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Greater Cambridge Housing and Economic Development Needs Assessment (HEDNA)

Iceni Projects Limited on behalf of
North Barton Road Landowners
Group

February 2020

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ICENI PROJECTS LIMITED
ON BEHALF OF NORTH
BARTON ROAD
LANDOWNERS GROUP

**Greater Cambridge Housing and
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1. INTRODUCTION

- 1.1 The North Barton Landowners Group (“North BRLOG”¹) has commissioned Icen Projects Limited (Iceni) to prepare a Housing and Economic Development Needs Assessment (HEDNA) to inform its engagement in the preparation of the Greater Cambridge Local Plan. The Greater Cambridge Local Plan is being prepared jointly by Cambridge City Council and South Cambridgeshire District Council.
- 1.2 The Greater Cambridge Local Plan is at an early stage of preparation, with an Issues and Options Consultation due to begin in January 2020. One of the key issues for the plan will be the level of development which the plan seeks to deliver; and an important consideration in how much housing to plan for is what is needed to support the area’s dynamic economy.
- 1.3 Both the National Infrastructure Commission’s Report on the Cambridge-Milton Keynes-Oxford Arc and the Cambridge and Peterborough Independent Economic Review (CPIER) have argued for higher levels of housing provision to support economic growth. The draft Issues and Options Consultation text indicates that based on the CPIER, Greater Cambridge might need to build 66,700 homes over the 2017-40 plan period, equivalent to 2,900 homes a year, which is significantly above the level of housing need indicated at the current time by the Government’s standard methodology. It also indicates particular affordability issues within the Greater Cambridge area, and a significant need for affordable housing
- 1.4 The draft Issues and Options Consultation text recognises the link between economic performance and housing need. This is why this report is a Housing and Economic Development Needs Assessment (“HEDNA”) in that it considers and addresses this important interaction. What Icen’s report does is seek to provide an independent, evidence-based assessment considering these issues with the aim of helping to inform and support the preparation of the joint Local Plan. Icen would welcome the opportunity to engage with the authorities on our findings, if this is deemed helpful.

National Planning Policy and Guidance

- 1.5 The latest version of the National Planning Policy Framework (“NPPF”) was published by Government on 19th February 2019. The NPPF (paragraph 7) states that the purpose of planning is to contribute to the achievement of sustainable development. It states (paragraph 9) that planning policies and decisions should play an active role in guiding development towards sustainable solutions, but in doing

¹ North BRLOG comprises four landowners Corpus Christi College, Downing College, Jesus College, and University of Cambridge

so should take local circumstances into account, to reflect the character, needs and opportunities of each area.

- 1.6 Accordingly, plans should apply a presumption in favour of sustainable development and for plan-making, this means that plans should positively seek opportunities to meet the development needs of their area, and be sufficiently flexible to adapt to rapid change and strategic policies should, as a minimum, provide for objectively assessed needs for housing and other uses, as well as any needs that cannot be met within neighbouring authorities, where it is sustainable to do so (paragraph 11).
- 1.7 In order to support the Government's objective of significantly boosting the supply of homes, the Framework (paragraph 59) states it is important that a sufficient amount and variety of land can come forward where it is needed, that the needs of groups with specific housing requirements are addressed and that land with permission is developed without unnecessary delay.
- 1.8 The Framework (paragraph 60) sets out that in order 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.
- 1.9 Planning Practice Guidance ("PPG") on Housing and Economic Needs Assessments [2a-010]² sets out that the Government is committed to ensuring that more homes are built and supports ambitious authorities who want to plan for growth. It is clear that the standard method for assessing local housing need provides a **minimum** starting point determining the number of homes needed in an area. The PPG states that there will be circumstances where it is appropriate to consider whether actual housing need is higher than the standard method indicates, with such circumstances including:
- 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 in the homes needed locally; or
 - An authority agreeing to take on unmet need from neighbouring authorities, as set out in a statement of ground.

