

London Cancer Hub

Stage One Report



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1 Introduction

1.1 Our Appointment

JLL has been appointed by Sutton Council to provide real estate led advice for the development opportunity at London Cancer Hub.

Our appointment is split in two five main stages. This document relates to Stage One of the instruction and provides a market research led report covering the following points;

- Market context
- Supply
- Demand
- Input in to the masterplan options
- Delivery

1.2 Next Steps

JLL will build on this research and apply it to a preferred option as agreed by the London Cancer Hub partnership group.

2 Global Market Overview

2.1 Overview

The global life sciences market can be broadly split to include biotechnology, pharmaceuticals and medical technology.

- The global pharmaceutical industry was valued at \$1.084 trillion in 2011. The market is expected to grow at a CAGR of 4.21 percent over 2011–2020. As per IBIS Pharma 2015 report, by the end of 2015, the market is expected to reach \$1.2 trillion.¹
- According to a 2014 report by Evaluate Medtech, the global medical device industry was valued at ~\$364 billion in 2013. The market is expected to increase at a CAGR of 5 percent over 2013–2020, to reach ~\$514 billion in 2020.²
- The biotechnology market (biologics + biosimilars) was valued at \$169 billion and is expected to reach \$221 billion in 2017, growing at a CAGR of ~6 percent (2012-2017).³

2.2 Americas

The Americas region is unique in that it is comprised of some of the most and least established life sciences clusters across the globe.

While specific cities within the United States and Canada are at various stages of maturity, as a whole the two countries have mature and deep-seated industry presence. As a whole, effects of the patent cliff and depleted product pipelines have resulted in right-sizing across the board. Markets with a strong biotechnology and R&D presence are emerging as the new leaders of the industry. Oftentimes these cities tend to be coastal and possess vibrant urban environments that attract the younger generations of the workforce. Universities with highly ranked research programs remain important innovation partners and therefore cities anchored by such institutions also continue to see growth in their biotech industries. Perhaps the most growth opportunity in the Americas lies in expansion and development of operations in Latin America. Growing middle class populations and ever-increasing access to healthcare have bolstered demand for drugs and treatments. Currently most of the medicines use is in the form of generics, as many countries have established generic manufacturing sites through domestic companies or partnerships with multinationals. However, many governments are focused on growing their knowledge-based economies and are taking measures to improve R&D capabilities at universities and support for small and medium-sized enterprises through incubator centers and targeted funding.

Development of the industry in Latin America is twofold. Improvements to manufacturing practices, regulatory systems and trade agreements are under way in most countries in order to not only grow manufacturing capabilities for domestic use, but also for exportation to other regions. Substantial progress has been made in these areas; however, highly differential laws and employment practices across Latin countries make it difficult to establish regional standards and practices. The biotech industry is very young in the region. Although the various country leads are eager to grow their R&D capacities, limited funds and relatively unstable economic environments prevent the governments from being able to inject funds into the industry at comparable levels to emerging countries from other regions, particularly those in Asia.

America holds the largest share of the global market, it holds around 40% of global pharmaceutical sales⁴. America received £1.4 billion worth of foreign direct investment in 2013⁵. In 2014, it boasted a 71.7% share of

¹ PWC Report: Pharma 2020; IBIS Pharma Report 2015

² Evaluserve

³ Evaluserve

⁴ Deloitte - 2015 Life Sciences Outlook

⁵ HM Government Life Science Indicators March 2015

the global life science Initial Public offerings market⁶. It should also be noted that 50% of the world's global pharmaceuticals R&D takes place in American laboratories⁷. America's position as the world's leading life science economy is supported through life science clusters such as the world-leading Boston, San Francisco and San Diego which help drive research and innovation. Life science companies such as Pfizer, Merck and Bristol-Myers Squibb have their headquarters in America.

Case study A: Greater Boston Area

The Greater Boston area life science cluster encompasses areas such as Cambridge and Mass Pike. It is the leading science cluster in the world. Its main advantage is that it is home major medical institutions, centres of excellence, venture capital firms, start-ups and mature corporations- all within minutes of each other

Boston's recipe for success:

- It possesses the largest concentration of life science researchers in the United States
- Home to many of the global leaders in life sciences, the Kendall Square in East Cambridge has been touted by some as the "most innovative square mile on the planet"
- The Greater Boston area is home to many elite academic and research institutions, as well as world-class medical facilities. This includes the top three American National Institute funded hospitals in the United States.
- Region also boasts 250,000 students across 52 higher education institutions, such as internationally renowned MIT and Harvard.
- Boston's economy is fuelled by a large concentration of healthcare professionals, including over 30,000 scientists and other workers employed directly in biotech.
- The cluster is a highly attractive destination to entrepreneurs. In 2013, the area received \$1.4 billion from venture capitalists. Boston ranks second in America for venture capital funding and number of IPOs.

2.3 Asia Pacific

The life sciences industry continues to experience strong growth in most of the Asia Pacific region. According to the latest IMS Market Prognosis, pharmaceutical sales in Asia are expected to reach \$350.0 billion in 2016, accounting for 30.0 percent of global market size. The remarkable growth is facilitated by strong demographic trends, such as increasing urbanization, changing lifestyles and an aging population, as well as an overall increase in wealth and improvements to medical infrastructure.

The robust market potential in Asia has also attracted major international players to the region and, more recently, spurred on a flurry of M&A activity as companies desperately look for growth in the wake of major patent expiries and declining sales elsewhere. Multinational companies such as Pfizer, Bayer and GlaxoSmithKline have increased their presence in the region, largely by relying on structured partnerships with local manufacturers. Additionally, many companies are diversifying their portfolios to fully exploit Asia Pacific's market potential by adding generic brands, crop and animal science and even consumer products, primarily through mergers and acquisitions.

The improvement of public health coverage in a number of markets has been a particularly strong driver of growth. For example, the Indonesian government has stepped up its commitment in recent years, with healthcare expenditure expected to double to around 5.0 to 6.0 percent of GDP by the end of 2014.

⁶ HM Government Life Science Indicators March 2015

⁷ Deloitte - 2015 Life Sciences Outlook

Nonetheless, in most of the region, many people in rural areas continue to have little to no access to healthcare. In the case of Indonesia, around one-third of the population still has no health insurance coverage.

The Asian pharmaceutical market continues to be exceptionally varied. Patent expiries pose a huge opportunity for Asian generic manufacturers, who seek to exploit this for significant sales growth. Branded generics are particularly popular in Asia due to their lower prices and favorable reputations and comprise the majority of the market in countries such as the Philippines, Indonesia and India. Furthermore, niche markets of incremental innovation such as biosimilars have thrived in the region and are the source of strong business growth in China, Korea and India in particular.

Innovation and R&D also continue to gain momentum outside of the well-established Japanese hubs. Singapore is quickly becoming an important R&D hub, while China is putting a strong emphasis on developing the next wave of drugs and treatments (with a specific focus on biotechnology), heavily supported by government funds and other incentives. Biotechnology was selected as one of the seven strategic emerging industries in China's 12th Five-Year Plan, which calls for government R&D spending of over \$1.9 billion on new drugs through to 2015.

Japan is another leading economy within the global life sciences markets. After America, it holds the second largest pharmaceutical market share in the world (around 10%)⁸. Despite its position within the global market it held a 0.9% share of the global life science IPOs in 2014⁹. Japan recorded around a £100 million of foreign direct investment¹⁰. In contrast to these figures, Japan conducts 15% of the world's global pharmaceutical research¹¹. Its life science economy is driven by clusters such as Kobe and Tsukuba science city. Life science companies such as Takeda and Meiji have their headquarters in Japan.

Case Study B: Tsukuba Science city

Tsukuba's recipe for success:

- The Tsukuba Science City offers one of the highest concentrations of cutting edge research centres in the world, with an estimated 3% of the population holding doctoral degrees. Tsukuba is host to over 22,000 researchers belonging to 131 Nationalities.
- Home to nearly a third of Japan's public research institutions, the most prominent of these include University of Tsukuba, the National Institute of Materials and Chemical research, the National Institute of Biomedical Innovation and the National Institute of
- The government has supported Tsukuba to be one of the world's key sites for public-private-partnerships in basic research areas such as micro-biology, next generation cancer therapy and plant genetics.
- Tsukuba centre, Inc. located within the science city provides various rental laboratories and offices, promotes industry-academia-government collaboration and fosters the development of entrepreneurial ventures (more than 205 existing venture companies have initiated in Tsukuba)

⁸ Deloitte - 2015 Life Sciences Outlook

⁹ HM Government Life Science Indicators March 2015

¹⁰ HM Government Life Science Indicators March 2015

¹¹ Deloitte - 2015 Life Sciences Outlook

2.4 EMEA

In 2013, the EMEA region, like other mature life sciences markets, continued to witness strong competition from the emerging markets across the globe. However, increasing expenditures on R&D, rising healthcare spending and development of European clusters is expected to sustain growth of the sector in the near future.

Europe continues to offer a conducive environment for life sciences companies mainly due to its technological leadership, manufacturing know-how, laws toward protection of intellectual property (IP) and availability of skilled workforce.

Demand for complex asset disposal and partnerships with real estate service providers to ensure optimal outcomes has increased among the key life sciences companies in Europe. Consolidation in the form of partnerships and acquisitions among key players has given an opportunity to the larger life sciences companies to optimize their global portfolios, eliminate excess real estate costs and enhance productivity and efficiency. Detailed analysis and understanding of government policies, grants and incentives continue to remain the key factor for relocation and development.

Among all of these real estate trends, workforce optimization and optimizing relocation expenses continues to remain the most significant challenge for life sciences organizations – a trend that is expected to continue in 2014.

The EMEA market is home to a number of countries who play an important role in the growth of the life science market. Countries such as Germany, France and Switzerland respectively received around £700 million, £400 million and £200 million pounds of foreign direct investment¹². The comparative strength of the UK market in relation to its European neighbours is evidenced through the total amount of private equity investment in these markets. Germany, France and Switzerland both received around £500 million in 2013¹³. The UK eclipsed this with over £700 million pounds in private equity investment in 2013¹⁴.

