Land at Hinxton
Response to matters and issues raised by the Inspector

Representation prepared by Terence O'Rourke on behalf of Hinxton Land Ltd

Matter 4 Employment and retail

c. Will the proposed amounts of land for economic development uses meet the needs for all foreseeable types of economic development?

Summary

1. The employment land allocations will not meet all foreseeable types of economic development over the plan period.

2. The pressure for growth is significant to the South of Cambridge where most of the major high technology research facilities are located.

3. E/9 provides flexibility for delivering additional economic development over the plan period in the most sustainable locations and where businesses want to locate. These developments can be delivered in addition to, and in parallel with, the allocated sites over the plan period.

Economic need and Policy E/9

During the consultation on the submission version of the local plan, Hinxton Land Ltd supported the inclusion of Policy E/9 (ID 60757, 60758) and Policy E/10 in principle (60759). These policies will facilitate the delivery of cluster-related economic development in sustainable locations during the plan period, which will help to maintain the Cambridge area as one of the leading concentrations of high technology and research clusters in the UK. Matter 4 c is relevant to these earlier representations prepared by Hinxton Land Ltd.

We do not consider that the proposed amount of land allocated for economic development will meet the needs for all foreseeable types of economic development. Hinxton Land Ltd has not sought an allocation in the current plan, because policy E/9 provides policy support to deliver cluster-related development in sustainable locations, such as to the south of Cambridge on land beyond the green belt, in a flexible manner and in response to market demand. This can be delivered in addition to, and in parallel with, allocated sites over the plan period.

The pressure for growth is significant to the south of Cambridge and land outside the green belt is available to meet the demand to the south. Most of the major research facilities are in or to the south of the city. This is particularly the case for bioscience research, where Cambridge has some world-renowned institutions. Bioscience firms want to be located at the heart of the sector where a specialist labour market has grown around them. Furthermore, the south of the city is closer and better connected to London, which is an important factor for businesses. Please refer to the SQW report in Appendix 1 for further analysis.

The economic evidence base for the new local plan was prepared when the UK was

recovering from a recession. The Cambridge economy was resilient and performed relatively well during the recession. Overall, the high tech community continued to grow and to innovate during the prolonged period of economic recession and stagnation between 2008 and 2012. Cambridge remains one of the UK's main economic drivers in a recovering economy (see Appendix 1 for details).

The latest economic data indicates that there is strong pressure for development to the south of Cambridge. The Commercial Edge in Cambridge 2014 report, prepared by Carter Jonas, confirms that take-up of office and laboratory floorspace in 2013 increased by 38% compared to 2012, totalling 691,166 sq ft. Furthermore, availability of the overall office and laboratory built stock stood at 618,939 sq ft at 2013 year end, a significant 26% reduction from the 2012 year end level. Carter Jonas considers that *"Total availability has now reached perilously low levels within the Cambridge office and laboratory markets with less than 15 months supply based on the city's 5 year average take-up levels … Speculative development is now urgently required"*. In 2014 it is expected that active demand will continue to increase from a diverse range of occupiers, both indigenous to Cambridge and new entrants. Please refer to the Carter Jonas report in Appendix 2 for details.

Notwithstanding the robustness of the local plan's economic evidence base, Policy E/9 provides flexibility for delivering additional economic development over the plan period in the most sustainable locations and where businesses want to locate.

Appendix 1

Cambridge High Tech Cluster Growth: Opportunities to the South of Cambridge, prepared by SQW (June 2014)

Cambridge high tech cluster growth

Opportunities to the south of Cambridge

June 2014

SQW

Contents

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Approved by:	Chris Green Director	Date:	June 2014

1. Introduction

1.1 This report provides insights into the future growth of the high tech cluster in the Cambridge area, with a particular focus on the area to the south of Cambridge and on the bioscience cluster, which is strongest in this area. It is intended to inform future decisions on planning strategy and infrastructure, rather than to critique current development plan policies.

1.2 The report draws extensively on SQW's long term involvement in charting the growth of high tech businesses in the Cambridge area, and in understanding the dynamics of the local economy, as reflected in successive SQW reports on the Cambridge Phenomenon[1]. It has been undertaken mainly through desk based research, supplemented by a small number of in-depth interviews with individuals who have particular insights into the high tech cluster (see Annex A for a list of consultees).

1.3 The report first assesses the context for growth, including: the recent history of growth in the Cambridge area and the role of the high tech cluster; forecasts for future growth; and the planning and economic development policy context. It then examines various reasons why econometric forecasts for strong and sustained future growth are credible, and in some ways may actually understate the potential, particularly in the long term.

[1] The Cambridge Phenomenon, 1985: The Cambridge Phenomenon Revisited, 2000: The Cambridge Cluster at 50 - the Cambridge economy, retrospect and prospect, 2011.

2. Context for growth

Summary:

The economy of the Cambridge area is one of the strongest in the country, based primarily on the growth of the high tech business cluster and the excellence of research. Growth is expected to continue in future, with the strongest performing sectors to 2031 expected to be high tech, professional and business services. There is strong national and local policy support for growth, most recently illustrated by the City Deal which commits £1.5bn of public sector investment in infrastructure, subject to achievement of economic development and housing targets. The commitment to growth has resulted in substantial private investment, for example in nine science parks in the Cambridge area capable of accommodating 671,500 sqm of specialist R&D space – of which 446,000 sqm has already been developed and occupied.

2.1 The Cambridge area – defined to include Cambridge City and South Cambridgeshire District - has a resident population of around 265,000 people, 180,000 employee jobs and over 10,000 businesses. Based on the draft Local Plans for Cambridge City and South Cambridgeshire, by 2031 there are likely to be another 65,000 people living locally, in 31,000 more homes, and 44,000 more jobs.

2.2 On the basis of constant prices data (£2009), output (GVA) is approaching £7.5bn (over 7% of the regional total) while GVA per job is well above regional and national averages. According to the 2013 UK Competitiveness Index, Cambridge is the most competitive city in the UK. The Cambridge economy is therefore competitive and productive, and it contains institutions and firms of national, and in some cases global, significance.

2.3 The primary cause of Cambridge's strong position is the high tech business cluster, combined with the scale, strength and diversity of the research and education base. Cambridge also has other roles which are increasingly important and also contribute significantly to its success and growth. These include its role as: a retail and leisure centre for an extensive catchment population; a regional centre for public administration; and an international visitor attraction. In addition, Cambridge is significantly influenced by a strong – and growing – relationship with London (with implications, in particular, for the nature and strength of its labour market). However, it is the high tech cluster that is the most distinctive driver of the economy.

2.4 Over the last 50 years, the **Cambridge high tech cluster** has achieved global significance and recognition. In the Cambridge City/South Cambridgeshire area there are about 900 high tech businesses employing in total about 37,000 people – close to a quarter of all jobs. According to a cluster mapping exercise carried out in 2012, in the wider area (Cambridgeshire and adjoining districts to the south), there are 1,500 high tech firms employing 53,000 people and generating £11.8bn of turnover[2]. Overall, the high tech community continued to grow and to innovate during the prolonged period of economic recession and stagnation between 2008 and 2012.

[2] SVC2UK - Silicon Valley Comes to Cambridge, 2012

2.5 Specialisms include:

- Bioscience – major firms include Cambridge Antibody Technology, Horizon Drug Discovery and, now, Astra Zeneca
- IT/telecoms – including major firms such as ARM, Autonomy, CSR and Microsoft
- Printing technologies – for example, Domino, Xaar
- Advanced engineering – examples include Marshalls, AVEVA
- Cleantech – growing strengths reflected by companies such as GenDrive and The Solar Cloth Company.

2.6 The hard and soft infrastructure to support technology-based businesses is generally well developed, with Cambridge being renowned for its strong, diverse and continually evolving networks, including:

- the Cambridge Network, which has over 1,000 corporate members, representing the majority of the technology businesses in the Cambridge area
- One Nucleus, representing the bioscience community in Cambridge and London, and comprising 470 members
- Cambridge Cleantech, with 282 members in the areas of renewables, environment and low carbon
- Cambridge Wireless, with 400 members in the IT and telecommunications areas
- Cambridge Ahead, which is a business and academic member group dedicated to the successful growth of Cambridge and its region in the long-term.

2.7 The "culture" of Cambridge – regarded as "*a low risk place to do high risk things*" [3] and where "*people go out of their way to be helpful*"[4] – is still very strong and is important in explaining the cluster's growth.

2.8 Underpinning the area's technology-based businesses is its wider **research community**, encompassing the University of Cambridge and various world renowned research institutes. On virtually all global rankings, Cambridge University is consistently among the top few in the world[5]. Over recent years, there has been substantial investment in research facilities in the area – including development of the West Cambridge site for the University of Cambridge, Cambridge Biomedical Campus[6] (including new buildings for Cancer Research UK and the Laboratory for Molecular Biology, and now planned to be Astra Zeneca's new global HQ and research centre) and expansion of the Genome Campus at Hinxton and the Babraham

[3] Quote from Andy Richards, one of Cambridge's most successful high tech entrepreneurs and angel funders.
[4] Quote from the manager of a firm on Cambridge Science Park, interviewed by SQW for the 'Cambridge Cluster at 50' report, 2010
[5] For example, 3rd in the QS World University Rankings 2013/14; 5th in the Academic Ranking of World Universities 2013 by Shanghai Jiao Tong University; 7th in the Time Higher Education World University Rankings 2013-14
[6] After some doubt, it has now been confirmed that Papworth Hospital – a world class specialist heart and lung hospital – will relocate to the Cambridge Biomedical Campus. Construction is due to commence in 2015 and the total cost is £165m

Institute. Further development of these assets is planned, including the expansion of the University into North West Cambridge and another phase of development at Babraham[7].

2.9 The role of the research infrastructure is crucial in supporting the formation and growth of the high tech cluster. For example, by 2005, 250 companies had been started on the basis of knowledge transfer from the University, including 175 located in the Cambridge area. However, in addition, Cambridge is increasingly attracting inward investment to link with relevant research institutes. Microsoft and Astra Zeneca are the most high profile examples, but there are many others which have moved into the Cambridge area, including through acquisition of local firms (e.g. Astra Zeneca was familiar with Cambridge because it acquired Medimmune in 2007, which it chose to merge with Cambridge Antibody Technology, a previous acquisition).

