Land South East of Cambridge REPRESENTATIONS

February 2020

Representations
Greater Cambridge Local Plan Regulation 18 Issues and Options

CEG obo Guy's & St. Thomas' Charity and Peterhouse

Monday, February 24, 2020

LICHFIELDS

13577/04/MS/RC
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Contents

1.0 Introduction

1.1 Lichfields is instructed by CEG (o.b.o. the two landowners Guy's and St Thomas' Charity (GSTC) and Peterhouse College) to submit representations in response to the Cambridge City and South Cambridgeshire Council consultation: Greater Cambridge Local Plan (Regulation 18: Issues and Options 2020) ('the Reg 18 consultation'). These representations are made in the context of CEG's interests at land South East of Cambridge ("the site"). The site is located immediately to the east of the adopted Cambridge City Local Plan allocation GB1, extending round to the employment allocations of GB3 and GB4 in the same Local Plan and allocation E/3 in the South Cambridgeshire Local Plan (2018).

1.2 This representations document provides detailed answers to the questions posed in the Reg 18 consultation document and also provides comments on the Sustainability Appraisal which also forms part of this consultation.

1.3 These representations are also accompanied by the following documents which should be read in conjunction with one another:

- **Consultation Response Form** – this form signposts where in this document we have answered specific consultation questions and reviewed key studies; and
- **Vision Document** – this site was submitted to the Strategic Housing and Economic Land Availability Assessment Call for Sites and Broad Locations in 2019. As requested a new Housing and Employment Sites Call for Sites Form has not been produced but the Vision Document for the site reflects what it is considered the site could include. As such the Vision Document should be read alongside the 2019 SHELAA submission and it supersedes the previously submitted Options for Sustainable Growth document (March 2019).

1.4 The representations are structured into the following sections:

- **Section 2** – provides a short introduction to the site, its location and the proposal for its allocation in the Local Plan relative to the options for growth being considered as part of the consultation;
- **Section 3** – provides narrative to respond to the questions associated with the first of the 'Big Themes' in the Issues and Options consultation document on climate change;
- **Section 4** provides narrative in response to questions associated with the second of the 'Big Themes' in the Issues and Options consultation document on biodiversity and green spaces;
- **Section 5** - provides narrative to respond to the questions associated with the third of the 'Big Themes' in the Issues and Options consultation document on wellbeing and social inclusion;
- **Section 6** - provides narrative to respond to the questions associated with the fourth and final of the 'Big Themes' in the Issues and Options consultation document on great places. This focuses on the assessment of job growth;
- **Section 7** – provides narrative to respond to the questions associated with the fourth and final of the 'Big Themes' in the Issues and Options consultation document on great places. This focuses on the assessment of housing need;
- **Section 8** - provides narrative to respond to the questions associated with the fourth and final of the 'Big Themes' in the Issues and Options consultation document on great places. This includes narrative and assessment on the best locations for jobs and homes;
- **Section 9** – provides a review of the various Sustainability Appraisal documents; and
- **Section 10** – summarises the above and sets out our conclusions.

2.0 Land to the South East of Cambridge

2.1 CEG considers that the site could make a significant contribution to meeting the economic development and associated housing needs of Cambridge City and the wider Cambridge region through a sustainable extension to land South East of Cambridge, building on the principles established through the allocation of GB1 – 4 and E/3 in the most recent adopted Local Plans. CEG has been working with a team of professional advisors to assess the suitability of the location and the scale of the opportunity. Further details of this analysis can be found in the Vision Document which accompanies these representations.

2.2 Furthermore, the inherent suitability of the location to make a significant contribution to meeting the development needs of Cambridge is acknowledged in the allocation of sites GB1-2 for up to 430 dwellings and GB3-4 and E/3 for employment use in the adopted Local Plans.

Landowners

2.3 CEG is promoting the site on behalf of the landowners GSTC and Peterhouse College:

- GSTC is a leading urban health charity and have a commitment to delivering high quality schemes championing the principles of health and well-being, sustainability and the supporting of future and existing communities. As a long-term landowner in Cambridge, it is committed to delivering schemes that are exemplar in these areas in order to support future growth. The charity is also launching a programme into the health effects of pollution this year which will become a key consideration as part of development proposals to come.
- Peterhouse is a long term landowner and wider stakeholder within Cambridge and the surrounding region. Peterhouse is mindful of its reputation both locally and more widely and therefore wishes to be associated with development schemes that make a positive impact on the local communities in which it operates, working collaboratively with those communities wherever it can. Current members of the College (students and Fellows) and its alumni are, in general, very interested in taking an aspirational approach to sustainability, the environment, health (including mental health) and wellbeing. Peterhouse recognises the importance of investing in place making and delivering high quality development in this context.

2.4 Both landowners are committed to creating a development with health and wellbeing at its heart, in a location which is truly sustainable.

Sustainable Location

2.5 The Greater Cambridge Local Plan consultation document sets out six options for where growth might go which are set out below.

1 **Densification of existing urban areas** – Providing more homes and jobs on underused land within Cambridge and also potentially in existing new settlements.

2 **Edge of Cambridge: outside Green Belt** – Creating new homes and jobs in extensions on the edge of Cambridge, using land not in the green belt.

3 **Edge of Cambridge: within Green Belt** – Creating new homes and jobs in extensions on the edge of Cambridge, involving release of land from the Green Belt.

4 **Dispersal: new settlements** – Creating one or more whole new towns or villages, providing homes, jobs and supporting infrastructure in a new location, and supported by strategic transport infrastructure connecting to Cambridge.

5 **Dispersal: villages** – Spreading new homes and jobs out to the villages, through allocating sites on the edges of villages or increasing the number of homes that can be developed on sites within the villages.

6 **Public transport corridors** – Creating new homes and jobs along key public transport corridors extending out from Cambridge, where they can access high quality public transport.

2.6 There is no singular growth option that can meet the development needs of the city while fully responding to the challenges identified by each of the emerging Local Plans themes. Each option will invariably have its own trade-offs and benefits. For this reason, a balanced approach will inevitably need to be adopted with a focus on growth options that can best support the four themes while also meeting the development needs of the city.

2.7 In this context, we consider the growth options that best achieve the aims of the emerging Local Plan with regards to the four main themes are (1) densification of the exiting urban area and (3) development on the edge of Cambridge within the Green Belt. Some of the reasons why these growth options should be preferred for housing and economic development include:

1 Development would be located closest to the existing centres of employment and services. This reduces the need to travel by private vehicle and can promote lower carbon emissions and healthier lifestyles;

2 Development would be less reliant on the delivery of major transport infrastructure to unlock land;

3 Greater opportunities for biodiversity net gain both within the city (on mainly brownfield land) and on its urban edge where land is mainly in agricultural use; and

4 Greater opportunities to access and improve existing services alongside the development of new community infrastructure. This would not only benefit new but also existing nearby residents.

5 The most recent round of Local Plans focused a greater proportion of growth in more distant new settlement locations (Waterbeach, Bourn, Northstowe) which will absorb a significant amount of publicly-funded infrastructure investment. The new plan provides the opportunity to complement this with a renewed focus on Cambridge itself, which remains the growth driver of the sub region, at a lower direct cost to the taxpayer.

The Proposals

2.8 Land South East of Cambridge is suitable for a mix of residential and employment uses, with associated local facilities and services. It is likely that the northern development area within the site will accommodate uses to support the expansion of Peterhouse Technology Park and the important high technology research and development cluster on Fulbourne Road. This could be a mixed development area with additional employment floorspace constructed alongside new homes, with education and local facilities to serve the new population.

2.9 The southern area is well served to support existing and proposed centres of employment including Addenbrooke's Hospital and the Biomedical Campus plus the substantial new AstraZeneca development. It provides opportunities for employees across the spectrum of incomes to live nearby to their place of work, but also provides the economies of scale to deliver the services and facilities currently lacking in south east Cambridge including shops and community meeting spaces.

2.10 CEG's vision provides for a significant area of green space between the two development parcels to provide a strategic amenity space for existing and new residents and significantly improved

linkages between the city and the surrounding countryside. This also benefits local wildlife sites and nature reserves which are coming under increasing burden from visitors by offering an alternative location to relive visitor pressure. This area of open space will also ensure views of the city are maintained.

Green Belt Development

2.11 The need to promote sustainable patterns of development in this location inevitably means additional releases of Green Belt land for development are required. We consider there is are strong exceptional circumstances to fully evidence and justify a revised Green Belt boundary in this location through the preparation of this new Local Plan.

2.12 As per the requirements of paragraph 138 of the NPPF, the release of the site from the Green Belt would promote sustainable patterns of development, including the fact that the site is well-served by public transport compared to some of the other strategic development options considered. There is also scope to offset this Green Belt release through compensatory improvements to the environmental quality and accessibility of remaining Green Belt land, including the opportunities for biodiversity gains and a large country park in the scheme as set out later in the report.

Next Steps

2.13 The following sections (3.0, 4.0, 5.0, and 6.0-8.0) of these representations focus on the four main themes of the consultation including how a development at the site in this location can support the Councils themes to achieve them. This all serves to demonstrate why growth option (3) should be sequentially preferable for development and specifically why Land to the South East of Cambridge should be allocated.

3.0 Climate Change

3.1 Climate change is rightly identified in the emerging Local Plan as a defining issue of our times. It requires a planning response now to shape the pattern and form of new development in the years to come. It is an issue that will require actions beyond the sphere of planning, but the emerging Local Plan will be a vital vehicle for the joint Councils' concerted efforts to achieve net zero carbon by 2050; aligned to the wider national target for net zero greenhouse gas emissions[1].

3.2 To meet the future needs of residents and help address climate change, the Local Plan will need to ensure future housing developments are designed from the outset to promote low-carbon lifestyles. Homes of the future will need to use less water and less energy. What energy is used should preferably be generated from a renewable source to reduce the need to offset carbon emissions. The material choices and design of the built environment will all need to respond to this aim. Developments will also need to be designed to encourage a modal shift in transport towards walking, cycling, and public transport; reducing the reliance on private car use. Taking all of these together will help mitigate against and adapt to the challenges that climate change will inevitably bring.

3.3 In this context, a comprehensive development at Land to the South East of Cambridge could support the Council's ambitions. CEG as a master developer is alive to the issue of climate change as are the landowners who are committed to a development legacy that marks their commitment to a socially responsible outcome for future generations. Responding to climate change through the built environment is a core aspect of CEG's business model and it is promoting a number of sites that embody this ethos. The site's landowners are committed to creating a development which helps to tackle climate change, in a location which is truly sustainable.

Land to the South East Cambridge

The location of future development

3.4 Ensuring development is located in the most sustainable locations is the first step to mitigating against climate change in new developments. As identified in the emerging Local Plan, Cambridge should be promoting development patterns that enable and encourage low-carbon transport use. This is to encourage a modal shift away from private vehicle use towards walking, cycling, and public transport. To support this aim, the emerging plan should be allocating land that is in highly accessible locations close to employment and services to reduce the need for people to use the private vehicle.

3.5 The emerging Local Plan identifies six growth options in terms of location of development. From the perspective of promoting sustainable patterns of development in highly accessible locations, Option 1 'densification of existing urban areas' is one of the most preferable options. This can be achieved through building taller and denser developments on available land (either greenfield or brownfield) within the urban area. However, when considering the economic growth ambitions of the city, is not clear that there is sufficient deliverable and developable land within the existing Cambridge urban area to meet all its development needs, particularly in view of its heritage value.

3.6 The next preferable location for development with regards to promoting low-carbon transport use is Option 3 'Edge of Cambridge: Within the Green Belt'. This is where the South East of Cambridge site is located. Development in this growth area and specifically at this site will

[1] https://www.gov.uk/government/news/uk-becomes-first-major-economy-to-pass-net-zero-emissions-law

reduce the need to travel and can encourage a modal shift towards low-carbon transport modes. Indeed, this is already the case in this part of Cambridge.

3.7 Land to the South East of Cambridge is uniquely well-connecting with the surrounding urban area with its high-quality pedestrian and cycle network. Commuting data (Census 2011) already shows that 45% of residents in the Queen Edith's ward walk or cycle to work with a further 12% on public transport. Car use was just 34%. A development in this location will build on this base, as it is located within easily cycling distance to Cambridge's city core. So too is the Biomedical Campus and Addenbrooke Hospital campus to the west, with employment at the Biomedical Campus having increased exponentially since the 2011 Census, meaning there is now even greater potential for those living in this part of Cambridge to walk or cycle to work. At Peterhouse Technology Park to the north, there has been investment by ARM Holdings to strengthen the high technology research and development cluster on Fulbourne Road, with significant job growth through its current and future phases on GB3 and GB4 and then through the further allocations at E/2. Indeed, there are opportunities to improve north/south connectivity for walking and cycling in a development. The site is clearly highly accessible where residents would be more likely to use low-carbon transport modes. This would not only have an impact on local emissions, but also local congestion as absence of local housing will require greater flows of in-commuting from elsewhere in the City, or more likely, outside the City, particularly from the west and north of the City, where new settlement development is focused.

3.8 Other growth options are thus clearly less sustainable from a locational perspective. Dispersed development outside of Cambridge can lock people into private car use and discourage walking and cycling. For example, 77% of workers commuting into Cambridge from beyond the city and the city fringe from elsewhere in South Cambridgeshire currently travel by car. Very few travel into the city and the city fringe by public transport (11%) and only 7% travel by bike or walk[2], given these locations are likely too far for most to cycle in from. This serves to demonstrate that the most sustainable location for development is close to employment and services. It is clear that beyond development within the city itself, the next sequentially preferable location for development is on highly accessible sites on the existing urban edge such as Land to the South East of Cambridge. Only then can people be encouraged to adopt low-carbon transport modes; with dispersed development locking them into private vehicle use.

The design of future development

3.9 Whilst the key aspect of climate change mitigation that this site can deliver is its location, CEG is also committed to delivering a development that is designed to mitigate against and be adaptable to the future impacts of climate change. In this regard, CEG would be looking to deliver a net zero carbon scheme and would look to work with the Council to identify the most effective way of achieving this in tandem with pursuing other policy objectives.

3.10 It is acknowledged that elements of climate change mitigation are rapidly evolving and CEG would want to adopt the latest technologies, which may not yet be widely available. However, at this stage, the following CEG wishes to develop the following key design themes into the design of a future scheme with the Council.

- **Walking and cycling:** Designing the development to promote walking and cycling to encourage a modal shift to more sustainable patters of development, including maximising the opportunities presented by proximity to the proposed Cambridge South Station close to the Biomedical Campus. The pattern and layout of streets, how the site connects to existing cycling/walking infrastructure, and the design of streets to promote safety would also all

[2] Census 2011 – see Figure 8.1 in this report.

contribute. This takes inspiration from the Marmalade Lane (Cambridge) development and the Aura (Trumpington) developments. CEG have promoted schemes with similar designed streets such as at Kirkstall Forge.

Figure 3.1 Kirkstall Forge - Residential Street

Source: CEG

- **Low carbon construction:** The use of lower carbon construction methods would be explored.
- **Energy efficiency:** Reducing energy and water use through the use of high-quality materials to ensure homes are energy and water efficient to reduce energy use. Furthermore, the design of properties and placement of trees would be considered to reduce potential overheating in the summer months (and reduce to the need for air-conditioning). Homes can also use electrical heating solutions instead of traditional gas boilers.
- **Renewable energy:** Incorporating renewable energy generation, this could be through the use of PV solar panels within the development to generate electricity on site, reducing the need to offset to achieve net zero.
- **Offsetting carbon:** CEG is open to exploring opportunities to offset carbon on site. This could be through planting of trees within a new 'country park'. This would have the added benefit of supporting biodiversity gains across the site.
- **Growing food on site:** CEG is open to exploring opportunities for allotments, the provision of a community orchard, or the provision of fruit trees for individual properties.
- **Monitoring:** CEG would monitor how the energy and sustainability strategy is implemented with future residents to optimise energy usage, as CEG are currently undertaking on other schemes.
- **Water:** ensuring a water efficient development.

