix 4 – life sciences strategy

Cambridge performs the best out of all the UK cities in terms of investment, on a global scale it does not come close to the levels invested within cities within the United State and China.

“One of the biggest challenges for the city in the short term is the supply of laboratory space to accommodate those companies successfully fundraising and hiring” – Steven Land, Director, Commercial Research⁵³

Figure 4.7 – venture capital raised by city, 2021



Source: Savills, 2022. Spotlight: Life Science Capital Raising in Cambridge

Research and development

4.29

Cambridge is known for its global research institutions such as the University of Cambridge, the Medical Research Council of Molecular Biology), and the European Bioinformatics Institute. These and numerous others perform world leading research into fields such as technology, life sciences, engineering, and pharmaceuticals and those included within the Cambridge city region employ 37,345 people.⁵⁴ This strong base of research institutions underpins Cambridge being the most innovative city in the UK in terms of the creation of intellectual property per 100,000 residents. Cambridge recorded 317 patents per 100,000 residents,⁵⁵ with next highest being Coventry with 109. Oxford is ranked as the fourth most innovative city with 78 patents per 100,000 residents.

⁵³ Savills, 2022. Spotlight: Life Science Capital Raising in Cambridge

⁵⁴ Cambridgeahead, 2023. [Cambridge Cluster Insights Interactive Dashboard](#) Accessed May 2023.

⁵⁵ Consultancy.uk, 2018. Cambridge leads UK's top 10 cities for new patent applications

4.30 The University of Cambridge is the driving force of the research within Cambridge. Its publications within the life sciences fields are some of the worlds most impactful studies.

4.31 **Table 4.2** shows that between 2015 and 2018, Cambridge produced over 4,700 papers within the life sciences sector,⁵⁶ of these, over 20% were amongst the top 10% most cited within the field.

Table 4.2 - top five universities worldwide for quality of biomedical and health sciences research publications, 2015 to 2018

University	Country	Number of papers	Number of papers in the top 10% most cited	Number within the top cited as proportion of all papers
Massachusetts Institute of Technology	United States	2,196	668	30%
University of California, Berkeley United States	United States	2,240	488	22%
University of Oxford	United Kingdom	6,151	1,314	21%
University of Cambridge	United Kingdom	4,715	992	21%
Harvard University	United States	24,791	5,133	21%

Source: Cambridge and Peterborough Combined Authority. 2021. Appendix 4 – life sciences strategy

The University of Cambridge and spin-outs

4.32 A report by London Economics measured the University of Cambridge's impact on the UK economy.⁵⁷ The total impact on the UK economy is estimated at £29.8bn. The research finds that for every one pound invested within the university, an economic impact of £11.70 is created, and for every £1m in publicly funded research income the university receives it generates £12.65m in economic impacts across the UK. There are very few government interventions that can accumulate higher economic benefits than investment into the University of Cambridge.

4.33 The universities' activities support a total of 86,000 jobs across the UK,⁵⁸ and the Cambridge cluster and local ecosystem is one of the most successful in the UK. Around 78% of the total economic impact (just over £23bn) is generated from the impact of 178 spin-outs and 213 start up companies that have connections to the University. This is the biggest impact of any university.

⁵⁶ Cambridge and Peterborough Combined Authority. 2021. Appendix 4 – life sciences strategy

⁵⁷ London Economics, 2021. The economic impact of the University of Cambridge

⁵⁸ London Economics, 2021. The economic impact of the University of Cambridge

The importance of industrial clusters

Clusters are geographic concentrations of interconnected companies and institutions in a particular field.⁵⁹ They can include a variety of linked companies – including suppliers of specialised inputs and infrastructure, customers of the industry and businesses working in complementary products. Institutions and Government bodies are also important in terms of providing skills and research. Clusters can be thought of as ecosystems of linked firms, individuals and institutions.

Industrial clusters

- 5.1 Clusters will often include institutions, such as universities, which help shape networks and encourage the sharing of knowledge. These institutions add to the international competitiveness of such clusters, making them even more desirable for firms. Institutions within clusters may provide specialised training, education, information, research, and technical support.⁶⁰
- 5.2 By locating in a sectoral cluster, firms are able to take advantage of agglomeration economies. This is the primary reason for the existence of clusters. Firms benefit from better supply channels, lower production/transportation costs, specialist infrastructure, and a stable source of trained workers.⁶¹ Workers and firms can learn more from one another when they are close. They benefit from what is known as knowledge spill overs – relationships and networks can be built. Some of the key benefits of clustering are listed in **Figure 5.1**.

⁵⁹ Harvard Business Review, 1998. Clusters and the New Economics of Competition.

⁶⁰ Porter, M. 1998. Clusters and the New Economics of Competition.

⁶¹ Pearl & Coutts, (no date). Types of business clusters in London.

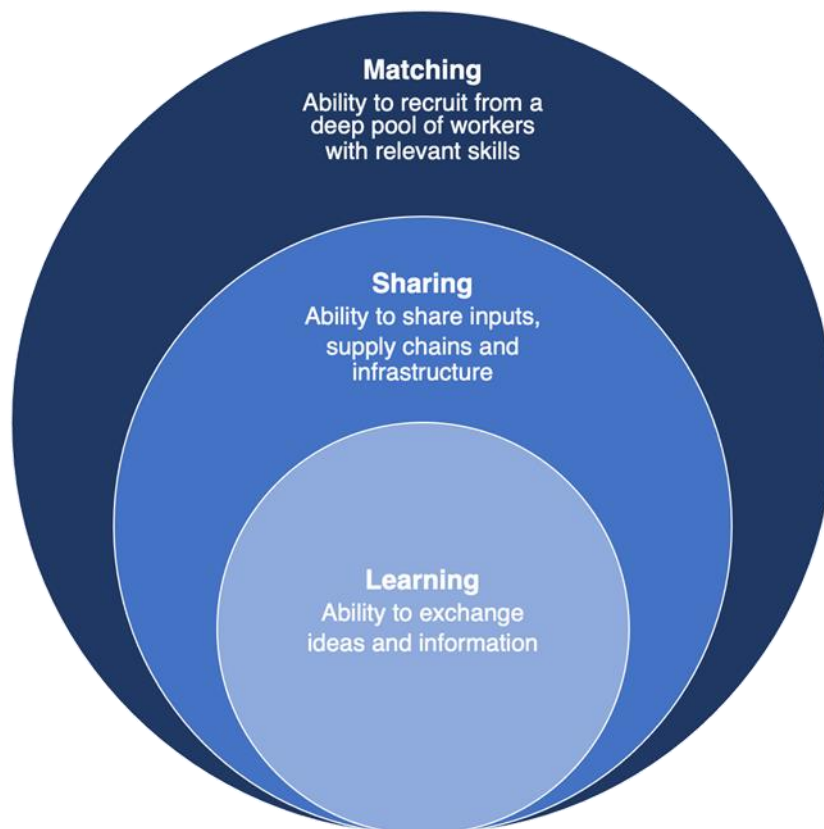
Figure 5.1 – Benefits of clustering

01	PRODUCTIVITY	Firms locating near one another benefit from productivity advantages associated with agglomeration economies. Gains includes access to specialised workers, a deeper supplier base and specialised information and institutions within the cluster.
02	INNOVATION	There is evidence that clusters result in higher levels of innovation due to better awareness, knowledge spill overs and competition.
03	GROWTH	Growth of new businesses is encouraged in the cluster. This can be due to benefitting from existing infrastructure, being an attractive location for new firms, and a positive feedback loop existing within the cluster.