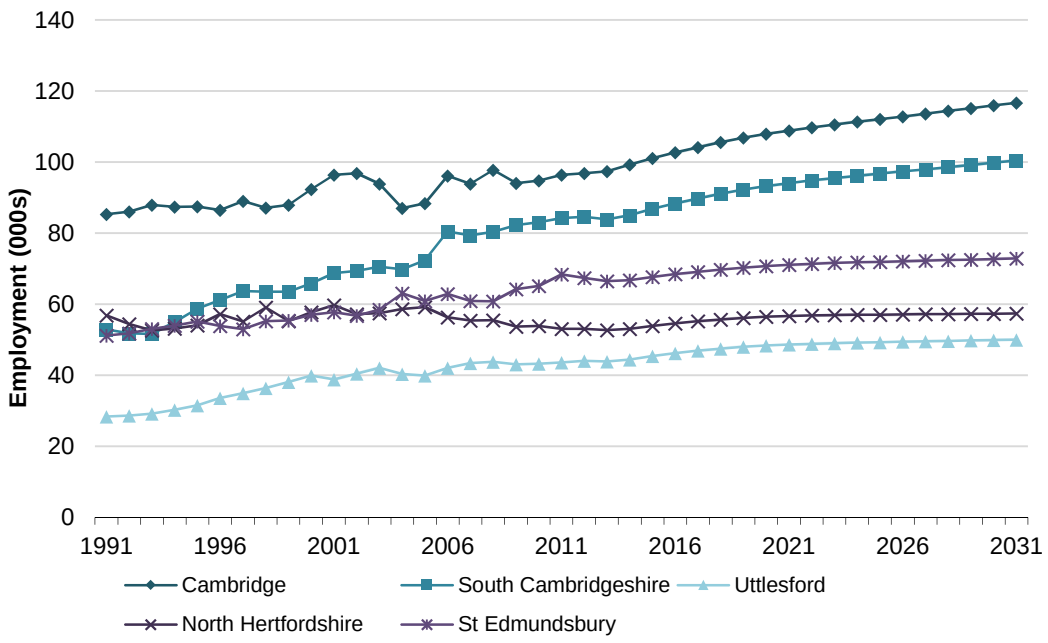
Economic forecasts

2.10 Between 1991 and 2011, employment in Cambridge and South Cambridgeshire grew by 42,400 (31%) (Figure 2-1). This includes periods of recession (most recently 2008-11), during which employment fluctuated, but the overall growth trajectory is clear and strong. Most of the growth in employment since 1991 has been in South Cambridgeshire rather than the City Council area, though this is partly explained by the fact that much of the business space on the edge of Cambridge – including most of Cambridge Science Park – is actually in South Cambridgeshire administrative area.

2.11 Employment in the wider area, including other local authority districts to the south and east – North Hertfordshire, St Edmundsbury and Uttlesford – also grew substantially between 1991 and 2011, though only Uttlesford (which includes Stansted) matched the rate of growth of Cambridge and South Cambridgeshire.

[7] Plans for a £6m expansion of the Babraham incubator were explained in a speech on science in Cambridge by the Chancellor of the Exchequer on 25th April 2014. See https://www.gov.uk/government/speeches/chancellor-of-the-exchequers-speech-on-science-in-cambridge

Figure 2-1: Employment trends and projections by local authority district, 1991 to 2031



Source: ONS/EEFM

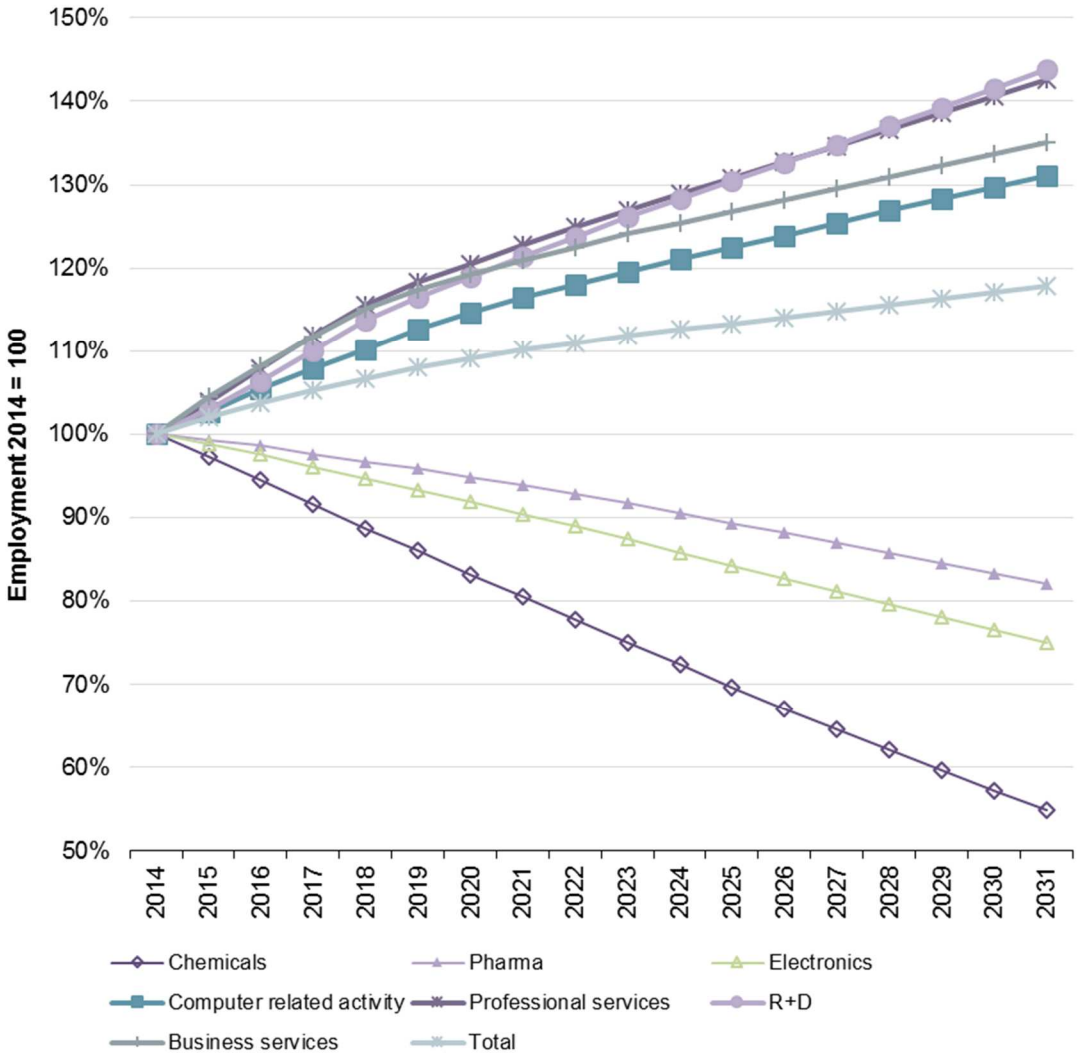
2.12 Looking ahead, the most widely used forecasts are those produced by the East of England Forecasting Model (EEFM). The EEFM was developed by Oxford Economics to project economic, demographic and housing trends in a consistent fashion. The projections are based on expectations regarding future national growth, and on the projection forward of past relationships between national, regional and local trends. They are not related to the supply of land or planning policies in a particular area, although Local Plans will have taken account of the EEFM figures as well as other data.

2.13 The EEFM projections suggest that employment in the Cambridge area is expected to increase by 36,500 (20%) between 2011 and 2031. This suggests slower growth than that achieved between 1991 and 2011 (which probably reflects primarily expectations about growth of the national economy and its implications for local areas), but it is nevertheless a substantial increase. Unlike the 1991-2011 period, when it was South Cambridgeshire that grew fastest, both local authority districts are expected to grow at similar rates.

2.14 Looking at the composition of growth, during the recession, the resilience of the area's employment was largely due to the strength of the retail, education, health and land transport sectors. Retail remained buoyant mainly due to new investment (the Grand Arcade, anchored by a John Lewis store, opened in 2007/08) and the importance of visitor spending (Cambridge attracts about 3.5 million visitors every year). Education and health are both major components of the local economy, accounting for 27% of total employment in the City and South Cambridgeshire, and were largely protected from the effects of the recession because of public sector funding decisions. In contrast, the high tech sectors suffered some declines in employment during the recession, including both manufacturing and service sectors.

2.15 Over the period to 2031, the greatest growth is expected in high tech services (in particular, computer related activity, R&D), and in professional and business services – see Figure 2-2. Employment in education and health is also expected to grow, in contrast to national trends, but by much less than between 1991 and 2011.

Figure 2-2: Percentage change in employment 2014 to 2031 in the Cambridge area based on EEFM forecasts



Source: ONS/EEFM

2.16 In contrast, the EEFM forecasts suggest that employment in all the high tech manufacturing sectors – electronics, chemicals and pharmaceuticals – is likely to decline. This expectation is based on past relative trends in these sectors, but may take insufficient account of local circumstances.

2.17 Factors which suggest that the EEFM forecasts may understate the scale of future high tech employment growth in the Cambridge area include:

- the constant emergence of new technology areas and disruptive innovations. Projections such as those produced by EEFM cannot predict the impact of disruptive innovations (such as, in the past, the emergence of biotechnology as a key driver of high tech growth in Cambridge) because they are based primarily on past trends.

Recent examples include the emergence of photonics, cleantech and 3D printing as major growth areas

- the significant and on-going investment in research in the Cambridge area, funded by public and private sectors and charities. Recent major investments include the new MRC Laboratory of Molecular Biology and the Cancer Research facilities on the Cambridge Biomedical Campus, and the expansion of activity at Babraham. Such investments are likely to lead to additional business activity over time through the process of research commercialisation
- the additional growth in employment in the pharmaceuticals sector which could occur as a result of Astra Zeneca's move (notwithstanding some uncertainty created by the failed bid by Pfizer to acquire Astra Zeneca[8]).

The policy context

Local policy

2.18 The Cambridge area has benefitted from a positive and consistent approach to growth for over 10 years, supported by both public and private sectors. The current strategic planning framework for the Cambridge area was set in the county Structure Plan, approved in 2003. In 2008, the *East of England Plan* (Regional Spatial Strategy (RSS)) preserved most of the key spatial policies for Cambridgeshire from the 2003 Structure Plan. These plans are no longer in force, but the draft Local Plans that have been produced over the last few years by Cambridge City and South Cambridgeshire District Councils have maintained the broad scale and locations of growth set out in the Structure Plan and RSS.

2.19 The 2003 Structure Plan involved significant changes in strategic planning policy for Cambridgeshire, the justification and support for which had been developed over the previous five or more years. The key changes included:

- recognition of the national significance of the Cambridge high tech cluster, and the consequences for the scale of housing as well as jobs growth that the plan sought to accommodate
- a concentration of growth in a few chosen locations, mainly close to Cambridge or in new settlements. The previous strategy, to disperse growth, particularly to the north and east, was largely abandoned.

2.20 Following adoption of the 2003 Structure Plan, Cambridgeshire Horizons was formed in 2004 to manage the delivery of the growth strategy. Horizons proved effective in securing (or helping to secure) funding from Government for major infrastructure investments (e.g. the Cambridgeshire Guided Busway, and the link road to Addenbrooke's), which helped make growth more acceptable locally.