3.11 Through all of the above, it is CEG's intention to deliver a net zero carbon scheme: supporting both the Councils' and Government ambitions to be net zero by 2050.

How has CEG achieved these development principles elsewhere?

3.12 CEG is committed to delivering sustainable principles in the schemes it promotes. For example, at Kirkstall Forge CEG is promoting a masterplanned development for 1,050 homes in addition to an office development that is already part developed.

Figure 3.2 Kirkstall Forge

Source: CEG

3.13 On the housing element, low carbon construction methods have been applied with prototype homes developed. This initiative included sustainable procurement policies and supported construction works develop new skills in sustainable construction. All residential buildings are targeted to achieve an EPC A rating, but all must meet a minimum EPC B rating. The design and layout of the residential streets also seeks to promote walking and cycling above private vehicle use. This included the development of a new network of walking and cycling routes, inviting future residents to walk and cycle in connection with their daily activities.

3.14 The office aspect of the development has already been part built out by CEG. Post-occupancy evaluation has also been used to inform the solar panel layout and improve energy efficient of the buildings. Currently, 200 sqm of photo-voltaic array saves around 10,000kg of Co2 per year. The design of the office building reduced solar gain, robust materials were incorporated, as were high efficiency LED lighting. All this contributed to the BREEAM 'Excellent' rating.

3.15 To promote sustainable transport, the development also included an upgraded train station whereby commuting by train increased by over 100% following the increase in the number of services. Free bike and scooter hire for employees at the office development has also been implemented, alongside a trial scheme for electric bike hire, on-site car club and lift share scheme, and electric vehicle charging points. The office element was also gold accredited bike friendly and awarded 'Walk to Work' friendly.

4.0 Biodiversity and Green Spaces

4.1 National planning policy requires development to achieve a net gain for biodiversity. This requires developments to ensure habitats for wildlife are protected, enhanced, and incorporated throughout a scheme. Going further, the Greater Cambridge Councils are members of the Natural Cambridgeshire Local Nature Partnership with a vision to double the area of rich wildlife habitats and natural greenspace.

4.2 The emerging Local Plan will be a key element of ensuring the Councils can achieve this vision and reverse a decline in biodiversity. It seeks to achieve this aim through improving the green space network and achieving biodiversity net gains in future developments. CEG fully support the Council's aims and ambitions in this regard and believe that a development at Land to the South East of Cambridge can achieve a net biodiversity gain on site and support the enhancement of the green space network.

4.3 The site is currently in agricultural use and is therefore not, as a whole, a rich environment in terms of biodiversity. That said, it is not devoid of localised rich environments within the site itself. Mature hedgerows with trees cross the site supporting a wider variety of wildlife than the majority of the farmed land. There is also the Beechwood Nature Reserve which abuts the site to the south and the Limekiln Close Nature Reserve, Cherry Hinton Chalk Pits Nature Reserve (SSSI) and West Pit Nature Reserve which abut the site to the north west. The Cherry Hinton Hall Park and Wandlebury Country Park do not abut the site but are also in close proximity.

4.4 Not only is this a site where a net biodiversity gain should be attainable, it also offers up an opportunity to 'take the pressure of' other local nature reserves close to the site. We have been engaging with the local Wildlife Trust on the progression of the planning application for GB1 from which we know that these nature reserves are coming under pressure from increasing visitor numbers, including residents from new developments to the south of Cambridge who are using these much larger outdoor spaces close to their homes. The delivery of a substantial country park within the site would not only provide a leisure and recreation location for residents and employees of the new development, but also those in other parts of south Cambridge, to offset impacts on local nature reserves.

4.5 At such an early stage CEG cannot provide specifics of how precisely the development would secure biodiversity net gains and to what percentage as this must be an outcome of a comprehensive masterplanning process which will be defined by the requirements of the next Local Plan. However, CEG is looking to incorporate the following features into a future masterplan:

- Significant tree planting across the site and creation of new habitats such as ponds, woodlands, and grassland areas;
- Installing bird and bat boxes;
- Creation of a country park that links with other green assets such as Cherry Hinton Hall Park, Beechwoods Nature Reserve and Wandlebury Country Park; and
- Creation of ecological corridors running through the development through the design of residential street layouts and landscape design to support biodiversity.

4.6 Incorporating such features will not only benefit the richness of biodiversity across the site but also contribute to the wider aims of the site to mitigate against and adapt to climate change. For example, tree planting can reduce overheating in properties and species of trees can also be chosen that will be resilient to the warming climate to ensure habitats can continue to flourish in future decades.

4.7 Importantly, development at scale can do the most to deliver these features to achieve a net biodiversity gain alongside housing and other considerations. It is much more difficult and sometimes impractical to deliver features that result in significant biodiversity gains on piecemeal developments. At this larger scale, it will also be much more practical to fully develop ecological corridors through the whole site at an early stage in the masterplanning process.

4.8 CEG is also supportive of implementing monitoring of habitats before, during, and after the development is completed to fully demonstrate that a net biodiversity gain is achieved in practice and in perpetuity.

5.0 Wellbeing and Social Inclusion

5.1 The emerging Local Plan rightly acknowledges its potential to be a powerful tool to improve the general wellbeing and social inclusion of people living and working in Greater Cambridge. The way developments are designed, the mix of homes required, and the supporting services it delivers all needs to be considered in promoting wellbeing and social inclusion. CEG is already committed to achieving 'good growth' through its developments and is exploring how to maximise the opportunities to do so at Land to the South East of Cambridge.

What services support the existing community? Are there any gaps in provision?

5.2 The site is located on the south eastern edge of Cambridge in the Queen Edith's ward. From a high-level review, this is a ward identified as being in a gap in community infrastructure provision where there is high need for access to City Council services[3]. Nearby, primary schools are in the main at or nearing capacity. For example, the Queen Edith primary School had only 41 available spaces based on the latest data. While there is secondary school capacity in nearby schools there is a distinct lack of early-years care. It is also a location where there is a general lack of accessible day-to-day services. To the east is the Nightingale Recreation Ground and to the north there is a greater provision of services in Cherry Hilton and a small parade of shops on Wulfstan Way. From feedback received through community consultation on the GB1 site, we know there is local interest in investing in the shopping parade on Wulfstan Way and that residents at Ninewells are currently using the Marks and Spencer store in Addenbrookes to meet their day to day needs. This points to local demand for local level shops and services that incremental development of the scale proposed in GB1 and GB2 alone cannot properly address, as reflected by the absence of requirements for such facilities in the policies of the adopted Plan.

5.3 A development at Land to the South East of Cambridge on a more strategic approach would therefore need to consider further the current gaps in provision and seek to help meet the needs of the existing and future population.

How could a development at Land to the South East of Cambridge site maximise good growth opportunities?

5.4 At this early stage CEG is not setting out a detailed development scheme as this should be created in combination with the Council and the local community. However, the below sets out the broad principles of how the site could maximise the opportunities to achieve good growth responding to the wider needs of the existing and future community.

5.5 Firstly, given the gaps in provision broadly identified, CEG is committed to delivering community infrastructure and doing so in the early phases of development. This is not only to support 'pioneer' families that move into the first phases of development, but to also support the existing local communities surrounding the site. At the South Bank Leeds development, CEG planned for 'meanwhile uses' before development took place including various events. Third parties have hired outdoor space for theatre performances, big concerts and even Octoberfest. The events focussed on creating vibrancy, making people feel safer in what was previously a derelict area and bringing families in.

5.6 Land to the South East of Cambridge could include the provision on site of, for example:

- A new dedicated community hub;

[3] Cambridge City Council Community Centres Strategy (2019)

- A primary school; and
- Two local centres including shops and services on site.

5.7 Early phases of development (including community infrastructure) could also come forward relatively quickly. The development of the site is not reliant on major transport infrastructure improvements to unlock the land and it is immediately available from a land owner perspective – it could follow seamlessly from the existing allocations GB1- GB4. The site therefore has the ability to commence delivery in a timely fashion and could help address housing needs in the early part of the plan period. This is a benefit to the Local Plan because whilst there are other edge of Cambridge location which could delivery housing in the plan period they cannot necessarily come forward as quickly, for example the Cambridge Airport site which the consultation document states will not be vacated until at least 2031 (and even this is unknown).

5.8 Thus, benefits to the wider community could be delivered in the earlier years of the next plan-period. The development could also incorporate the creation of active public places, these could be focused around new local centres, designed to be inviting and safe in order to encourage social interaction.

Community Engagement

5.9 CEG is also committed to ensuring community engagement in the design process. Community involvement in the designs of schemes can foster community support and community ownership of a housing development. CEG will therefore work in partnership with the Council and local groups as it has done successfully on other sites across the country, but also locally in the development of the GB1 planning application.

5.10 Development can also have major social benefits during construction as well as in its active life. At the Kirkstall Forge development, CEG delivered £10million of social value through initiatives including its skills programme Forging Futures Campus. It partnered with The Skill Mill social enterprise working with ex-youth offenders and local community groups. This created 45 new local jobs, 45 training opportunities have been completed and 6 jobs were created for the long-term unemployed with around 36 more to be created. This is just one example of how CEG through development can support social inclusion.

5.11 Finally, it is important to note that, to bring forward community infrastructure alongside other scheme benefits, development at scale is key. The provision of community infrastructure in particular requires a critical mass of people and housing to generate enough demand for the services and value to cover the costs of implementation. Smaller piecemeal developments cannot deliver the same levels of benefits given the land uptake of community infrastructure and costs associated with their delivery. This is one of the key benefits of development across the land to the South East of Cambridge site.

6.0 Great places – Jobs

How many jobs?

6.1 Cambridge has been described as Europe's most successful high technology cluster and now has leading presence in sectors where the UK leverages competitive advantage in the global economy. Cambridge competes with city-regions like San Francisco, Boston, Singapore and Bangalore meaning that a significant proportion of growth in the Cambridge economy is net growth to the UK rather than simply displacing activity that would in any case happen elsewhere in the UK. It is also important for retaining existing specialist technology operations in an increasingly competitive global marketplace. The 2013 decision of AstraZeneca to relocate its head office and research function to Cambridge because of its mix of academic and private sector biomedical research highlights the importance of this type of technology cluster to business growth.

6.2 In 2017/18 there were an estimated 25,900 companies in the Cambridge cluster which turned over a combined £46bn; up 8.7% since the previous year[4]. Businesses in the cluster employ over 230,000 people, including:

- In high-tech manufacturing, 662 companies employing over 18,000 with a combined £5bn turnover. Turnover in high-tech manufacturing has increased by 13.7% in the last year alone;
- In education, arts, charities and social care, 1,300 companies employing 22,800 people (up 10.4% on the previous year) with a combined turnover of £1bn;
- In IT and telecoms, over 3,000 companies employing 21,500 people (up 12.6% since the previous year) with a combined turnover of £5bn (up 14.8% on the previous year);
- In knowledge intensive sectors, 780 companies employing 6,800 people (growth of 3.6%) with a combined turnover of £981m; and
- In life sciences and healthcare, 450 companies employing 15,000 people with a combined turnover of £5bn (up 7.5% on the previous year).

6.3 Cambridge's success can be attributed to a number of factors, including:

1 A broad sector base, ranging from information technology and computing, scientific instruments, printing and media, bioscience and pharmaceuticals, which has been successful in adapting over time;

2 Local networks, with many businesses being located within or close to the city itself, allowing exchange of knowledge and labour as well as benefiting from proximity to Cambridge University which is world renowned; and

3 The presence of a local, highly-skilled workforce, driven by the University as well as other research organisations, which are focused in the city centre.

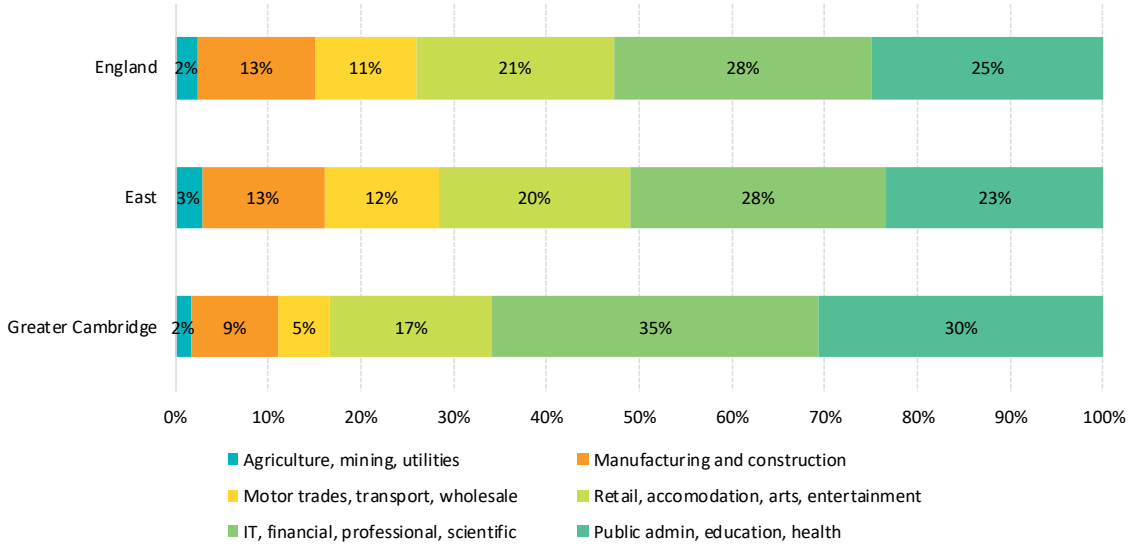
6.4 As of 2017 (the base date of the emerging plan) there are an estimated 193,000[5] jobs across Greater Cambridge and in recent years the rate of job growth across Greater Cambridge has far outpaced that seen nationally. The Cambridgeshire and Peterborough Combined Authority Independent Economic Review (CPIER) report[6] looked at how the combined authority performs in economic terms; it shows that since 2001 the area has outperformed the regional and

[4] Source: Cambridge Ahead: Cambridge Cluster Insights https://www.cambridgeahead.co.uk/cambridge-cluster-insights/
[5] According to ONS's Business Register and Employment Survey (BRES). Greater Cambridge represents 0.7% of all jobs in England
[6] https://www.cpier.org.uk/media/1671/cpier-report-151118-download.pdf

national growth in gross value added (see CPIER Report Figure 3) and Cambridge currently has the highest number of patents per 100,000 for any city.

6.5 The Cambridge economy is dominated by knowledge-intensive sectors – 35% of jobs in Greater Cambridge are in IT, finance, professional, scientific/technical industries, as shown in Figure 6.1. However, the local economy is still diverse – there is a higher than average portion of workers employed in public admin, health and education – 30% compared with 25% nationally. Sectors which are under-represented in Greater Cambridge are agriculture, manufacturing and construction, motor trades, wholesale, transport and storage. Retail, accommodation and food services, arts, entertainment and recreation are also lower than average, however still represent 17% of all jobs in Greater Cambridge.