5.3 Another way of thinking about why it can be beneficial for firms to co-locate is the opportunities provided for sharing, matching and learning due to proximity.⁶² Matching means access to a deeper pool of skilled workers and suppliers, sharing infrastructure, production facilities, and learning from other firms and individuals in similar industries.

⁶² G Duranton and D Puga, 2003. "Microfoundations of agglomeration economies", Centre for Economic Policy Research.

Figure 5.2 – why firms cluster



5.4 Supporting clusters is important policy in the UK. It is widely accepted that a country's economic success is not decided by individual firms, but rather innovative clusters of companies localised in the same geographical area and working in the same field.⁶³ Consensus and policy supports reinforcing clusters, not creating a new one.

UK cluster policy

Supporting clusters has become an important policy objective in the UK and further afield. There is a general consensus that it is essential to build on existing clusters, and that should be prioritised over creating a new cluster.⁶⁴ Porter recommends that Governments should “reinforce and build on existing and emerging clusters rather

⁶³ Porter, M. 2000. Location, Competition, and Economic Development: Local clusters in a global economy.

⁶⁴ The Work Foundation (February 2011), Creative Clusters and the Changing Economy.

than attempt to create entirely new ones.”⁶⁵ Clusters need to change and evolve to respond to new trends.

“The formation of new businesses within a cluster is part of a positive feedback loop. An expanded cluster amplifies all the benefits I have described — it increases the collective pool of competitive resources, which benefits all the cluster’s members. The net result is that companies in the cluster advance relative to rivals at other locations.”⁶⁶

-
- 5.5 Growing the R&D and life science sector is a national priority. In order to best do this, new R&D companies must locate in existing clusters so they will be able to take advantage of the above clustering benefits. The benefits flow both ways: proximity to other R&D companies will increase the chance of success for the occupier, and investment in the cluster will increase the attractiveness, brand and efficiency of the whole cluster. Building on past success is an accepted approach for economic development.⁶⁷ This creates a positive feedback loop.
- 5.6 Failure to invest in clusters risks stifling growth. This can have significant impacts to GVA contribution, job creation and innovation.

Urban innovation districts

- 5.7 A fundamental shift in the geography of innovation is emerging. Over the past 50 years, innovation has been spatially dominated by places such as Silicon Valley – “suburban corridors of spatially isolated corporate campuses, accessible only by car, with little emphasis on the quality of life or on integrating work, housing and recreation.”⁶⁸
- 5.8 A new urban model, called innovation districts, is now emerging. Innovation districts are urban areas with networks of knowledge-producing organisations such as universities, research bodies, teaching hospitals, cultural institutions, and knowledge-intensive businesses. By bringing innovators, entrepreneurs, researchers, creatives, investors among others, to work, collaborate, compare and compete, innovation districts are reshaping and regenerating major parts of UK cities to create high quality jobs in easily accessible locations. Locating stakeholders in close proximity to each other allows for the knowledge organisations, employers and employees to engage in new ways to spur on innovation and improve access to career and learning opportunities.⁶⁹
- 5.9 The Brookings Institute notes that:

⁶⁵ Porter, M., 1998. Systems of innovation: growth, competitiveness and employment.

⁶⁶ Porter, M. 1998. Clusters and the New Economics of Competition.

⁶⁷ Porter, M., 1998. Systems of innovation: growth, competitiveness, and employment.

⁶⁸ Brookings, rise of innovation districts. Available at: <https://www.brookings.edu/essay/rise-of-innovation-districts/>

⁶⁹ Arup, (no date). UK innovation districts and knowledge quarters.

“Innovation districts have the unique potential to spur productive, inclusive and sustainable economic development. At a time of sluggish growth, they provide a strong foundation for the creation and expansion of firms and jobs by helping companies, entrepreneurs, universities, researchers and investors—across sectors and disciplines—co-invent and co-produce new discoveries for the market. At a time of rising social inequality, they offer the prospect of expanding employment and educational opportunities for disadvantaged populations given that many districts are close to low- and moderate-income neighbourhoods. And, at a time of inefficient land use, extensive sprawl and continued environmental degradation, they present the potential for denser residential and employment patterns, the leveraging of mass transit, and the repopulation of urban cores.”

5.10

A study of 50 innovation districts found that when compared to areas of non-innovation, the innovation districts have on average:⁷⁰

- Four times higher intensity of tangible innovation per employee;
- Nine times higher density of job opportunities;
- 15 times higher concentration of knowledge intensive jobs;
- 20 times more economic activity per resident; and
- For every innovation focused job the district create, it generates between four and five additional support jobs.

5.11

Whilst innovation districts are more well known in the US, there are six innovation districts in the UK that form the UK Innovation Districts Group:

- **Glasgow West End and Waterfront Innovation District** – A £114m project with a completion date of 2025, aimed at stimulating development in areas that are currently constrained by the costs of remediation and site access with a focus on routes and entry points for the areas main business, cultural and institutional facilities;⁷¹
- **Leeds Innovation District** – A district based in the city centre’s northwest quarter, where the main civic, education and health institutions are located with plans including the £450m redevelopment of the Leeds General Infirmary and a brand-new home for Leeds Children’s Hospital to develop and the world-class services, providing patients with the latest technologies treatment and research;⁷²
- **Knowledge Quarter Liverpool** – A 450-acre innovation district located at the heart of Liverpool’s city centre that is home to world leading organisations including the University of Liverpool, Liverpool John Moores University, Clatterbridge Cancer Centre, the Liverpool School of Tropical Medicine, the

⁷⁰ Aretian, 2019. Kendall Square, MA: How to analyze an innovation system.

⁷¹ Glasgow City Council, (no date). Waterfront and West End Innovation Quarter.