[8] Note though that in seeking to acquire AZ, Pfizer stated its intention to "*go ahead with Astra's planned research and development (R&D) base in Cambridge*" see http://www.bbc.co.uk/news/business-27250795

2.21 The current spatial and economic plans for the area maintain the focus on growth. The draft Local Plans for Cambridge City and South Cambridgeshire were published in July 2013 and are based on evidence compiled primarily in the period 2010 to 2012[9]. They provide for 31,000 more homes, 65,000 more people and 44,000 more jobs by 2031, an increase of nearly 25% in both people and jobs in the area. The Strategic Economic Plan for the Greater Cambridge/Greater Peterborough Local Enterprise Partnership (LEP) area, submitted to Government on 31st March 2014, includes a bid for £119 million of funding for infrastructure for 2015/16, with an overall funding bid of £500 million over the next six years. As a result of the investment, the Plan aims to support the delivery of 70,000 new jobs and 50,000 new homes, leading to a £2.8 billion uplift in GVA across the LEP area, which includes the Cambridge area but extends well beyond it.

National policy

2.22 Cambridge has been supported by national policy in two main ways. First, successive governments have been willing to fund infrastructure in the Cambridge area, explicitly in return for housing and jobs growth (the development of Northstowe largely justified government funding for the Cambridgeshire Guided Busway and has influenced its commitment to the A14 upgrading; and the Addenbrooke's Link Road was predicated on the development of the Cambridge Biomedical Campus and housing at Great Kneighton and Trumpington Meadows). The latest example is the Cambridge City Deal, announced in the 2014 Budget, in which the Government has agreed to invest up to £500m and local government £1bn in transport and housing (note that this is separate from the bid for funding included in the Strategic Economic Plan referred to in paragraph 2.20). Of the central government money, £100m is to be invested over the period 2015-19 in local infrastructure. The next £200m is for the period 2019-24, and is dependent on achievement of targets yet to be defined but likely to include housing completions and a retrospective assessment of whether the infrastructure projects invested in by then have achieved their specific objectives. The final £200m will be unlocked at a later date subject to achievement of a certain level of economic growth, independently measured. The £500m of Government money is additional to existing commitments, and will therefore enable significantly more investment in infrastructure than would otherwise be the case. Government is offering the local councils the flexibility to invest the £500m as they see fit, however, there will be a tough 'Assurance Framework' to manage the technical process by which those decisions are made that will ensure investment goes to schemes that are good value for money. There is no indication at present of what infrastructure projects will be funded with this money[10].

2.23 Second, successive governments have strongly supported the continued excellence of research in Cambridge, including the expansion of applied R&D and commercialisation facilities. As noted above, recent examples of the latter include the new MRC building at Addenbrooke's, which government contributed £67m towards the total cost of £212m (the remainder was paid mainly from royalties earned by the LMB from research

[9] For example, the work for the South Cambridgeshire and Cambridge City Employment Land Review was undertaken between January and July 2012, and the employment projections used in the study were prepared in the Spring 2012. The South Cambridgeshire Economic Assessment and Strategy was published in July 2010, and uses published data for the period up to 2008.
[10] Budget 2014, paragraph 2.244: HM Treasury, March 2014, and report to Cambridge City Council Strategy and Resources Scrutiny Committee, 26th March 2014

commercialisation), and the provision of several phases of specialist incubator and grow on space for bioscience firms at Babraham.

Consequences of a supportive policy context

2.24 The main consequences of local and national policies acting in tandem include investment by both public and private sectors in:

- the transport infrastructure (e.g. guided busway, Addenbrooke's Access Road, A14 improvements, Science Park railway station)
- the publicly funded research and commercialisation infrastructure, such as the Babraham Research Campus and the Genome Campus
- corporate research (e.g. by Microsoft, Astra Zeneca)
- specialist property to support the high tech cluster.

2.25 Figure 2-3 summarises key features of the specialist property schemes that have been developed to accommodate high tech firms. All of the specialist schemes are restricted wholly or partly to R&D and related uses (i.e. Use Class B1(b)) and most include some purpose built laboratory as well as office space. The figure indicates that nine science parks in the Cambridge area provide about 671,500 sqm of specialist R&D space (their locations are shown in Figure 2-4), of which 446,000 sqm is fully developed or committed, leaving remaining capacity for further development of around 225,500 sqm of space[11].

2.26 Figure 2-3 excludes the University of Cambridge's West Cambridge campus, the Genome Campus, and business parks which have an open B1 permission. The West Cambridge campus is being developed by the University to accommodate much of the science faculty and other uses which have insufficient space in central Cambridge. The campus also accommodates some corporate research facilities, including Schlumberger (oil and gas exploration) and, until 2012, Microsoft Research (now located adjacent to Cambridge station in the CB1 development). The Genome Campus includes a conference centre, but not dedicated business space.

2.27 The largest and longest established business parks are the Cambridge Business Park on the northern edge of Cambridge, and Cambourne Business Park to the west of Cambridge. These schemes accommodate some high tech firms (e.g. Redgate Technologies, a software developer, employs 300 people on Cambridge Business Park) but are not restricted to high tech uses. In addition, to the south of Cambridge, Iconix Park at Sawston is being developed to eventually provide around 11,000 sqm of mixed office and laboratory space, and development of 42,000 sqm of mixed office and R&D space is proposed at Haverhill Research Park. Haverhill has not been widely regarded as part of the high tech cluster until now, but the availability of high quality business space there could change perceptions, as geographically it is only 16 miles from Cambridge (though not on a rail line).

[11] Note that these figures are accurate based on available published information

Figure 2-3: Specialist property for the high tech cluster in the Cambridge area

Scheme	Location	Permitted uses	Size	Remaining capacity	Developer/ owner
Babraham Research Campus	South of Cambridge	R&D	13,000 sqm	1,500 sqm *(see footnote)*	Babraham Institute/ BBSRC
Cambridge Biomedical Campus	Southern edge	R&D	215,000 sqm	93,000 sqm *(see footnote)*	CUH NHS Foundation Trust & Countryside Properties/ Liberty Property Trust
Cambridge Research Park	North of Cambridge	R&D and some office (B1a)	75,000 sqm	50,000 sqm	Mountgrange
Cambridge Science Park	Northern edge	R&D	145.500 sqm	Nil *(see footnote)*	Trinity College/Trinity Hall
Chesterford Research Park	South of Cambridge	R&D	75,000 sqm	48,000 sqm	Aviva/Church Manor Estates
Granta Park	South of Cambridge	R&D	93,000 sqm	33,000 sqm	BioMed Realty
Melbourn Science Park	West of Cambridge	R&D	19,000 sqm	Nil	Technology Partnership
Peterhouse Technology Park	Eastern edge	R&D	16,000 sqm	Nil	Peterhouse College/ Churchmanor
St John's Innovation Park	Northern edge	R&D	20,000 sqm	Nil	St John's College
Total			671,500 sqm	225,500 sqm	

Source: *SQW research, based on review of relevant websites (e.g. http://www.churchmanor.com/research-and-development for Peterhouse Technology Park), publications (e.g the UK Science Parks Directory), interviews (eg with One Nucleus) and correspondence (e.g. with Cambridge Biomedical Campus)*

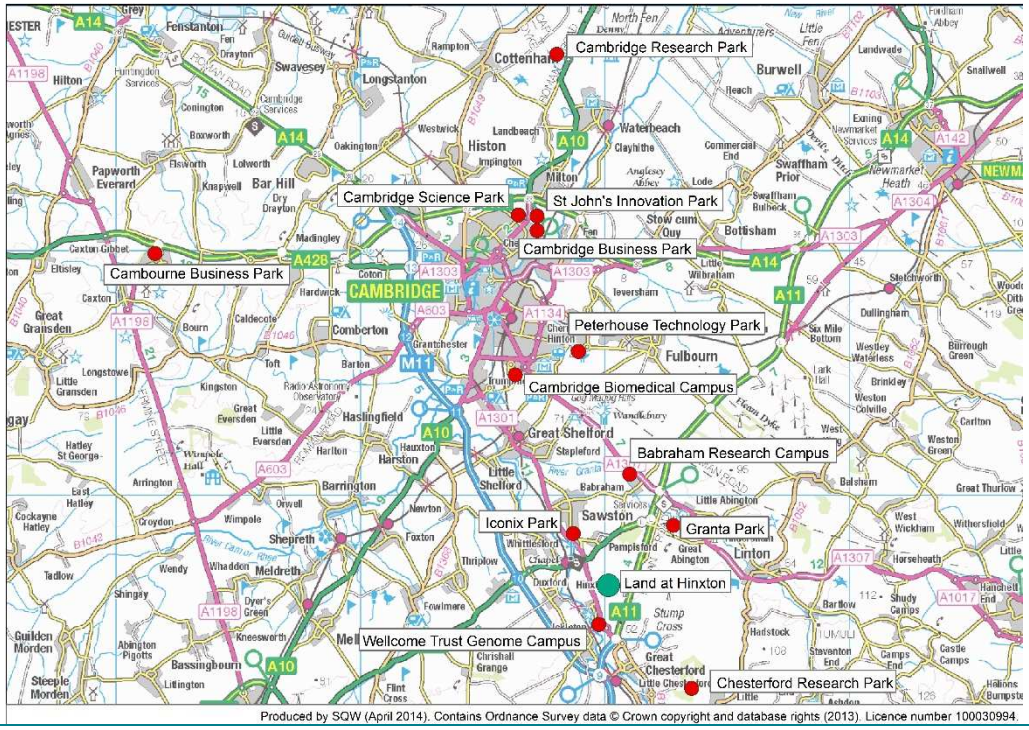
Notes:

Babraham Research Campus – The Chancellor of the Exchequer announced on 25 April 2014 that the Government had awarded £6m to Babraham for additional incubator space. This is estimated to provide for about 1,500 sq m of mix office and laboratory space. Further development beyond that appears to be constrained by Green Belt. We understand that there has been a recent request to release land from the Green Belt to enable further development. However, no decision has been made yet.

Cambridge Biomedical Campus – Phase 1 is fully committed, assuming the Astra Zeneca move goes ahead as planned. Phase 2, which will accommodate approximately 1m sq ft (93,000 sqm) of commercial development, has been released from the Green Belt but does not yet have planning consent.

Cambridge Science Park – the land is now fully developed, but there are plans to redevelop the early phases of CSP at significantly higher densities.