Figure 6.1 Employment in Greater Cambridge by Industry



Source: ONS Business Register and Employment Survey

6.6 Cambridge is a highly successful city with a local economy of national and international importance. It sits within a sub-region which is seen as key to the country's economic success; the Cambridge-Milton Keynes-Oxford (CaMKOx) arc. The National Infrastructure Commission's (NIC) report 'Partnering for Prosperity: A new deal for the Cambridge-Milton Keynes-Oxford arc' (November 2017)[7] stated *"The Cambridge-Milton Keynes-Oxford arc must be a national priority. Its world-class research, innovation and technology can help the UK prosper in a changing global economy*", noting that the success of the arc did not only matter to those living there but to the whole country.

6.7 The economic success that Greater Cambridge has enjoyed in recent years has not been matched by commensurate increases in housing growth; the Cambridgeshire and Peterborough Independent Economic Review (CPIER) Report published in 2018 shows that between 2012 and 2016 across Cambridgeshire and Peterborough combined authority, employment growth has outpaced housing growth. Whilst job growth has been around 15% (albeit this could even be an under-estimate of job growth) housing has grown by just 5% over the same period (CPIER Report Figure 20). Similarly, one of the NIC's central findings was that an insufficient supply of housing in the CaMKOx arc in the future could undermine the arc's economic success. This finding is echoed in the NIC report, with one of its key findings being that significant investment

[7] https://www.nic.org.uk/wp-content/uploads/Partnering-for-Prosperty.pdf

and development in housing and infrastructure would be necessary to secure the success of the arc in the future.

Future job growth

6.8 In support of the NIC's report several background papers were prepared, including an economic analysis paper by SQW[8] (November 2016). It considered three broad scenarios for economic growth for the CaMKOx arc:

1 Business as usual, in which current levels of housebuilding and growth are maintained;

2 Incremental enhancements, where housing delivery increases in line with needs identified in strategic housing market assessments but not at a level sufficient to create transformational changes; and

3 Transformational enhancements, with population growth above ONS projections, high levels of transport investment leading towards a globally competitive knowledge cluster.

6.9 The annual rate of employment change between 2014 and 2050 across each scenario is shown in Table 6.1. Under a transformational scenario, South Cambridgeshire is forecast to see the fastest rate of employment growth across the arc with the exception of Milton Keynes. Under both the 'incremental enhancements' and 'transformational enhancements' scenarios Cambridge and South Cambridgeshire are expected to perform above the average for the arc.

Table 6.1 Estimates of 2014 jobs and forecast growth (annual rate of growth – long-term 2014-50)

	Estimate jobs (2014)	Baseline	Incremental enhancements	Transformational enhancements
CaMKOx Corridor	1,883,000	0.5%	0.9%	1.3%
Greater Cambridge-Northern Hertfordshire	487,000	0.5%	1.0%	1.3%
Cambridge	104,000	0.5%	1.1%	1.4%
South Cambridgeshire	84,000	0.5%	1.1%	1.5%

Source: SQW report Table 5-3, Table 5-8 and Table 5-13

6.10 The SQW report estimated that in 2014 there were 188,000 jobs across Cambridge and South Cambridgeshire. More recent figures suggest this has since increased; when the rates of growth are applied to the 2017 estimate of jobs the forecasts would suggest growth of between circa. 1,200 per annum and 3,500 per annum across Greater Cambridge over the proposed plan period (2017 to 2040), as shown in Table 6.2.

[8] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/601163/Economic-analysis-Cambridge-Econometrics-SQW-report-for-NIC.PDF

Table 6.2 Number of jobs in 2017 and forecast number of jobs based on SQW forecasts from NIC Economic Analysis report

	Cambridge	South Cambridgeshire	Greater Cambridge
2017 Jobs	105,000	88,000	193,000
Baseline Rate of growth	**0.50%**	**0.50%**	**~**
Jobs in 2040	122,249	97,575	219,824
Total change 2017-40	17,249	9,575	26,824
Annual	750	416	1,166
Incremental rate of growth	**1.10%**	**1.10%**	**~**
Jobs in 2040	140,185	111,891	252,077
Total change 2017-40	35,185	23,891	59,077
Annual	1,530	1,039	2,569
Transformational rate of growth	**1.40%**	**1.50%**	**~**
Jobs in 2040	150,072	122,529	272,601
Total change 2017-40	45,072	34,529	79,601
Annual	1,960	1,501	3,461

Source: Lichfields based on BRES/SQW. *Whilst BRES has published more up-to-date job figures (for 2018), 2017 has been used for consistency with the base date of the emerging Greater Cambridge plan.

6.11 We have modelled this level of employment growth for Greater Cambridge using the industry-standard demographic modelling software PopGroup. This allows us to understand how many people would be needed in Greater Cambridge (taking into account economic activity rates, commuting and unemployment) to support these potential levels of employment growth. Based on this level of population growth we can understand (using household formation rates and an allowance for vacancy) how many homes are likely to be needed. For the purposes of this exercise we have applied the 2016-based household projections and also include a sensitivity which includes some improvement in household formation rates for those under 34 which sees rates return half-way to their 2001 levels by 2030.

6.12 In our baseline modelling, assumptions around commuting are fixed based on the current position (the position as of the base year, in this case 2017). This means that if the level of labour market self-containment has worsened in recent years (up to 2017) , this is 'baked-in' and the assessment of housing need assumes these patterns will continue. As noted in the CPIER report (see para 6.7 above) the rate of housing growth has been significantly below the rate of employment growth in this area since 2012. Because Greater Cambridge has continued to see strong job growth, the implication is that the area is drawing more and more in-commuters from elsewhere[9] (associated with more in-commuters from outside Greater Cambridge travelling longer distances to work in the area).

6.13 Table 6.3 shows the change in Cambridge and South Cambridgeshire in the number of jobs and employed residents (i.e. the economically active population less those who are unemployed) since 2012. The number of employed residents divided by the number of jobs gives the labour force ratio, which is largely affected by commuting patterns but also reflects a small proportion of double-jobbing. Should the balance of commuting remain stable over time (assuming no change in the proportion of workers with more than one job) the labour force ratio should also remain stable over time.

[9] Is is possible that labour supply can grow in the absence of housing growth if unemployment reduces or economic activity increases, however the scale of change unemployment and economic activity in this time in Greater Cambridge is likely to have a marginal impact relative to the impact of increased in-commuting.

6.14 In Cambridge the labour force ratio is less than 1, implying the area is a net importer of in-commuters (i.e. there are more jobs than there are working residents). In South Cambridgeshire, the opposite was true in 2012; there were more employed residents than jobs giving a labour force ratio greater than 1, implying there was net out-commuting. This pattern is common amongst cities and their surrounding areas. Across Greater Cambridge in 2012 the labour force ratio was 0.86, implying the area as a whole (both Cambridge and its hinterland) was a net importer of workers.

6.15 However, over subsequent years, there has been a clear shift in commuting patterns across both districts. Cambridge has become an ever-increasing net importer of workers with there now being 0.58 employed residents per job in the city. In South Cambridgeshire – in 2012 a net exporter of workers – there has been a shift to net in-commuting, with there now being more jobs (88,000) than employed residents (c.84,000). Across Greater Cambridge this has meant a reduction in the labour force ratio from 0.86 in 2012 to 0.75 in 2017.

6.16 If the labour force ratio across Greater Cambridge were to have remained at its 2012 level over the subsequent years, we can calculate how many employed residents would need to live in the area. By 2017, there would have needed to be 165,724 employed residents to support the 193,000 jobs; in reality there were closer to 144,000 employed residents. This implies that over the 2012 to 2017 period, Greater Cambridge has seen an additional 21,421 net in-commuters into the area, as shown in Table 6.3. This will in part have contributed to increases in congestion on the Greater Cambridge road network and is an inherently less sustainable pattern of commuting.

6.17 A substantial increase in net in-commuting is just one of the consequences in areas where job growth significantly outpaces housing growth, as has been the case across this area and the wider area, as cited in the CPIER report (see para 6.7 above).

Table 6.3 Changes in the labour force ratio (commuting patterns) in Greater Cambridge - 2012-2017

		2012	2013	2014	2015	2016	2017
Cambridge	Number of jobs	92,902	96,000	102,000	103,000	103,000	105,000
	Employed residents	59,444	59,892	60,149	61,327	60,527	60,517
	Labour Force Ratio	**0.64**	**0.62**	**0.59**	**0.60**	**0.59**	**0.58**
South Cambs	Number of jobs	69,000	69,000	77,000	80,000	83,000	88,000
	Employed residents	79,577	80,411	81,501	82,429	83,191	83,786
	Labour Force Ratio	**1.15**	**1.17**	**1.06**	**1.03**	**1.00**	**0.95**
Greater Cambridge	Number of jobs	161,902	165,000	179,000	183,000	186,000	193,000
	Employed residents	139,021	140,303	141,650	143,756	143,718	144,303
	Labour Force Ratio	**0.86**	**0.85**	**0.79**	**0.79**	**0.77**	**0.75**
	Employed res. needed at 2012 LF ratio	139,021	141,681	153,703	157,137	159,713	165,724
	Implied additional net in-commuting	~					+21,421

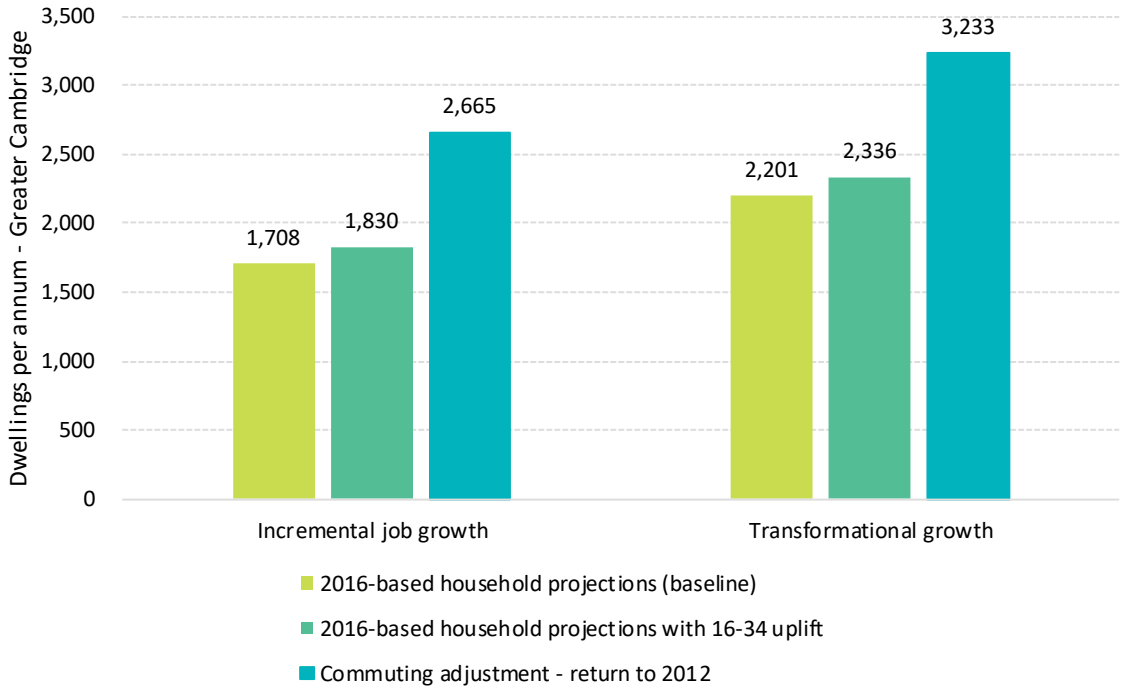
Source: These estimates are Lichfields analysis based on a combination of Census data (ONS), Mid-year estimates (ONS), Annual Population Survey (APS, produced by ONS) data, Office for Budget Responsibility (OBR) projections and Business Register and Employment Survey (BRES, produced by ONS) data. See Appendix 1 for further details. Figures shown above are rounded, however for modelling purposes we have used unrounded labour force ratios.

6.18 Even without any further job growth, there would be a need to be additional housing to help re-balance commuting in Greater Cambridge, i.e. to allow those working in the area to live locally and reduce reliance on in-commuting from elsewhere. On the basis of the above, the Council may need to boost the number of people living and working locally by around 21,000 alone just to address recent changes in the balance of commuting – even without taking into account further job growth.

6.19 On this basis, we have considered how much additional housing might be needed such that the balance of commuting (measured by the labour force ratio) returns to the 2012 level (shown above) by 2040.

6.20 Our modelling suggests that across Greater Cambridge under the incremental growth scenario 1,708 dwellings per annum would be needed between 2017 and 2040 as an absolute minimum (the baseline scenario), rising to 1,830 dpa if a headship rate adjustment were incorporated. To address the recent imbalances in commuting significant more homes would be needed – 2,665 dpa (if a headship rate adjustment were applied to this scenario the need would be slightly higher). This is a significant uplift, but reflects the fact that Greater Cambridge would need to attract and retain an additional 21,400 workers (net). To support the transformational growth scenario a minimum of 2,201 dpa would be needed, rising to 2,336 dpa when an uplift for headship rates is applied and 3,223 dpa to rebalance commuting by 2040. This is shown in Figure 6.2.

Figure 6.2 Housing need based on employment growth scenarios



Source: Lichfields analysis using PopGroup. 'Baseline' scenario uses headship rates as published in the 2016-based household projections. 'PRT' uses adjusted headship rates for 16-34 year olds where rates return half-way to their 2001 levels by 2030.

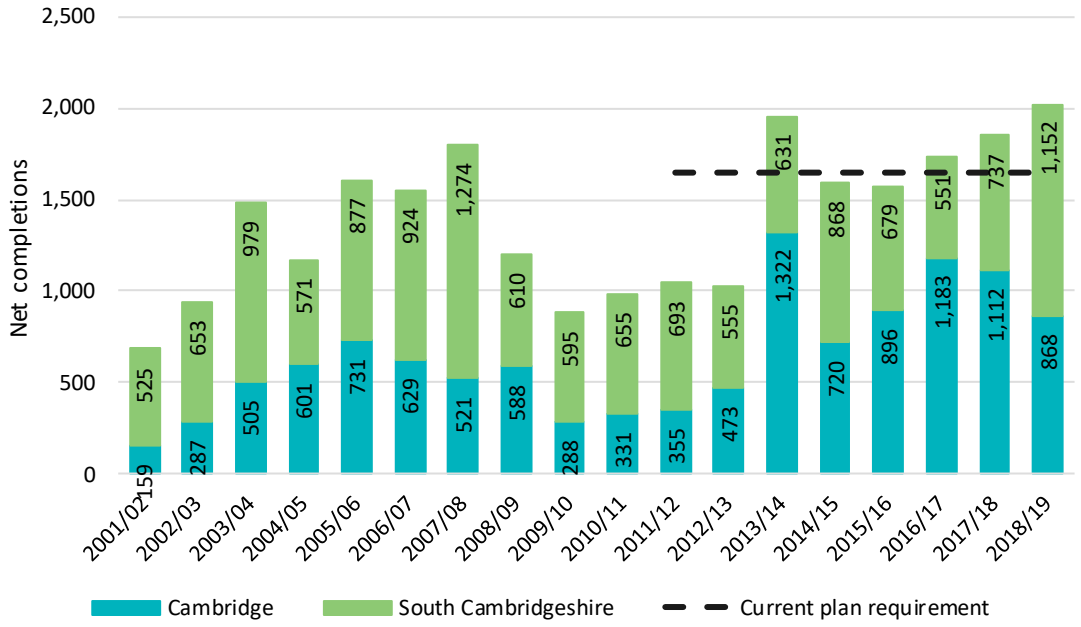
7.0

7.0 Great places – Homes

How many homes?