⁷² Leeds Council, 2019. Available here; <https://news.leeds.gov.uk/news/leeds-innovation-district-builds-on-bold-ambition-to-create-a-world-class-research-and-innovation-hub-in-the-heart-of-the-city>

Liverpool Science Park, and the Accelerator (home for life sciences companies on the Liverpool Health Campus);⁷³

- **Knowledge Quarter London** – Located in the half square mile area around Kings Cross, the district is home to some of the world’s most innovative companies, institutions and tech firms, including Google’s \$1bn headquarters as well as knowledge-based institutions such as the British Library, British Museum, The Alan Turing Institute, UCL and the Francis Crick Institute;⁷⁴
- **Queen Elizabeth Olympic Park** – Launched in 2022 by seven core partners in the University of the Arts London, UCL, Loughborough University London, Here East, Plexal, Lendlease, and the London Legacy Development Corporation to work with more than 250 knowledge intensive companies and organisations to develop 53,000 sqm of workspace and a base for more than 10,000 undergraduate and postgraduate students;⁷⁵ and
- **Manchester Oxford Road Corridor** – Located in the south of Manchester’s city centre, this cluster is home to several public, private, academic and clinical institutions, and as of 2019, generated 20% of Manchester’s GVA and provided 79,000 jobs. The number of jobs supported increased from 11% from 2015 – 2019 since 2015.⁷⁶ This innovation district is just a 15-minute commute from Manchester Piccadilly Train Station via public transport, and a 30-minute walk.

5.12 Though these districts are at different stages of development, it is clear that major investment in new campuses, cultural buildings, public spaces, physical and digital infrastructure, and the curation of social research and business networks have the potential to significantly improve productivity.⁷⁷

5.13 It is recommended that governments should prioritise location-based investment in innovation districts to help boost productivity.^{78,79}

- Government, cities, and regions should prioritise innovation districts to support the delivery of the Industrial Strategy;
- Innovation districts should build on the existing work and infrastructure to help increase the productivity through inclusive growth;
- Innovation districts should work together to form a closer-knit national network; and
- Cities, regions, and innovation districts should continue to secure capital investment in public spaces, physical and digital infrastructure, and new buildings.

5.14 The leading global innovation district is in Boston. Located in Massachusetts, Kendall Square is one of the world’s leading research institutions. It is said to be “*to science what New York is to finance and what Paris is to culture*”.⁸⁰ Commercial rental rates stand at over \$120 per sqft in Kendall Square as of 2021.⁸¹

5.15 Over 1,000 companies in the biotechnology sector are located in Greater Boston, benefiting from its close proximity to Harvard University and the Massachusetts Institute of Technology (MIT), the latter of which

⁷³ The Guide Liverpool, 2020. Available here: <https://theguideliverpool.com/everything-you-need-to-know-about-the-knowledge-quarter-liverpool/>

⁷⁴ The Office Group, (no date). Available here: <https://www.theofficegroup.com/stories/design/brain-power-why-the-knowledge-quarter-is-londons-new-business-hub>

⁷⁵ Queen Elizabeth Olympic Park, 2022. Inclusive innovation district shift launches at Queen Elizabeth Olympic Park.

⁷⁶ Oxford Road Corridor, 2019. Economic Impact Assessment Summary.

⁷⁷ Arup, (no date). UK innovation districts and knowledge quarters.

⁷⁸ 36th IASP World Conference on Science Parks and Areas of Innovation.

⁷⁹ Arup, (no date). UK innovation districts and knowledge quarters.

⁸⁰ Curbed, 2018. Available here: <https://archive.curbed.com/2018/11/6/18067326/boston-real-estate-cambridge-mit-biotech-kendall-square>

⁸¹ Bisnow, 2021. Available here: <https://www.bisnow.com/boston/news/life-sciences/boston-lab-rents-hit-record-triple-digit-rates-as-vacancy-teeters-on-zero-110548>

helped advance the proposals to create the “*most innovative square mile on the planet*” and deliver a blend of uses in the area including housing, laboratory and research space, retail, innovation space, open space and a dedicated facility for the MIT museum.⁸²

- 5.16 Kendall Square is currently home to 62 public companies with an estimated combined market value of \$170bn. Over the past 20 years, Kendall Square has been an area home to a major urban development plan with the projects aim to redesign the neighbourhood into an architecturally attractive area that is well connected to other centres and draws in professional talent. This plan has been successful with the neighbourhood having the lowest real estate vacancy rate of any major downtown market in the USA at just 3.6% whilst also having the highest Innovation Intensity of any innovation district at 94%.⁸³ More development is planned for the area, with Japanese drug company Takeda Pharmaceuticals set to occupy a new 16-story office and laboratory space from 2026.⁸⁴
- 5.17 Innovation districts provide ideal locations for firms to locate and make the most of the various clustering benefits as mentioned earlier in this section. It is vital for Cambridge to build on the current infrastructure in the city, budding talent pool and variety of existing innovation companies and knowledge-based institutions to provide the necessary space that will enable the formation of a potential world leading innovation district.
- 5.18 As we will see later, companies prioritise urban science or city district locations which are amenity rich and provide strong public transport links and sustainability credentials.

⁸² MIT, (no date). Kendall Square Initiative; available at <https://kendallsquare.mit.edu/>

⁸³ Aretian, 2019. Kendall Square, MA: How to analyze an innovation system.

⁸⁴ Boston Globe, 2022. Available at: <https://www.bostonglobe.com/2022/06/22/business/japanese-drug-giant-takeda-will-move-into-16-story-building-planned-kendall-square/#:~:text=Japanese%20drug%20giant%20Takeda%20Pharmaceuticals,ready%20for%20occupancy%20by%202026.>

The need for new lab and office space

For life sciences to be a key focus of an economy, the appropriate space is needed for innovative firms to operate. This consists of high quality, grade A office and laboratory space in highly accessible locations.⁸⁵

Views from the industry

- 6.1 There is the need for immediate investment in the life sciences sector. The life sciences sector globally is booming, and the demand is outstripping the limited supply of space. Data from JLL has revealed that the growth of the European life sciences sector shows no signs of slowing, with venture capital investment volumes for 2022 13% higher than 2020.⁸⁶ The UK's leading position within Europe is exemplified by its 36% growth over the same period.⁸⁷
- 6.2 The CEOs of Britain's two largest pharma groups (AstraZeneca and GSK) signed an industry letter to the Prime Minister which called for an "urgent solution [to] prevent an acceleration of pharmaceutical disinvestment from the UK".⁸⁸ The UK competes on a global stage for this activity. The lack of space within the UK's key clusters means it could lose out to other international innovation districts.
- 6.3 A technical report by UCI in partnership with the University of Cambridge found that one of the key challenges facing university spin-outs is the access to suitable space and appropriate facilities and equipment within the local ecosystem.⁸⁹ This space is required to support early company development. This combined with the access to experienced expertise has been cited as the most frequent barrier affecting university spin-outs.
- 6.4 Likewise, CBRE has stated that they expect the current demand/supply imbalance of available lab space to continue into 2023, leading to higher rents.⁹⁰ These issues highlight the precarious position that the UK life sciences market currently falls within. The demand for space is clear, yet there is a critical lack of supply.

⁸⁵ HM Government, 2021. Life Sciences Vision

⁸⁶ JLL, 2023. EMEA Life Sciences Cluster Outlook 2023

⁸⁷ UK Bioindustry Association (BIA), 2023. UK biotech financing 2022.