¹² HM Government Life Science Indictors March 2015

¹³ HM Government Life Science Indictors March 2015

¹⁴ HM Government Life Science Indictors March 2015

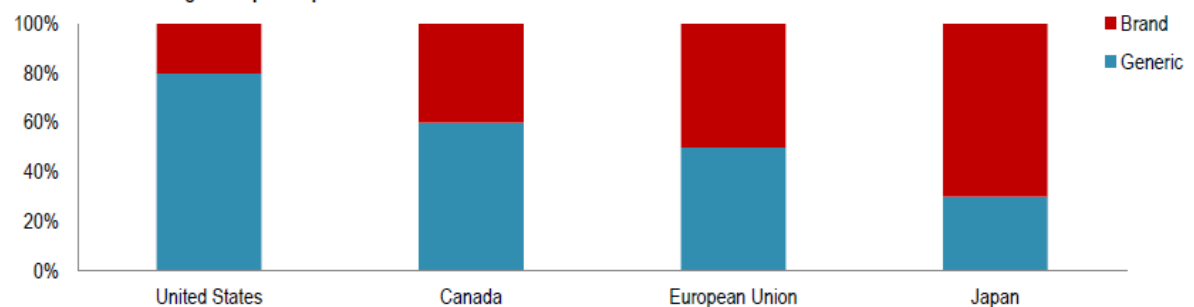
3 Global Trends

3.1 Generic demand on rise¹⁵

A few key trends have shifted the way in which sciences firms conduct business. To provide patients with affordable care, governments and regulatory bodies are implementing stricter regulation to curb drug prices and promote generics.¹⁶ The patent cliff- the point in which patents run out and generic replicas enter the market- continues to have a major impact on the revenue stream for large pharmaceutical firms. During 2011–16, best selling drugs worth ~\$255 billion in global annual sales are set to go off-patent.¹⁷ These drugs are expected to be replaced by low-priced generics, which could decimate as much as 90 percent of their sales.¹⁸ In 2015, the life science industry continues to change in response to growing regulatory and demand pressures from across the globe. As policies like the Affordable Care Act (aca) in the United States takes hold, demand for generics is growing. Governments are using new policies to support prescribing generics in order to save money. The patent cliff is also creating an increase in generics demand, as patents continue to run out on well-known drugs like Lipitor and Plavix. According to Bloomberg, 86.0 percent of prescriptions in the United States are generic. The Global generics market is expected to reach nearly \$350 billion by the end of 2015 and will grow with a CAGR of 12 percent over the next 5 years to attain a value of nearly \$620 billion by 2020.¹⁹

The rise in the generic prescriptions can be seen in other mature life science markets, such as the EU, Japan and Canada. This shift is becoming especially noticeable in historically life sciences centric Western Europe, where recession caused R&D funds to decline drastically over the last several years. For instance, the French government is providing doctors one-on-one guidance on prescribing lower cost medications.

Percent branded vs. generic prescriptions filled



Source: U.S. Food and Drug Administration

3.2 Branded pharmaceuticals are pursuing globalisation, consolidation and are actively engaged in seeking out collaborative partnerships

Despite the growth of generics, the pharmaceuticals market continues to invest in the search for new drugs. Biopharmaceutical production, and its generic counterpart, biosimilars, have increased as firms look to new, creative drugs that will make a profit in the competitive market. Biopharmaceutical research focuses on synthesizing biological sources to create pharmaceuticals. Small and mid-size bio-pharma are ripe for M&A's, as large companies look to diversify their portfolios to create and to create high-impact drugs that counteract

¹⁵ JLL - Life Sciences outlook: United States 2015

¹⁶ Wall Street Journal -1

¹⁷ Pharmaceutical Technology

¹⁸ Pharmaceutical Technology

¹⁹ sns

revenue declines. This type of production is labour-intensive, harnessing mental acuity of highly trained scientists, often with PhDs.

There has been a spike in merger and acquisition (M&A) activity as big pharmaceuticals seek to maximize vertical integration, collaboration and enhance innovation.

M&A activity is increasingly becoming a vehicle to grow revenue, especially amongst branded pharmaceutical and medical manufacturers. Consolidation is driven by the need to strengthen **big pharma companies' thinning pipeline and cutting down their internal R&D expenses. M&A, partnerships and collaboration of this type provides larger pharmaceutical companies, who are answerable to shareholders, the opportunity to collaborate on R&D initiatives and expand product offerings.** Some factors influencing M&A activity in 2015 include:

- The development of orphan drugs, pharmaceuticals designed to treat rare diseases
- According to a 2014 report by Marken, 30 million people in the US and 350 million people worldwide suffer from orphan diseases, while 95 percent of orphan diseases lack an FDA-approved treatment.²⁰
- According to a 2014 report by Evaluate Pharma, expected ROI on phase 3/filed orphan drugs is 1.89 times higher than non-orphan drugs.²¹
- Biopharma R&D, which has much less generic competition than synthetic pharmaceuticals
- Operational efficiencies, which are gained by acquiring established specialized research and developments

Some key deals announced in 2015 include:

- Pfizer, Inc's merger with Hospira, Inc. which is a provider of injectable drugs and biosimilars. This deal highlights the importance of branded pharmaceuticals acquiring biosimilars in order to minimize competition for the industry's growing biopharma market.
- Bristol-Myers Squibb announced an agreement to acquire Flexus BioSciences, which is a biotechnology company focusing on oncology drugs located in San Carlos, CA. The transition underscores the value of oncology drugs in pipeline.
- Astra Zeneca acquired Harvard's biotech start-up to leverage stem cell technology for its diabetes R&D²²
- Teva plans to acquire California based biotech company, Auspex Pharmaceuticals Inc. to strengthen CNS portfolio.²³

Globalisation is another key strategy for big biopharma firms looking to counteract the trend of increased generic demand. Emerging markets have seen growth in the life sciences industry over the past several years, in tandem with chronic disease. These markets have commercial potential in the long run, though it may take up to 20 years for some of these countries to have competitive buying power in the market. Still projected medical sales in 2020 may reach \$175.8 billion in China, \$57.3 billion in Brazil and \$45.1 billion in Russia; investment in these markets, though high risk, presents strong opportunities for embattled big pharma firms in entrenched markets. Device manufacturing firms also see opportunity in emerging markets in the form of lower cost labour and increased demand for new, innovative devices. Emerging markets provide the chance to grow at a lower cost. Lack of market transparency and unfamiliar regulations can make assessing facility options, lease

²⁰ Marken Report

²¹ Evaluate Pharma 2014 Report

²² Fierce Biotech

²³ Law360- Teva Acquisition

negotiations, and lab design difficult to navigate. Emerging markets sometimes do not have consistent fiscal and monetary policy, which can make financing risky and challenging, as well.

Despite the changing dynamics in front of the market, it is agreed that this is still an area of growth for the global economy. It has been estimated that this market will grow to over £1.4 trillion by 2018²⁴. In order to capitalise on this predicted growth, developers, landlords and occupiers will need to consider how to develop the right facilities in light of change.

²⁴ London Stansted Cambridge Corridor - Life Sciences industry and UK analysis, September 2014

4 UK: Gateway to the European life sciences market

4.1 Overview

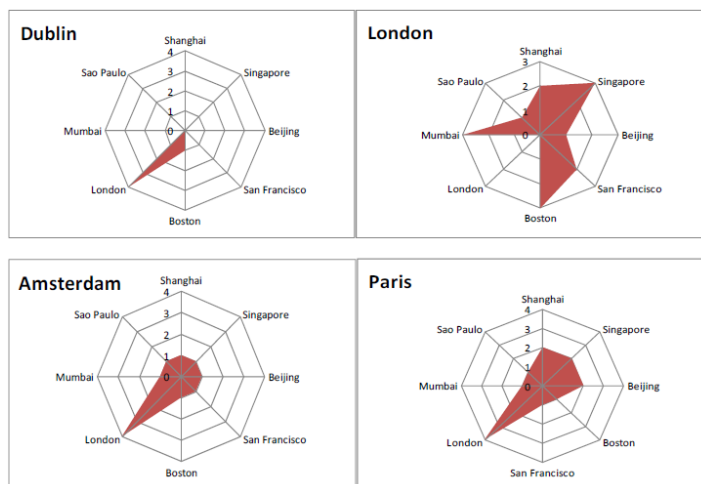
The UK holds 6% of the global life science market²⁵. It trails America and Japan in terms of market share, however it can be argued that it is the leading European life science economy. It had the highest share of global life science IPOs (4.1%) in 2014 when compared to other European markets²⁶.

Some key facts of life sciences in the UK:

- £50bn turnover
- 165,000 employees
- 4,500 life sciences firms
- 3rd fastest growing sector
- London target for investors
- Occupiers seek links to clusters
- Wet lab demand unmet

The strength of the UK life science's market is underpinned by its world leading research, its developed venture capital eco-system and its economic environment which nurtures start-ups. In conjunction with this, as the diagram illustrates below the UK is extremely well connected to other key life sciences markets such as San Francisco and Boston. This signifies the unique position the UK has as the world's gateway into the European life sciences market.

International Flight Connections (Direct Flights per Day)



Source: KPMG report

A significant statistic is that the UK receives a third of all foreign investment into the European life sciences sector²⁷. The UK's life science economy is based around its world class research institutes which help the UK conduct 10% of the global pharmaceutical research²⁸.

²⁵ Estates Gazette – August 2015

²⁶ HM Government Life Science Indicators March 2015

Its life science economy is driven by the “golden triangle” of Oxford, Cambridge and London. GSK and AstraZeneca are companies that have headquarters and research facilities in the UK.



Source: KPMG report

4.2 Real estate occupational trends

The sector as a whole is predicted to grow with new business opportunities driven by demographic changes, growth in emerging markets, the onset of chronic diseases, technological innovation and growing R&D spend. Access to healthcare in the developing world brings a much larger population into the market. This is driven by the India and especially China (a \$125 billion plan to extend healthcare insurance cover) but includes other growing populations in emerging markets. This is resulting in companies engaging in R&D both locally and internationally in order to take advantage of the growth of this sector.