7.1 As of 2018 there were just under 121,000 homes across Greater Cambridge[10]. Average completions since 2001/02 are shown in Figure 7.1; since 2011 (the start of the current plan period) the Greater Cambridge area has delivered an average of 1,599 homes per year, which is only slightly below the plan requirement of 1,650 per year.

Figure 7.1 Annual housing completions for Greater Cambridge 2001/02 to 2018/19



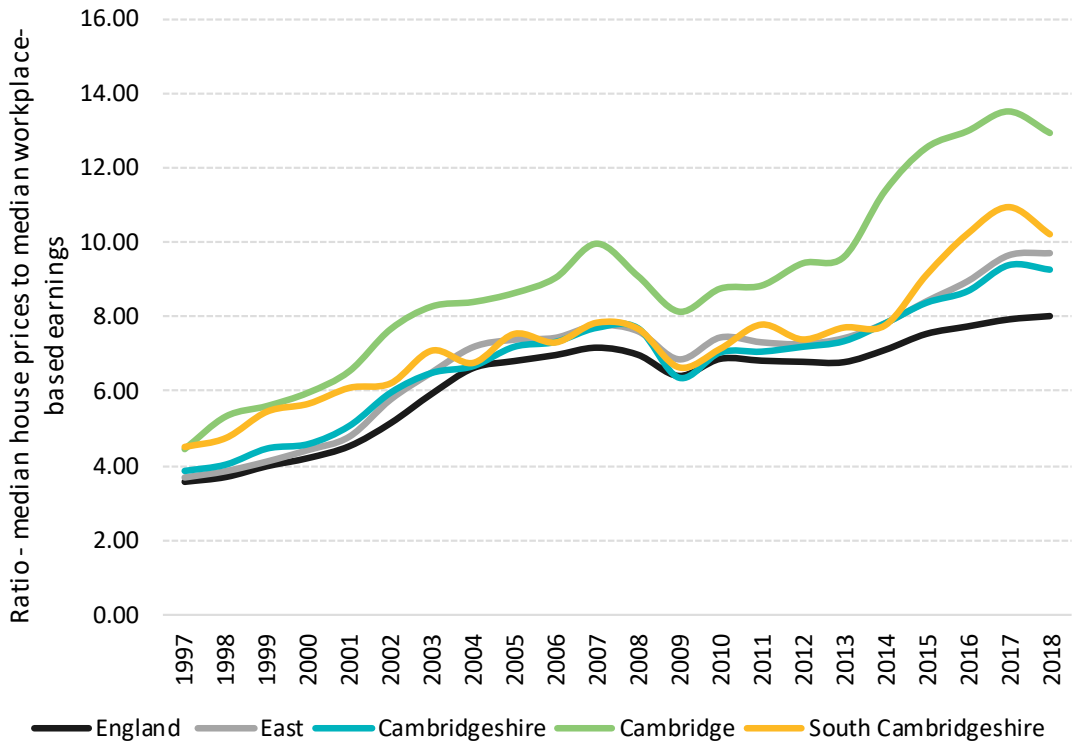
Source: Cambridge/South Cambridgeshire Annual Monitoring Reports

7.2 As expected, earnings in Cambridge and South Cambridgeshire are higher than in surrounding areas and regional and national averages. These higher earnings are reflected in higher house prices, but disproportionately so. In 2018 average (median) house prices in Cambridge were £430,000; 13.0 times average workplace-based earnings of £33,199. In South Cambridgeshire prices are lower (362,250) and wages higher (£35,349) giving a ratio of 10.3.

7.3 In Greater Cambridge (and Cambridge particularly) the ratio of house prices to earnings has risen substantially faster since the recession compared with regional and national averages, as shown in Figure 7.2. Whilst the ratio nationally has been broadly flat at around 7.0 since the recession, the ratio in Cambridge recovered to its pre-recession peak by 2014 and has continued to climb. The ratio peaked at 13.5 in 2014 and has fallen marginally to 13.0 in 2018 but Cambridge remains one of the least affordable authorities outside London. South Cambridgeshire has seen a similar pattern.

[10] Source: MHCLG Live Table 125

Figure 7.2 Affordability ratio (median, workplace-based) 1997-2018



Source: ONS *The reduction in affordability ratio in Camb/South Camb in the most recent year has been caused by relatively flat house prices and growth in wages

Population and household growth

7.4 The most recent population and household projections are the ONS 2016-based projections, published in 2018. These project Greater Cambridge's population will increase by around 20,000 over the plan period, reaching 300,681 by 2040. The number of households is expected to grow faster (due to ageing and declining average household size), growing by 11.7% by 2040, to 121,061.

Table 7.1 Projected population and household growth - 2016-based projections

	Population			Households		
	2017	2040	Rate of growth	2017	2040	Rate of growth
Cambridge	124,635	127,331	2.2%	44,793	46,456	3.7%
South Cambs	156,020	173,350	11.1%	63,569	74,605	17.4%
Greater Cambridge	280,655	300,681	7.1%	108,362	121,061	11.7%

Source: ONS

7.5 It is notable that a city such as Cambridge is projected to see household growth of just 72 per year, or 3.7% in total over 23 years. Other recent sets of household projections have even projected the number of households to remain broadly stable or to even decline in Cambridge. This can be partly attributed to the low levels of projected population growth for Cambridge, which in turn have arisen due to large elements of unattributable population change (UPC) with ONS's mid-year estimates.

7.6 ONS produces population estimates each year for local authorities which estimate the total population along with births, deaths and migration in the previous year. Each decade, when the results of a census become available, ONS recalibrates its mid-year estimates, and any element of population change which cannot be accounted for is termed UPC. UPC can result from mis-recording the amount of people at the start or end census (i.e. 2001 or 2011) or can be the result of mis-recording migration estimates. Unfortunately ONS is not able to confidently attribute UPC to a particular cause, but it is notable that in Cambridge almost +15,000 in UPC was added to the 2001-11 mid-year estimates following the 2011 census; in other words the 2011 census found that there were almost 15,000 more people in Cambridge than were expected based on the 2001 census combined with the estimated change which had taken place each year between 2001-11 in the mid-year estimates. With there being c.123,000 people in Cambridge in mid-2011, this error represents 12% of Cambridge's total population.

7.7 Because – at a national level – the level of UPC lies within the margins of error in the 2001 and 2011 censuses[11], ONS does not include UPC in the population projections. This is unlikely to significantly impact most areas when assessing future needs, but in Cambridge it is something important to consider. We will not know whether mid-year estimates for Cambridge in recent years have accurately recorded growth until the results of the 2021 Census become available, but based on what was seen between 2001 and 2011, and given that the most recent population projections (which draw upon migration trends seen between 2011 and 2016) suggest Cambridge will grow at only a very small rate in the next 25 years, we can be confident that official estimates and projections are likely to continue to under-estimate current and future growth in Cambridge.

7.8 Indeed, for the purposes of the adopted local plan, the Councils did not defer to the official projections for Cambridge, partly for these reasons. Instead, the evidence base (which included the Cambridgeshire SHMA and subsequent updates prepared during the examination by consultants PBA on behalf of the Councils) used alternative long term trend scenarios and employment-led scenarios, amongst others.

National policy and guidance

The standard method – a minimum figure

7.9 For plans submitted after January 2019 the NPPF states that:

"To determine the minimum number of homes needed, strategic policies should be informed by a local housing need assessment, conducted using the standard method in national planning guidance – unless exceptional circumstances justify an alternative approach which also reflects current and future demographic trends and market signals…" (NPPF, para 60) (emphasis added)

7.10 As of February 2020 the standard method would suggest a total of **1,771 dwellings per annum** in Greater Cambridge, as shown in Table 7.2. Evidently, this is similar to the baseline scenario for housing need which is needed to support SQW's incremental growth scenario (c.1,700 dpa, as shown in our analysis above in Figure 6.2) but:

- It would also be insufficient to help address the commuting imbalances which occurred in Greater Cambridge in recent years (which would require c.2,770 dpa);
- It is insufficient to support the transformational scenario (which would require at least 2,200 dpa, potentially up to 3,200 dpa on more sustainable commuting pattern); and

[11] i.e. it is plausible that the mid-year estimates were correct and the UPC has resulted from mis-calculations in 2001 and/or 2011

- Because its supply would only match the population growth associated with employment growth, it would make no contribution to improving affordability or access to affordable housing because the 'uplift' for affordability in the Standard Method would be wholly absorbed by demographic growth attracted by job growth.

Table 7.2 Standard method calculation for Cambridge and South Cambridgeshire

	Cambridge	South Cambridgeshire	Greater Cambridge
Household projections 2020-30	425	797	~
Affordability ratio	12.95	10.25	~
Uplift / figure	56% / 663	39% / 1,108	~
Cap?	Local Plan adopted in last 5 years (2018) - 700 dpa Therefore cap = 700 + 40% = 980	Local Plan adopted in last 5 years (2018) - 950 dpa Therefore cap = 950 + 40% = 1,330	~
Final figure	**663 dpa**	**1,108 dpa**	**1,771 dpa**

Source: Lichfields based on PPG/ONS

Going above the standard method

7.11 Whilst the standard method clearly reflects some of the key factors which indicate housing need in an area (namely population growth and affordability pressures) there are circumstances where areas will need to plan for more housing than it suggests – hence the NPPF refers to the standard method figure as a minimum. Some of these circumstances are highlighted in the PPG at ID: 2a-010 and include (but are not limited to):

- Growth strategies for the area that are likely to be deliverable, for example where funding is in place to promote and facilitate additional growth (e.g. Housing Deals);
- Strategic infrastructure improvements that are likely to drive an increase in the homes needed locally;
- An authority agreeing to take on unmet need from neighbouring authorities, as set out in a statement of common ground;
- Situations where previous levels of housing delivery in an area, or previous assessments of need (such as a recently-produced Strategic Housing Market Assessment) are significantly greater than the outcome from the standard method; and
- Affordable housing need (at ID: 2a-024).

7.12 It is key that the standard method figure is treated as a minimum; authorities collectively need to plan for more if the Government is to realise its ambition of delivering 300,000 homes per year because the standard method currently yields around 270,000 homes per year[12]. We consider there are several key factors which may justify adopting a figure in excess of the standard method in Greater Cambridge, which we explore below.

[12] Whilst this suggests that authorities nationally need to be doing (collectively) 30,000 more per annum than the standard method suggests, London is likely to only deliver at most 40,000 per annum whereas its standard method figure is c.76,000 leading to further a shortfall of at least 36,000 per annum. This could mean authorities outside London need to collectively plan for around 66,000 (possible more) per annum more than the standard method for Government to achieve 300,000 homes per annum.

1. Employment and commuting

7.13 The workforce that the CaMKOx corridor needs in order to secure economic success must have access to sufficient housing which is affordable and in the right location. Both the CPIER report and the NIC report highlight housing supply as a key issue for Cambridgeshire, with the NIC report specifically stating that housebuilding needs to roughly double (compared with recent levels of housebuilding) to support the arc's potential. Housebuilding across the CaMKOx corridor has increased in recent years, but still needs to increase substantially to meet local needs in full – to at least 23,000 per year (or 30,000 to address needs of nearby constrained markets, such as London, which we turn to later).

7.14 The standard method does not take into account any housing needs associated with employment growth which will be a key driver of housing needs in Greater Cambridge. Whilst some demand associated with employment growth may be reflected in a poor (and worsening) affordability ratio, there are other aspects to consider:

1 For the reasons set out above, official projections are potentially under-estimate future population and household growth in Cambridge. Since these projections form the basis of the standard method, if the projections are flawed the figure generated by the standard method will also be flawed;

2 Housing demand associated with employment growth may manifest in other ways, such as increases in overcrowding/sharing households or increases in long-distance commuting, so the affordability ratio may not capture the entire picture. We know that in addition to worsening affordability, in recent years net in-commuting to Greater Cambridge has been increasing since at least 2012 as a result of job growth significantly outpacing housing growth; the number of in-commuters to Greater Cambridge grew by 21,500 in the five years 2012-2017;

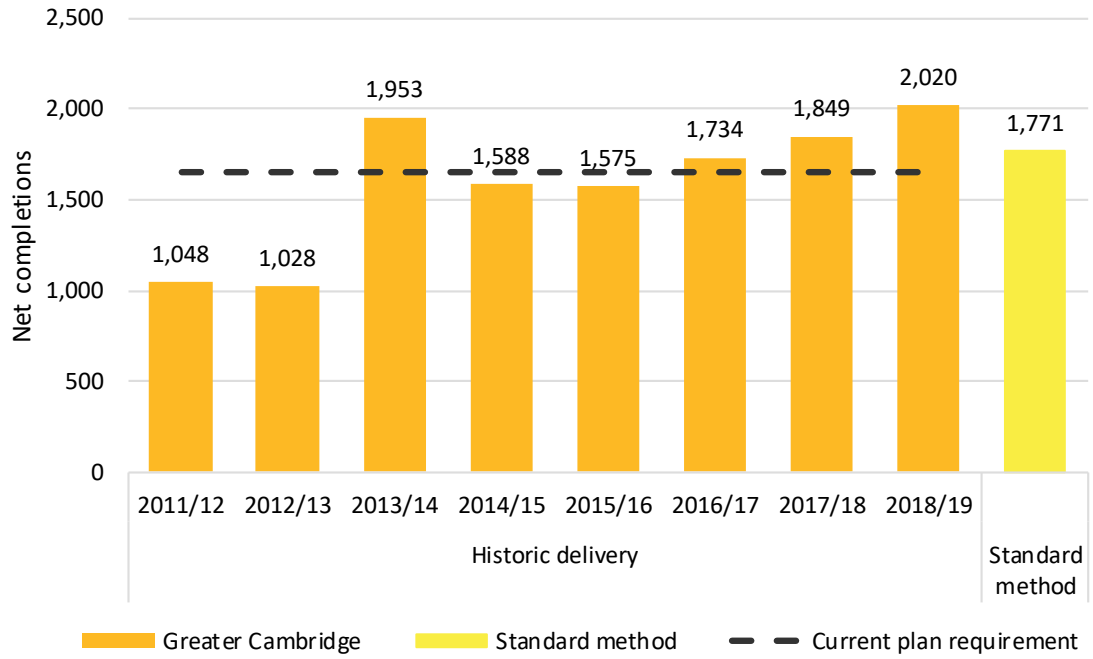
3 Under the standard method the uplift for affordability is a proportion of future population growth (39% for South Cambridgeshire and 56% for Cambridge – this is set out in full below) – it works on the assumption that where affordability is poorer, more homes relative to the population will be needed. Demand for housing associated with employment growth (i.e. the amount of housing needed to adequate a labour force of sufficient size to support forecast job growth) may not be linked to population growth in this way – in areas expected to see transformational changes to employment growth the number of homes needed to support forecast job growth might be double (or more) that suggested by household growth projections, so a percentage uplift may be insufficient; and

4 In areas where job growth is expected to create demand over and above the standard method, it may be necessary to make a further uplift to this in order to help improve affordability, for reasons set out at para 7.10.

7.15 We have already considered how much housing would likely be needed to support the incremental growth and transformational growth scenarios set out in the SQW economic analysis report prepared to accompany the NIC report on the CaMKOx arc. This suggests c.1,700-1,800 dpa and c.2,200-2,300 dpa would be needed to support each scenario, respectively. However, in order to support future employment growth and address commuting imbalances, up to c.2,700-3,200 dpa would be needed, which would also be associated with improving affordability above the employment growth.

7.16 This standard method figure of 1,771 dpa is only slightly higher than the 1,650 dpa in the current Cambridge and South Cambridgeshire local plans. Indeed, Greater Cambridge has exceeded this level in three years since the start of the current plan period, as shown in Figure 7.3.