⁸⁸ The Guardian, 2023. GSK boss warns UK life sciences at 'tipping point' despite Sunak's R&D pledge

⁸⁹ UCI, 2022. BUSTING MYTHS AND MOVING FORWARD: The reality of UK university approaches to taking equity in spinouts

⁹⁰ CBRE, 2023. Market Outlook 2023

Current laboratory and office stock in Cambridge

- 6.5 As of June 2023, Cambridge had approximately 7.7m sqft of office space and 3.2m sqft of laboratory floorspace. International comparators, such as Greater Boston and New York City, have 28.4m sqft and 3.7m sqft of life science space respectively.⁹¹
- 6.6 To address the shortfall in supply of lab space in Cambridge. There has been a rising trend in repurposing of office space to labs in order to address the continued shortage of laboratory floorspace.⁹² At Granta Park, Metrion Biosciences increased its occupancy by 8,700 sqft by refitting office space with lab space. Similarly Sphere Fluidics converted 7,000 sqft of office space to laboratory space.

Availability and demand for office and laboratory floorspace

- 6.7 Demand outweighs the current stock of office floorspace in Cambridge. **Figure 6.1** shows the demand and supply of office space. The current available stock of office floorspace in Cambridge as of June 2024 is 873,600 sqft, although only 12% of this space is considered the highest quality (grade A).⁹³ Demand for office space in Cambridge is approximately 754,700 sqft. Over the last five years, the majority of the take up of office space has been grade A. There is therefore a mismatch between the type of space that is in demand and the existing supply of the best space.
- 6.8 In terms of scale of requirements, around 44% of businesses in Cambridge require office spaces that are 20,000 sqft or more. The imbalance of high quality space and requirements in Cambridge has led to a fall in take up with some businesses compromising by taking lower grade stock.⁹⁴ The continuous lack of supply in Cambridge will drive up the price of higher quality spaces.

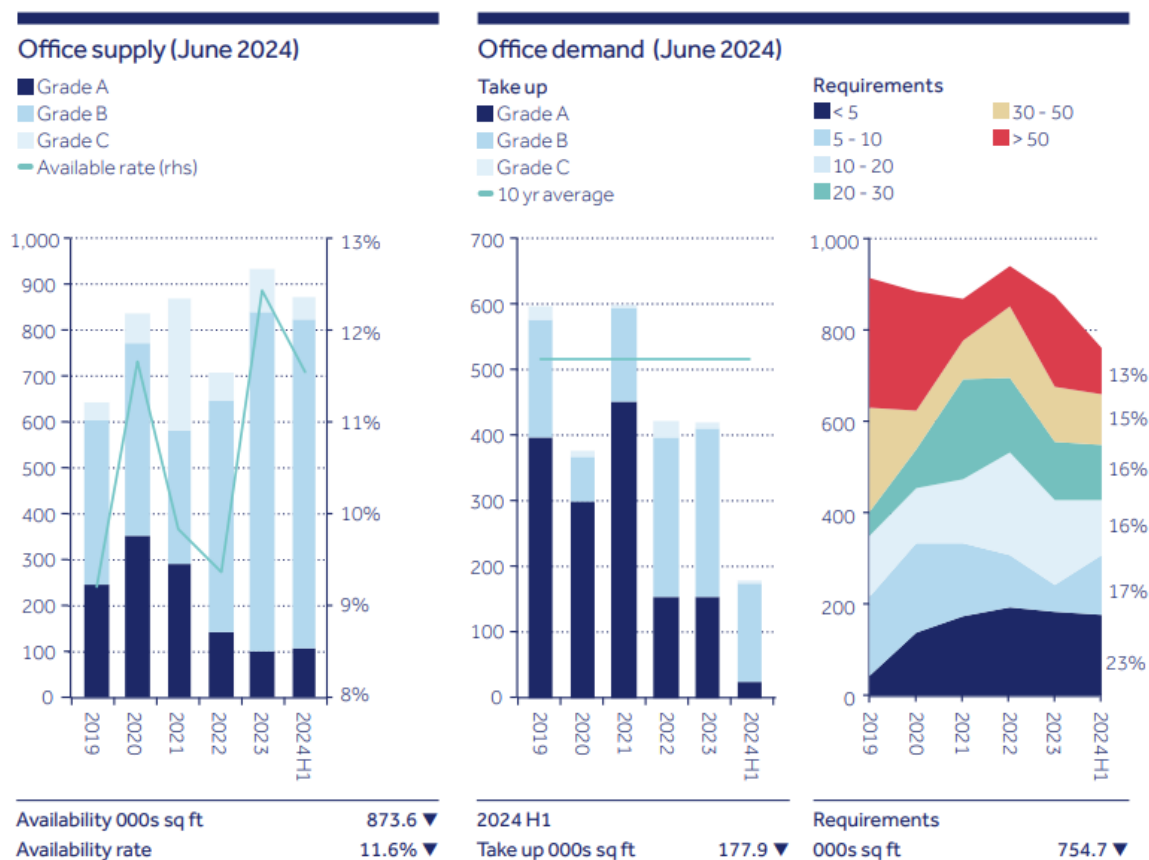
⁹¹ Newmark, 2022. Mid-Year Life Science Overview & Market Clusters.

⁹² Bidwells, 2024. Cambridge Arc Market Databook January 2023

⁹³ Bidwells, 2024. Cambridge Arc Market Databook January 2023

⁹⁴ Savills, 2024. Cambridge office and lab supply remains critically constrained as take-up drops in 2022