² Paragraph: 010 Reference ID: 2a-010-20190220

Report Structure

- 1.10 This report outlines a framework for assessing housing need in the Greater Cambridge area, recognising that the economic dynamism, strong economic growth potential of this area and the substantial level of funding allocated to strategic infrastructure projects together with the importance of housing growth to supporting this (and vice versa), has been firmly established at a national, sub-regional and local level.
- 1.11 This report draws together evidence underpinning substantial growth ambitions in Greater Cambridge, the Cambridgeshire and Peterborough Combined Authority area and across the Cambridge-Milton Keynes-Oxford Arc to consider ambitious but realistic scenarios of employment growth looking to 2040; and what level of housing provision is needed to support this. It also considers the affordability issues which are present in the Greater Cambridge area, and the interaction between this and the economy.
- 1.12 The remainder of the report is structured as follows:
- Section 2: The Framework for Housing Need
 - Section 3: The Greater Cambridge Housing Market
 - Section 4: The Greater Cambridge Economy
 - Section 5: Scenarios for Housing Need
 - Section 6: Drawing the Analysis Together.

2. THE FRAMEWORK FOR HOUSING NEED

- 2.1 There is an important strategic context to the consideration of housing need in Greater Cambridgeshire, which is influenced by policies and strategies at the sub-regional level, including the area's location within the Cambridge-Milton Keynes-Oxford Arc, which has in effect been designed as what used to be called a 'growth area'; and by its location within the Cambridge and Peterborough Combined Authority area which has negotiated a Devolution Deal with Government. These issues are considered within this section.
- 2.2 The recognition of the economic dynamism and strong economic growth potential of this area, together with the importance of housing growth to supporting this, has been recognised at a national, sub-regional and local level. This provides an important context for the development of the Greater Cambridge Local Plan.
- 2.3 We start out by considering the work undertaken by the National Infrastructure Commission on the Arc. This is of direct relevance to the preparation of local plans in the context of Paragraph 6 in the NPPF (February 2019) which states "*other statements of government policy may be material when preparing plans or deciding applications, such as relevant Written Ministerial Statements and endorsed recommendations of the National Infrastructure Commission.*"

National Infrastructure Commission: Partnering for Prosperity

- 2.4 The National Infrastructure Commission's ("the NIC Report"), titled '*Partnering for Prosperity – A New Deal for the Cambridge-Milton Keynes-Oxford Arc*'³ sets out that the Cambridge-Milton Keynes-Oxford Arc must be a national priority. Underpinned by a range of detailed research, it outlines how the Arc is home to some of the country's strongest economies, that this has fuelled demand for homes, but that this has not been matched by housing supply. This has impacted on housing affordability which now presents a fundamental challenge to future economic growth and prosperity within the Arc.
- 2.5 The Commission's central finding is that:

"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. But success cannot be taken for granted. Without urgent action, a chronic undersupply of homes could jeopardise growth, limit access to labour and put prosperity at risk.

³ Published in November 2017

The Commission's central finding is that rates of housebuilding need to double if the arc is to achieve its economic potential. This requires a new deal between central and local government – one which aligns public and private interests behind the delivery of significant east-west infrastructure and new settlements, and which seeks commitment to faster growth through a joined-up plan for jobs, homes and infrastructure.”

- 2.6 The NIC report sets out that the Arc is **at the heart of the UK's knowledge economy**, which reflects the concentration of world-leading universities and research facilities, internationally significant business clusters, a track record in innovation and entrepreneurship and the skills of its workforce.
- 2.7 In the Cambridge area, it reflects the presence of Cambridge University which is one of the top four in the world; Addenbrooke's teaching hospital, which drives internationally-significant clinical and medical developments; and the broader clustering of electronics, digital and ICT activities from the emergence of Cambridge Consultants (founded in 1960) and TTP (1987) through to the success of businesses such as Autonomy and ARM in recent years.
- 2.8 It identifies that Bioscience has been central to growth in the Cambridge area over the last decade, with the successful development of companies such as Cambridge Antibody Technology, Horizon Drug Discovery and Abca, and the attraction from major inward investment most notably Astra Zeneca. It sets out that the number of patent applications in 2015 in Cambridge was 19 times greater than the UK average; and the City is one of only two UK cities in the European top 20 for innovation. A strong enterprise culture together with the track record of the universities supports research and innovation, and the commercialisation of this.
- 2.9 The NIC Report outlines that fundamental to this success has been the skills of the workforce; describing Cambridge and Oxford as having the most highly qualified workforces in the country with more than 60% of workers qualified to degree level or higher. Indeed, Centre for Cities has identified Cambridge as having the highest concentration of highly skilled residents in Europe.⁴
- 2.10 This combination of innovation, enterprise and a highly-skilled workforce has supported Cambridge (as well as Oxford and Milton Keynes) to be amongst the most productive and fastest growing of main towns and cities across the UK. The NIC found, based on Centre for Cities research, that the contribution of places such as Cambridge to UK economic performance, trading accounts and tax revenues is both significant and increasing.