Figure 7.3 Net completions in Greater Cambridge since 2011/12 and standard method



Source: AMR

7.17 Given the NPPF (2019) maintains the Government's objective to 'significantly boost' the supply of housing, i.e. to deliver more than what has come before, it is questionable whether an area such as Greater Cambridge should simply continue building homes at a level similar to that seen in recent years, even if that would satisfy the standard method. Furthermore, the NIC report found that housebuilding rates across the CaMKOx arc needed to roughly double from recent delivery levels to meet needs in full, including those needs from land constrained markets. We also know that projections of population and household growth for Cambridge are likely to be less reliable than for most other areas and are potentially underestimating future household growth.

7.18 In light of local and wider aspirations for Cambridge and the CaMKOx arc we consider it appropriate for Greater Cambridge to – at the very least – plan for growth above the incremental growth scenarios (which is akin to the standard method figure), and consider delivery of enough housing to support the transformational scenario, i.e. c.2,200-2,300 homes per year, equivalent to **around 51,000 to 53,000 homes in total over the emerging plan period**. The transformational scenario would be more closely aligned with the short-term growth scenario from the CPIER report which suggests a potential doubling of the number of jobs in the Cambridgeshire and Peterborough Combined Authority between 2011 and 2040[13]. However, this should be seen in the context that between 61,000 and 74,000 homes would be needed to support employment growth and address commuting imbalances; should the Council wish to address the deterioration experienced in the pattern of commuting it would need to plan for housing in this range.

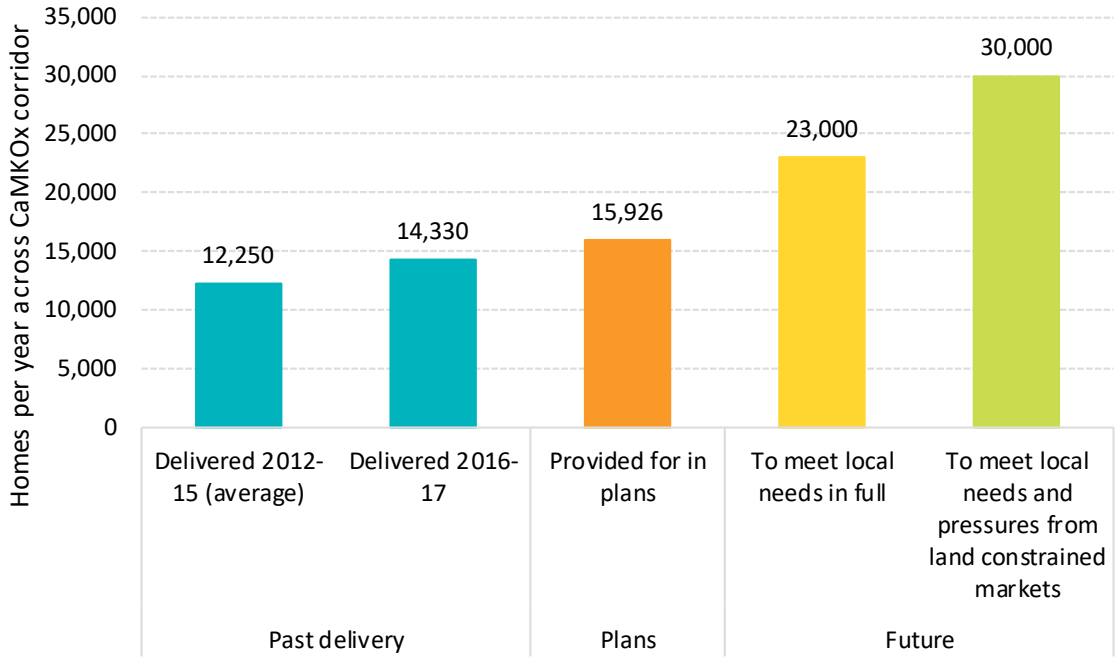
[13] The CPIER report does not contain specific forecasts but Fig 1 (graph – no data given) shows combined authority employment has 400,000 jobs in 2011. If short term rate of growth continued number of jobs could more than double by 2040 to around 880,000 jobs when compared with 2011 jobs. CPIER stresses that none of theses scenarios are 'forecasts', but purpose is to enable debate about about combined authority ambitions.

2. Unmet need and pressure from London

7.19 Greater Cambridge is encompassed by the wider London housing market area which extends across much of the wider south east. The backlog of housing need in London has been accruing for numerous years[14] and will continue in the future[15] to a significant degree. It is unlikely that the Mayor of London or Government will seek to address London's unmet needs formally (e.g. through a strategic plan for the wider south east or through engagement with individual authorities) but this will not stop the region – including Greater Cambridge - from experiencing the housing pressures associated with London overspill.

7.20 Greater Cambridge's links to London and relatively affordable housing, putting it within commutable distance, meaning that local residents can be priced out of housing by those moving out of London with greater purchasing power. Should London continue to not meet its needs in full, pressures on housing in Greater Cambridge from London's overspill will only continue to increase. This issue was highlighted in the NIC report; the NIC estimates that if the CaMKOx arc were to address demands associated with land constrained markets (London), needs would rise from 23,000 per year to 30,000 per year (i.e. rising by around one-third). It is reasonable to assume that the greatest pressures would be felt in the areas with the closest links to London, e.g. around towns/cities with good transport linked. Figure 7.4 below shows how the NIC's assessment of need for the CaMKOx arc - including that associated with needs from land constrained markets - compares with recent delivery levels and current plans.

Figure 7.4 Homes per year needed across CaMKOx arc - past delivery and future need



Source: National Infrastructure Commission Report - Partnering for Prosperity

7.21 The significant uplift that the arc as a whole is likely to need to meet needs in full including from land constrained markets (30,000 per year, which is roughly double what has been delivered in recent years) provides further justification for Greater Cambridge delivering more than its

[14] The 2013 London SHMA identified London's housing need to be 49,000 homes per year. In the last few years, delivery in London has averaged closer to 32,000 homes per year [MHCLG Live Table 125 London stock 2014 – 3,427,645, stock 2018 3,556,161].
[15] London's need under the current standard method is in the region of 76,000 per year. The submitted London Plan had a target of 65,000 per year (in the 10 years 2019/20 to 2028/29) however this was reduced in the Panel Report to 53,000.

standard method figure, which would suggest Greater Cambridge continues at a level akin to recent delivery. To do so would place a disproportionate amount of pressure on other parts of the arc to increase housing delivery far above what has been delivered in recent years. This lends further support to the adoption of a housing requirement which is in line with the transformational scenario, at around 2,200-2,300 per year. However, the reality could be even higher; if we adopt the NIC's findings (i.e. that recent delivery levels would need to roughly double), this would imply a target in the region of around 3,400 (based on recent delivery of around 1,700 per year), or around 78,000 over the plan period.

3. Affordable housing needs

7.22 Under the previous (2012) NPPF, authorities were required to address affordable housing needs as part of objectively assessed housing needs. This involved assessing affordable housing needs and considering how much affordable housing was likely to be delivered as a proportion of mixed market-affordable developments, then determining whether an uplift to the housing figure could be made to help meet more needs.

7.23 The section of the PPG which sets out how affordable housing needs should be assessed and the paragraph which states "*…an increase in the total housing figures included in the plan may need to be considered where it could help deliver the required number of affordable homes"* remains within the PPG, although affordable housing needs do not form part of the standard method.

7.24 Whilst areas with high affordable housing needs may see these partly addressed by the uplift for affordability, the true extent of affordable housing needs may not be reflected by this. As with employment needs, affordable housing needs are not necessarily linked to overall housing needs because it is a need for a specific tenure of housing. For example, in areas with high amounts of households on the waiting list, this does not necessarily mean a net increase in people (and households) overall in the area, but a specific tenure of housing needs to be provided in order to meet their needs. In Greater Cambridge, as of 2018/19 there are 3,989 people on the housing waiting list of which 1,835 are in reasonable preference categories. The breakdown of this need based on number of bedrooms and category is shown below.

Table 7.3 Housing waiting list - total need by bedrooms

	Total households on the waiting list	1 bedroom	2 bedrooms	3 bedrooms	More than 3 bedrooms	Unspecified /duplicate
Cambridge	2,624	1,713	639	205	57	10
South Cambridgeshire	1,315	651	442	174	48	0
Total	**3,939**	**2,364**	**1,081**	**379**	**105**	**10**

Source: MHCLG Local Authority Housing Statistics 2018/19

Table 7.4 Housing waiting list - reasonable preference households by category

	Reasonable preference households	Homeless	Owed a duty	Insanitary/ overcrowded/ unsatisfactory	Medical/ welfare grounds	Hardship
Cambridge	1,159	116	23	975	468	59
South Cambridgeshire	676	44	0	162	56	74
Total	**1,835**	**160**	**23**	**1,137**	**524**	**133**

Source: MHCLG Local Authority Housing Statistics 2018/19

7.25 In many areas, the level of affordable housing need is so substantial that it would generate a number which would be unrealistic to deliver (if affordable needs were met in full as a percentage of mixed market-affordable developments), but this might still support delivering a higher number than the standard method. Without all the information needed to undertake an affordable housing need assessment we cannot quantify Greater Cambridge's future affordable housing need, but given Greater Cambridge is known for its affordability issues, and this issue was raised repeatedly in the NIC report, we can safely assume affordable housing needs place significant upward pressure on overall housing needs.

7.26 Affordable housing needs also link to employment needs because potential employers may be deterred from locating in Greater Cambridge if suitable and affordable housing cannot be secured for potential employees (something recognised within both the NIC and CPIER report). Whilst Cambridge is noted for its high paying jobs in highly skilled industries, it still relies upon lower wage jobs where workers may require affordable housing.

What type of housing?

7.27 The NPPF places clear importance on authorities identifying the housing needs of different groups and ensuring these are reflected in policies:

"…the size, type and tenure of housing needed for different groups in the community should be assessed and reflected in planning policies (including, but not limited to, those who require affordable housing, families with children, older people, students, people with disabilities, service families, travellers, people who rent their homes and people wishing to commission or build their own homes)." (NPPF para 61)

7.28 Like all other parts of the country, one of the key housing issues in Greater Cambridge will be to address the housing needs of an ageing population. According to the household projections, shown in Figure 7.5, single person households and couple (or multiple adult) households age 65+ will be the fastest growing in Greater Cambridge over the plan period. Older households have a wide range of needs and demands; many older households who own their home are reluctant to move for sentimental, practical or financial reasons leading to significant under-occupation, i.e. where single people or couples live in large family sized housing. Some older households may require accessible homes or homes with retirement complexes where some degree of support is available, e.g. in the form of a part-time warden. Some may wish to maintain a degree of independence whilst needing a form of health care, so may need extra care housing, while others will need the facilities of a care home. Older households will also have varying incomes and therefore a mix of affordable and market options is likely to be needed.

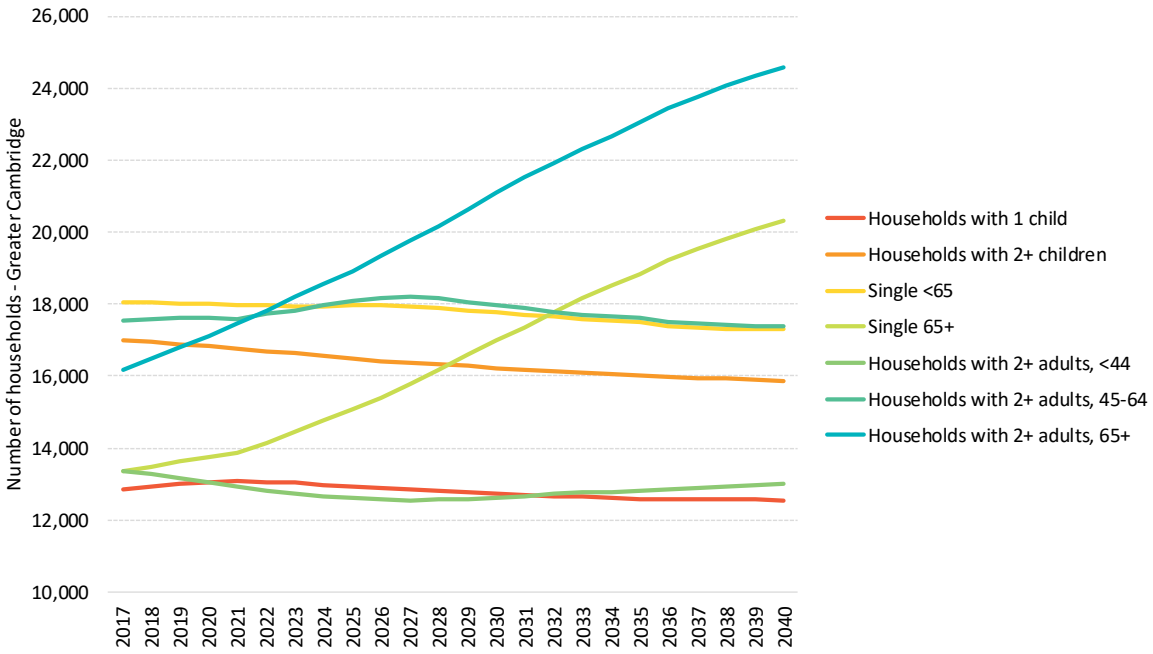
7.29 Other household types – including young single person households, couples and families – are expected to remain broadly stable or decline. However, this does not mean that additional housing should ignore these needs, for a number of reasons:

1 Providing an uplift to the household projections for affordability (as applied through the standard method) is likely to have the effect of inducing household formation, and thus have the most significant impact in younger age groups. For example, young adults who were previously living at home or in multiple adult households (HMOs) will be able to form a household where they otherwise would not. Therefore, the actual number of young single person and couple households (and potentially families) is likely to be higher than that suggested by the household projections; and

2 Providing additional housing to meet job demand is likely to have the effect of inducing in-migration to Greater Cambridge (either from surrounding areas or further afield). Given those moving are likely to be economically active, they are likely to be young people and

families. Because of this, the number of single person, couple and family households is likely to be higher than the projections suggest.

Figure 7.5 Projected change by household type - Greater Cambridge - 2017-40



Source: ONS 2016-based Household Projections

7.30 Earnings in Greater Cambridge are above those in surrounding areas and national averages and there is a relatively high proportion of jobs in high-tech knowledge intensive sectors, which suggests there is likely to be a good demand for high quality market or executive housing in Greater Cambridge. However, there is still a diverse local economy with a higher than average portion of workers employed in public admin, health and education which are more likely to be lower paid (compared with jobs in the knowledge intensive sectors) and we know that housing affordability is particularly acute in Greater Cambridge.

7.31 A range of affordable housing options are likely to be needed to support those on all incomes in Greater Cambridge, but it is worth considering how a new local plan can take full advantage of new types of affordable housing in the NPPF, particularly forms of affordable purchase. This can assist households who can afford to rent privately (and thus likely be ineligible for affordable rented housing) but may lack the income needed to buy in the open market.

7.32 In Cambridge, households with an income of between £38,000 and £50,000 are able to rent an average (median) 1-2 bed home. In South Cambridgeshire this income is £30,000-£35,800, due to the lower cost of rents. However, in Cambridge, a household income of just over £63,000 is needed to afford to buy an entry-level (i.e. lower quartile) home, which carries a cost of £335,000. This means that any household living in Cambridge which has an income of between £50,000 and £63,000 (for a couple, this would be earning £25,000-£31,500 each) is likely to be 'stuck' in the gap between buying and renting; a discount home for purchase, shared ownership or other affordable purchase option could help meet this need. The gap could be even higher if the household contained children and needed a home which cost more than the entry-level average of £335,000.