Figure 2-4: Major business and science parks in and around Cambridge



2.28 Based on Savills data used in the Employment Land Review update (paragraph 3.11) over the past two decades, office and R&D completions in Cambridge and South Cambridgeshire have totalled in excess of 368,000 sqm or an average of 18,400 sqm net per annum. However, take up has been higher than completions, largely due to turnover. According to Carter Jonas[12], take-up in 2012 totalled 50,000 sqm, compared with a 10 year average of 40,000 sqm, and market activity has continued to increase. This view is supported by other property agents: for example, Lambert Smith Hampton reported a record annual office take-up in Cambridge in 2013, with growth being primarily driven by technology, media and telecommunications (TMT) and pharmaceutical occupiers[13]. The rate of take up appears to have fallen back somewhat since the first quarter of 2013: according to Lambert Smith Hampton, demand in the Cambridge office market in the first Quarter of 2014 was down 17% on Q4 2013 and 47% on Q1 2013, with take up of 8,500 sqm. However, this was still well in excess of the average annual take up over the last 20 years. Available office space in Cambridge in Q1 2014 fell by a further 12% to just 55,000 sqm.

[12] Commercial Edge Cambridge, Carter Jonas, May 2013
[13] Lambert Smith Hampton Office Market Pulse Q4 2013

3. Factors which support the prospect of long term growth

Summary:

The origins of the high tech cluster lie in the outstanding quality and diversity of research undertaken in Cambridge University and various specialist institutes in the area. The number of high tech firms and jobs in the area has grown steadily over the last 50 years, and this is expected to continue in future. The growth of indigenous firms combined with increased inward investment means that the Cambridge area now accommodates some global brands (e.g. ARM, Microsoft) as well as around 1,500 new and small high tech firms.

Cambridge forms part of the largest bioscience cluster in Europe, which stretches southwards to include London. Within this extended area there are 37 research institutes and 1,400 bioscience businesses, providing 43,200 jobs. In and around Cambridge there are 200 bioscience firms and some globally significant research facilities. The decision by Astra Zeneca to relocate its corporate HQ and research facilities to Cambridge represents a step change in the scale and nature of inward investment into the area, and it will have a major impact on the cluster (not least through the 2,000 jobs that will be located on the Cambridge Biomedical Campus)[14]

Other factors which make the Cambridge area attractive to firms and residents are the increasing size and quality of the specialist labour market, the strong functional links with London, and the Cambridge brand, which reflects, accurately, the high quality of life.

3.1 As indicated in Chapter 2, there is a strong momentum for and commitment to growth in the Cambridge area. This chapter examines the key factors that will support that growth in future.

Strength of research base

3.2 The University of Cambridge has been fundamentally important to the growth of the high tech cluster in the Cambridge area. The excellence of the research and teaching (it is consistently ranked among the foremost universities in the world) has meant that the University is a constant source of bright ideas and bright graduates. There are particular strengths in the applied sciences (e.g. computing, engineering, medicine) which has created many opportunities to commercialise research. And historically the University has had a relaxed attitude to the ownership of intellectual property and to faculty members holding positions in business, which enabled many academics to benefit financially from their research findings.

3.3 The strength of the University – which continues to attract increased research funding from both public and private sectors – is complemented by many other research institutes in the area. There is a particularly strong concentration of institutional research to the south of Cambridge, much of which is focused on bioscience. The research complex at Addenbrooke's includes the University's School of Clinical Medicine (which itself includes three research

[14] Although Pfizer's recent bid for AZ raised uncertainties, it too appears committed to significant R&D in Cambridge

institutes) and two major national research centres – Cancer Research UK and the MRC's Laboratory of Molecular Biology (nicknamed the "Nobel Prize factory" due to the fact that LMB scientists have won 10 Nobel prizes). Further south are the Genome campus at Hinxton Hall, which includes the Sanger Institute and the European Bioinformatics Institute (EBI), the Babraham Institute and TWI (joining technologies, at Granta Park).

3.4 Despite concerns about declining public sector funding for research, the University and research institutes based in and around Cambridge have benefitted from major new investment in recent years. They have also increased funding from private sector and charitable sources, which has reinforced the excellence and status of research in Cambridge, and in turn makes it more likely that funding will continue to be attracted here in future.

Strength of the high tech business cluster

3.5 The past growth of the high tech business cluster in the Cambridge area is demonstrated in Figure 3-1. In 2008, the core high tech sectors accounted for 16% of employment in Cambridge/South Cambridgeshire and 23% of GVA, indicating that they had much higher levels of productivity than for the economy as a whole[15].

Figure 3-1: Growth of firms and jobs in the high tech business cluster around Cambridge

Date	Firms	Jobs	Source
1984	300	14,000	The Cambridge Phenomenon, SQW, 1985
1998	1,250	32,500	The Cambridge Phenomenon Revisited, SQW, 2000
2008	1,400	48,000	Cambridgeshire County Council Research Group
2012	1,500	53,000	SVC2UK - Silicon Valley Comes to Cambridge

Note: figures relate to varying geographies and high tech definitions differ, so are not directly comparable, though they do give a broad indication of scale and trends

3.6 As was noted in Chapter 2, the EEFM projections suggest that total employment in the area will grow by 36,500 between 2011 and 2031. High tech services are projected to grow rapidly to 2031: R&D and Computer related activities combined are expected to add 7,700 jobs between 2014 and 2031, and professional and business services (which include but extend beyond high tech jobs) another 9,750 jobs. However, employment in high tech manufacturing sectors is projected to decline, partly offsetting growth in services

3.7 The EEFM projections do not provide a sufficiently detailed sector breakdown to derive a figure for high tech growth to 2031. Based on total employment growth to 2031 of 36,500, and if it is assumed that the ratio of high tech business to total employment stays much the same as in 2010, then high tech firms are likely to be responsible for growth of around 6,000 jobs to 2031. However, in comparison with past growth of high tech employment, and in the light of local knowledge (not least the decision by Astra Zeneca to move 1,500 staff to Cambridge by 2016), an increase of 6,000 over 20 years looks conservative. This suggests, therefore, that employment in the high tech cluster will form a higher proportion of total employment in the Cambridge area by 2031 than it does now.

[15] Cambridge Cluster at 50. The Cambridge Economy, Retrospect and Prospect, paragraph 2.35. SQW on behalf of EEDA, 2010

Diversity of the high tech business cluster

3.8 A key characteristic of the high tech business community in the Cambridge area is its diversity, in terms of technology focus, activities, size and ownership of the firms. The Cambridge high tech business community has always been diverse, but there have been changes in the relative importance of different sectors and technologies. This is illustrated by Figure 3-2, which shows the way in which sectors were classified in SQW's original Cambridge Phenomenon study in 1985 compared with the cluster study in 2012[16]. The surprising feature of the 2012 classification is not the appearance of new 'sectors' such as nanotechnology and cleantech, but the omission of consultancy/R&D: one of the most distinctive features of the high tech cluster in Cambridge is the very high concentration of contract R&D organisations in the area, which is unique in Europe (examples include Cambridge Consultants, TTP (the Technology Partnership), Sagentia (formerly Scientific Generics) and PA Technology).

Figure 3-2: Technology focus on Cambridge high tech firms, as depicted in key reports

Date	Main technology/sector cuts
1984	Chemicals/biotechnology; electrical equipment; electronics capital goods; other electronics; instrument engineering; computer hardware; computer software; consultancy/R&D; other
2012	Life science/healthcare; IT and telecoms; physical sciences and engineering; energy and cleantech; nanotechnology and advanced materials; other

Source: Reports as listed in Figure 3-1

3.9 The Cambridge high tech cluster is characterised by its concentration of research, development, design and prototyping activities. Many other concentrations of firms classified as high tech do not undertake as many high tech activities. A prime example is the Thames Valley, which has far more firms and employees classified to high tech sectors, but a much higher proportion of those employees working in sales, marketing and management functions.

3.10 Before 2000, the Cambridge Phenomenon was regarded as a 'small firms phenomenon', characterised by its high rate of start ups but not by the number of large firms. But this is changing. Evans and Garnsey[17], writing in 2008, suggested that the cluster had grown four firms of scale, at a rate of one per decade: Domino, ARM, Autonomy and Cambridge Silicon Radio (CSR). In contrast the 2012 SVC2UK work claims that Cambridge has two companies with market capitalisation of over $10bn, ARM and Autonomy, and a further ten with market capitalisation of over $1bn – Abcam, AVEVA, CAT, Chiroscience, CSR, Domino, Ionica, Marshall, Solexa, and Virata. It also states that, although only half the number of companies scale-up in the UK compared to the US, "*Cambridge has led the way in creating and scaling high-tech companies*".

3.11 In addition, inward investment into Cambridge is increasing. Astra Zeneca is the most recent example, but the 2000 Cambridge Phenomenon Revisited report states that "*movement [by firms] into Cambridge has been happening for many years….[but the survey] figures suggest that the importance of in-movers may have been gathering pace, both in terms of the number of firms and their potential for growth*" (Part 1, page 42).

[16] SVC2UK - Silicon Valley Comes to Cambridge, 2012
[17] Evans and Garnsey (2008), The Cambridge Cluster on the eve of the financial crisis, IfM

3.12 Ownerships are also increasingly diverse, as inward investment through acquisition has increased, and founders and early stage investors have sought to realise the value of their shares through sale of all or part of their companies.

3.13 This diversity is important because it creates a more resilient platform for growth, with greater potential for innovation, and better access to funding and expertise. It is more resilient because firms are engaged in a wide variety of markets, many of them global in scope. Crossover opportunities at the interface between technology areas are particularly rich in the Cambridge area and a major source of innovation and business growth. For example, the printing industry in Cambridge is expected to develop commercially viable 3D printing technologies, which could potentially transform some aspects of biomedical research and production (e.g. by dramatically increasing the speed and accuracy of the production of anything from artificial organs to pharmaceutical products).

The strength of bioscience

3.14 Although the Cambridge high tech cluster is characterised by its diversity, it is also known globally for the strength of bioscience. Cambridge is part of one of the largest research based bioscience cluster in the world, which stretches southwards to London and including significant facilities within and between the two cities. According to the London Stansted Cambridge Consortium, "*there are over 1,400 Life Sciences businesses in the Corridor, accounting for 43,200 jobs, 19.6% of all national (England) employment is in this sector. The Corridor's success is built on 37 research institutes with global renown in the life sciences sector. The Corridor and its adjacent areas are the focus for the bulk of UK research activities and expertise in life sciences*"[18]. In the Cambridge area, the cluster includes:

- the University research and teaching facilities
- research institutes funded by the Government and national charities – for example, the MRC Laboratory for Molecular Biology, Babraham Institute, the Genome Centre
- corporate research facilities such as Pfizer, Amgen and now Astra Zeneca
- around 200[19] small and medium sized firms, many formed locally as spin outs from, or to link with, the research base. This compares with 70 in 2000[20].