⁴ Centre for Cities (2016), *Competing with the Continent*

2.11 **The strong economic assets and enterprise culture have supported strong economic performance, fuelling a demand for homes which has not been matched by supply.** The report outlines that:

*“Despite building faster than the national average for the past decade, and despite recent increases in the number of housing completions, **the arc is not building enough homes to meet current and future needs. The under-supply of homes in some areas is reaching crisis point.***

The undersupply of new homes has contributed to high house prices and low levels of affordability for both home ownership and private rental. The ratio of median house prices to earnings is 13:1 in Cambridge and 12:1 in Oxford making them two of the least affordable cities in the UK ...

*But the impact is not limited to the housing market. **The undersupply of homes presents a fundamental challenge to future economic growth in the arc’s towns and cities.** Many communities across this arc enjoy near full employment and without further growth in the population and labour supply, and in the provision of homes for these workers, future growth will be constrained.*

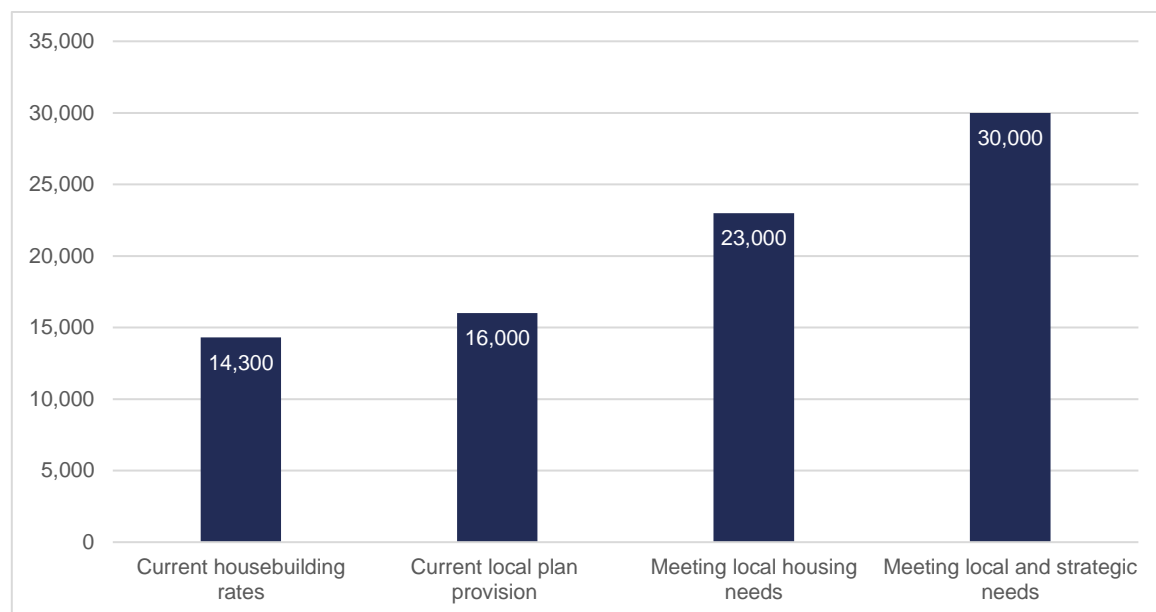
*Indeed, **there is powerful evidence that house prices are already diminishing firms’ ability to attract employees. Workers are being priced out of local housing markets, restricting firms’ access to labour and impacting on their competitiveness.** Global business within the arc have told the Commission that, had they realised the impact that employees’ housing costs would have on their business they may have located elsewhere. Others may yet choose to do so. This is as much an issue for high-tech firms and universities seeking to attract, recruit and retain global mobile talent, as it is for public sector agencies looking to recruit key workers.” (our emphasis)*

2.12 The nature of the economy in the Cambridge area is that it is operating in an internationally competitive market for talented and highly-skilled staff and researchers. The evidence is clear that housing costs are hindering the ability both to attract workers, and potentially business investment. It is not a credible solution simply to ignore the issue – such as through targeting lower economic performance – as the growth pressures exist, and in this scenario affordability and businesses’ ability to recruit skilled staff would worsen.