7.33 The gap is slightly greater in South Cambridgeshire; whilst rents and house prices are both cheaper than in Cambridge, any household with an income of between £35,800 and £53,000 would be 'stuck' in the gap between buying and renting.

Table 7.5 Difference between household income needed to rent and buy in Greater Cambridge

	Renting		Purchasing (open market)	
	Income needed - median 1-bed*	Income needed - median 2-bed	Lower quartile prices - 2018	Income needed**
Cambridge	£38,000	£50,000	£335,000	£63,278
South Cambridgeshire	£30,000	£35,800	£280,500	£52,983

Source: Lichfields based on VOA Private Rental Market Statistics to year ending April 2019, ONS House Price data, English Housing Survey. *Assuming household spends no more than 30% of gross income on rent. **Based on 15% deposit and borrowing 4.5x household income. Based on English Housing Survey which shows first-time buyers (who buy with a mortgage) have an average deposit of 15.6%.

7.34 Greater Cambridge is and will continue to be a diverse area in the future; an area of young and old households, families and single people, those on low and high incomes, in high and low skilled jobs, as well as a large student and university associated population. It will need to ensure a diverse provision of housing in the future to ensure that no groups of its population are left behind and to ensure that the diverse workforce needed to support its economic potential have access to suitable and appropriate housing which needs its needs and demands.

7.35 In terms of housing type, Greater Cambridge will need to provide a diverse supply of housing to meet the challenges of an ageing population as well as to attract and support the workforce needed to fulfil the area's economic potential.

8.0 Great places – Where should new jobs and homes go?

Employment demand

8.1 The success of the Cambridge economy is built on a spatial concentration of activity in the centre and fringe of Cambridge City itself: a pattern typical of clusters of high value, knowledge-based activities. Employment growth has been less effective where the attempt has been made to disperse it to locations outside Cambridge beyond the Green Belt, as illustrated by the new settlement of Cambourne, which has not achieved its potential. In this context, the Council's spatial strategy for growth needs to work with the grain of the local economy.

8.2 Submissions made to the Cambridge and South Cambridgeshire Local Plan examination on behalf of Pigeon Land and Lands Improvement Holdings[16] included representations from several organisations located in/around Cambridge, noting (inter alia);

- Many existing premises are full and there is high demand for additional floorspace (evident through waiting lists);
- Businesses typically wish to be located close to Cambridge to take full advantage of links to the University, labour market and other businesses;

  This is supported by, for example, the fact that virtually all research organisations in the Cambridge cluster are found within the city centre, e.g. the University and several large hospitals. Few research organisations are located outside of Cambridge, the key sites being Hitchingbrooke and Papworth Hospitals[17].
- A further issue is that of housing, with limited housing which is affordable within walking/cycling distance (in part because this housing is attractive to London commuters with higher purchasing power).

8.3 Research by Bidwells which also supported these submissions found that companies want to grow and remain in Cambridge. It also found that – concurrently – office space in the city centre is being increasingly converted for residential use, including student accommodation, further increasing demand for floorspace which is available for commercial use. To maximise the benefits that companies gain from being located in or near Cambridge, including access to a highly skilled labour force, other businesses and the university, employment land needs to be located if not in the city then as close as possible, i.e. on the edge of Cambridge.

Linking homes to employment

8.4 In order to fill jobs generated by development of new employment space there will need to be a sufficient amount of suitable housing within commutable distance. We know that providing housing anywhere within Greater Cambridge will likely contribute to meeting employment demand because the two authorities form the centre of the Cambridge travel-to-work area, and we have quantified the amount of housing which is likely to be needed across Greater Cambridge to support a transformational job growth scenario.

8.5 However, depending on where in Greater Cambridge new homes are provided will have a significant impact on how people travel to work, including whether this is by sustainable means linked to the climate change theme. This is logical; where a road is the only link between where

[16] Matter 4 Employment and Retail - CCC 5102/SCDC 20801 – representations by CODE on behalf of Pigeon Land and Lands Improvement Holdings, Appendices 1-3

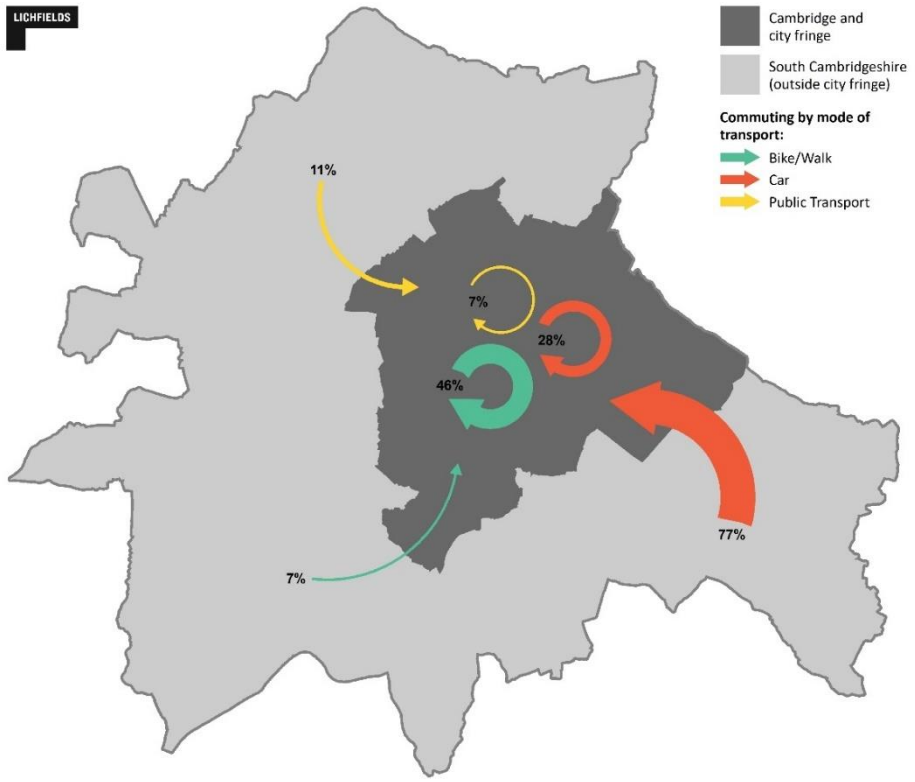
[17] Source: Cambridge Ahead

someone lives and works, they are likely to drive. People living on public transport routes who are employed in other locations along the same route are more inclined to take public transport if they are close to a station, while those living close to their place of work are likely to walk or cycle.

8.6 We have looked at how the travel patterns of people who live in or on the edge of Cambridge and who work in or on the edge of Cambridge compare to those who live outside the edge of Cambridge, i.e. in the rural part of South Cambridgeshire[18]. A total of just over 18,000 people travel to work from South Cambridgeshire (beyond the city fringe) into the city and fringe for work. As shown in Figure 8.1, 77% of people commute by car, with only 11% travelling by public transport and only 7% travelling by bike or walking.

8.7 A total of almost 61,000 people live in the city and fringe, and either travel to a fixed location from work or work from home. Of these people almost half (46%) cycle or walk to work – amounting to just over 28,000 people. The proportion driving is much lower than those travelling in from elsewhere in South Cambridgeshire, at 28% (17,300 people). 7% travel by public transport (4,200 people). A further 16% of people living/working in the city and fringe work from home (amounting to 9,500 people).

Figure 8.1 Commuting into Cambridge/city fringe by mode of transport – living within Cambridge/city fringe and from those living in South Cambridge

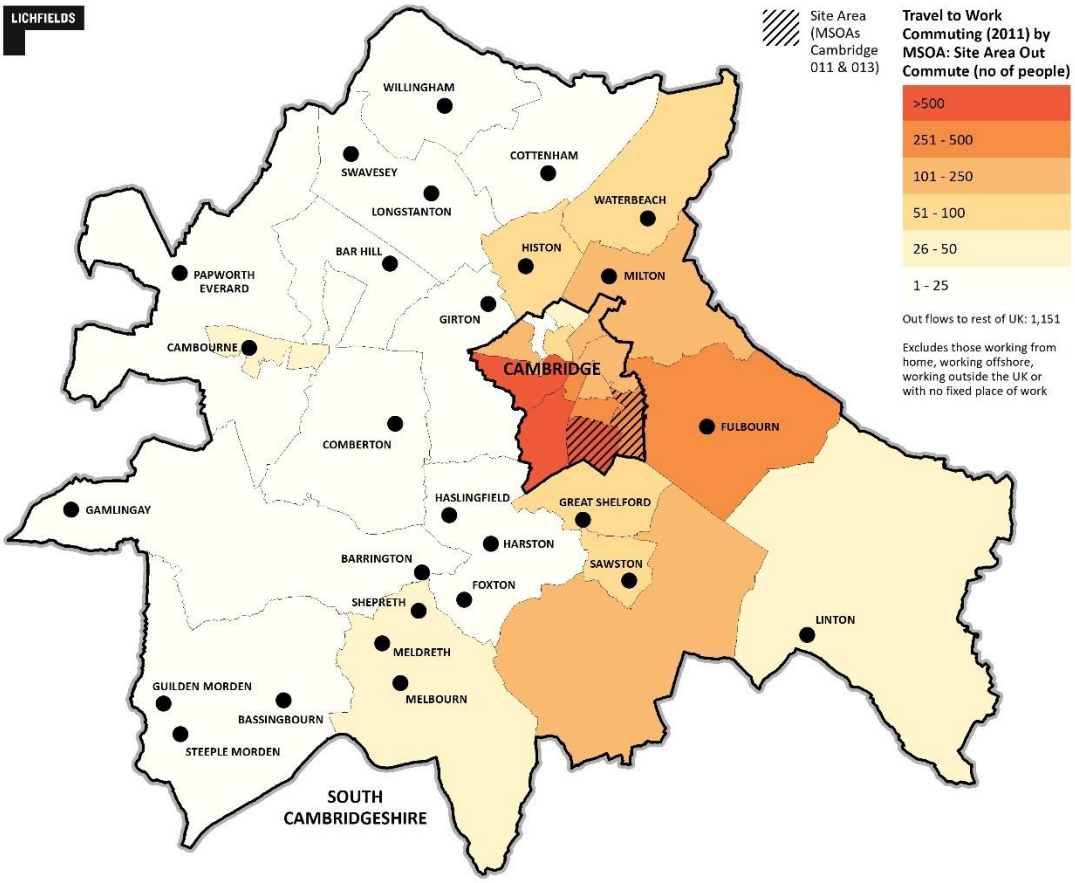


Source: Census 2011. Analysis refers to those who travel to a fixed place of work or work from home. It excludes those with no fixed place of work or who work offshore/outside the UK. *Car refers to those travelling as a driver of a car, van or motorcycle and those who travel by taxi. People travelling as passengers in cars (3%) and those working from home or commuting by another method of transport (16%) are not included in the above diagram.

[18] This encompasses Cambridge and the Middle Super Output Areas (MSOAs) which directly adjoin the city boundary.

8.8 Looking specifically at the commuting patterns in the area around the site (south east Cambridge), most people who commute travel within the local area (i.e. work in the same MSOA in which they live), commute into Cambridge city or into adjacent parts of South Cambridgeshire to the east and south (e.g. Fulbourn and Duxford).

Figure 8.2 Commuting flows out of site area (MSOAs)



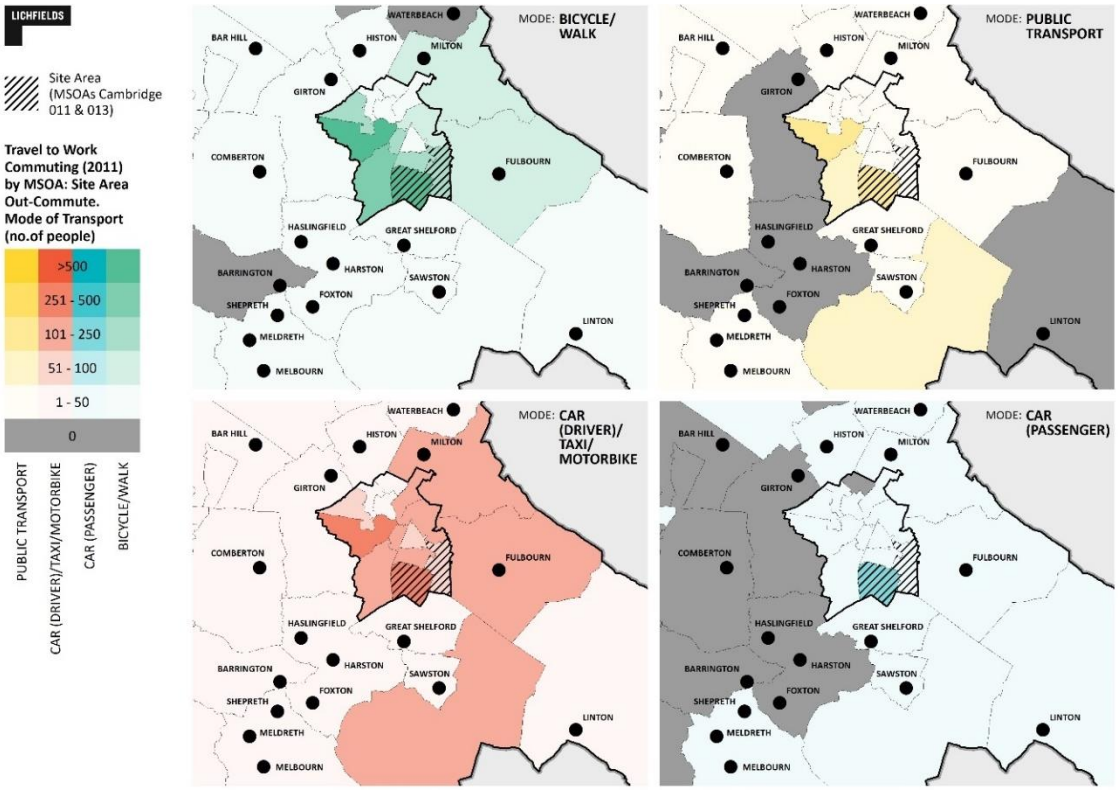
Source: Census 2011. Excludes people who work from home, have no fixed place of work or work offshore/outside the UK.

8.9 Of the 6,500 people living in the area around the site at the time of the 2011 Census who travelled to work somewhere within Greater Cambridge[19], almost half – 3,100 – either cycled or walked to work. Most of these travelled to the city centre or worked locally (i.e. within the same MSOA), as a shown in Figure 8.3.

8.10 Travelling by car (or motorbike, as a driver, or by taxi) was the second most common method for those living in the local area, with 2,400 people (37%) travelling to work this way. However, this was mainly those work worked outside of Cambridge, in areas such as Fulbourn and Duxford, as shown in Figure 8.3. Some residents do drive to work in the city, particularly the west of the city where the University is mostly located (with 282 residents of the site's local area commuting to this MSOA), but this is much fewer than the number cycling, walking or taking public transport (totalling 834). Public transport as a method of travel to work for those living in the site's local area is modest at 11.5%.

[19] As our analysis is concerned with the method of travel used by people who commute to a fixed place of work regularly, i.e. commuters, it excludes those who work mainly at/from home, those with no fixed place of work of those working offshore/outside the UK.