The Global life sciences market is **modifying traditional lab configurations to provide more options for teamwork and collaboration**. An example of this is the American company Biogen, they have made the transition towards an open floorplan design to meet the preferences of millennial workers in its office portfolio. The company designed an innovative new office that includes amenities to improve the quality of life of employees, including on-site daycare and a fitness centre. It is expected that other life sciences firms will adopt this model as the ability to create and innovate becomes a differentiator in the market.

Bio-pharmaceutical production has increased as firms look to new, creative drugs that will make a profit in the competitive market. Biopharma research focuses on synthesizing biological sources to create pharmaceuticals. Small and mid-size bio-pharma firms are ripe for M&As, as large companies look to diversify their portfolios and to create high-impact drugs that counteract revenue declines. This type of production is labour-intensive, harnessing the mental acuity of highly trained scientists, often with PhDs. The increase in bio-pharma work

²⁷ Estates Gazette – August 2015

²⁸ Deloitte - 2015 Life Sciences Outlook United Kingdom

requires highly-educated employees and, therefore, real estate near elite educational institutions is more in demand.

Despite this growth, the sector is not without challenges. Incomes are under pressure from patent expiry and the growth of generics. The cost testing is increasing in conjunction with the cost of maintaining a pipeline of next generation drugs is increasing, as is the timeline for delivery. This has led to an industry focus on consolidation and cost-cutting, whilst at the same time seeking collaboration which can aid the development of economically viable medical products.

Industry emphasis has been on the restructuring of Research and Development, this contains the following:

- A greater focus on collaboration
- focused R&D planning,
- flexible pipeline,
- use of technology to reduce R&D spend,
- outsourcing parts of R&D to SME life science companies
- moving to clusters and hubs where there is a focus on collaboration

Linked to a more efficient and flexible real estate approach, the large campus solution for a single occupier, similar to the model that drove the creation of AstraZeneca's Alderley Park in the first place is becoming less common in the industry despite arguably there being more sector businesses that have the spend to make the scale of operation viable. Rather the focus on collaboration with academic institutions and life science SMEs has meant that there is a greater demand for campuses where there is a spirit of innovation. Large corporates are placing themselves in hubs such as Stevenage Bioscience Catalyst (where GSK is part of the partnership that helped formed this hub) and Astrazeneca moving their HQ to Cambridge Biomedical Campus in 2016.

Therefore successful life science hubs are increasingly a mix of large life science companies, academic institutions, public institutions and outsourced life science technical providers. This mixture of tenants requires life science real estate to be varied and can include amenities such as laboratory space (wet and dry), meeting rooms and collaborative spaces outside of laboratories such as on site communal areas (cafes and brasseries). There is some space for some of these tenants, however the market does not appear to have enough optimised /modified space for the SMEs who are driving research within the life sciences industry.

SMEs are requesting spaces such as incubator and grow on space. SMEs also require facilities that are optimised for their operations, "but they appear to be facing a real estate market which offers too large floor plates and aged air handling systems rendering the space insufficient for their needs"²⁹. There is currently 8.2 m sq ft of commercial lab space in greater Boston area³⁰, however London only has 80,000 sq ft³¹ and Cambridge has 1.4 m sq ft³². In contrast to Boston, it is clear that Cambridge and London do not have enough laboratory space to fulfil general demand, let alone the specific demand created by SMEs.

In addition to this, lots of early stage companies are spin-offs from universities, however their lifecycles can be short. Firms may swell when they make a research breakthrough or disband overnight if they don't. Therefore this type of occupier looks for immediate shorter term lease in the realisation that they may not have a research breakthrough and facilities with grow on space in the event that they meet a research breakthrough which might attract greater funding. In light of this, players such as Babraham Research Campus are offering two year lease periods. Cost is of paramount concern for start-ups who may have funding for a certain period of time and increasingly science hubs are considering various models. The flexibility required by SMEs has manifested in

²⁹ Estates Gazette – August 2015

³⁰ Estates Gazette – August 2015

³¹ Estates Gazette – August 2015

³² Estates Gazette – August 2015

science hubs such as Babraham Research campus offering as the Chief Executive of Babraham Research Campus puts it a “Regus office lab model for companies that want access a lab for two afternoons a week”.

Both SMEs and large life science companies are also taking a greater interest in the amenities that science parks offer.. Dominaex has explained that “amenities such asas the bar and gym being very old[acts].....as a reason to move”³³. SMEs and corporates focus on quality of life for their employees and their families as an incentive to retain highly skilled staff may be one reason as to why there is an increasing focus on such amenities. For instance, Chesterford Park has a golf course, both Cambridge Biomedical Campus and Oxford Science Park have a nursery on site. It is becoming clear that simply offering a working environment is not enough, there also needs to be facilities to improve employees’ quality of life and also cater for their families.

Flexibility appears to be the theme within the market and appears to be driven by the life science SMEs. Investors and landlords have to be flexible in terms of lease term periods, amenities on-site, their ability to provide grow-on space and the types of facilities (wet or dry lab) they are able to offer. Successful science hubs are dynamically responding to these occupational trends and by doing so they are reaping the benefits of a real estate market driven by life science SMEs.

³³ BNP Paribas – Sutton Report

5 UK: Life Science Organisations

5.1 MedCity

Founded as a partnership, MedCity is a collaboration between three core London organisations that includes King's Health Partners, Imperial College Academic Health Science Centre and UCL Partners. The Mayor of London launched MedCity on 8 April 2014 to bring together life science expertise across London and the greater south east. To promote the initiative the Mayor announced funding of £2.92m from the Higher Education Funding Council for England, and a further £1.2m funding from the Mayor of London's office to assist MedCity.

MedCity's mission is to help London and the greater south east of England become a world leading, hub for life sciences that rivals areas like Boston/Cambridge and San Diego. In doing so it aims to create a "golden triangle" of life sciences that links London and the south east to the established markets of Cambridge and Oxford.

It aims to do this by promoting investment opportunities, creating job opportunities, facilitating discussion with investors and encouraging collaboration between various life sciences stakeholders.³⁴

What does this mean for the London Cancer Hub? Due to its greater London location in Sutton, the London Cancer Hub should continue to work closely with MedCity to ensure that the development potential being brought forward works alongside its aims and objectives.

5.2 London Stansted Cambridge Corridor (LSCC)

Founded in June 2013, the LSCC is a strategic partnership of public and private sector organisations that aim to drive economic development and promote and drive employment growth within the corridor.

In terms of geography, the LSCC covers a significant part of England running from Royal Docks, Tech City, the City Fringe, Kings Cross, and the Olympic Park, up through the Lee Valley, the M11, A1 and A10 road, the East Coast and West Anglia Mainline rail corridors to Stevenage, Harlow and Stansted, and through to Cambridge and Peterborough.

A full list of members, partners and supporters of LSCC can be found at <http://lsc.co/about-lscc-2/members/>.

In 2014, a fact file released by LSCC stated that there were 37 world class life science institutions within its boundary. This includes six Biotechnology and Biological Sciences Research Centres (BBSRC) such as Babraham Institute and Rothamsted Research.

What does this mean for the London Cancer Hub? Our site is not within the defined boundary of the LSCC but it would be useful to engage with LSCC to understand if they have relationships within life sciences community that could be of benefit in terms of investment or end users.

³⁴ <http://www.medcitylondon.com/>

6 Existing Supply

Please see Section 14 - Appendix One for further details of the life sciences stock in the markets presented below.

6.1 Cambridge

The Cambridge region is a mature market, with over 180 biotech companies and the presence of some world leading centres such as the Sanger Centre (a genomic research institute), the John Innes Centre for Plant Research, the Babraham Institute for immunology research and the Laboratory for Molecular Biology. The university, frequently ranked as one of the top five in the world, has cemented Cambridge's position as one of the leading locations in the world for research and development and the region is expected to remain a key location for the life sciences sector in the UK. Real estate development activity in Cambridge and surrounding markets is expected to remain limited, which may lead to lower levels of space availability. The market is particularly constrained for companies intending to acquire space in the centre of Cambridge as opposed to the science parks located in peripheral areas.

Life science companies generally choose to locate out of town, at the numerous business and science parks that provide high specification office and laboratory space they require. Key parks include Cambridge Science Park, West Cambridge Research & Development Park, St Johns Innovation Park, Cambridge Research Park, Chesterford Research Park, Melbourn Science Park, Granta Park and Cambridge Biomedical Campus.

Of these parks, Cambridge Biomedical Campus is particularly well placed in terms of its location-adjacent to Addenbrookes hospital and its relative proximity to city centre and train station. It is a 70-acre scheme with planning permission for biomedical research use. Two schemes have completed here so far, a 114,000 sq ft facility for Cancer Research UK in 2005 and a 203,000 sq ft facility for the Laboratory of Molecular Biology in 2012. More recently, pharmaceutical firm AstraZeneca announced plans to construct a new £330 million R&D facility campus where they plan to relocate to in 2016.

Due to the consistently high demand for lab and office space in Cambridge, the availability of large or self-contained units can be limited, although pockets of smaller space are more widely available. Rents range from £20 per sq ft for shell and core lab space, to c. £32 per sq ft for fully fitted out space dependent on the level of fitout.

6.2 Oxford

Oxford is home to more than 160 biopharmaceutical/healthcare companies. The cluster has four science parks, of which two are linked to the university. Since 2007, the Oxford cluster has added more than 28 new companies and over £700 million in investment from the private sector.

As a leading centre for scientific research, Oxford and the surrounding area has a significant cluster of biotechnology and research-based businesses. Prime examples include Oxford Instruments, Pension and Agilent Technologies. Whilst very important to the economy of the area, these firms are generally small in size. Many require laboratories as well as traditional office space. Principal locations include Oxford Science Park, Oxford Business Park, Milton Park and Harwell Science and Innovation Park.