2.13 It is these issues which underpin the NIC’s conclusion that **rates of housebuilding will need to double if the Arc is to achieve its economic potential.** It sets out that this needs to form part of a package of investment – including in infrastructure; skills development; science, research and innovation; business infrastructure and the continued development of the Arc’s world-leading sectors.

The NIC Study concluded that to meet local and strategic needs and meet economic growth potential would require up to 1 million homes to be delivered between 2016-50, equivalent to 30,000 homes per annum across the Arc. This was more than twice current completions levels and 88% above the levels in current local plans across the Arc.

Figure 2.1: NIC Conclusions on Housing Need across the Arc – Homes per Annum



2.14 These homes, it found, need to be delivered in high quality, well-connected liveable communities which respect the environmental character of the arc and interests and rights of existing communities; and were expected to be delivered through both growth of existing towns and cities, and delivery of new settlements.

What the NIC Study highlights in particular is:

- The strategic importance of the Cambridge economy nationally in terms of sectors in which the UK is/can be at the cutting edge, and in terms of its contribution to national performance;
- The importance of increasing housing supply and addressing affordability to maintaining this economic competitiveness; and
- That ignoring the issue is not really an option, as in this scenario there would be clear negative social and economic consequences.

2.15 In a context whereby there are headwinds and economic risks to deal with in the context of Britain's anticipated exit from the EU (Brexit) and the need to realign trading relationships with countries near and far, it is of national strategic importance – we would suggest – that one of the UK's most competitive economic areas are firing on all cylinders. The NIC report identifies the strategic importance of increasing housing supply to this.

Government's Response to NIC Report

- 2.16 Following the publication of the NIC's report in November 2017, the Government issued a detailed response to the NIC's recommendations in October 2018. This is of direct relevance to the preparation of local plans across the Arc, as the NPPF in Paragraph 6 is clear that **endorsed recommendations of the NIC may be material when preparing plans or deciding applications**.
- 2.17 In responding to the NIC report, the Government welcomed it and its recommendations; explicitly recognising that "*with the right interventions and investment, we believe there is a **transformational opportunity** to amplify the Arc's position as a world-leading economic place and support the government's Industrial Strategy aim to boost the productivity and earning power of people across the UK*" (our emphasis).
- 2.18 The Government acknowledged that the Arc is a globally significant place and has the potential to become even greater. The response explicitly recognised that "*it is already home to 3.3 million people and currently supports some 1.8 million jobs and contributes £90 billion of annual GVA to the UK economy*". The intention is now, the Government said, to learn from successful regional economies across the world; ensuring that threats such as environmental degradation and unaffordable homes do not hamper success.
- 2.19 In order to achieve this, **the Government has designated the Arc as a key economic priority**. It said actions had already been taken in the 12 months following the publication of the NIC report, including committed funding of £3.5 billion for the Oxford-Cambridge Expressway and £74 million allocated to Cambridgeshire and Peterborough as part of the Transforming Cities Fund; and outlined a breadth of actions to seize the opportunity for growth identified in the NIC report.
- 2.20 Looking forward, **the Government has committed to deliver transformational infrastructure projects** to improve east-west connectivity across the Arc, most notably by completing the £1bn East West Rail scheme and the Expressway. Infrastructure investment is expected to unlock opportunities for housing growth, and support economic performance.
- 2.21 In responding to directly to the NIC's ambition to build up to one million new homes to be delivered by 2050, the Government endorsed the recommendation; noting that a step change in housing delivery would be required. The response recognised that:

"When planned in tandem with infrastructure, housing and jobs growth will help drive productivity. This will also help provide the capacity needed to mitigate congestion and enable business networking, and encourage clustering of businesses and jobs with associate agglomeration benefits".