3.15 According to the UKTI, the UK Life Sciences sector encompasses a range of subsectors including biotechnology, medical technologies, medicinal, medical devices, chemistry, and pharmaceuticals. It is the third largest contributor to economic growth in the UK with more than 4,000 companies, accounting for 165,000 UK jobs and with a total annual turnover of over £50bn[21]. A recently placed advertisement in Estates Gazette to acquire a biomedical R&D facility of up to 100,000 sqm close to one of the main bioscience hubs in England[22], plus the

[18] LSCC Sector Profiles: Life Science, page 3, London Stansted Cambridge Consortium, 2014
[19] The Cambridge BioPharma Cluster Map lists 206 firms in the area, the Cambridge Cluster Map classifies 159 as life sciences and healthcare. 136 of One Nucleus members have a Cambridge postcode
[20] Cambridge Phenomenon Revisited, Part 2, SQW, 2000
[21] UKTI, 2012, Unlock Your Global Business Potential: The New UK Life Sciences Prospectus, UK Trade & Investment: London
[22] Estates Gazette, 5 April 2014, page 19

Pfizer bid for Astra Zeneca, suggests that there is significant current investment and potential rationalisation underway in the sector.

3.16 The Cambridge area includes all of the sub sectors identified by UKTI, and has significant research strengths in most. This means multiple opportunities for growth: if one area is constrained, for example by a failure to discover new drugs, or NHS funding constraints, other areas may be growing.

3.17 Geographically, the growth of bioscience research and business activity is concentrated to the south of Cambridge. All of the main research facilities are located on the Cambridge Biomedical Campus (at the Addenbrooke's Hospital site, on the southern edge of the city) or further south. Many bioscience firms are also located in this area, partly for proximity to the research facilities, but also because of the location of specialist property including laboratory space and related facilities (e.g. waste disposal, air quality controls) for bioscience firms at Babraham, the Cambridge Biomedical Campus, Granta Park, and Chesterford Research Park. These factors also mean that the specialist labour market is concentrated to the south of Cambridge, because in general people choose to live within easy commuting distance of their work (and commuting from the north of Cambridge to the south is not easy due to congestion).

Potential Astra Zeneca effect

3.18 Potentially, the effect of the decision by Astra Zeneca (AZ) to relocate its global research and corporate headquarters to Cambridge could be substantial and "game changing"[23].

3.19 Previously, the most high profile inward investment was Microsoft, which chose Cambridge as the location for its main European research facility in 1997. At the time, this was regarded as an important statement that Cambridge was not just a small firms' phenomenon, it was also attractive to global firms as a location for their research facilities. Microsoft was not the first such investment (predecessors included Nokia, NAPP and Xerox - who later pulled out), but it was the highest profile and the research laboratories that Microsoft built on the University's West Cambridge site (alongside a new Computer Laboratory building for the University) were a conspicuous symbol of Cambridge's new image.

3.20 However, Astra Zeneca (AZ) is different again, for two main reasons. Both of these could be "game changers" for Cambridge.

- **Changing functions:** First, AZ is moving its global research and corporate HQ to Cambridge, and in the process closing facilities in London and Luton and leaving only a residual presence in Macclesfield. Cambridge has never before been recognised as a place for a corporate HQ for a global company, except for those large firms that started locally, like ARM.

[23] Some uncertainty was created by Pfizer's bid to acquire Astra Zeneca, which has now been rejected by may be revived later this year. However, a statement posted on the Cambridge Biomedical Campus website on 30th April 2014 states that "Liberty Property Trust and Countryside, the developers of the Cambridge Biomedical Campus, understand that AstraZeneca is still proposing to move its UK R&D and global corporate headquarters to the Campus. The developer is proceeding with the project as planned ….The Board of AstraZeneca has stated that is remains committed to executing the strategy announced by the Company in March 2013 which includes plans to establish a new global R&D centre and corporate headquarters in Cambridge by 2016" For the full announcement, see http://cambridge-biomedical.com/statement-by-campus-developers-regarding-pfizer-announcement/

- **Changing scales**: Second, AZ is moving 1,500-2,000 people to the new site on the Cambridge Biomedical Campus adjacent to Addenbrooke's Hospital. Although 500 of those are employees of Medimmune, AZ's subsidiary company currently on Granta Park, the remainder are moving from other AZ locations or to be recruited. In contrast, Microsoft Research started very small and even now has only around 100 researchers based in Cambridge. The scale of AZ's move will test the local labour market and related infrastructure – including housing, schools, etc. – more thoroughly than any previous expansion.

3.21 For AZ, the move is high risk: it has had few successes in recent years in developing new drugs, and is hoping that developing strong links with the exceptional research facilities and innovative small firms in Cambridge will enable it to change that situation. The past market dominance of a small number of billion-dollar blockbusters is being replaced by a focus on developing targeted treatments, and the personalisation of medicine and healthcare, which requires that companies invent and bring to market more products to fill the pipeline.

3.22 The proposed acquisition by Pfizer of Astra Zeneca initially created some uncertainty regarding AZ's investment in Cambridge, although this has now reduced partly because the takeover has (at least temporarily) been resisted, but also because Pfizer stated publically that it was committed to "go ahead with Astra's planned research and development (R&D) base in Cambridge"[24]. A comment from Professor Richard Sykes (former CEO of GSK) is also noteworthy in this context:

> *"I think it would be rather stupid of them [Pfizer] to close Astra Zeneca's state of the art facilities. With the opportunity to build the big science base they have in an area like Cambridge around one of the top science groups in the world, they would be crazy not to do that and they will jump at that opportunity."*[25]

3.23 Planning policy for the Cambridge area will have to accommodate this uncertainty as best it can, which means being prepared for step changes in scale which can result from decisions by major firms such as Pfizer and Astra Zeneca.

3.24 If the move by AZ to Cambridge is a success, other global firms are likely to take note, particularly those in bioscience where the traditional corporate R&D model has not worked well for many firms in recent years and/or those who have not previously considered Cambridge seriously as a potential location for HQ functions. This could result in further investments by major corporates, which would stimulate more growth – of the specialist labour market, attracted to the opportunities locally, of the research base, which is likely to obtain funding from such moves, and of the supporting infrastructure, including housing.

Specialist labour market

3.25 The growth of the specialist labour market in Cambridge is extremely important, because expertise is the most sought-after asset by high tech firms. The scale of high tech employment and the number of firms gives comfort to both firms and employees that recruitment of specialists, or finding the next job, will be possible in Cambridge. Failing that, the improved

[24] see http://www.bbc.co.uk/news/business-27250795
[25] See "*Big pharma takeover "threat to science base in UK",* BBC - http://www.bbc.co.uk/news/health-27208899

connectivity with London means that commuting is always a possibility (including reverse commuting for those who want to live in London but work in Cambridge). Cambridge has had a critical mass of research scientists for a long time, but an increasing number now have industry experience. The area is also increasingly well-endowed with management and marketing expertise, which is partly just the result of growth of firms, but it has also been strongly influenced by angel investors and venture capital funds, who insist on strengthening management capability as a condition or consequence of investment.

Financial, research and expertise links with London

3.26 Cambridge's proximity to London enables it to draw on the financial, research and expertise strengths of a global city – a benefit which most other technology clusters around the world do not have. These factors are very important to the long term growth of Cambridge. Its firms have good access to specialist sources of funding. There are increasing research links with London, which will be reinforced once the Crick Institute at St Pancras is operational. And London's specialist labour market means Cambridge is much less constrained than it otherwise would be by its limited size and technology focus. London provides management and marketing expertise which Cambridge firms can draw on, without having to reply exclusively on the local labour market.

3.27 Cambridge is also increasingly popular as a place to live for London commuters. There are four fast trains an hour during peak hours from Cambridge into central London: two to King's Cross and two to Liverpool Street. Trains between Cambridge and London King's Cross are now 12 carriages in length in peak hours, and virtually full on leaving Cambridge. A few years ago they were eight carriages in length. There is also heavy usage of the regular services during the day (two fast, two slow per hour into both King's Cross and Liverpool Street) and increasing reverse commuting, from London into Cambridge. Much of the new residential development in Cambridge close to the station (CB1) and readily accessible to it (e.g. Great Kneighton) is occupied by people commuting to London. This trend may be accentuated when the Science Park station opens, which will give people living to the north of the city much better access to rail to London.

3.28 This all means that Cambridge is now a good location for "two career households", not a "dead end" (which it once was). Coupled with outstanding local schools (state and private sector) and healthcare (Addenbrooke's and Papworth hospitals), Cambridge is a very attractive choice for many households that retain strong links with London through daily – or occasional – commuting.

Image and brand

3.29 Cambridge has a very strong national and international brand. Its national image is regularly reinforced by data which demonstrate its attractiveness. As mentioned already, the UK Competitiveness Index 2013 identifies it as the country's most competitive city. In addition, Cambridge has the lowest unemployment rate of any city in the country (1.4% JSA Claimant Count, November 2013) and the fourth highest rate of growth of private sector jobs (3.6% 2011-12, a net gain of 1,900 jobs)[26].

[26] Cities Outlook 2014, Centre for Cities

3.30 Internationally, Cambridge is famous for its University and its high tech industry. It is perceived as a beautiful small city with an excellent quality of life and strong learning and cultural facilities. It is a very cosmopolitan city, with a high proportion of foreigners living and working in Cambridge, particularly in the education, health, high tech and tourism sectors.

3.31 South Cambridgeshire benefits from the Cambridge brand, and the CB postcode which extends across most of the District (and all of the District to the south of Cambridge) is valued by firms. It is also recognised for its high quality of life. For example the District is ranked 11th in the UK (out of 468 local councils) in the 2013 Halifax Quality of Life index, which includes measures of residents' health and life expectancy, crime rate, weather, employment, school results, broadband access, and personal wellbeing. In relation to life expectancy at birth, South Cambridgeshire ranks 3rd for males and 5th for females out of 346 local authorities in England and Wales[27].

[27] ONS, Local authorities in England and Wales ranked according to male and female life expectancy at birth and at age 65, 2012

4. Implications for growth to the south of Cambridge

Summary:

The area to the south of Cambridge has a unique combination of assets, including the concentration there of outstanding research facilities, specialist science parks and incubator space, and its connectivity to London. It forms part of the largest bioscience cluster in Europe, which has huge growth potential: the planned move to Cambridge Biomedical Campus by Astra Zeneca being the most recent, and highest profile illustration.

Consequently this area is under strong pressure for development for high tech employment, housing and ancillary uses. Much of the land closest to the city is within the Cambridge Green Belt, which is strongly protected by national and local planning policy. This increases pressure for long term development of land outside the Green Belt.

4.1 The previous chapters have demonstrated that the Cambridge area has the potential for sustained and substantial growth. The potential is based on the outstanding research capabilities in the area, the strengths of the high tech business cluster and its excellent strategic location close to a world city. The high tech business cluster is diverse and dynamic, and includes a mix of indigenous firms – some of which have grown to be globally significant – and, increasingly, inward investors. In a recent television programme Evan Davis, the BBC's former Economics Editor, stated that "*Cambridge could go on growing to 2 million people*"[28]. He was (probably) exaggerating to make a point, but the point was well made – the area has huge growth potential.