The majority of these in Oxford's pipeline comprise the remaining phases of development at the existing business parks. The largest of these can be found at Milton Park where permission exists for just under 450,000 sq ft. However, so far, only MEPC's 165,000 sq ft Site One has been cleared. Permission also exists at Oxford Business Park for over 300,000 sq ft and Oxford Science Park for a total of 244,900 sq ft.

It is important to highlight that at mid-2011 the government confirmed that the Science Vale area of Oxfordshire had been awarded Enterprise Zone status. The area features both Harwell and Milton Park and it is hoped that

reduced business rates, super-fast internet access and a simplified planning regime will encourage development here, providing a boost to the biotech and science technology in the area.

In the market, conventional prime Grade A office space is available at £22.50 per sq ft with fitted lab space available at £19-£22 per sq ft.

6.3 London

The London area is home to UCL Partners, one of Europe's largest academic health science partnerships and medical research centres, and is home to 28 universities, over 1,500 biomedical researchers, and 15 hospital sites. The London Region has developed particular strengths in the field of stem cells, oncology, neurology, cardiovascular, infection and drug delivery.

Life science companies are not commonly found in central London, one of the most expensive office locations in the world. Some are located in submarkets such as Paddington and Kings Cross and more still along the M4 corridor which stretches from Heathrow Airport in the east to Bath and Bristol in the West. Land along the M4 corridor is often cheaper than more central location and provides good connectivity through Heathrow Airport, the motorway links and railways connections which offers easy access to professionals and different parts of the world. These areas offer proximity to universities with expertise and research facilities and skilled labour supply, and the ability to create a business like campus environment. The corridor is home to a wealth of Pharmaceutical companies such as GSK and Allergan and many clinical research organisations such as Parexel and Quintiles.

There are currently no available combined office/lab buildings of any size. Developers have not traditionally speculatively developed this kind of stock. However, this situation may change going forward with the government funding going into life sciences sector. It is our view that land around Heathrow and along the M4 corridor might attract science park money, due to its location and potential to build on a larger scale and we may see some pre-lets here in the short to medium term.

6.4 What does this mean for the London Cancer Hub?

Cambridge is the most established market for life sciences in the UK. In terms of defining the ingredients for success to create a successful life sciences cluster it has world leading academic and clinical research institutions, access to a skilled labour/talent and is attractive to commercial anchors. However, despite its strengths, there is a lack of available office/lab space available in the market. In contrast, Oxford is bringing additional space to its local and regional market to try to satisfy future demand and is building on its position as a strong regional alternative to Cambridge.

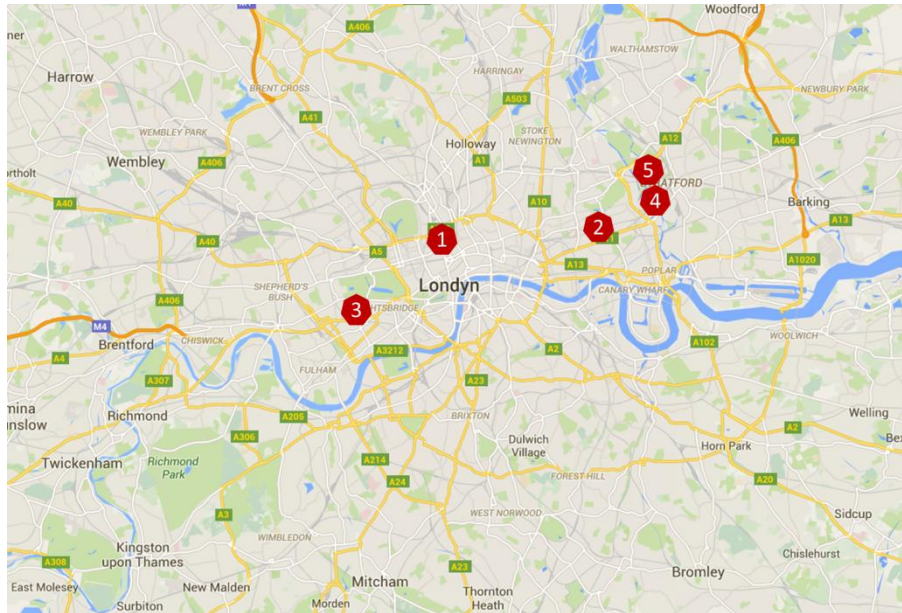
From our market research, we are of the opinion that the London market is one of opportunity. Occupier demand is strong and with a similar lack of available space to meet demand, any future supply that is bought forward is well placed should benefit from this imbalance. The London Cancer Hub is therefore positioned to benefit from these market characteristics.

However, the success and longevity of a life sciences cluster is based on more than this. Sutton is currently not a recognised life sciences location, particularly in terms of being recognised as a business opportunity. This perception, as well as other factors that are explored within this report will need to be considered to maximise the development opportunity.

7 Future Supply

7.1 Central London

Below we have provided an overview of future schemes that we are aware are coming forward in the Central London market.



Site	Key Facts
<p>1. Francis Crick Institute King's Cross, London</p>	<ul style="list-style-type: none"> • Founded and developed by a consortium of six members that include: Medical Research Council , Cancer Research UK , Wellcome Trust , UCL (University College London) , Imperial College London and King's College London³⁵ • The Crick is the biggest biomedical research centre under construction globally and is set to open in 2015 to be home to 1,250 scientists. • Funded by a £650m investment, the Crick will look to combine research, knowledge and expertise under one roof. • It is important to note that there is no available space to the open market and all of the space is being used by the consortia members.
<p>2. Queen Mary University of London, Whitechapel</p>	<ul style="list-style-type: none"> • Queen Mary University of London in partnership with Barts Health NHS Trust are creating a life science campus in Whitechapel with over 2 hectares of redevelopment space. • Potential for development of over 1million sq ft of space
<p>3. Imperial West,</p>	<ul style="list-style-type: none"> • Imperial College controls over 22 acres of the White City Opportunity Area. The College has a vision for the whole site to be an open-access,

³⁵ <http://www.crick.ac.uk/>

Site	Key Facts
White City	<p>world-class academic facility that provides the physical infrastructure for great research and teaching, as well as another 'live, work and play' location with regular interaction with the wider community, commerce and like-minded institutions.</p> <ul style="list-style-type: none"> The overall site is split in two with a plot to the north of the A40 already having planning consent for 1.2 million sq ft of office led development that is due to be completed to shell and core in 2016 with a fitout in 2018. Construction is well underway across the site and we understand that the majority of the space being brought forward is to be occupied by Imperial College with limited or no available to other end users. There is a separate site to the south of the A40 which could provide 2million sq ft of development scheduled to be completed in 2022/23. Imperial College are currently going through a consultation and masterplanning exercise to understand what type of space can be delivered but it is widely expected that this will be a mix of traditional office space, as well as lab space.
4. Pudding Mill Lane, Stratford	<ul style="list-style-type: none"> Under the single ownership of the London Legacy Development Corporation (LLDC), Pudding Mill Lane has been identified to have the potential for a 2million sq ft life sciences campus. The proposals are at a very early stage with the delivery timeframe unclear.
5. UCL East, Stratford	<ul style="list-style-type: none"> University College London (UCL) is creating a new campus called UCL East in Stratford that is scheduled to be delivered in Autumn 2019³⁶ The campus will comprise around 1.35m sq ft and will accommodate the School of Design, Centre for Experimental Engineering, UCL Incubator and UCL Museum of the Future. Similar to the Crick Institute, we understand that there is no available space to the open market.

7.2 What does this mean for the London Cancer Hub?

The Francis Crick Institute is creating a new hub of life science activity in central London. Despite it not being able to provide any space to the open market, the Crick is proving to be a major attraction to those companies that are looking to move in to or expand in to London market. Other competing schemes that could come forward are situated in Whitechapel, White City and Stratford, and if all are brought forward they will all add to the competitive supply in the central London market.

However, for none of these schemes is there complete clarity as to whether they will be delivered. Imperial College South is arguably the most likely providing circa 2million sq ft of office/lab space with both Whitechapel and Pudding Mill Lane being more uncertain in terms of the quantum and type of space that will be delivered. There is therefore a good opportunity for the London Cancer Hub to deliver space that can cater to demand in a market that is currently characterised by low supply.

³⁶ <https://www.ucl.ac.uk/ucl-east/>

For the London Cancer Hub this new supply and the attractiveness of the Crick Institute strengthen London's regional and global position as a life sciences location. Due to its location in south west London, Sutton will be offering a different opportunity as it is situated outside the core London market. This will mean that the need to differentiate itself will be more important and it must develop an identity that places itself as an attractive alternative to these schemes.

8 Demand

8.1 Nature of Demand

From our own market research and through speaking to organisations like MedCity there is strong demand for life science space in London from occupiers, investors and developers, particularly from overseas players from the US.

Occupiers/End Users

Examples of live requirements in the life sciences market that we are aware of include:

- **UCB** is considering a restructuring of their current premises in Slough or to relocate elsewhere in the South East. Their requirement is for a total of 200,000 sq ft of which approximately half is laboratory space.
- **Bayer** seeking relocation from their current premises in Newbury. Their space requirement totals 80,000 sq ft.
- **Boehringer Ingelheim** is currently seeking a 70,000 sq ft premises.
- **P&G** is seeking 4,800 sq ft of laboratory space and 4,800 sq ft office space in proximity to the South East, with the ambition to start a new lease within 12-24 months. The requirement includes a lab of Biohazard Level 2 for microbiology use.

The requirements above give an idea of the potential users that could take space at the London Cancer Hub. We are however aware of previous work undertaken on this project which has engaged with occupiers who have a close affiliation to the landowners of London Cancer Hub. In our opinion, to understand the demand profile of potential occupiers we would recommend working closely with the ICR and RM to understand their existing connections and relationships within the life sciences community and how these could be used to encourage occupiers to take space within the proposed development. Imperial College uses this model extremely well by creating and developing spin offs within their existing network and is adopting this approach at Imperial West North. Adopting this approach at London Cancer Hub will elevate the proposition of a life sciences and innovation campus at the site and make it more attractive.