2.22 The Government also recognised in their response that to build the one million new homes by 2050 and deliver the full economic potential of the Arc, the planning and delivery of business, housing and infrastructure should be coordinated across the Arc. The Government made it clear that it has already invited local authorities to bring forward and commit to ambitious proposals on housing and economic growth, including for new settlements.

As we will come onto the evidence demonstrates that the Greater Cambridge area is an economic growth node within the Arc. In the context of the Government's endorsed ambition to deliver up to 500,000 homes across the Arc by 2050 in order to support its economy, there is strong policy support and indeed an expectation from Government that Greater Cambridge will deliver significant levels of housing growth, with delivery above the standard method.

Cambridgeshire & Peterborough Devolution Deal

2.23 The authorities across Cambridgeshire together with Peterborough announced a Devolution Deal with Government on 16th March 2017 which included a commitment to establish a Combined Authority with a directly-elected Mayor; whilst giving Cambridgeshire and Peterborough:

- New powers over transport, planning and skills;
- A new £600 million investment fund over 30 years to grow the local economy; and
- £170 million to deliver new homes.

2.24 The vision underpinning the Devolution Deal included a number of themes around delivering substantial economic growth focused on low carbon, knowledge-based activities; accelerating housing delivery; skills development; transforming public service delivery; and investing to provide world-class connectivity and transport systems.

2.25 **The economic commitments within the Devolution Deal included increasing economic output by nearly 100% over the next 25 years (2017-42), increasing GVA⁵ from £22 billion to £40 billion;** as well as enhancing the area's position as a global leader in knowledge and innovation; and further developing its key sectors including life sciences, information and communication technologies, creative and digital industries, clean tech, high-value engineering and agri-business.

2.26 The Devolution Deal also centred around achieving ambitious levels of housing growth; with **the Deal setting out that the Combined Authority, with its partner authorities, was expected to use its powers and resources to substantially increase housing delivery.** The Deal expected the

⁵ GVA describes the total value of goods and services produced in the economy

Combined Authority to bring forward proposals to deliver 29,000 homes over the period 2016-2021 and 72,000 homes over the longer period of the Local Plans to 2036; as well as 90,000 additional jobs to 2036.

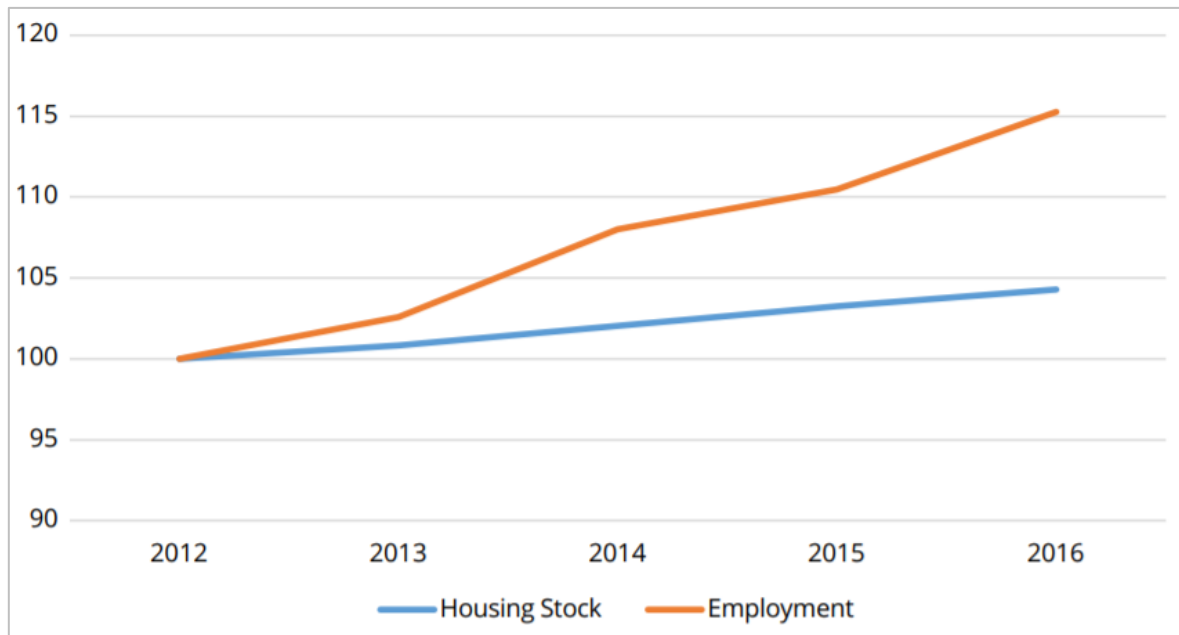
- 2.27 Recognising the high levels of growth and '*exceptional housing market conditions in Greater Cambridge*', the Government agreed to provide £100m housing and infrastructure fund to help deliver infrastructure for housing and growth; subject to a business case. The direct recognition by Government that housing market conditions (and in particular affordability issues) are "exceptional" is highly material to considering issues of the scale of growth to plan for.
- 2.28 In order to support and accelerate these ambitions, the Deal committed all authorities to have adopted or published Local Plans by 2017 that reflected overall assessments of housing need; and committed the Mayor and Combined Authority to preparing a non-statutory spatial framework for Cambridge and Peterborough to act as the framework for planning across the Combined Authority area; and for the future development of Local Plans. In addition, Mayoral Development Corporations were to be created.
- 2.29 To support the delivery of the commitments outlined above, the Devolution Deal also secured an agreement between the Combined Authority and the Government to ensure there is a sufficient, balanced supply of readily available sites for commercial and residential development to meet the demands of a growing economy was to be maintained; and to create stronger partnerships with the HCA, Community Land Trusts and others to delivering housing and economic growth.
- 2.30 Furthermore, recognising that Cambridge is internationally renowned for its world-leading university and its global strengths in technology and life sciences, the Deal set out that the Combined Authority would work with the Government and Greater Cambridge partners to support delivery of the existing Greater Cambridge City Deal which is ensuring the future success of the city and surrounding district of South Cambridgeshire by investing in housing, transport infrastructure, and skills needed to see future economic growth.