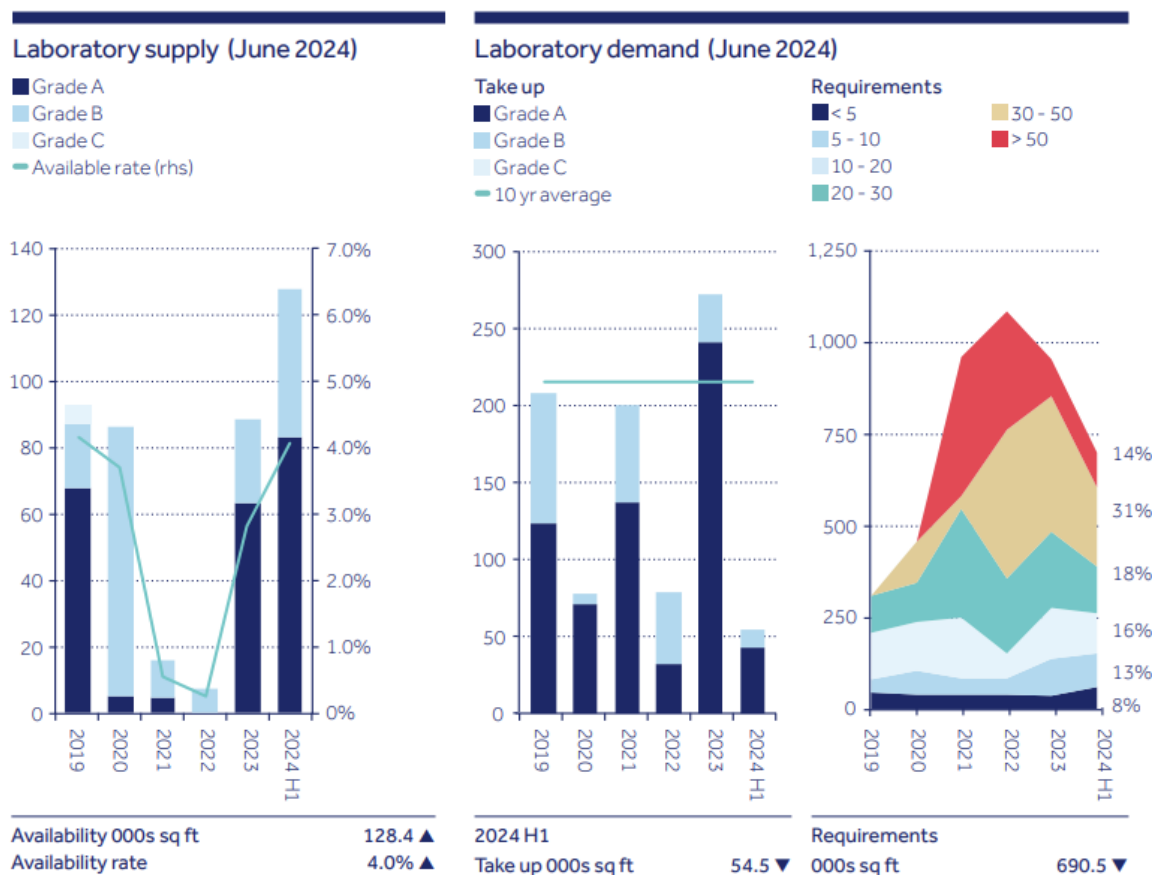
Figure 6.1 Office supply and demand, June 2024



Source: Bidwells, 2023. Cambridge Arc Market Databook Summer 2023

- 6.9 The supply of laboratory floorspace was nil throughout much of 2022 against demand of over 1m sqft. Any lab space released during that period was re-let immediately with rents rising sharply. Tightening of funding over the past 2 years has then the acute shortage ease a little but there remains a significant supply versus demand mismatch (see **Figure 6.2**). At the end of H1 2024 immediately available lab space remained very constrained at c.128k sq ft with demand at the same date point was c.691k sq ft. There is c.140k sq ft of lab space being delivered in H2 2024 the of which a quarter has been pre let and other spaces in advanced negotiations. With occupier demand stabilised and expected to return to growth with improving funding environment the supply demand imbalance is expected to remain a feature for the coming years.
- 6.10 Bidwells find that, reviewing significant new building completions since 2016, they have generally been pre-let or let within a year practical completion. This is a unique phenomenon for Cambridge, compared to other regional cities, and amplifies the severe lack of new supply that has come forward to support the growing businesses of the city. For businesses to grow to full potential access to available space is of key importance and the lack of space will have stalled economic potential.

Figure 6.2 Laboratory supply and demand, June 2024

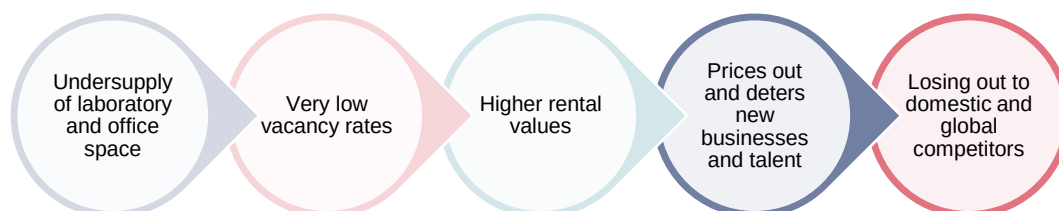


Source: Bidwells, 2023. Cambridge Arc Market Databook Summer 2023

Vacancy rates and rental values

- 6.11 The undersupply of laboratory and office space in Cambridge is clear. The issues this creates as a result of this are shown in **Figure 6.3**. The lack of supply of laboratory floorspace in Cambridge has resulted in a vacancy rate of just 4.0%.
- 6.12 The high demand and lack of supply has pushed up rental values in Cambridge. Prime office space is at a record high rental value of £60 per square foot.
- 6.13 Laboratory rents have risen significantly in the six months between December 2022 and June 2024. Prime fitted labs have risen from £58.50 per square foot to £71.50.
- 6.14 Increasing rents could result in new businesses and talent being priced out the market. These businesses may look elsewhere for space such as Cambridge's competitors, Oxford and Stevenage. Stevenage is seeing a number of spaces come forward. Reef Group have been approved to develop a new life sciences quarter in the heart of Stevenage town centre. Stevenage benefits from being located within the heart of the Golden Triangle, with good access to all three major markets London, Cambridge, and Oxford. It is also home to a successful life sciences cluster which includes: the GSK and Autolus campuses.

Figure 6.3 – impact of the constrained supply of laboratory and office floorspace



- 6.15 The evidence presented shows that there is a very high demand for laboratory space in Cambridge, with the current lack of supply causing a bottleneck which is leading to higher rental values and risks Cambridge losing its competitive advantage.

The development pipeline

- 6.16 The delivery pipeline of new office supply remains constrained short and medium term and is not expected to meet levels of occupier demand.⁹⁵ Schemes delivering in 2024 include 10 Station Road and Brooklands in the city centre. Brooklands is approaching half let with the whole scheme not completing until year end. 10 Station Road will PC in late August and has a c. 20% under offer with advanced discussions on remaining floors. One Cambridge Square, Cambridge North was the largest office building to be delivered to the Cambridge market in 2023 and less than 12 months from PC is approaching 80% let. The only office building on site of scale to be delivered in 2025 is the Optik, Peterhouse Technology Park which has good levels of interest. There is limited further office development then until 2026 & 2027 at locations such as Devonshire Gardens and Botanic Place respectively. However more high quality schemes are needed to support the growing science and tech occupiers who are seeking high quality connected locations with amenities.
- 6.17 The delivery of speculative laboratory space has improved. This is good to support businesses growth following a number of years with very limited speculative supply being delivered. Where space was delivered in 2023 at locations such as Cambridge Biomedical Campus and Unity Campus leasing take up has been very successful. The 2nd half of 2024 will see much needed new lab space delivered at One Grant, Granta Park where the top floor is already pre leased.
- 6.18 The lab buildings being delivered in 2024 will total c.150 sq ft NIA already have good levels of interest and expected to be fully let shortly following PC. The forecast pipeline supply should improve for occupiers in 2025-2028 and will begin to alleviate the supply shortage and provide occupiers with choice but is not expected to meet existing and expected new demand. Currently there are no labs in urban city centre locations available for occupiers seeking to grow and locate within the city centre areas.
- 6.19 Delivery of more lab and office space is critical for the UK to fulfil its objectives of becoming a scientific superpower, and the lack of development is threatening promising start ups and scale ups from taking