In terms of future demand we are also aware that MedCity is about to commission a study to explore current and future demand in the London and South East market. We understand that this will be published in the coming months and will feed back the output of this in to our demand proposition for the London Cancer Hub.

Investors / Developers

Developers have not traditionally speculatively developed this kind of stock due to issues that include a lack of understanding for the market, covenant strength risk and the cost of construction. Land values are also not as attractive in comparison to other uses such as offices and residential. London has therefore typically failed to capture the potentially huge economic and social benefits of biomedical research and investment from the sector.

However, this has changed as a number of major investors / developers, particularly from the overseas US market, have come to the UK to explore development opportunities that will strengthen their presence and/or create a campus environment for life sciences. Examples of this include:

- **Biomed Realty**, founded in 2004, is focused on the business of developing and managing real estate specifically for the life sciences industry. Their UK land holding is currently at Granta Park in Cambridge.
- **HCP Inc**, is a US based real estate investment trust that operates in the healthcare industry. They are actively looking for opportunities to invest in the UK, and have a particular focus on London.

Looking forward to when the preferred masterplan at the London Cancer Hub is set, we should look to actively engage with these players as they could act as partners in the development framework that could deliver the masterplan. Working with them as part of this process would also be beneficial as it can help us to shape the masterplan in a way that mutually benefits the aims and objectives of all parties.

8.2 Initial Conclusions










From our market overview of available supply in the current market it is clear that there is a lack of available space, particularly in both Cambridge and London. This low supply, coupled with high demand means that there is a requirement in the market for new space to come online. London Cancer Hub has the ability to deliver this by providing flexible office/lab accommodation that can be tailored to meet the future requirements of an occupier whilst also being attractive to an investor / developer.

9 Ingredients for Success

9.1 Defining the ingredients

- 1) **Being part of a cluster** – Life science businesses want to be part of a cluster that will foster innovation and encourage growth. If this is not possible it is likely that they will aim to be situated close to an existing and established cluster in order to benefit from a ripple effect. An example of this would be the Stevenage BioScience Catalyst in relation to the life science cluster of Cambridge.
- 2) **Successful collaboration** between academic and commercial research is important within life science clusters. Examples of this include research institutes, hospitals and corporate life science companies where they are able to complement each other.
- 3) **Access to skilled labour** - this can come directly from being based in an area where there is a huge talent pool of researchers and scientists. Alternatively some newly developed clusters have placed themselves close to areas where there is a talent pipeline.
- 4) **Cost** is an important consideration for real estate decisions. It is particularly important for SMEs who drive forward demand and require costs to be competitive. These SMEs are focused on having flexibility in terms of lease terms and incentives, predominantly for laboratories and science facilities.
- 5) **Infrastructure**, this includes:
 - a. hard infrastructure such as transport links via road, rail and air, and internet accessibility and speed of network
 - b. social infrastructure such as the availability of affordable housing for staff
- 6) **A commercial anchor** is recognised as an important component to drive forward business development that is attractive to investors.
- 7) **Development Mix** – delivering the right environment where SMEs are encouraged, achieved through an appropriate split of space between incubator, grow on and larger institutional type space.
- 8) **Access to funding** has become increasingly important for life science cluster to kick start development.
- 9) **Amenity Provision** of cafes, communal areas and other facilities such as a nursery and gym all have become increasingly important to create an attractive working environment for employees.

9.2 Testing the ingredients at London Cancer Hub

Ingredients for Success	Now	Key Points
Being part of a cluster		In London there are a limited number of established life science clusters, albeit these are very localised and strongly linked to research and educational establishments. Sutton currently however is not recognised as an established life science hub.
Successful collaboration		The core anchors of RM and ICR are the USP for this location. Collaboration between RM and ICR is crucial to the success and longevity of this development framework and this should be agreed formally at the earliest opportunity.
Access to skilled labour		Sutton is an affluent London suburb which has access to a skilled demographic.
Cost		Once the product is developed, Sutton has the opportunity to bring forward space at an attractive price point across each of the different type of uses.
Infrastructure		Sutton is accessible from the mainline rail station and has air links through its proximity to Gatwick Airport. As outlined elsewhere in this report further improvements are needed.
Commercial anchor		Securing a major commercial anchor to the scheme would attract businesses to the location as well help to generate future growth of RM and ICR.
Development mix		Currently there is no provision here so this is red. However, with time, this will change as the development framework brings forward development that caters to incubator, grow-on and institutional type space.
Access to funding		We have assumed that RM and ICR have access to funding sources that can drive forward development. When we have a clear development framework and proposition we should use this to encourage central government or other sources of funding that promote development.
Amenity provision		None provided on site of any note and this will need to be included as part of the wider development.

It should be noted that if a number of these ingredients are missing, a life science cluster is unlikely to succeed as they are interdependent on one another. Our initial view at this stage is that the London Cancer Hub has the ingredients or has the ability to achieve them to create a life sciences cluster.

10 Masterplan Input

10.1 Overview

Each of the options presented provide the following accommodation:

Option	Quantum (sq ft)	
	Inc. Allotment	Exc. Allotment
Option A – Residential Led	444,000	
Option B – Hospital Led	505,000	328,000
Option C1 – Business Led	1,120,000	943,000
Option C2 – Business Led	1,038,000	956,000
Option C3 – Business Led	980,000	

10.2 Option A – Residential Led

Due to the substantial residential element of the scheme this option is likely to be the most viable from a financial perspective. However, this option carries a serious drawback as it significantly restricts the business and commercial opportunity and will have serious implications for the entire project in terms of its aims and objectives to achieve a life sciences campus.

Downsizing of the commercial element would mean that the overall vision is not delivered as the critical mass of business space is not achieved within the development. Occupiers as well as investors and developers are unlikely to be attracted by this proposition due to it being a residential led development.

10.3 Option B – Hospital Led

In this scenario the ESH land is developed to be a hospital for acute care. Across the site the majority of the proposed development is fixed with the proposed school to the north being a standalone site and both the TRM and ICR having relatively fixed positions due to their current layout and constrictions imposed by the ESH development.

The business accommodation is focused around the proposed public square and in our opinion this is the best position for the business space as it will be able to closely collaborate with the TRM, ICR and ESH. The proximity to each anchor on the site should foster innovation and stimulate growth.

10.4 Option C1/2/3 – Business Led

Each of these options assumes that the ESH land is purchased by the development framework and is then available for business led development. The proposed business accommodation is focused around the proposed public squares and this makes sense in order to encourage and foster collaboration between users of the space. The amount of space being brought forward fluctuates marginally between the options and is circa 1 to 1.1m sq ft including the allotments. **Without this allotment space it is important to recognise that the**

business opportunity at the London Cancer Hub is still strong as the scheme will deliver c. 950,000 to 1m sq ft of space.

Due to the quantum of development being brought forward the space will need to be delivered over phases and a longer development timeframe of say 20 years.

10.5 Initial Recommendations

The creation of an employment hub with some critical mass is dependent on the ability of the ESH land forming part of the overall development.

Option A - From a vision and practical perspective we would recommend that this option is discounted and housing is provided elsewhere within the Local Plan.

Option B – this should be viewed as the base case, minimum development opportunity at the site. Such is the strength of demand in the market and the lack of supply that should only 328,000 to 505,000 sq ft be brought forward this could be used as business space. In our opinion this amount of available space for the market could diminish should the TRM and ICR identify future requirements outside of their existing estate strategies.

Option C1/2/3 – each of the options presented provides circa 1 to 1.1m sq ft of space including the allotments. From a real estate perspective the opportunity is therefore similar although tying in design and transport principles we would agree with the project team that C3 is the preferred option. Adopting a development timeline of say 20 years we are of the opinion that this additional space will be met by market demand, albeit it dependent on changing economic and market conditions over this period. To progress this option we need more information from TRM and ICR on their specific growth strategies over time and how this can be matched to potential future business demand.

11 Development Mix

11.1 Type of Use

To maximise value from this new development it is important that London Cancer Hub is able to create the correct mix of development between different types of use. These can be split in to three different categories.

- **Incubators and Accelerators** are spaces such as the Imperial Incubator, Queen Mary Bio enterprises Innovation Centre, Stevenage Bioscience Catalyst and Babraham Research Campus. Their main aim is to support SMEs and help them grow. Incubators and accelerators always consist of more than one tenant, as the themes of innovation, collaboration and support are fostered in order to support their main tenants SMEs. On certain sites, large companies such as GSK (Stevenage BioScience Catalyst) have a presence in order to access research undertaken by SMES. As SMEs tend to spin-off from universities, universities such as Cambridge, Oxford, Imperial have a presence in these schemes. They tend to have a mixture of facilities such as laboratory and office space.
- **Specialized research facilities** are spaces where research institutions, hospitals and large corporations undertake their own scientific research in facilities used solely by them. These can either be stand-alone sites or they can be research facilities on science parks where other companies reside such as GSK's research facility development at Cambridge Biomedical campus. Institutions such as the Cancer Research UK Cambridge Institute on the Cambridge Biomedical Campus would also classify as a research facility. The Royal Marsden's Clinical Research Facility in Imaging would also be included in specialized research facilities. Such facilities include dry and wet lab facilities. They also include customized laboratory space specific to the type of research the tenant is undertaking. Such research spaces are built with a specific type of research in mind. Due to the cost of specialized research facilities, start-ups generally do not occupy such spaces.
- **Large corporate complexes**, a prime example of this is GSK's former HQ at Alderley Park. Such schemes are for the large life science companies such as Astrazeneca and Pfizer. They typically include a number of the large corporation's operations such as research, development, manufacturing and distribution.

11.2 Development Mix at London Cancer Hub

Occupiers of space vary in terms of scale, running from incubator type units, through to grow on and then more institutional type space. However, each of these end users collectively will create a campus type environment and how they work together is fundamental to their future success. This development mix could be based around the core USP of the site that is oncology, as well as bringing forward space focused on imagery and hi-tech users.