Cambridge & Peterborough Independent Economic Review

- 2.31 The Cambridge and Peterborough Independent Economic Review ("CPIER"), published in September 2018, provides an evidence-based, independent assessment of the Cambridgeshire and Peterborough economy and its growth potential. The purpose of the review is to create a single strategic position to help the Cambridgeshire and Peterborough area consider the case for greater fiscal devolution and powers to unlock the delivery of major infrastructure.

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- 2.32 The review was led by the Cambridgeshire and Peterborough Independent Economic Commission (“the Commission”) and was co-funded by the Cambridgeshire and Peterborough CA, the CA’s Business Board and Cambridge Ahead.
- 2.33 Upfront, the CPIER effectively establishes three sub-economies within the study area including the (1) Greater Cambridge area, (2) the Greater Peterborough area and (3) the Fens. The Greater Cambridge area is described as a scientific centre of global importance where there has been continuing growth of the world-leading life sciences cluster and research institutes and laboratories have been encouraged to move to the area.
- 2.34 The CPIER’s findings show that **the Greater Cambridge area and local business environment is unique in the UK**, with particular sectoral strengths, business growth which is self-perpetuating, high rates of business start-ups and foreign acquisitions. The findings are that the knowledge-intensive sectors in and around Cambridge and the southern part of the area are strongly clustered, densifying and highly dependent on their location. The area is an economic success story.
- 2.35 The CPIER notes that economic growth, driven by high value industries and rising employment, has brought many benefits to Cambridgeshire and Peterborough as a whole; with the contribution the area makes to the UK economy a significant one. The CPIER notes that economic growth has also been the basis for devolution, through the commitment from the Combined Authority to doubling GVA to 2042.
- 2.36 Importantly however, the findings of the CPIER also show that for this vital section of the local and indeed the national economy, **it is becoming a choice of ‘Cambridge or overseas’ for businesses whereby many innovation-rich firms, if pushed to move, would relocate abroad.**
- 2.37 **One of the main reasons for this, the CPIER identifies, is Cambridgeshire and Peterborough’s housing crisis which is defined as a major constraint on the region’s ability to fulfil its economic potential.** Coupled with transport infrastructure constraints, the CPIER identifies both as being not only a local concern but a significant risk to the national economy if they are not tackled. As the CPIER puts simply, house prices have soared, and journey times have increased as congestion has intensified which is beginning to have implications on local businesses.
- 2.38 With regards to housing issues specifically, the CPIER highlights that since 2012, employment has grown by over 15%, whilst housing stock has grown by under 5%. Notably, this uses BRES employment data which, the report says, may to some extent understate the strength of employment growth. This is shown in the Figure below, drawn from the CPIER directly. It is clear however that **there has been a strong strategic imbalance between employment growth and housing delivery across the Combined Authority area, which will have contributed to deteriorating affordability, which if unaddressed is expected to harm economic competitiveness moving forwards.**
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Figure 2.2: Employment Growth vs. Housing Stock Growth in the CA