4.2 The pressure for growth is greatest within Cambridge and to the south of the city, for five main reasons:

- most of the major research facilities are in or to the south of the city. This is particularly the case for bioscience research, where Cambridge has some world renowned institutions
- specialist incubators and science parks with laboratory space and related facilities have been developed to the south of Cambridge, including Cambridge Biomedical Campus at Addenbrooke's, Babraham Research Campus, Granta Park and Chesterford Research Park, Collectively, these facilities have planning permission or agreement to development for 175,500 sqm of additional specialist business space[29]
- because of the location of these research institutes and science parks, a specialist labour market has grown around them. This reinforces the attractions to firms of the

[28] Mind The Gap: London vs The Rest, BBC2, 3rd March 2014
[29] There are consents for 81,000 sq m of development at Granta and Chesterford. At Addenbrookes, 93.000 sqm for phase 2 of the Biomedical Campus has been taken out of the Green Belt but planning consent has not yet been agreed. Babraham has funding for a further 1,500 sqm of incubator space – see Figure 2-3.

area to the south of Cambridge, which in turn further increases its attractions to people looking to move to or within the Cambridge area

- many people and firms want to be in Cambridge, because of its attractions as a lively, cosmopolitan small city. Those that can afford the high property prices choose to locate in the city, but many have to look elsewhere in the surrounding area
- south of the city is closer, and better connected to London, which is an important factor for residents and businesses.

4.3 However, most provision for housing growth has been made to the north and west of the city. This is partly due to fewer constraints, but is also because it was argued that development to the north of Cambridge is more likely to meet local needs compared with development to the south, which is more likely to attract London commuters. Within the city there are severe limitations on new development, due to the historic significance of the central area and land ownerships. The development of CB1, around Cambridge station, has been a major benefit to the city but this will be completed soon. The potential for further intensification of use beyond that is limited.

4.4 The development at and around Addenbrooke's Hospital – Cambridge Bioscience Campus and 2,600 homes at Great Keighton and Trumpington Meadows – is providing for growth on the southern fringe of Cambridge. Otherwise the main provision for housing and business growth is to the north and west, including:

- two major new settlements, at Northstowe and (subject to confirmation in the Local Plan) Waterbeach
- the expansion of Cambourne and development at Bourne Airfield
- development around Cambridge northern edge, from NW Cambridge to the area around the new Science Park station
- further afield, housing and business development on the Enterprise Zone at Alconbury.

4.5 The main constraint to further growth to the south of Cambridge is the Green Belt. The government's view on Green Belts is summarised in the National Planning Policy Framework: "*The Government attaches great importance to Green Belts. The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence*"[30].

4.6 The inner edge of the Green Belt has already been adjusted through the local planning process to allow the development of Cambridge Biomedical Campus and some of the housing around Trumpington. But the countryside that continues to be protected by Green Belt designation is symbolic of the image of Cambridge as an historic, small city surrounded by open countryside, which many residents hold dear – and it is the reason those residents have chosen to live in Cambridge.

[30] NPPF Chapter 9 paragraph 79

4.7 Historically, the argument concerning London commuting was strong: Cambridge station is to the south of the city centre, therefore more accessible from the southern suburbs, and further south, commuters have a choice of stations and rail lines into central London. However, the improvements in connectivity to the north of the city – in particular, the new Science Park railway station and its link to the guided busway – will make the area to the north almost as attractive to London commuters as to the south.

4.8 The conclusion from these arguments is that pressure for development to the south of Cambridge is likely to continue to increase, because of the concentration of bioscience research and business activity – accentuated by Astra Zeneca's choice of location and scale of operation – in this area, and its links into a wider cluster which stretches southwards to London. At the same time, the case for diverting that pressure to the north in order to better meet local housing needs is no longer as persuasive. Nevertheless, protection of the Green Belt remains a national and local policy priority.

Annex A: Consultees

Harriet Fear, Chief Executive, One Nucleus

Tony Jones, Director of Business Development, One Nucleus

Richard Dickinson, Director of Specialist Services, One Nucleus

Martin Garrett, Chief Executive, Cambridge CleanTech

David Gill, Managing Director, St John's Innovation Centre

Dr Tim Minshall, Institute of Manufacturing, University of Cambridge

Appendix 2

Commercial Edge Cambridge 2014, prepared by Carter Jonas (2014)

Commercial edge Cambridge 2014

Spotlight on office and laboratory market performance and prospects in Cambridge.

Cambridge continues to be one of the UK's most prosperous office markets, demonstrating the nation's talent and expertise on an international stage, and is already benefiting from the positive market sentiment and recovering UK economy.

Cambridge remains one of the UK's main economic drivers and is a showcase for much of the nation's business expertise overseas. Commercial talent continues to spin out from the University of Cambridge and an increasing number of non-indigenous corporate interests are keen to have a Cambridge based operation.

> "Cambridge remains one of the UK's main economic drivers..."

Cambridge GVA totalled £4.7 billion in 2012, placing the city in the UK top ten in terms of GVA per worker. The most recent Centre for Cities report also confirmed Cambridge to be the most innovative city in the UK with more patents granted per 100,000 residents than the next five most innovative cities combined.

**The figures referred to within the report cover take-up, availability and requirements from 5,000 sq ft upwards and within approx 15 miles of Cambridge. The sq ft take-up figures exclude the deal with Astra Zeneca at the Cambridge Biomedical Campus as this was deemed to be a unique transaction falling outside of the standard definition of take-up throughout the series of Commercial Edge reports. The Astra Zeneca land purchase has been reflected in the reduction of pipeline land availability.*

Cambridge in numbers...

691,166 sq ft
take-up in the office and laboratory markets in 2013

525,000 sq ft
5 year average take-up

618,939 sq ft
total availability of built stock at end of Q4 2013

38% increase in take-up compared to 2012

53% of all built stock supply is located in the traditional business park belt

16% increase in the total number of requirements in 2013 compared to 2012

£33.00 per sq ft
Prime city centre rents achieved at the end of 2013

£26.50 per sq ft
Prime business park rents achieved at the end of 2013

2.8 million sq ft
Development pipeline total at the end of 2013

CAMBRIDGE ZONES

A CB1
B Cambridge Science Park
C Cambridge Business Park
D St John's Innovation Park
E Biomedical Campus
F Cambridge Research Park
G Vision Park
H Capital Park
I Granta Park
J Chesterford Research Park
K Babraham Research Campus
L Cambourne Business Park
M Peterhouse Technology Park
N West Cambridge Site
O Haverhill Research Park

Take-up

Take-up in 2013 increased by 38% and totalled 691,166 sq ft during 2013. This increase reflects the strengthening demand and improving market sentiment for good quality office accommodation across the city.

Quarterly take-up increased significantly in Q4 2013 to reach 245,184 sq ft comprising 13 transactions, the largest of which totalled 58,186 sq ft where Astra Zeneca acquired Building 310 on Cambridge Science Park on a short-term basis pending development at Cambridge Biomedical Campus.

35% of take-up in 2013 was located in Zone 4, with Zone 3 accounting for an additional 35% of activity. The results for 2013 are broadly in line with those for 2012 although in 2012 there was a greater percentage of letting activity within Zone 3 (35% compared to 25% in 2013).

The average size of transaction completed during 2013 was 17,278 sq ft. By comparison, the average size of transaction completed during 2012 was 10,635 sq ft indicating an increase of 62% in transaction size over this time scale. This increase is predominantly down to the rise in the number of large lettings such as the deals conducted at Building 310, Cambridge Science Park, The Da Vinci Building, Melbourn Science Park and Plot 430, Cambridge Science Park.

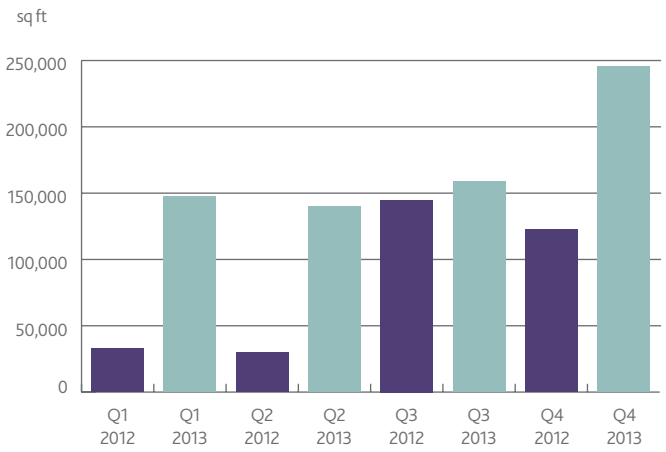


FIGURE 1

QUARTERLY TAKE-UP

Source: Carter Jonas

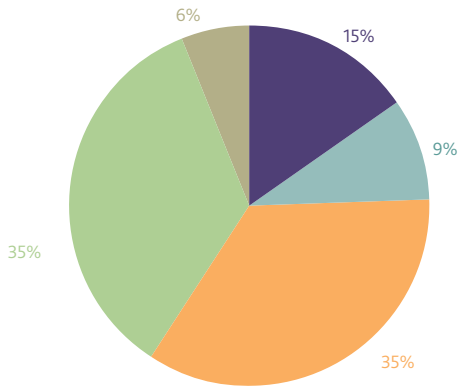


FIGURE 2

2013 TAKE-UP BY ZONES

Source: Carter Jonas

The Robinson Building, Chesterford Research Park. 60,000sq ft under construction for BioFocus

22 Station Road, Cambridge

Availability – Built Stock

Availability of the overall office and laboratory built stock stood at 618,939 sq ft at 2013 year end, a significant 26% reduction from the 2012 year end level. Over half (56%) of total supply is located in Zone 4, where the majority of business and science parks are located.

Total availability has now reached perilously low levels within the Cambridge office and laboratory markets with less than 15 months supply based on the city's 5 year average take-up levels. The 5 year average has increased to 525,000 sq ft, up by 100,000 sq ft on the 10 year average.

Speculative development is now urgently required. Figure 3 clearly illustrates the rapidly depleting supply levels, with total availability standing at only 25,130 sq ft in Zone 1 at 2013 year end.

Grade A quality space is proving popular with occupiers across all sectors although only 40% of existing stock is judged to be such quality (the rest being Grade B / R&D space). The majority of Grade A space (55%) is located in Zone 4 which may attract occupiers requiring immediately available good quality stock to these out-of-town locations.