In our preferred masterplan option we would recommend the provision of an incubator unit between 30,000 and 50,000 sq ft. The remaining space should be a mix of grow-on and institutional type space. For the grow-on space we would recommend at this stage that there is a mix of larger office/lab space as well as manufacturing facilities. We would recommend that the commercial anchor(s) are situated in the central location within the site, preferably in a building that encouraged collaboration with shared space and amenities.

A more detailed breakdown of accommodation will be defined as part of Stage Two when we develop the preferred option for the scheme. This should be worked through alongside the marketing proposition and the rationale on bringing forward phased development plots.

11.3 Miscellaneous: Car Parking

We have been asked to provide a comment on car parking as part of the Partner feedback. We have found the following costs that can be considered:

- Surface car parking based on 20 to 22 sq m per car is around £3,000 - £5,000 (per space) depending on drainage and lighting requirements.
- Multi storey based on 24 to 28 sq m per car is around £14,000 - £17,500 (per space) depending on façade treatment.
- Underground car parking based on 30 to 32 sq m per car is c. £25,000 (per space) but this can substantially increase based on the efficiency of the space.

These figures are indicative only, are subject to variation and exclude professional fees.

Based on the development cost we would recommend that the required car parking is provided as surface car parking, decked or if required multi storey car parking, rather than underground car parking.

12 Delivery

12.1 Next Steps

We have assumed that you will progress with Option C3 and the ESH land will be available developable land for the London Cancer Hub development.

Our initial recommendation which we have stressed previously is that we would encourage you to form a contractual land pooling arrangement for all of the developable land within the site.

Being able to provide certainty and clarity to a potential investor or private sector development partner is crucial and undertaking this will provide that comfort to interested parties. If this is not in place then the development framework will be a weaker proposition to the market.

Once agreed, there are several options available to you as a landowner (collectively now one) and we have presented a preferred option in this report. In our opinion this provides the most advantageous framework to create long term value at the scheme.

12.2 Preferred Option

Under a joint venture/development agreement you could follow the following process, outlined at a headline level at this stage and to be developed as part of the latter stages in this process:

Step One – Consolidate land pooling arrangement between landowners

Step Two - Create a JV between the landowners and a private sector development partner

Step Three –Private sector development partner to carry out planning and enabling works to the site to facilitate future development such as infrastructure, any site assembly.

Step Four – Valuation event occurs of the land at point of planning consent

Step Five – Land is drawn down and the private sector partner contributes 100% of the land value minus their cost for undertaking the enabling works and a fee for the doing the work

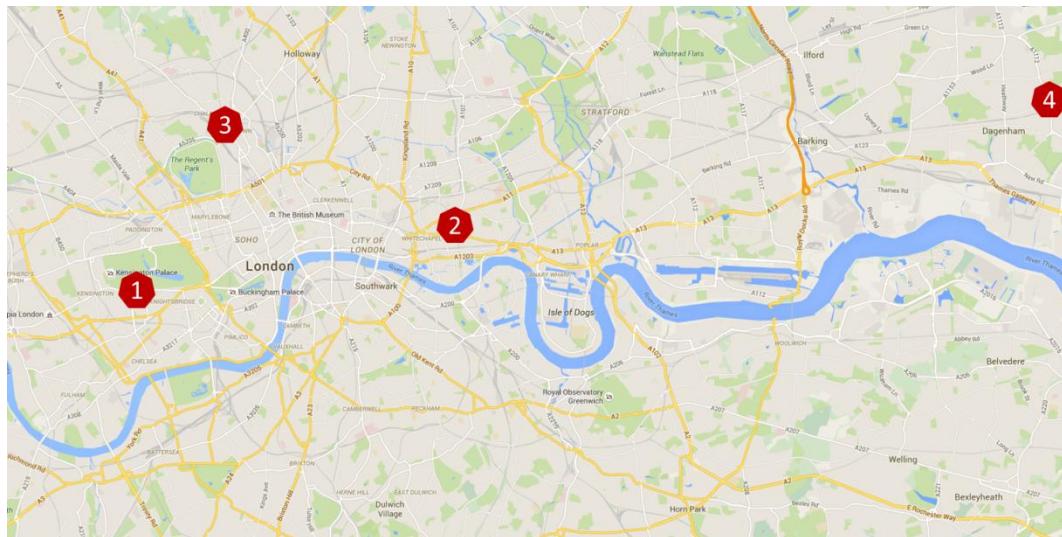
Creating this development framework will allow you to create a proposed masterplan through the planning process that can then be used to bring forward a private sector development partner in a JV structure that then mitigates some of the development risk. It will also allow all parties to share in the uplift from value.

13 Market Research – Initial Conclusions

Strengths	Weaknesses
<ul style="list-style-type: none"> • The Royal Marsden and the Institute for Cancer Research are world-leading organisations and their combined “gravitas” should attract other tenants to London Cancer Hub. This is Sutton’s USP. • London Cancer Hub boasts an impressive location situated amongst the “Golden triangle” cluster of world-leading universities, researchers and life science companies. • Sutton benefits from being close to Gatwick and Heathrow. This is important for international tenants who may want to travel frequently. • It’s Greater London location means that it benefits from a London talent pool, which ensures access to skilled labour and also the opportunity to access London’s venture capital eco-system. • In addition to being located in London, London Cancer Hub is thirty minutes away from Surrey which boasts institutions such as The Royal Surrey Hospital and the Cancer Partnership Research group. This provides the campus with access to a range of institutions and facilities. • Due to the geographical location for London Cancer Hub, it would provide a base whereby researchers could engage with other life science hubs. 	<ul style="list-style-type: none"> • The ESH land has an uncertain future and is pivotal to the success of the future development • Despite the positives, it must be remembered that this would be a new location. Therefore some tenants may be reluctant to relocate to London Cancer Hub in the initial stages of its life. • Local transport links require improvement if London Cancer Hub wishes to attract tenants. A lack of transport infrastructure improvements will result in potential being unfulfilled at Sutton. A clear strategy must be worked up that is holistic in its approach to transport. • Supply of land on the London Cancer Hub is limited, however from research it is clear that a life science park is not solely a laboratory and office space. The site will require collaboration space and amenities. London Cancer Hub will have to consider this when planning. • Having visited the site, we have noticed that the site suffers from tele-communications connectivity issues. This included poor mobile phone coverage and WI-FI. • A key component for attracting SMEs who are increasingly influencing the life sciences market, is to provide incubator and grow on space. This could be an issue for London Cancer Hub. • Sutton’s success will depend equally on skilled workers and junior staff. Junior members of staff may find housing costs in Sutton expensive; this will affect the attractiveness of the campus. • London Cancer Hub will invariably be a new location, however the lack of physical space onsite and lack of laboratory space in the South-East may drive up rental prices. If Sutton’s lack of space is coupled with no transport infrastructure improvements, some tenants may decide that the price is ahead of the fundamentals.
Opportunities	Threats
<ul style="list-style-type: none"> • The life science industry has been predicted to grow to over £1.4 trillion by 2018, this should result in more life science companies chasing real estate stock. London Stanstead Life Science Corridor has predicted that employees in the region will grow by 14,000 in 2023. London Cancer Hub partially helps provide a solution to how real estate demands will match this growth. • Surrey boasts the Surrey Cancer Research Institute, the University of Surrey and the Royal Surrey County Hospital. Given that Surrey Cancer Research Institute has a real focus on cancer, perhaps Sutton alongside Surrey can develop a wider cancer life sciences eco-system hub. • London Cancer Hub will be an alternative to high London office prices and high Cambridge laboratory spaces. • There is a lack of laboratory space in the South-east and Sutton could help fill this void. 	<ul style="list-style-type: none"> • Sutton does not have an established venture capital system and this may be an issue for SMEs who rely on such funding. This could be resolved by inviting both public and private life science funding organisations on-site. This would certainly be an attraction for SMEs. • Amenities will help build an environment beyond a working environment; however facilities such as gyms and retail outlets will cost money to build. Sutton will have to ensure that they will be enough interest in order to make these economically successful. • There is a pipeline of future life science hubs, which Sutton will have to compete, there include schemes such as Imperial West Research hub, Birmingham’s Selly Oak, Francis Crick Institute and a potential hub at Pudding Mill Lane.

14 Appendix One – Detailed Existing Supply

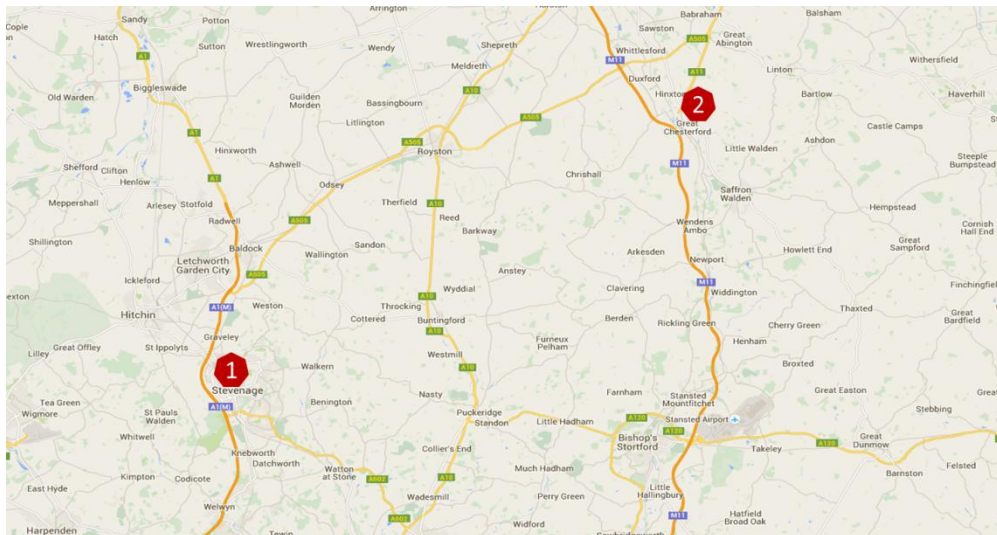
14.1 Greater London



No.	Site	Key Facts
1.	Imperial Incubator, Exhibition Road, South Kensington	<ul style="list-style-type: none"> • Developed by Imperial College. • The building comprises of 24,000 sq ft of private offices, hot desks, laboratory space and a communal kitchen. • Occupiers include Econic, Mesh Power and Hexxcell • Amenities on the Imperial College South Kensington Campus where the Incubator resides, includes a library, Early Years Education Centre, dental surgery, bars, cafes and a sports centre.
2.	Queen Mary Bioenterprises (QMB) Innovation Centre, Whitechapel	<ul style="list-style-type: none"> • Wholly owned by Queen Mary Innovation. It is a culmination of investment partnership between Queen Mary and the London Development Agency (now dissolved). • This incubator space provides 39,000 sq ft of office and laboratory space. • Occupiers include Spirogen, MediWise, Hvivo, Barts and the London School of Medicine and Dentistry • The centre has a gym and a boardroom. It has meeting rooms and cycle spaces. It also has a café.
3.	London BioScience Innovation Centre, Royal Veterinary College, King's	<ul style="list-style-type: none"> • Owned and operated by one of the independent colleges in London, recognised to have a world class veterinary and biomedical research institute.