⁹⁵ Bidwells, 2024. Cambridge office and laboratory occupational market update – the Beehive Centre

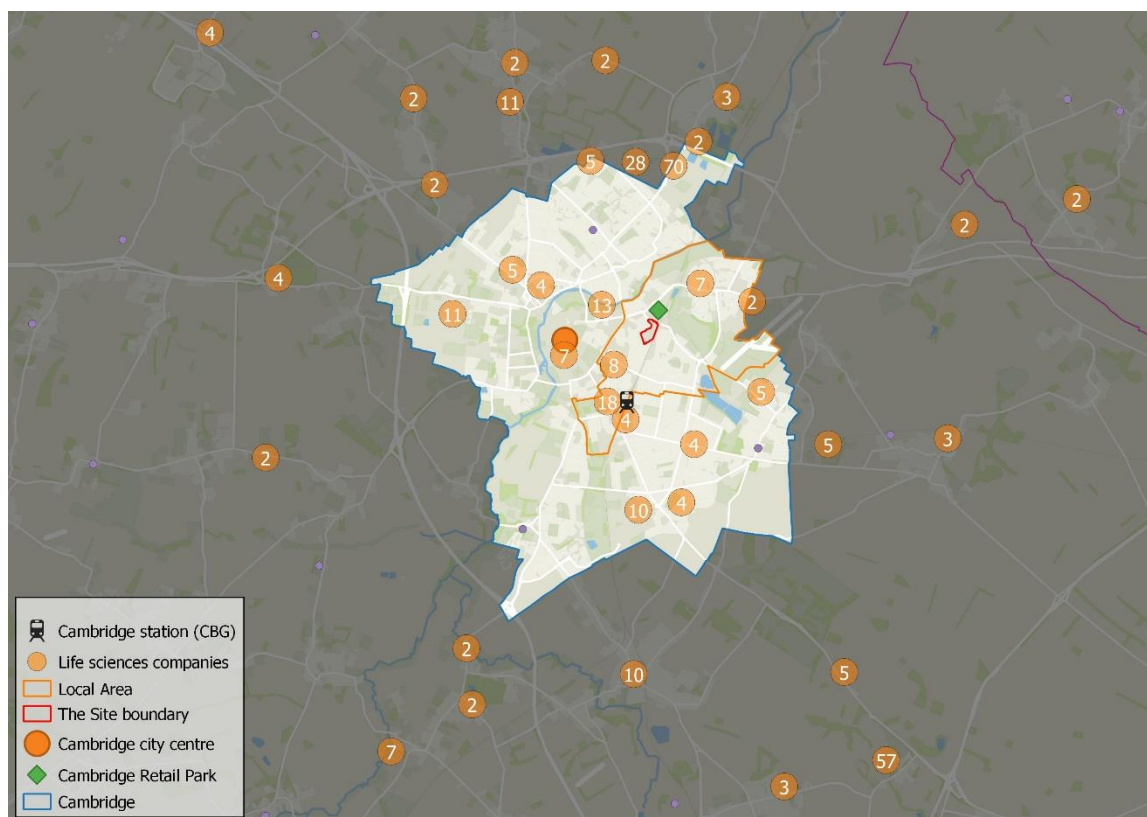
place. Bidwells collaborated with Blackstock Consulting to publish a report advocating for the Oxford-Cambridge Arc to be transformed into a super cluster similar to those in the US such as in Boston.⁹⁶ Failure in this would result in the UK economy missing out on £50bn of GVA by 2030. The report finds that the Arc could knowledge-based economy is set to grow by £235bn by 2030 and could support over two million jobs. The development pipeline still falls short of the demand for office and laboratory space. This could have a serious impact on the UK economy, not just in terms of jobs growth and GVA, but also the wider contributions of the life sciences sector to healthcare and discovery.

Central Cambridge office and laboratory market

- 6.20 The office and laboratory market in central Cambridge is limited, particularly laboratory space. Most of the life sciences companies are located to the outskirts of the local authority boundary and are not nearby to the city centre or the train station (see **Figure 6.4**). These are known as the out of centre locations, where there is more space to create large business/science parks which can support a high quantum of floorspace and businesses. It is likely that the majority of pipeline development will occur in these out of centre business/science parks.
- 6.21 Bidwells found that that there is a clear preference for urban and accessible locations. A key part of the reason for this is the need to meet ESG ambitions and reduce carbon footprints, operating in more sustainable locations. This has increased demand for centrally located purpose-built laboratory space for two reasons. Firstly, central accessible locations are a priority for many businesses given the greater access to public transport hubs allowing for more sustainable travel patterns. Secondly, purpose-built high-quality space is generally the only route to achieve a BREEAM rating of Excellent or Outstanding for laboratories where the impact of high energy demands needs mitigating elsewhere in the design.

⁹⁶ Bidwells, 2023. Radical Capital

Figure 6.4 – location of life sciences companies in Cambridge



Source: Office for life sciences, 2022. Bioscience and health technology company statistics

Contribution of the Proposed Development

7.1 A recent Bidwells/YouGov R&D business survey, the bespoke Cambridge office and laboratory occupational market update, other sources which are discussed below identify that businesses within the life sciences sector and other R&D who are demanding lab space are looking for spaces with a combination of the following factors:⁹⁷

- City centre or sustainable urban locations.
- Purpose built laboratory space that provides the laboratory and office space with flexibility for companies to grow and change processes and techniques as research advances available.
- Excellent ESG credentials to meet the demands of investors and high skilled staff who increasingly consider this issue when considering an employer.
- Public transport accessibility for staff.
- Proximity to research, whether university and/or hospitals.
- Critical mass to deliver a collaborative ecosystem essential to the innovation process.
- Urban amenities such as meeting spaces, conference facilities, coffee shops and restaurants.
- Data connectivity and power.

⁹⁷ Bidwells, 2023. Cambridge office and laboratory occupational market update – the Beehive Centre

- 7.2 The Proposed Development provides an opportunity to not just meet all of these requirements, but also go beyond them by addressing the areas wider social and economic ambitions on feasible development site of scale.

Impact of proposals

Purpose built space

- 7.3 The Proposed Development will bring a significant quantum of much needed office and laboratory floorspace. Growing life sciences companies require best-in-class office and lab space. Every life science company has different needs, and as their businesses evolve, those needs change and complicate real estate matters if the space uses are static.⁹⁸
- 7.4 The commercial real estate needs of life sciences companies are varied and complex. While spin-out firms can make use of small generic lab space, the market leading life sciences firms require large build-to-suit spaces for state-of-the-art production and quality control facilities.⁹⁹
- 7.5 There is currently a lack of deliverable sites providing high quality, flexible space to accommodate these firms. Whilst life sciences businesses can renovate and repurpose existing commercial and retail space, most commercial properties are not fit to house life sciences spaces as there are certain factors that cannot easily be converted.
- 7.6 A survey of fifty global corporates with some form of occupation in the UK found that purpose-built space that includes meeting facilities, conference facilities, innovation centres and co-working space were valued aspects in the decision of choosing where to locate. Specifically, ultra-fast and high volume data connectivity was ranked as the second most important consideration in choosing a location.¹⁰⁰
- 7.7 The Proposed Development will be purpose-built for life sciences firms to operate. It will help to fulfil some of the excess demand for space from life sciences firms in Cambridge. The floorspace provided at the Proposed Development will be flexible so that the lab provision can respond to market demand and be adapted to future tenant requirements.