Source: CPIER, Figure 20

- 2.39 Set against exceptionally high demand for housing, the report also highlights that **house prices are now more than 13 times average earnings in Cambridge and over 11 times in South Cambridgeshire**, compared to the UK average of 7. The CPIER notes that worsening affordability has meant that:

*“many have been forced to endure unpleasant commutes, or been priced away from the city altogether due to the unaffordability of rents [and house prices]. This is bad for both people and businesses, and we believe is an unsustainable approach to growth. **We are rapidly approaching the point where even high-value businesses may decide that being based in Cambridge is no longer attractive**” (our emphasis)*

The Parallels with Oxfordshire

Iceni has been working with the Oxfordshire Growth Board in looking at issues related to housing needs to inform the Oxfordshire Joint Strategic Plan to 2050. There are a number of clear parallels which can be drawn, with the Oxfordshire LEP's evidence base for its Local Industrial Strategy noting an imbalance between housing delivery and employment growth, with its engagement with businesses indicating that this is harming economic competitiveness.

The Oxfordshire LIS Baseline Economic Review, prepared by PwC sets out some of the issues associated with poor housing affordability in Oxfordshire:

“Poor housing affordability can prove a deterrent to young professionals hoping to live and work in Oxfordshire. Given the country’s unhelpful demographic profile, retention of younger workers could be considered a priority. Without these workers, the region’s ability to fill positions in high technology and innovative business sectors would be hampered, weakening Oxfordshire’s competitiveness.”

This was based on stakeholder engagement which showed this was having real impacts on businesses:

“Stakeholders are confident that Oxfordshire’s attractiveness as a place to work (and for postgraduate research) has been constrained by the high cost of living.

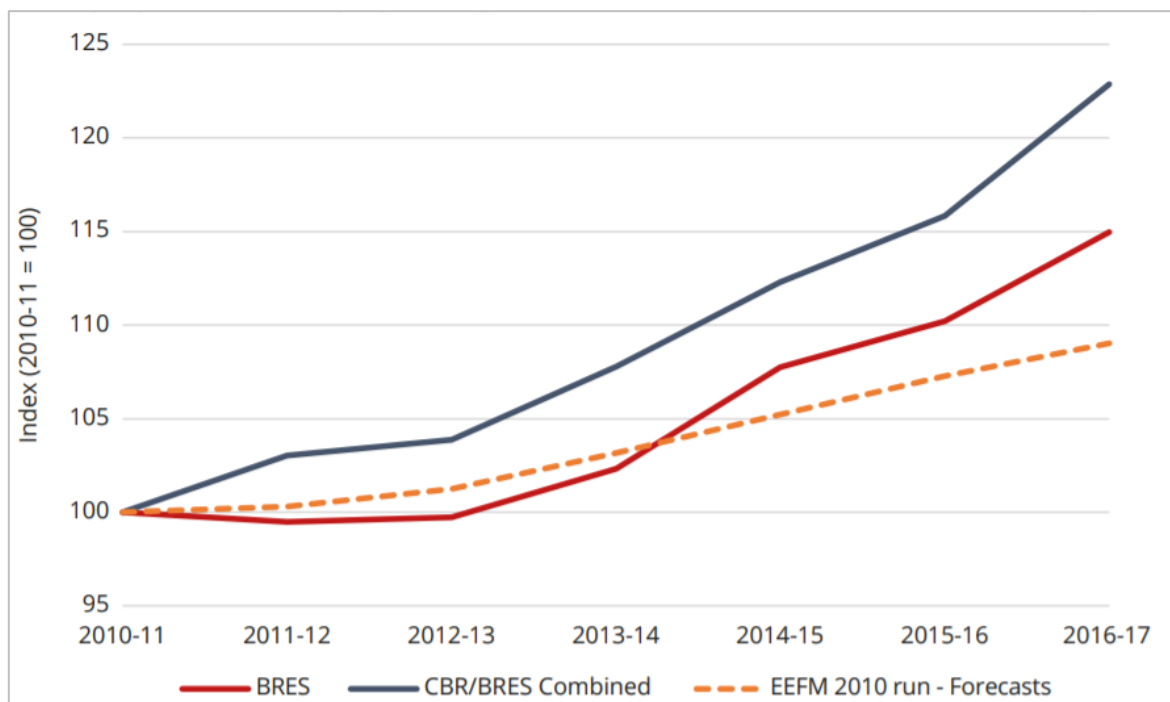
The evidence around Oxfordshire’s cost of living challenge is well documented in this review and other local reports. Oxfordshire now has an unwanted reputation as being one of the most expensive places to live in the UK. Stakeholders have clearly voiced that they felt this is a factor which is having a material impact on their research and business activities in Oxfordshire. Stakeholders have suggested that this is deterring individuals from considering local roles – and in turn in impacting innovation, research and productivity levels (and therefore, ultimately Oxfordshire’s GVA and future growth potential. Individual organisations, such as the University of Oxford, are now seeking to explore putting in place their own measures which help to address this challenge for their key personnel (in this case, postgraduate researchers).