No.	Site	Key Facts
	Cross	<ul style="list-style-type: none"> Provides 2,500 sq m of superior quality space of office and laboratory space ³⁷ Occupiers include Alacrita Consulting LLP, Oxford Pharmascience, Sciad Ltd, MedCity, Lab Merchant and Domainex Facilities include lecture theatres, meeting, cafes and seminar rooms .
4.	London-east	<ul style="list-style-type: none"> London-east, UK, owned by SOG Ltd London-east currently has available: <ul style="list-style-type: none"> 2,000 – 100,000 sq ft of clean room space 500-40,000 sq ft laboratory space 40,000 sq ft office space 30,000 sq ft warehouse space Facilities include meeting rooms and conference rooms

14.2 Greater South East



³⁷ <http://www.lbic.com/>

No.	Site	Key Facts
1.	Stevenage Bioscience Catalyst ³⁸	<ul style="list-style-type: none"> Partnership between the Wellcome Trust, UK government, GlaxoSmithKline, the East of England Development Agency and the Technology Strategy Board developed this park³⁹. Bioscience park adjacent to GSK's R&D facilities in Stevenage, Hertfordshire⁴⁰. Stevenage BioScience Catalyst provides around 10,000 square metres of state-of-the-art facilities⁴¹ Occupiers include The Cell therapy catapult, Johnson& Johnson, MRC technology, Cambridge University, UCL's bioscience incubator, GSK have a presence in this hub Facilities include access to GSK lecture theatre, fitness suite, restaurant, café and communal area with access to chemistry services⁴².
2.	Chesterford Research Park	<ul style="list-style-type: none"> Site developed by Aviva Investors and The Churchmanor Estates Company plc⁴³ To date, more than 240,000 sq ft of laboratory and R&D space has been let and occupied. Further phases of construction will extend the development to approximately 600,000 sq ft (56,500 sq m)⁴⁴. Illumina, Biofocus and Cellzome have a presence in the hub. ⁴⁵ The facilities on site include a state-of-the-art conference, facilities, a gym, seven hole par three golf course, shop, an award winning restaurant, taxi shuttle services and a café bar. ⁴⁶

³⁸ <http://www.stevenagecatalyst.com/about/>

³⁹ <http://www.stevenagecatalyst.com/about/>

⁴⁰ <http://www.wellcome.ac.uk/Funding/Innovations/Major-initiatives/Stevenage-Bioscience-Catalyst/index.htm>

⁴¹ http://www.stevenagecatalyst.com/how_can_we_help/site/

⁴² LSCC - Stevenage Bioscience Catalyst Campus

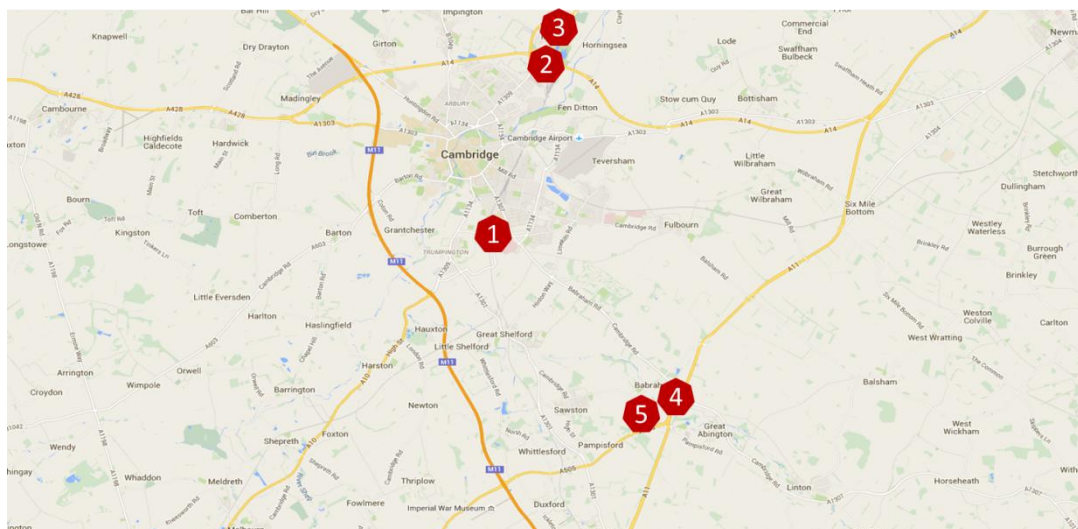
⁴³ <http://www.chesterfordresearchpark.com/about-the-park/current-occupiers/>

⁴⁴ Chesterford Research Park Brochure

⁴⁵ Chesterford Research Park Brochure

⁴⁶ Chesterford Research Park Brochure

14.3 Cambridge



No.	Site	Key Facts
1.	Cambridge Biomedical Campus	<ul style="list-style-type: none"> The Campus dates back to 1962 when Addenbrooke’s Hospital and the Medical Research Council Laboratory of Molecular Biology (LMB) moved onto the site Cambridge Biomedical Campus⁴⁷ sits on 2.3 m sq ft of real estate Occupiers include Astrazeneca, GSK, University of Cambridge School of Clinical medicine, MRC laboratory of Molecular Biology, Wellcome Trust, Cancer Research UK Cambridge Institute (Cambridge Cancer centre), Cambridge Institute for Medical Research Campus amenities include the sports and leisure centre, a children’s nursery, shops and cafes.
2.	Cambridge Science Park	<ul style="list-style-type: none"> Established by Trinity College, Cambridge The Cambridge Science Park sits on 1.65 million sq ft of real estate⁴⁸ Occupiers include Lucideon, Diamond Biopharm Ltd, GHX UK, AstraZeneca, Sybrelabs, Esaot and Twist DX The park boasts a nursery, a health and fitness club, bar and restaurant.

⁴⁷ <http://lsc.co/wp-content/uploads/2014/11/Countryside-Getting-Utilities-Provision-in-Place-LSCC.pdf>

⁴⁸ <http://www.novaloca.com/business-parks/details/Cambridge+Science+Park/3907> and <http://www.ft.com/cms/s/2/ad92b070-d18a-11e1-bbbc-00144feabdc0.html>

No.	Site	Key Facts
3.	Cambridge Research Park	<ul style="list-style-type: none"> The site is owned by Rockspring To date circa 250,000 sq ft of business space accommodation has been built at Cambridge research park and there is consent for a further 505,000 sq ft for three buildings and a hotel⁴⁹ Occupiers include Elecheck, Sectrum Management, Diomed, Horizon discovery Amenities include coffee shops, restaurants and conference rooms
4.	Granta Park	<ul style="list-style-type: none"> Property is currently owned and managed by BioMed Realty⁵⁰. Park boasts 472,234 sq ft of rentable office and laboratory space⁵¹ Illumina, Inc. (a world leader in genomics, has signed a 20-year lease for a 155,000 square foot development on Park, lease starts in 2017)⁵² Occupier include Pfizer, Gilead Sciences, MedImmune, PPD Global Limited, Vernalis (R&D) Limited) Facilities include cafes, a cafe meeting room, fitness suite, a networking suite and a nursery
5.	Babraham Research Campus	<ul style="list-style-type: none"> The Babraham Institute is the developer of the campus with funding from the Biotechnology and Biological Sciences Research Council (BBSRC)⁵³. Currently 140,000 sqft of lab and office space (growing to 200,000 sq ft)⁵⁴ Occupier include The Babraham Institute, Cancer Research Technology, Twist DX, X01 ltd and Imperial Innovations. Facilities include gym, bar, shops, nursery and coffee shop

⁴⁹ <http://www.cambridgeresearchpark.com/land.html>

⁵⁰ <http://www.biomedrealty.com/properties/property-details.aspx?StateCode=CB&PropertyID=617>

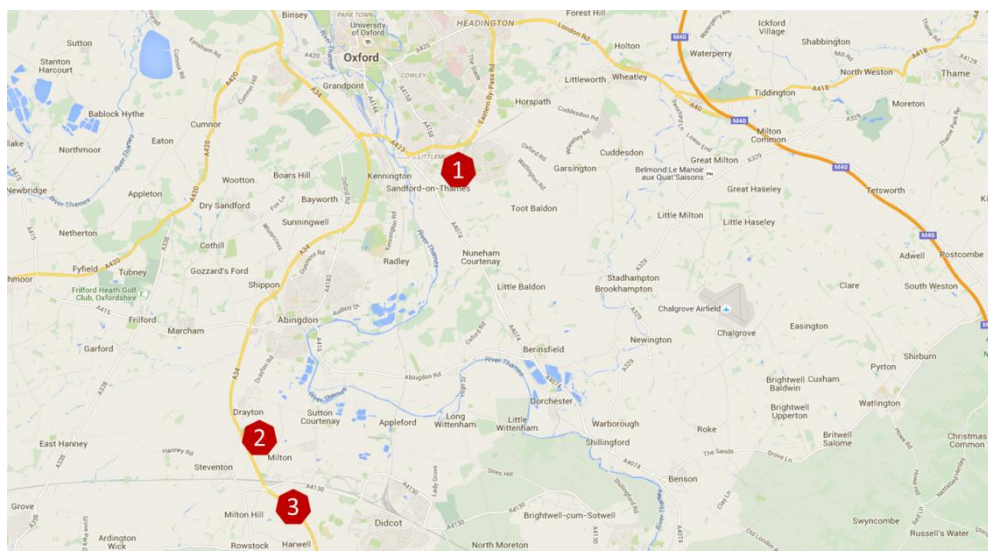
⁵¹ <http://www.biomedrealty.com/properties/property-details.aspx?StateCode=CB&PropertyID=617>