Scale

- 7.8 The scale required for both laboratory and office space has changed within Cambridge over the last five years. Companies are demanding larger spaces that are of the highest quality. The Proposed Development's lab enabled buildings are suited to meet the required spaces that can meet all the requirements for the businesses currently looking to rent spaces in Cambridge.

ESG credentials

- 7.9 The Proposed Development would provide the high-performing ESG credentials sought by business, necessary to aid the city towards its net zero ambitions. This extends beyond the building to car parking strategies, landscaping and the provision of green areas, as well as an urban sustainable location.

⁹⁸ Hines, 2021. Tips to Designing Purpose-Built Life Sciences Space.

⁹⁹ Lab Manager, 2021. Real Estate Considerations for Life Sciences companies. Available at:

<https://www.labmanager.com/lab-design-and-furnishings/real-estate-considerations-for-life-science-companies-27226>

¹⁰⁰ Bidwells, 2019. Delivering R&D Potential For The UK.

Why this location?

- 7.10 Given the spatial constraints of Cambridge, it is likely that the majority of the office and laboratory development pipeline will occur in out of centre locations. These spaces are further away from the city centre which are limited in accessibility by walking, cycling, and in some instances public transport. Whilst these would provide much needed supply of this type of space to support the sector.
- 7.11 The vast majority of existing laboratory provision is located on the periphery and outside of Cambridge's local authority boundary. Known as out of town science parks, this is also where the bulk of future development is anticipated. This presents connectivity challenges for businesses with limited accessibility to public transport provision and poor connectivity for other sustainable transport methods. This means that whilst increased development will be welcomed by Cambridge's life science occupiers, it often does not meet needs or aspirations of occupiers from an operational or sustainability perspective. This is counter to documented business demand preferences and the understanding of innovation which underlines the importance of critical mass to enable cross collaboration between organisations. Given the lack of sites that can be delivered centrally, the Site is one of the most sequentially preferable locations for development in Cambridge.
- 7.12 There is currently no modern large floorplate commercial laboratory or office stock with meaningful sustainable credentials near by to the centre of Cambridge. Suitable, sustainable locations where new space can be delivered are limited.
- 7.13 The Proposed Development provides a unique opportunity to address the undersupply of laboratory and office floorspace within a location nearby to the centre of Cambridge that is high-performing ESG credentials. The Site is within walking and cycling distance from Cambridge station and the city centre.

Economic impacts

- 8.1 The economic impacts that are presented are based on the most-likely end use of the Proposed Development, which includes lab space coming forward within the lab-enabled buildings and an equal split between lab (wet lab) and lab-enabled office (dry lab).¹⁰¹

Construction phase

Construction employment

- 8.2 The construction of the Proposed Development would result in additional economic activity in terms of construction jobs and spending. A standard method of estimating the number of construction workers at the site is to divide the expected cost of construction by the gross value added (GVA) of the average construction worker.¹⁰²



- 8.3 It is estimated that the construction phase of the Proposed Development would support an average of 990 jobs per year in the 96-month construction period.

Construction worker expenditure

- 8.4 Construction workers are one of the most mobile sectors of the workforce, travelling to wherever the work is. As a result, construction benefits are not generally viewed as having large local impacts. However, their expenditure does have a local impact. It is expected that construction workers on-site would spend a total of £11.9m in the local area over the duration of the construction period (£1.5m per annum).¹⁰³ Typical expenditure in the local area before, during, and after work can be on things such as food and beverages (e.g., lunch), after work activities and retail shopping at nearby stores.

¹⁰¹ Note that this approach uses different densities to the Environmental Statement: Chapter 12 Socioeconomics. This is due to the different scope of the reports, this assessment estimates the most likely scenario, whereas the ES chapter considers a reasonable worst case.

¹⁰² ONS, 2022. Regional gross value added (balanced) by industry 2019; ONS, 2022. Business Register and Employment Survey 2019. Whilst 2020 GVA data is available, 2019 has been used here to account for the impacts of the coronavirus pandemic which saw a £16,000 fall in GVA per construction worker in Stevenage. Using the 2019 figure in this context provides a more conservative estimate.

¹⁰³ Assuming 60% of workers spend £11.43 a day for 220 days a year. The £11.43 is based on a YouGov survey which found that UK workers spent £6 in the local area on average in 2005 – this has been uplifted to reflect earnings growth in the period to 2022 and the discrepancies between earnings in different industries and in London compared to the rest of the UK.

Operational phase

The existing site

- 8.5 The existing site is known as the Beehive Retail Centre, which includes 17 units, mostly retail but also some F&B and leisure uses. The existing facilities are estimated to support 855 jobs (670 full-time equivalents [FTE] jobs). The remainder of this section will consider the new jobs created by the Proposed Development, stating what quantity of these are additional compared to the existing Site.

Gross direct employment

- 8.6 The Proposed Development would bring significant additional economic activity and employment to the Site and the surrounding area. The majority of jobs will be created across the office and laboratory floorspace, with the other uses such as retail, community/events, and commercial active space also supporting jobs.
- 8.7 The job estimates which are derived using the relevant densities from the Homes and Community Agency (HCA) Employment Density Guide.¹⁰⁴ **Table 8.1** shows the breakdown of employment estimates by type of floorspace. It is estimated that the Proposed Development would support 6,450 jobs, equivalent to 5,755 FTEs. When compared to the existing site, this equates to 5,590 gross additional jobs (5,080 FTEs). The gross additional jobs support 25% of Cambridge's job target to 2031 (22,100 net additional jobs between 2011 and 2031), outlined in the Cambridge local plan.¹⁰⁵

Table 8.1 – gross direct employment supported by the Proposed Development

Use	Floorspace (sqm)	Density (by floorspace type)	Density	FTEs	Jobs
Lab (wet lab)	23,688	NIA	50	475	515
Lab-enabled office (dry lab)	23,688	NIA	12	1,975	2,150
Office	36,328	NIA	12	3,025	3,400
Retail	4,852	NIA	18	275	385
Events / community	246	GIA	125	0	5
Total				5,755	6,450

Source: HCA, 2015. *Employment Density Guide* (3rd edition); Note: figures may not sum due to rounding.