Figure 8.3 Commuting flows out of site area by mode



Source: Census 2011

8.11 It would be reasonable to assume that if housing and employment were co-located at Land to the South and East of Cambridge, the proportion who live and work in that local area who cycle or walk to work would be high because work would be within easy walking or cycling distance. At the time of the Census, of the 2,100 people who lived in the local area around the site and travelled to work in the same area, 68% either cycled or walked to work. A further 9% travelled by public transport (not too far from the average for all local residents who travel to work across Greater Cambridge) suggesting reasonable bus links exist in/around the area; something which could be further improved as a part of development. A further 19% drive to work, however this has the potential to be reduced if the proposed development incorporates infrastructure to encourage sustainable travel in and around the local area. It is also significantly smaller than the proportion who travel to work by car into the city and edge of city who live elsewhere in South Cambridgeshire – as shown above, this is 77%.

8.12 If jobs need to be in/around Cambridge and the most sustainable methods of travel to work arise when people are close enough to walk/cycle, then housing development in the city fringe must be the best option. It is logical that the co-location of housing and employment will lead to the most sustainable outcomes and the empirical evidence supports this. Although in other circumstances an approach which disperses housing and employment growth and links these areas together (e.g. by rail) may produce sustainable live-work patterns, the unique importance of locating employment near to Cambridge (reflecting its unique dynamics) and the high prevalence of car use amongst those commuting into the city means that for Greater Cambridge, a strategy in which housing and employment are located on the city fringes are most likely to produce the most sustainable live-work patterns.

9.0 Review of the Sustainability Appraisal

9.1 We have reviewed the Sustainability Appraisal (SA) documents which accompany the consultation, including the SA Scoping Report and the SA Issues and Options Report. The purpose of the SA is to assess the *"extent to which the emerging plan, when judged against reasonable alternatives, will help to achieve relevant environmental, economic and social objectives."* (PPG ID11-001). The PAS Local Plan Route Mapper & Toolkit[20] identifies that:

9.2 *"too often the Sustainability Appraisal process… remains detached from the actual plan-making journey. This can result in duplication and become a tick box approach to meeting the legislative requirements, rather than being used as a key tool for testing the development of your plan or update from an environmental, social and economic perspective. The Sustainability Appraisal process should be at the heart of plan-making."*

9.3 In that context, the SA Scoping Report and the SA's appraisal of the options set out within the Issues and Options consultation provide a reasonably balanced, but necessarily high-level assessment of the six options. We appreciate that (excepting Option 2 Edge of Cambridge Outside the Green Belt, which relates to Cambridge Airport) the options are as yet unrelated to specific sites and/or proposals and as such the relative sustainability of one option against another will inevitably be able to be refined as an when site options get set against the spatial strategy. In that context, individual sites might perform better or worse on their own merits than the option they may be a part of (e.g. not all edge of Cambridge sites will score the same; some might be more sustainable than others, performing better than overall sustainability of that option as assessed in the SA at this stage). This is recognised in the SA (para 4.3), and how it should be addressed through future refinement and detail is also identified in the SA (para 4.10). The Councils will need to consider how any spatial strategy and combination of proposals perform against the objectives and criteria for the plan.

9.4 Notwithstanding the high-level nature of the above we would draw attention to the following points in respect of the SA methodology and objectives and how it will inform a site selection process:

1 The SA Objectives identified (SA Scoping Report Section 11) do not appear to be weighted in any way, meaning in effect the SA makes no distinction as to whether one SA Objective may be more or less important than another in informing which option should be taken forward; all objectives are treated equal in the analysis. Where there are competing aims between objectives, or balances to be struck, it will be necessary for the Council to consider wider policy aims and objectives and the relative importance of these. For example, given the City's declaration of a climate emergency, it might be more appropriate to weigh in favour of options which score better on such objectives that deliver outcomes aligned to that (e.g. sustainable sites, well located to minimise travel by private vehicle).

2 Linked to the above, not all objectives have a spatial dimension to them. For example, some objectives around aspects design might be equally implemented on any site or option; in such instances the location is less important. The site appraisal and selection process should focus on those reasonable alternative spatial options where location is a differentiating factor (which the appraisal of options within the SA does to a degree, noting the "difficulties" set out para 2.19-2.22).

3 The SA site appraisal criteria (SA Scoping Report Appendix 1) provides a reasonable coverage of objectives and themes for assessing sites. However, we are concerned with how

[20] https://www.local.gov.uk/sites/default/files/documents/PAS%20Local%20Plan%20Route%20Mapper%20v1%200.pdf

the criteria will be applied where sites and proposals will bring forward new infrastructure or uses, which could address deficiencies the locality. The current approach under some criteria of using distances to existing facilities, may negate the opportunity to assess whether sites could enhance wider access to such facilities by bringing forward new centres or local community facilities. It might also prejudice larger scale development that can achieve critical mass to viably deliver infrastructure (i.e. NPPF para 72). For example, the criteria under SA Objective 4 indicates if a development is likely to incorporate new health or open space facilities, then it will be assessed as though those would come forward, but similarly under SA Objective 2 the criteria appears to apply only to distance to existing city/town/rural centres rather and primary/secondary schools, rather than taking account of whether development could bring forward new provision of such facilities. It is imperative any implementation of the site criteria can adequately respond to the opportunity to deliver sustainable development through change, not just against baseline conditions.

9.5 In addition to the above points, we have reviewed the appraisal of spatial options and note the following:

1 On SA Objective 12 (climate change) the main likely effect from the different locations is rightly transport based. In simple terms, locations within and on the edge of Cambridge City, relative to those outside, a) reduce the need for travel/distances for travel (i.e. homes and jobs are close by) and b) provide better opportunities for the most sustainable transport modes (i.e. walking/cycling). This is recognised in the SA Scoping report (para 5.23) which reports 31.9% of residents in the City cycle to work, compared to 7.6% in South Cambridgeshire. Indeed, the baseline should also recognise that - based on Census 2011 data - overall sustainable modes of transport (i.e. public transport, walking and cycling) in Cambridge City account for a 58% modal share[21]. This is only marginally reduced in the areas on the edge of the City (e.g. Queen Edith's ward on the south east edge has 57% sustainable modes[22]). This compares to only 16% in Bourn Ward (Cambourne). Achieving shift onto sustainable transport modes will be difficult in locations beyond the City. Even on well served public transport corridors, it is very unlikely such locations could achieve more than half of journeys to work being made by sustainable modes (e.g. bus, walking, cycling etc.); the uniqueness of Cambridge City is its ability to engender walking and cycling as a preferred mode of transport because of its location. In our view the SA appraisal does not go far enough to recognise this distinction; growth on public transport corridors, based on the baseline evidence, would a) not generate the same modal split towards sustainable modes and b) would still create longer journeys, which even if taken by bus (for example), would still have a greater impact on climate change than equivalent journeys walking or cycling (which are ultra-low impact). Option 6 should be scored relatively lower (e.g. mixed minor effects) on SA Objective 12 than the equivalents for Option 2 and 3 on the edge of Cambridge.

2 There is an inconsistency on SA Objective 11 between the assessment for Option 2 reported at page 37 (i.e. "-?" minor negative but uncertain effects) and that then included on the summary table at page 47 (i.e. "++/-?" mixed significant positive and minor negative effects). It is assumed this is a typographical error, rather than a change to the scoring within the conclusion, but it risks presenting that Option 2 scores better than it actually does against climate change objectives (whereas it should be comparable with other edge of Cambridge options).

[21] This is Our analysis in Figure 8.1 does not include passengers in cars (i.e. car sharing) so figures do not sum as they refer to different groupings.

[22] As set out in section 8, our analysis focuses on two different MSOA's which include Queen Edith's ward and another.

3 The assessment of SA Objective 14 and at para 3.106 appears to identify concentration of economic activity as a 'negative effect'. Furthermore, it appears to be one of the same scale as to the positive effects that could accrue from shifting towards putting such employment on transport corridors beyond the City. This misunderstands the functional economic market of Cambridge and the growth sectors which new employment land and premises will be serving (as summarised in the SA Scoping baseline). Many of these are overwhelmingly focussed within or on the immediate fringe of Cambridge City and have grown in that way because of clustering effects and agglomeration benefits. Such economic growth potential may be curtailed by dispersal of new employment provision beyond the City; the likely significant effects of pushing growth out is that, in a competitive environment, inward investment is lost to competing centres (both nationally and globally given the sectors Cambridge is home to). There are likely significant negative impacts of such an approach which are not reflected in the SA appraisal, particularly with the assessment that Option 6: transport corridors would likely score as well as Edge of Cambridge locations on SA Objective 14.

9.6 Notwithstanding the above specific points, the overall conclusion and synthesis of the Sustainability Appraisal for the options (paras 3.116-3.119) is broadly concurred with, in particular that overall Option 3 performs better than Options 4, 5 and 6. Good growth on the edge of Cambridge City is inherently more sustainable across the range of themes than other spatial strategies which seek to distribute this growth more widely (either to villages, in new settlements or on transport corridors). This conclusion should be reflected in the Council's next steps in determining a preferred spatial strategy.

10.0 Summary and Conclusions

10.1 This representations document focuses on the inherent suitability of the location of Land to the South East of Cambridge to make a significant contribution to meeting both the housing, employment and social infrastructure needs of Cambridge. It falls within the third option for where growth might go in Greater Cambridgeshire:

Edge of Cambridge: within Green Belt – Creating new homes and jobs in extensions on the edge of Cambridge, involving release of land from the Green Belt.

10.2 The below sets out how development of the site can also help achieve the four key themes of the consultation.

Climate Change

10.3 In many respects, the development at Land to the South East of Cambridge will support the emerging Local Plan's aims with regards to the theme of climate change, most notably through its location. It is a highly accessible site that can encourage low-carbon transportation use: building on existing habits in this location and enhancing local cycling and walking networks to limit private car use. CEG would also pursue on site elements to bring forward a scheme where homes are high-quality, energy efficient, and well-designed to promote low-carbon lifestyles. This is all to promote a potentially net zero carbon scheme.

Biodiversity and Green Spaces

10.4 Not only is this a site whereby a net biodiversity gain is attainable through (but not exclusive to) significant tree planting, creation of new habitats and creation of ecological corridors, it also offers up an opportunity to 'take the pressure of' other local nature reserves close to the site including Beechwoods Nature Reserve. We have been engaging with both Cambridge Past, Present & Future the local Wildlife Trust on the progression of the GB1 application. From these discussions we know that nature reserves are coming under pressure from increasing visitor numbers. The delivery of a substantial country park within the site would not only provide a leisure and recreation location for residents and employees of the new development, but also those in other parts of south Cambridge, to offset impacts on local nature reserves.

Wellbeing and Social Inclusion

10.5 There are a number of gaps in service provision in the south of Cambridge including for community space and local shops and facilities. CEG is committed to delivering community infrastructure and doing so in the early phases of development. This is not only to support 'pioneer' families that move into the first phases of development, but to also support the existing local communities surrounding the site. Land to the South East of Cambridge could include the provision on site of a new dedicated community hub, primary school and local centres including shops and services on site, delivered through the creation of active public places, these could be focused around new local centres, designed to be inviting and safe in order to encourage social interaction.

10.6 CEG is also committed to ensuring community engagement in the design process. Community involvement in the designs of schemes can foster community support and community ownership of a housing development. CEG will therefore work in partnership with the Council and local groups as it has done successfully on other sites across the country, but also locally in the development of the GB1 planning application.

Great Places – Jobs, Homes and where to locate them

10.7 The economic success of Cambridge has been recognised as being of 'national importance' and it is essential that this is supporting by adequate housing. The economy is typically known for being dominated by knowledge-intensive high-tech industries which bring relatively high paying jobs; however, Cambridge is diverse, with high employment in other industries including public admin and health.

10.8 Forecasts suggest that long-term Greater Cambridge could see job growth of up to around 3,500 per year, leading to around 40% more jobs by 2040 compared with 2017. We estimate that around 2,200-2,300 homes per year across Greater Cambridge would be needed to support this transformational scenario (up to 3,200 per year to address commuting imbalances that have arisen just since 2012), and that there is good reason for Greater Cambridge to consider delivery in excess of its standard method figure (of c.1,800 homes per year). This would be consistent with the NIC's findings that housebuilding across the CaMKOx arc would need to roughly double compared with recent delivery levels to meet needs in full, including those from land constrained markets.

10.9 Given land in the city itself is in short supply (and competing with other uses, such as student accommodation or housing) the edge of the city is likely to need to be the focus for future growth. Given this, in order to achieve the most sustainable commuting patterns, housing similarly needs to be located on the edge of the city. We know that the most common method of transport for those living in the city and fringe who also work there is by cycling or walking. This is also true of those who live in the local area around the site and work in Greater Cambridge. The proportion cycling or walking to work rises further for those who live in the local area who also work in the same area, with almost 70% cycling or walking to work. These high levels of sustainable travel can be maintained with the co-location of housing and employment at the site, and potentially the number using cars to travel locally could be reduced if accessibility around the local area is improved as a result of the development.

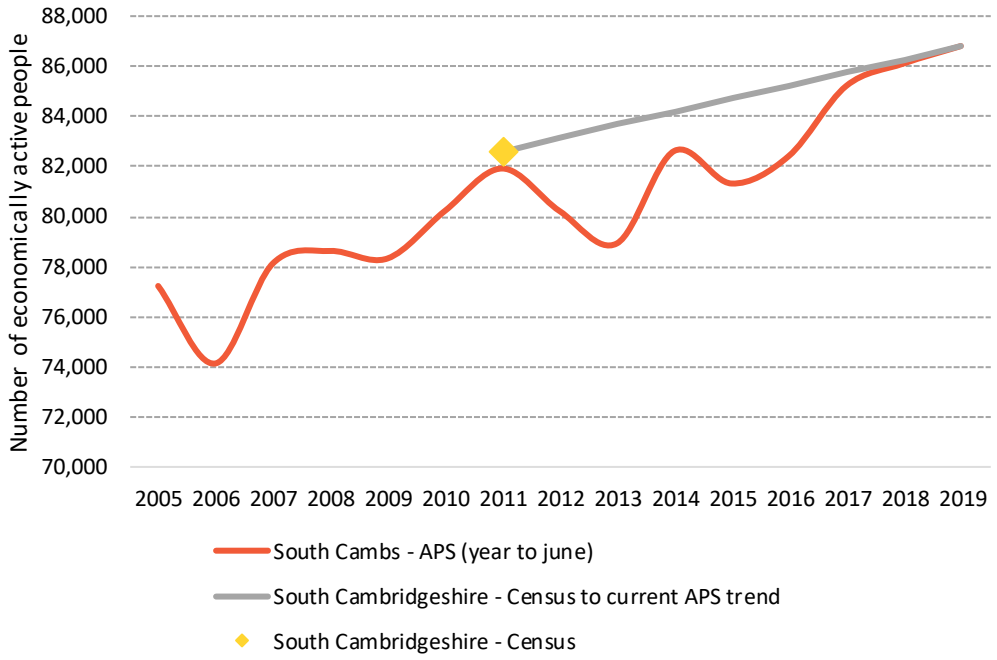
Appendix 1 Historic analysis of commuting in Greater Cambridge

Number of economically active people

South Cambridgeshire

The 2011 Census recorded 82,632 economically active people in South Cambridgeshire. This is very close to the estimate in the Annual Population Survey (APS) for July 2010 to July 2011 of 81,900. However, the APS suggests that since the Census the number of economically active people fell significantly to 2013, before rising sharply by 2016, as shown in Figure 10.1. In recent years (2017, 2018 and 2019) the APS has recorded fairly steady growth.

Figure 10.1 Economically active population - South Cambridgeshire



Source: Census/APS

On this basis, we have used a trend between the 2011 Census and the most recent APS data to estimate the number of economically active people in South Cambridgeshire (shown in **grey** above) and below in Table 10.1. This creates a steady upward trend since the 2011 Census up to the most recent APS data.