⁵² <http://www.grantapark.co.uk/pdf/Illumina%20News%20Release%20-%20July%202015.pdf>

⁵³ <http://babraham.co.uk/>

⁵⁴ Estates Gazettes – August 2015

14.4 Oxford



No.	Site	Key Facts
1.	Oxford Science Park	<ul style="list-style-type: none"> The Oxford Science Park is being developed as a joint venture between Prudential and Magdalen College, Oxford More than 530,000 sq ft of office and laboratory space has been completed to date⁵⁵. Analab, ATDBio, CalciCo Therapeutics, Communigen, LondonPharma, NetworkPharma, Organox, OvaScience, Oxehhealth, Oxford Academic Health Science Network, Oxford BioMedica, Oxford Cancer Biomarkers, have a presence there.⁵⁶ Facilities include on-site bars, brasseries, a café and nursery. Adjacent to the park there is a fitness club and VUE cinema.
2.	Milton Park	<ul style="list-style-type: none"> MEPC are the owners of Milton Park Milton Park has more than 3.6m sq ft of space including modern offices, laboratory and warehouse space⁵⁷. Occupiers include AMS Biotechnology, Chroma therapeutics, Dow Agrosiences and Glide Pharma Facilities include a cafe, business Lounge, meeting rooms, brasserie, newsagents, fitness Centre, nursery and pharmacy

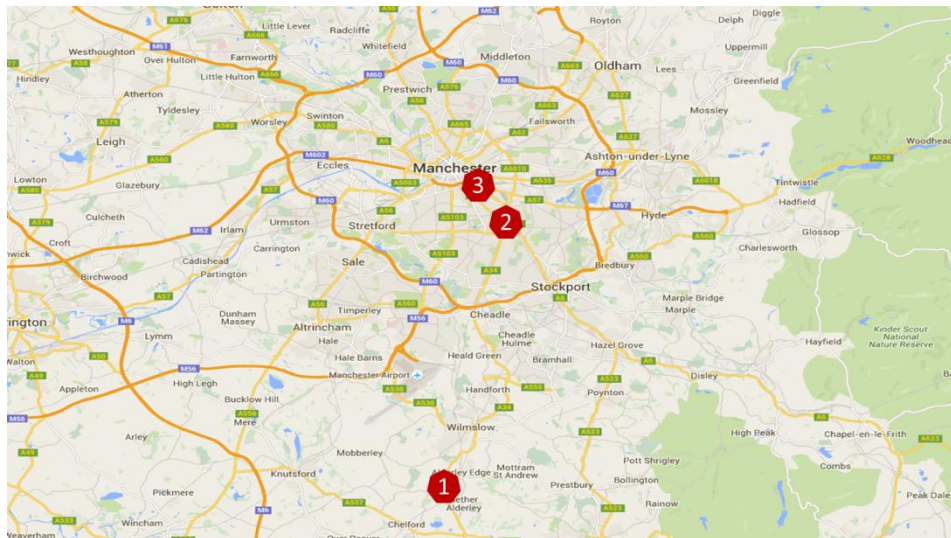
⁵⁵ <http://www.oxfordsp.com/about-introduction.asp>

⁵⁶ <http://www.oxfordsp.com/about-introduction.asp>

⁵⁷ <http://www.vslandp.com/about-vsl/key-projects/milton-park>

No.	Site	Key Facts
3.	Harwell Science and Innovation Park	<ul style="list-style-type: none"> • A joint venture between Harwell Oxford Developments Ltd, the Science and Technology Facilities Council (STFC) and the UK Atomic Energy Authority owns and manages the campus⁵⁸ • Park sits on a 710 acre site • Occupiers include Cardiff University, UCL, Queen's and AstraZeneca • Facilities include a hotel, 2 children's day nurseries post office, a café, bank, hair dresser, dental practice, health care facility, restaurant, recreational clubs and sports facilities

14.5 Manchester



No.	Site	Key Facts
1.	Alderley Park	<ul style="list-style-type: none"> • AstraZeneca has sold the site to Manchester Science Parks (Bruntwood is the majority shareholder and other shareholders are University of Manchester, Manchester Metropolitan University, and Manchester and Salford City councils)⁵⁹. • The campus has over 1.5m sq ft of laboratory and office space.⁶⁰ • Tenants onsite include The University of Manchester,

⁵⁸ <http://www.harwellcampus.com/about/about-harwell/>

⁵⁹ <http://www.insidermedia.com/insider/north-west/110256-msp-buys-alderley-park>

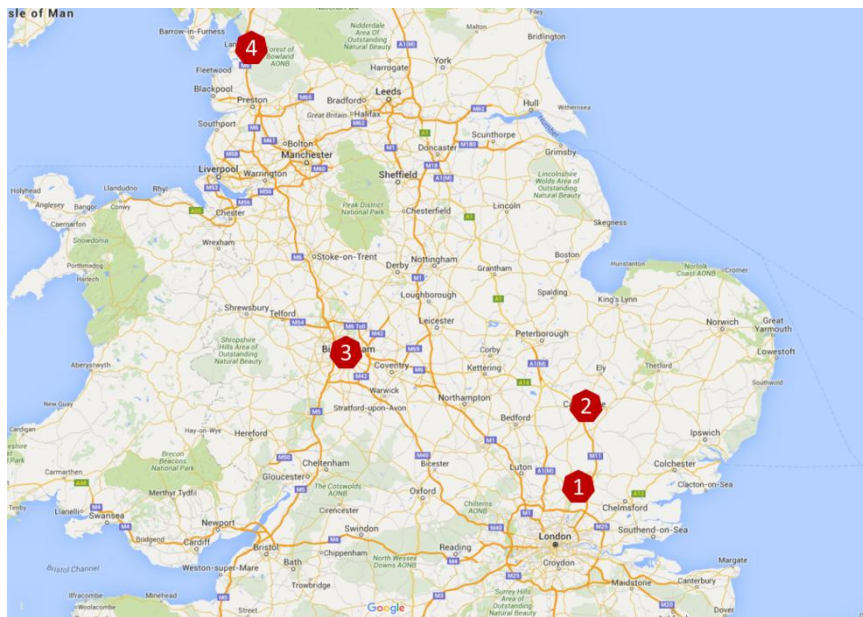
⁶⁰ <http://www.mspl.co.uk/location/alderley-park/#sthash.A7q46IRQ.dpuf>

No.	Site	Key Facts
		<p>Bionow, ImmunoSYS, Cytos Ltd and NHS@Alderley⁶¹</p> <ul style="list-style-type: none"> Alderley Park has a conference centre, restaurant, a sports hall which includes a football, tennis courts and a cricket pitch.
2.	Citylabs	<ul style="list-style-type: none"> Citylabs is a partnership development by Manchester Science Partnerships (MSP), Bruntwood, CMFT and Manchester City Council partially funded by ERDF. The centre has 100,000 sq ft of high specialization laboratory and office space Onsite facilities include research facilities, multi-storey car park, café, conference & meeting spaces. Location in proximity to city centre provides numerous other amenities such as banks, post, food stores etc.
3.	Central Campus	<ul style="list-style-type: none"> Central Campus is a development by Manchester Science Partnerships (MSP). The campus comprises 8 buildings with office and laboratory space, and one additional building, which will provide 70,000 sq ft with delivery scheduled for early 2016. The facilities include conference and meeting rooms along with new restaurant, cafe, networking, collaboration and fitness studio facilities.

⁶¹ <http://www.biocity.co.uk/whos-here/biocity-companies/biohub/>

15 Appendix Two – Regional Future Supply

15.1 Regional Market



Site	Key Facts
1. Harlow Enterprise Zone	<ul style="list-style-type: none"> Harlow Council and Anglian Ruskin working together in order to bring this to the market It is in the process of being development ready by 2016, they are in the process of attracting tenants apart from Anglian Ruskin.
2. AstraZeneca's new corporate HQ	<ul style="list-style-type: none"> This will open on the Cambridge Biomedical Campus in 2016 and will employ 2,000 people.⁶² Site will bring will bring together small molecule and biologics R&D⁶³. Site will also contain rodent facility to help research cancer treatments⁶⁴.
3. Birmingham's Selly Oak	<ul style="list-style-type: none"> Life Sciences campus at Selly Oak is expected in 2016⁶⁵ The new development also forms part of the Local Enterprise Partnership (LEP) Birmingham City Deal. Working with the Council, the LEP is looking forward to supporting the development of the new Life Science Life sciences campus on Selly Oak site which will be a 439,000 sq ft site⁶⁶
4. Healthy Ageing	<ul style="list-style-type: none"> Lancaster University want to establish a £167 million life sciences

⁶² <http://www.bbc.co.uk/news/uk-england-cambridgeshire-25003507>

⁶³ <http://www.astrazeneca.co.uk/astrazeneca-in-uk/our-uk-sites/cambridge>

⁶⁴ <http://www.astrazeneca.co.uk/astrazeneca-in-uk/our-uk-sites/cambridge>

⁶⁵ Estates Gazette - August 2015

⁶⁶ Estates Gazette - August 2015

Site	Key Facts
Campus	campus in Lancaster <ul style="list-style-type: none"><li data-bbox="630 302 1340 369">• Lancaster hopes to offer a new faculty, innovation space and a residential village community on a site totalling 5 hectares<li data-bbox="630 392 1412 459">• The focus of the campus will be focused on researching the effects of ageing and themes around end-of-life care



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