¹⁰⁴ HCA, 2015. *Employment Density Guide* (3rd edition)

¹⁰⁵ Cambridge City Council, 2018. *Cambridge Local Plan 2018*

Occupational breakdown

- 8.8 The following method is used to find the uplift in the gross additional employment by skill level at the Proposed Development. The average distribution of occupations by sector for the East of England are applied to the jobs within sectors at the existing site and the Proposed Development.¹⁰⁶ The occupations are then assigned into three categories of skill level: low skilled, mid skilled, and high skilled.
- 8.9 The results are shown in **Table 8.2**. This shows that the Proposed Development would result in an uplift for jobs across all levels. In total, the uplift in high level jobs would be around 4,010 jobs, for mid-level jobs an additional 1,070 jobs, and there would be an additional 520 entry level jobs.

Table 8.2 – skills distribution, existing site and Proposed Development

	Occupation	Existing site	Proposed Development	Uplift
High-level	Managers, directors and senior officials	130	965	4,010
	Professional occupations	75	2,035	
	Associate professional and technical	95	1,315	
Mid-level	Skilled trades occupations	65	240	1,070
	Administrative and secretarial	80	790	
	Caring, leisure and other service	5	195	
Entry level	Sales and customer service	265	355	520
	Process, plant and machine operatives	50	110	
	Elementary occupations	85	440	
Total		855	6,450	5,595

Source: UK Commission for Employment and Skills, 2015. Working futures: Data for all industries East of England; Volterra Calculations;
Note: figures may not sum due to rounding.

Worker expenditure

- 8.10 The additional workers at the development would bring greater spending to their respective local areas. A 2005 YouGov survey found that workers in the UK spent on average £6 a day in the local area around their

¹⁰⁶ UK Commission for Employment and Skills, 2015. Working futures: Data for all industries East of England

place of work. This figure has been uplifted for earnings growth between 2005 and 2022, as well as for the higher average earnings of workers in different industries as well as in the East of England compared to the rest of the UK. Once these differentials have been accounted for, it is estimated that the average lab worker (dry and wet lab) would spend approximately £14 per day, a office worker £13 per day, a retail worker £6 per day, and the events/community and commercial active workers would spend around £7 per day.

- 8.11 Based on the estimates of daily worker expenditure and conservatively assuming only 60% of workers will spend in the local area, it is estimated that the Proposed Development's workers would generate an additional £9.6m (£10.2m in total) in worker expenditure per year compared to the existing site.

Net additional employment

- 8.12 This analysis has so far focused on estimating the gross direct jobs that would be created by the Proposed Development, i.e., the jobs that are supported by businesses on the Site of the Proposed Development itself. The Homes and Communities (HCA) Additionality Guide provides a framework that allows for the estimation of the net additional impacts of a development.¹⁰⁷ The four key factors used to determine the additional impacts and the justification for their values are provided in the following subsections.

Displacement

- 8.13 The proportion of jobs that would otherwise have been supported elsewhere. The HCA Additionality Guide notes that "displacement arises where the intervention takes market share [...] from existing local firms and organisations".¹⁰⁸ There is a wide range of jobs provided at the Proposed Development, from low to high-skilled. This employment may be displaced from elsewhere in the district or the region. However, there has been huge demand for office and lab space within the sub-region in recent years, particularly in Cambridge. In December 2022, there was 7,200 square feet (sqft) of available lab space and demand for 1.2 million sqft. Many of the jobs are in a low displacement sector (life sciences), and unemployment across the district is higher (3.4%) in comparison to the regional level (2.9%), which suggests jobs at the Proposed Development could go to some of the unemployed, rather than being displaced from elsewhere. These factors combine to suggest a low displacement rate of 25% at the regional level.

Leakage

- 8.14 The level of leakage is used to determine the proportion of economic benefits arising from the Proposed Development which will accrue outside of the target area. For Cambridge and Greater Cambridge leakages have been used for this assessment to determine the impact at the local and sub-regional level. These are based on the most recent commuting patterns data.¹⁰⁹ These are applied to the net direct, indirect and induced jobs to determine estimate the quantity which will go to Cambridge residents and greater Cambridge residents. The latest data shows that 65% residents who live in Greater Cambridge work in Cambridge, and just over 40% of residents live and work in Cambridge.

Multiplier

- 8.15 The indirect benefit to the other sectors supported by the Proposed Development, generated through both the supply chain and worker expenditure. The scale and diversity of the economy in the regional area means that it is more likely that supply chain activity and income effects are felt within the region. Given the types of employment located at the Proposed Development, the local expenditure of the primarily office and

¹⁰⁷ HCA, 2014. Additionality Guide: Fourth Edition

¹⁰⁸ HCA, 2014. Additionality Guide: Fourth Edition

¹⁰⁹ ONS, 2012. Census 2011: Location of usual residence and place of work by method of travel to work (MSOA level)

lab workers will be high given income levels at other similar employment locations and the scale of the offer for local spend available. Across the region there is a very high level.

Estimating net additional employment

8.16

The results of the net additional employment using the assumptions above are shown in **Table 8.3**. The Proposed Development is expected to create net additional jobs of 7,465 across the East of England, this includes 3,075 indirect jobs. Based on 2011 commuting patterns, approximately 40% (around 3,060 jobs) would go to Cambridge residents, and 65% (around 4,830 jobs) would go to Greater Cambridge residents.

Table 8.3 – net additional employment

Employment type			Total
Jobs		A. Gross additional	5,590
	= A * (1 - 25%)	B. Net direct (following displacement)	4,190
	= B * (1.5 - 1)	C. Net indirect (multiplier)	2,940
	= B + C	D. Net additional	7,130
		E. Net additional (FTEs)	6,480
Jobs	= D * (0.4)	to Cambridge residents	2,850
	= D * (0.65)	to Greater Cambridge residents	4,640

Economic value and tax contributions

Gross value added (GVA)

8.17

GVA is the additional value generated by economic activity. The GVA impact of a development is estimated by multiplying the number of jobs in each sector by the annual GVA per job in that respective sector. When compared to the existing Site, the Proposed Development would lead to an additional output in GVA of an estimated £600m per year – equivalent to 25% of Cambridgeshire's total GVA within the professional, scientific and technical activities sector in 2019.¹¹⁰

Tax

8.18

By comparing national statistics on GVA in the years 1997 to 2017 with public sector receipts in each year, it can be estimated that tax revenues typically account for between 30% and 40% of GVA.¹¹¹ This is generated through business rates, VAT, corporate and income tax (among other smaller taxes). Applying this to the additional GVA generated by the Proposed Development, and it is estimated that the Proposed Development would result in additional tax revenues of between £180m and £240m.

Business rates

8.19

Business rates have been estimated by taking the rateable values per sqm for the types of commercial space in Cambridge. The different types of spaces have been as closely aligned as possible to Valuation

¹¹⁰ ONS, 2022. Regional GVA (balanced) by industry: all ITL regions

¹¹¹ ONS, 2019. Public sector finances and ONS, 2018. Regional gross value added (income approach)

Office Agency (VOA) primary description categories. Based on this, the Proposed Development would pay a total of £11.4m in business rates payments per annum, which is equivalent to an additional £8.5m when compared to the existing site. Of the additional £8.5m, approximately 40% is retained by Cambridge City Council, around £3.4m.



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