Haverhill Research Park

Availability – Development Pipeline

The Cambridge office/laboratory space development pipeline i.e. schemes benefitting from planning consent, totalled 2.8 million sq ft at the end of 2013, around 1.5 million sq ft less than its 2012 comparable figure. A number of significant design and build deals have occurred over the last 12 months reducing the amount of available consented land. These include the letting of The Robinson Building, Chesterford Research Park to BioFocus; Plot 430, Cambridge Science Park to Takeda and the letting of 22 Station Road, Cambridge to Birketts and Mott MacDonald. This has been further compounded by the Phase 2 land at Granta Park, totalling some 330,000 sq ft, being withdrawn from the market to provide the new TWI engineering training campus as well as the Astra Zeneca land purchase totalling ten acres with an option of a further three acres.

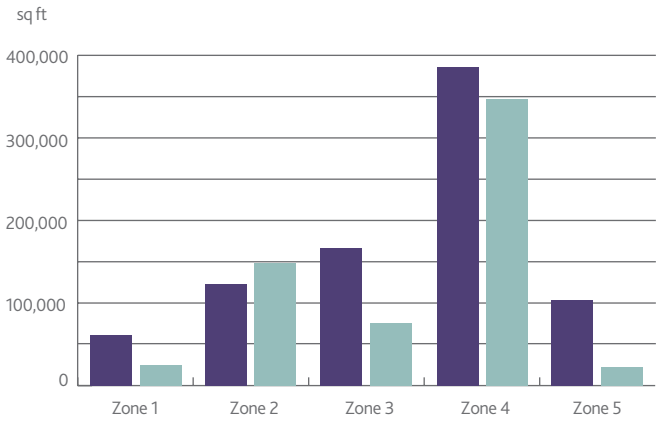
Key schemes providing pipeline development land, albeit limited in some situations, include; CB1, Station Road, Cambridge Biomedical Campus at Addenbrooke's Hospital, Cambourne Business Park, Cambridge Research Park, Chesterford Research Park, Granta Park, Haverhill Research Park and Phase VI, Cambridge Science Park.

The notable reduction of the development pipeline, which is in sharp contrast to the majority of other regional office markets throughout the UK, is of increasing concern to the future expansion and vitality of the Cambridge office and laboratory market. Speculative development levels remain very low, despite fast improving market conditions.

Occupiers seeking space within the city are becoming increasingly constrained in regard to potential buildings which suit their requirements. As demand levels increase, which they are forecast to do so over the next 12 months, the number of potential buildings will reduce placing upward pressure on rental levels and restraining the expansion of the market as a whole.

FIGURE 3

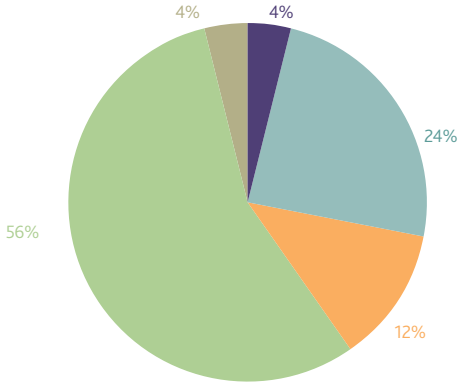
AVAILABILITY BUILT STOCK 2012/13



Source: Carter Jonas

FIGURE 4

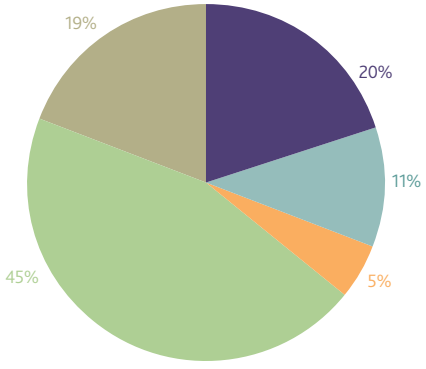
AVAILABILITY BUILT STOCK BY ZONES 2013



Source: Carter Jonas

FIGURE 5

AVAILABILITY DEVELOPMENT PIPELINE



Source: Carter Jonas

Active Requirements

The cumulative volume of known active requirements recorded throughout 2013 came to 1,306,000 sq ft compared to just over 1,130,000 sq ft in 2012. Active demand rose to a peak in Q4 2013 at 454,000 sq ft with an average requirement size of 19,739 sq ft. The annual average requirement size for 2013 was 16,325 sq ft.

The average size of requirements throughout the year fell in 2013 by 13% compared to 2012. However overall, there was a 33% increase in the number of active requirements registered in 2013 compared to 2012 indicating a greater demand for space across a wider size scale.

Half of requirements in 2013 were seeking space from 5,000 sq ft and up to 10,000 sq ft. 20% were seeking space from 10,000 sq ft up to 15,000 sq ft. 30% were seeking space from 15,000 sq ft upwards. This trend is in contrast to that witnessed in 2012.

The overall results collated for 2013 show a consistent positive trend towards ever improving market conditions in line with a rise in the number of lettings completed in 2012 and general market sentiment. Demand for Grade A space remains strong although prospective occupiers will be forced to be less selective in the future as stocks of the best quality space diminish.

Rents

Rental consolidation, as opposed to growth, was evident across the market during 2013 with a headline rental level of £33.00 per sq ft within the city centre achieved in the deal to Birketts LLP (22 Station Road, Cambridge) with others in close proximity including the deal to Mott MacDonald at £32.50 per sq ft and £30.50 per sq ft agreed with Siemens at Francis House, Cambridge.

Headline rents have remained static across the business park market over the last year at £26.50 per sq ft. Whilst demand for product has, and is forecast to continue to strengthen, incentive packages are likely to be reduced during 2014 rather than further rental growth being achieved.

Headline or quoting rents by the end of 2014 are expected to be: Zone 1 £35.00 per sq ft, Zone 2 £21.00 per sq ft, Zone 3 £27.50 per sq ft, Zone 4 £25.00 per sq ft and Zone 5 £19.00 per sq ft.

Office Investment Market

Investor interest in Cambridge offices has remained upbeat during 2013, with positive rental growth prospects underpinning the city as one of the few hotspots outside of the increasingly favoured M25 market. Yields for well secured 10 year income moved in significantly during Q3 and Q4 2013, from 6.50% to 6.00% as evidenced by 22 Station Road, CB1 and Vision Park, Histon. We forecast that forward funding and/or prime freehold investments will be attracting 5.75% or better during 2014, and therefore on a par with the Thames Valley/West London corridor markets.

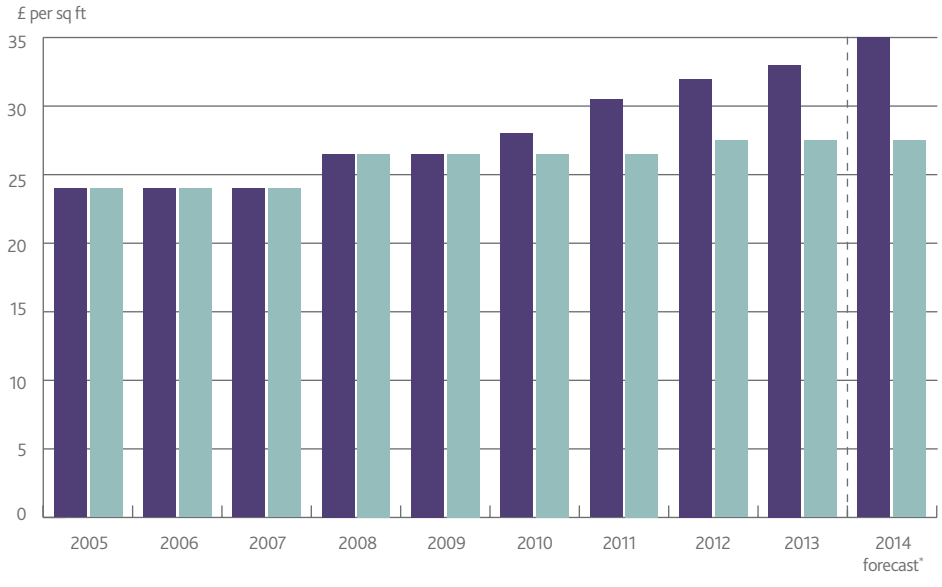
Address	Price	Initial Yield	Date
Vision Park, Histon	£28.5m	6.05%	Dec 2013
Mount Pleasant House	£10.6m	6.56%	Dec 2013
22 Station Road	£31.87m	6.30%	July 2013
Phase 2 Cambourne Business Park	£19.25m	9.39%	June 2013

FIGURE 6

PRIME ACHIEVED OFFICE / LABORATORY RENTAL LEVELS

Source: Carter Jonas

*Forecasts based on best achieved rents



Cavendish House, Cambridge Business Park

FOCUS PIECE

The pre-let prevails but the pressure is on the pipeline

Whilst the Cambridge office and laboratory market continue to prosper, they face a significant issue in terms of the provision of sufficient stock to ensure its future prosperity and viability. Demand from blue-chip companies keen to locate to the city has, and will continue, to place further pressure on the existing supply of stock. The past 18 months has seen considerable draw down from the development pipeline as a result.

2013 can be characterised by the phrase 'that was the pre-let year that was' and in 2014 commercial property interests in the city are pre-occupied with the sufficient delivery of office space in order to satisfy the ever strengthening demand for both office and laboratory space.

This year will be a pivotal year for property and development interests in Cambridge. Two years ago, in 2012, while profiling the need for pre-letting to secure Grade A accommodation, concerns were expressed about the depletion of the development pipeline to the point where by mid-2015 opportunities to actively pre-let from the planned new stock would be, more or less, exhausted.

The fact that businesses are now having to turn their attention to land that is about to be allocated in the local plan, which was supposed to serve the commercial development land interests of the city to accommodate future growth or re-location, poses problems for those charged with identifying future, realistic site and land opportunities.

In 2014, both Cambridge City Council and South Cambridgeshire District Council are scheduled to finalise their Local Plans. These should identify sites and numbers for commercial and residential development to last, on a rolling, 20-year programme. Both local authorities face the challenge of accommodating the provision of development within some very tight geographic boundaries and sensitive sites. The debate about how to accommodate development to foster growth and prosperity and also to maintain the unique appeal of the Cambridge area is not an easy one in which to see a clear way through.

With the economic and demographic forces in play now, which can only accelerate in the near future, this is something with which the Cambridge area is going to be forced to come to terms with – and quickly too.

The map overleaf details some of the key commercial developments proposed within the draft Cambridge Local Plan.