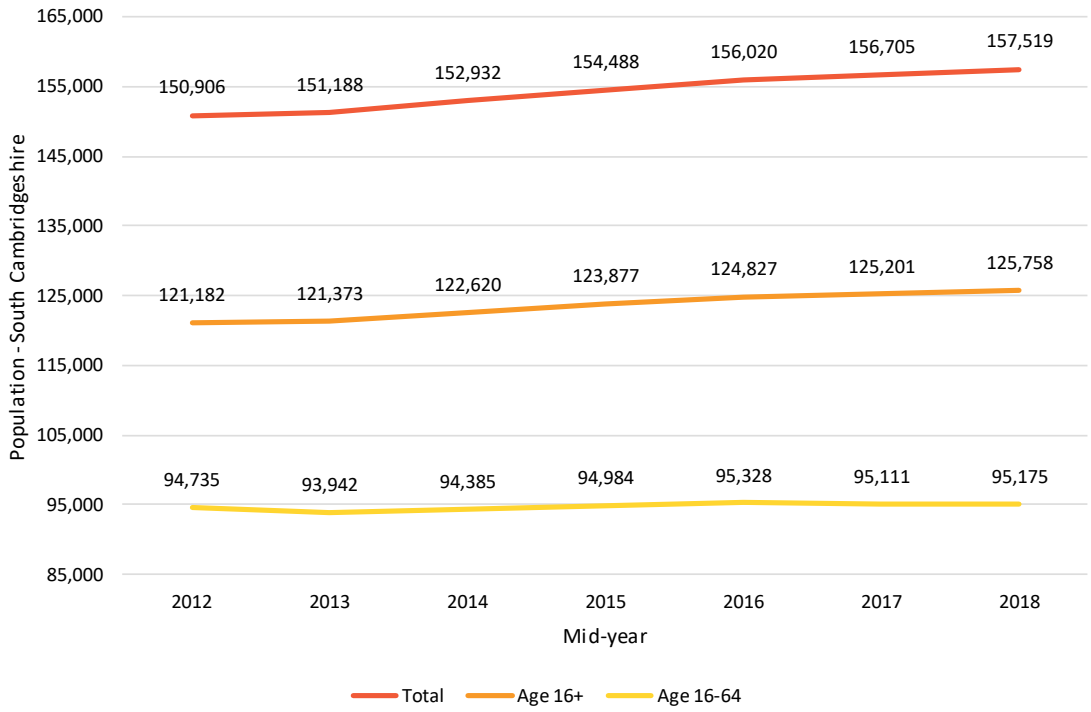
Table 10.1 Estimated number of economically active people in South Cambridgeshire between 2011 and 2019

	2011 (Census)	2012	2013	2014	2015	2016	2017	2018	2019 (most recent APS)
South Cambs	82,632	83,153	83,674	84,195	84,716	85,237	85,758	86,279	86,800

Source: Lichfields based on 2011 Census and APS (year to June data)

A steady rise in the total number of economically active people is South Cambridgeshire would be consistent with the mid-year estimates (MYEs), which show the working age population – both 16+ and 16-64 – has risen steadily in South Cambridgeshire since the Census, as shown in Figure 10.2.

Figure 10.2 Mid-year population - South Cambridgeshire - 2012-18 - Total, Age 16+ and Age 16-64



Source: ONS Mid-Year Estimates

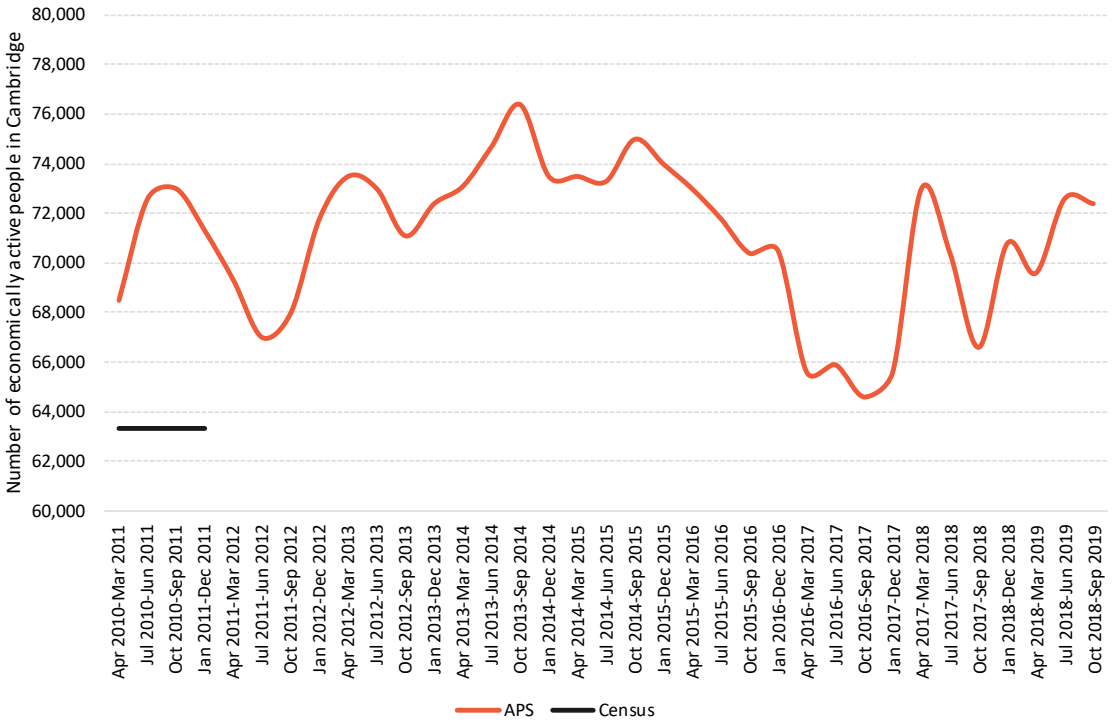
Cambridge

For Cambridge, the 2011 Census recorded 62,320 economically active people. At this time the APS appeared to be consistently and significantly overestimating the number of economically active people – in the period around the 2011 Census it suggested the total economically active population was between around 68,000 and 73,000, as shown in Figure 10.3. Another problem with the APS data for Cambridge is the significant fluctuations each year. Whilst the estimates for South Cambridgeshire fluctuated by a few thousand each year (still significant) the estimates for Cambridge fluctuate by over 10,000 over the space of just a few years – e.g. from a high of around 76,000 in 2014 to a low of 64,000 by 2017.

Furthermore, if one begins with the Census economic activity rates by sex and age, trends these rates forward[23], applies these rates to the mid-year estimate population in each year, and then adjusts these rates so that the total number of economically active people matches the APS total, it would create rates which exceed 100%. All of this further supports the idea that the APS is consistently over-estimating the number of economically active people particularly since the 2011 Census.

[23] Using the Office for Budget Responsibility (OBR) Labour Market Participation Rate Projections (2017)

Figure 10.3 Economically Active population in Cambridge - 2011 Census and APS estimates - 2011-current

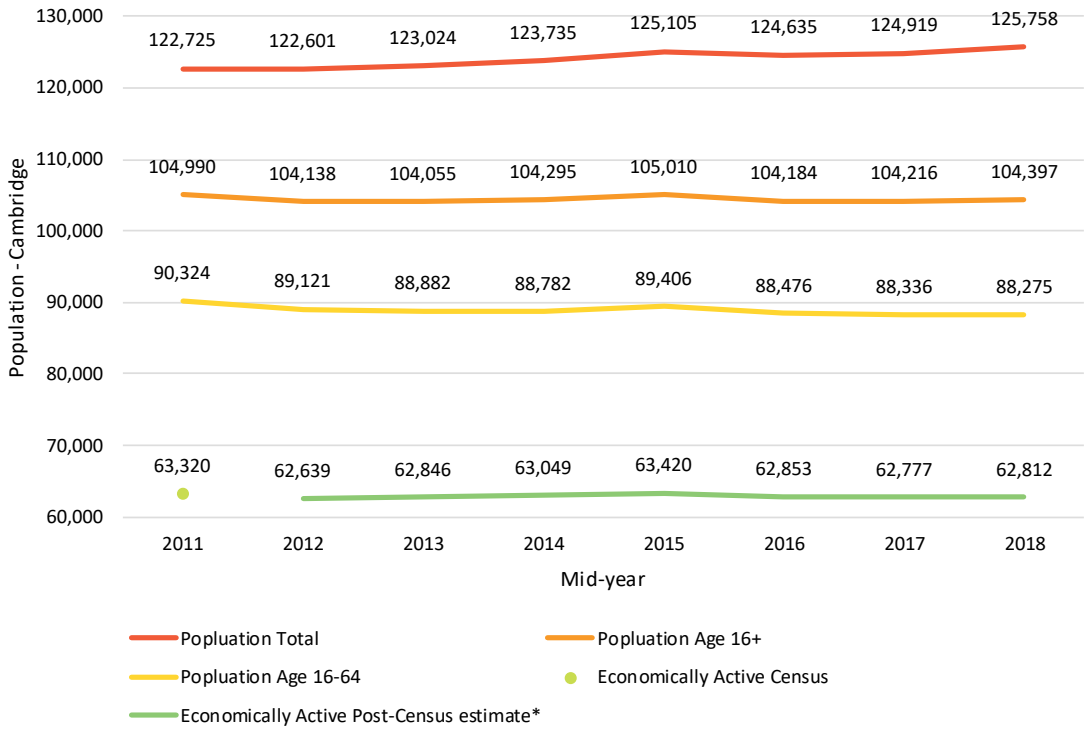


Source: Census/APS

Indeed, unless the number of economically active people in Cambridge is kept roughly in line with the Census level, rates for some age groups would exceed 100% because the working age population in Cambridge has been fairly flat since the Census, as shown in Figure 10.4.

Therefore to estimate the number of economically active people in Cambridge for 2011 onwards, we have trended forward the Census economic activity rates by age/sex using OBR projections, the applied these rates to the mid-year estimates in each year. This would suggest the economically active population of Cambridge has been fairly steady, at around 63,000, since the Census.

Figure 10.4 Mid-year population - Cambridge - 2012-18 - Total, Age 16+ and Age 16-64, Census economically active and post-2011 estimate of economically active



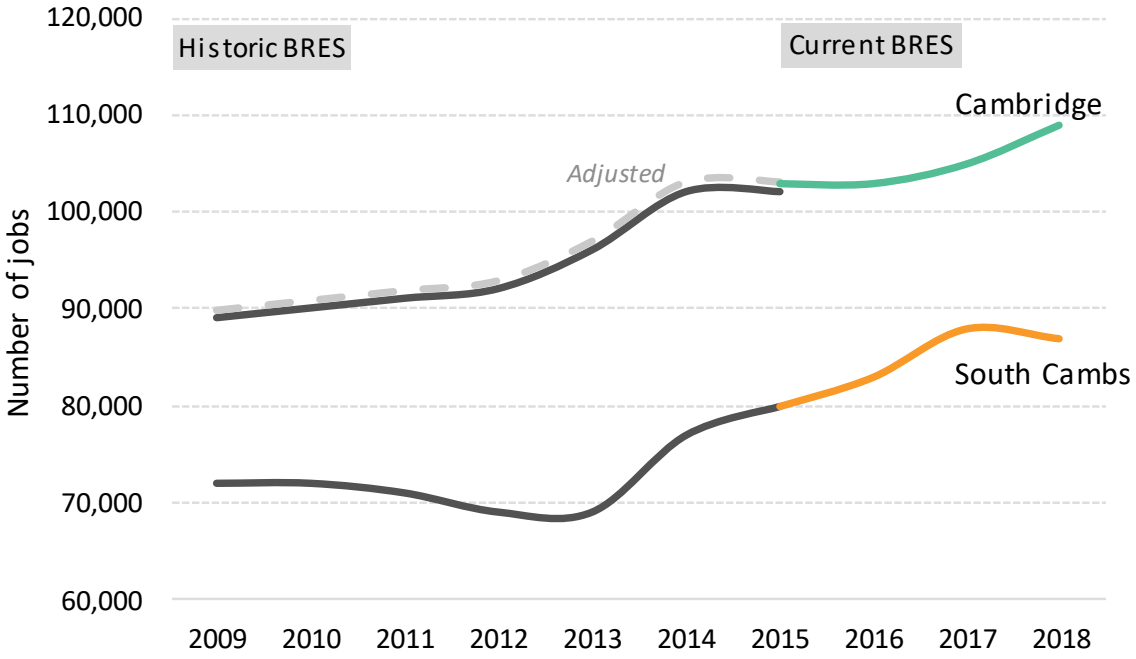
Source: ONS Mid-year estimates. *Post-Census estimates are based on Census rates (by sex and age), trended forward using OBR and applied to the MYEs.

Number of jobs

Figure 10.5 shows the estimate of the total number of jobs in Cambridge and South Cambridgeshire based on the most recent BRES (which provides data back to 2015) and historic BRES (which was based on a slightly different methodology, which has data for 2009-15). For South Cambridgeshire, the historic BRES and current BRES show the same number of jobs in 2015, so despite the methodology change the survey produces consistent estimates over time. For Cambridge, the historic BRES produced a slightly lower estimate of jobs for 2015 compared with the current BRES. Therefore, historic estimates for Cambridge have been revised up marginally for consistency, as shown below.

An estimate of the total number of jobs in Greater Cambridge exists within the SQW report cited in Table 6.1 of this report which suggested there were 188,000 across the two authorities in 2014. BRES data suggests a slightly lower figure of 180,000, however there will always be inconsistencies across data sources. Should the number of jobs in 2014 have been higher than the estimate below based on BRES (e.g. more in line with the SQW figure) this would have suggested net in-commuting was even greater at the time.

Figure 10.5 Estimate of number of jobs in Cambridge and South Cambridge - 2009-2018



Source: ONS Business Register and Employment Survey (BRES)

Estimate of the labour force ratio

Based on all of the above analysis (plus data on employment) the labour force ratio from 2012 onwards for Cambridge and South Cambridgeshire is shown in Table 10.2.

Table 10.2 Labour force ratio calculations for Cambridge and South Cambridgeshire

	Input (source)	2012	2013	2014	2015	2016	2017
Cambridge	Number of jobs (BRES)	92,902	96,000	102,000	103,000	103,000	105,000
	Economically Active Population (see above)	62,639	62,846	63,049	63,420	62,853	62,777
	Unemployment rate (APS)	5.1%	4.7%	4.6%	3.3%	3.7%	3.6%
	Employed residents (economically active less unemployed)	59,444	59,892	60,149	61,327	60,527	60,517
	Labour Force Ratio (employed residents / number of jobs)	**0.64 (0.6399)**	**0.62 (0.6239)**	**0.59 (0.5897)**	**0.60 (0.5954)**	**0.59 (0.5876)**	**0.58 (0.5763)**
South Cambs	Number of jobs (BRES)	69,000	69,000	77,000	80,000	83,000	88,000
	Economically Active Population (see above)	83,153	83,674	84,195	84,716	85,237	85,758
	Unemployment rate (APS)	4.3%	3.9%	3.2%	2.7%	2.4%	2.3%
	Employed residents (economically active less unemployed)	79,577	80,411	81,501	82,429	83,191	83,786
	Labour Force Ratio (employed residents / number of jobs)	**1.15 (1.1533)**	**1.17 (1.1654)**	**1.06 (1.0585)**	**1.03 (1.0304)**	**1.00 (1.0023)**	**0.95 (0.9521)**

Source: Lichfields analysis. For the purposes of modelling through POPGROUP, the unrounded labour force ratio is used.

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