FORTHCOMING COMMERCIAL DEVELOPMENTS LINKED WITH THE DRAFT CAMBRIDGE LOCAL PLAN

A CBI (ZONE 1)

- Approximately 9 hectares
- Mixed use development A/B use classes and residential
- Has outline approval

B CLIFTON ROAD INDUSTRIAL ESTATE (ZONE 1)

- Mixed use development comprising 550 homes, 2 hectares employment and leisure

C OLD PRESS/MILL LANE (ZONE 2)

- Mixed use development comprising residential, commercial and retail

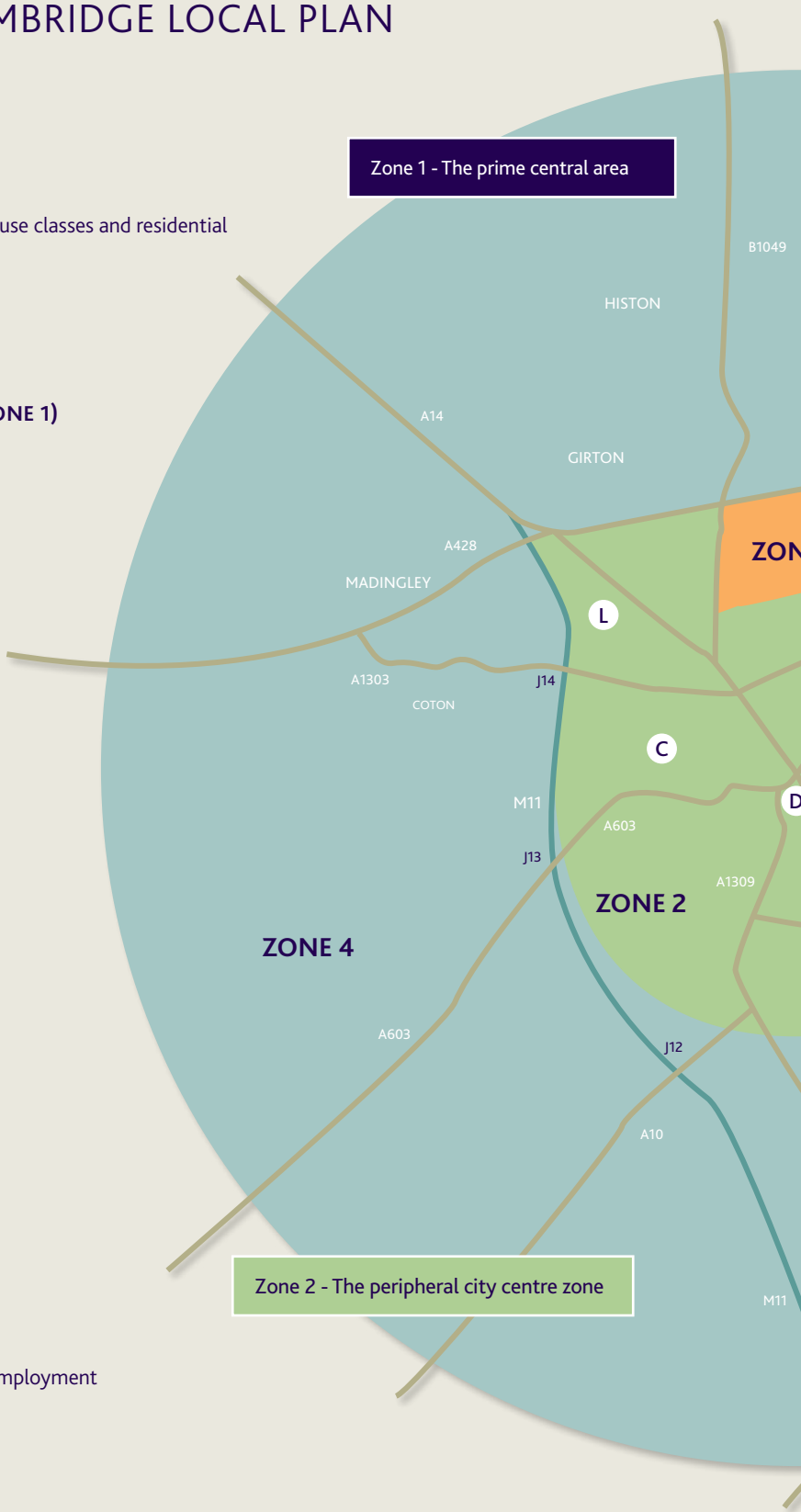
D CAMBRIDGE ASSESSMENT (ZONE 2)

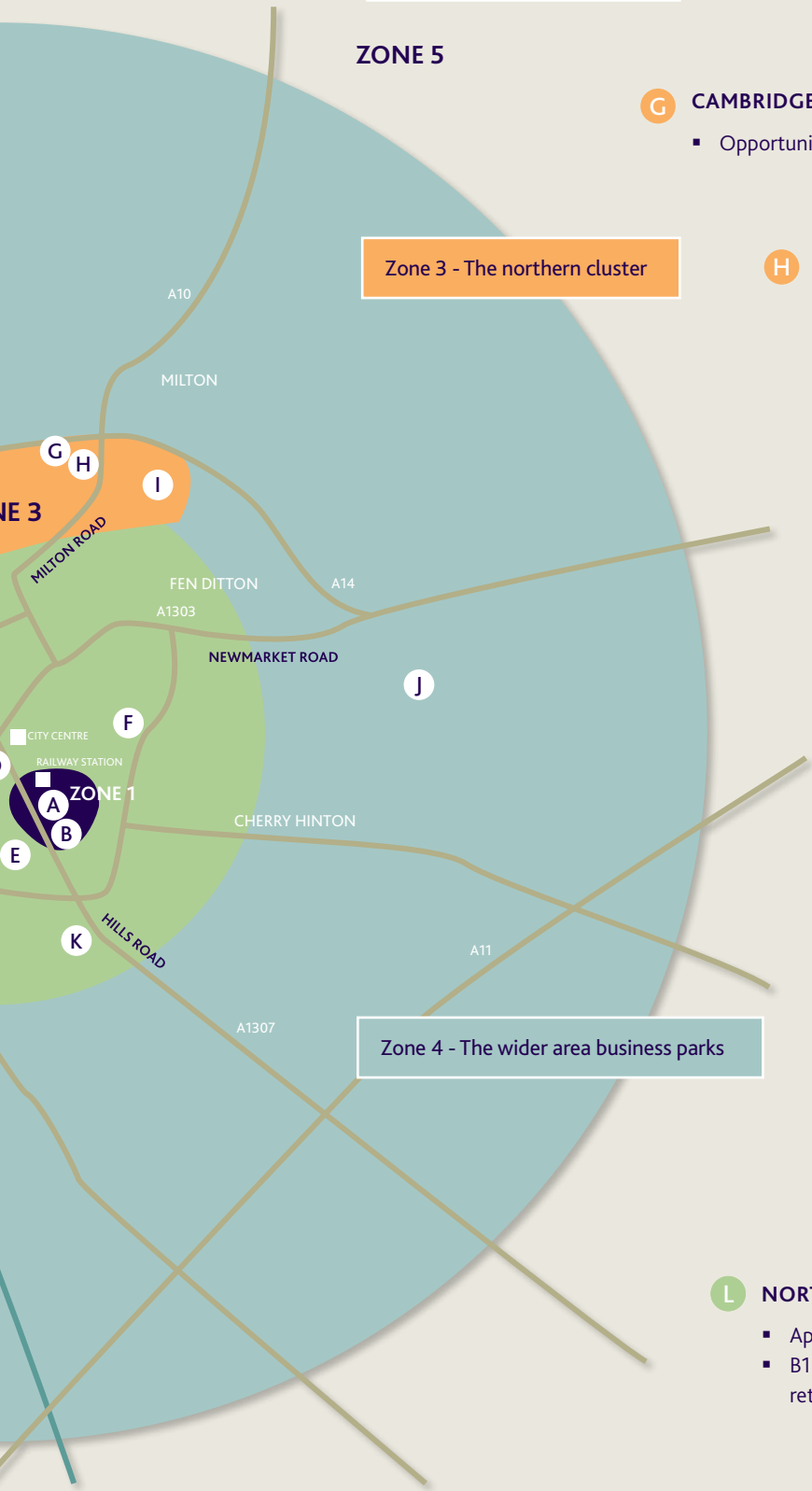
- Approximately 1 hectare employment allocation

E POSSIBLE RELOCATION SITE OF CAMBRIDGE ASSESSMENT CAMPUS (ZONE 2)

F BROOKFIELDS (ZONE 2)

- Approximately 1 hectare employment and residential





G CAMBRIDGE SCIENCE PARK (ZONE 3)

- Opportunity for redevelopment of early phases of park

H CAR SHOWROOMS (ZONE 3)

- Mixed use development including approximately 0.53 hectares for employment use

I NORTHERN FRINGE EAST (ZONE 3)

- Principally for B1, B2, B8 and supporting commercial, leisure and residential uses
- New train station and interchange (delivery expected 2016)

J CHURCH END INDUSTRIAL ESTATE (ZONE 4)

- Approximately 6 hectares for B1 and B8 uses

K CAMBRIDGE BIOMEDICAL CAMPUS (ZONE 2)

- Approximately 68 hectares
- Medical and biomedical research facility
- Outline approvals for the relocation of Papworth Hospital, Astra-Zeneca, NHS & private clinical development and clinical, biomedical & biotechnology R&D

L NORTH-WEST CAMBRIDGE (ZONE 2)

- Approximately 0.87 hectares
- B1 (b) use for hotel, residential, retail and academic facilities

2014 FORECASTS

- Speculative development will increase commencing with One The Square, CB1 (with work expected to start in May 2014) as well as various office / mid tech buildings at Cambridge Research Park
- Schemes in more outlying locations will rise through the planning process more quickly than originally anticipated
- Headline rental growth in the city centre will continue during 2014 along with a reduction of incentive packages in the business park market
- Occupiers will consolidate and retrench into smaller areas of space in preparation of the strong rental growth forecast over the medium term
- The new Cambridge Science Park Train Station, which will significantly improve the connectivity of the business park market, is due to be operational in Q1 2016. This significant infrastructural improvement will reduce the gap between city centre and business park rents
- Active demand will continue to increase from a diverse range of occupiers, both indigenous to Cambridge and new entrants
- Refurbishment of poorer quality build stock will increase

Illustrative CGI of proposed Cambridge Science Park Railway Station

Z1, Cambridge Research Park

One The Square, CB1, Cambri

> The new Cambridge Science Park Train Station will significantly improve the connectivity of the business park market

Plot 3000, Cambourne Business Park

Futures Building, Granta Park

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With thanks to Development Securities PLC, Churchmanor, Brookgate, Carisbrooke Investments, The Crown Estate, BioMed Realty Trust, Cambridgeshire County Council and Mountgrange for the use of photography

About Carter Jonas

Carter Jonas commercial has dedicated, specialist teams in six major locations throughout England offering strategic and consultancy advice in the key commercial sectors of Landlord Services, Tenant Services, Agency, Business, Science and Industrial Developments, Valuations, Investment and Asset Management, Planning and Development. Carter Jonas is therefore well placed to offer regional and national advice on all matters relating to commercial property to both corporate and private clients.