Stakeholders have also suggested that this problem (to date) has not been taken seriously enough in planning and policy discussions at a local and national level.”

There are clear parallels which can be drawn to the situation in the Greater Cambridge area based on the evidence in this report. **The CPIER Report shows that housing affordability could not just harm economic and productivity growth, but could result in business disinvestment.**

- 2.40 The CPIER sets out that there are multiple, complex factors which have contributed to the exacerbation of affordability issues including land values and land assembly, market incentives, a lack of suitable infrastructure and local resistance. One of the key factors of note is the ‘under-projection of growth’ for which the CPIER states that **high employment growth has been unanticipated (through the plan-making process) and therefore not built into targets.**
- 2.41 The CPIER highlights that the past projections of employment growth by the East of England Forecasting Model (“EEFM”) fall below the actual outturn by a significant margin. EEFM’s projections for employment growth in recent years fall considerably below the growth identified by the official ONS employment growth figures (through the Business Register and Employment Survey “BRES”). By implication, EEFM is expected to under-estimate future growth potential.
- 2.42 The EEFM projections also fall below the CPIER’s ‘blended rate’ of employment growth, which combined employment growth rate data for the corporate sectors where the CPIER/ Cambridge Ahead have the most knowledge and have been tracking employment changes, with the ONS growth rates where the CPIER are less confident. The Figure below, drawn from the CPIER, demonstrates the difference between the EEFM, ONS and Cambridge Ahead/ONS blended figures since 2010/11.

Figure 2.3: EEFM Projections of Employment Growth v. Actual Growth for the CA



Source: Dr Giorgio Caselli, University of Cambridge, CPIER, Figure 22

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- 2.43 The CPIER states that through engagement with Cambridge Econometrics⁶, it is understood that two main reasons why projections have been low are:
- A lack of local Government resource to discuss and refine the projections; and
 - A modelling basis that works back from regional projections to district-level projections whereby lower forecasts at a regional level can impact disproportionately to areas which are performing 'unusually' strongly.
- 2.44 The CPIER states that on this basis, further 'sense checks' to the employment projections are needed.
- 2.45 As part of the CPIER, and at the heart of the Commission, "*is a desire to help Cambridgeshire and Peterborough prepare well for the future*". In line with the above, the CPIER sets out to model scenarios to show what might happen; what may need to be prepared for and what action may be required now to increase the chance of more desirable outcomes.
- 2.46 The modelling is introduced through "the Futures work" which, for the purposes of the report, refers to a body of work produced by the University of Cambridge, building upon previous work undertaken around the turn of the millennium. The model which derives the analysis is an advanced land use and transport model which is driven by employment growth. It recognises that as the number of employees grows, the demand for housing and the pressure on transport systems will increase.
- 2.47 Four employment growth scenarios as part of the CPIER to understand the scale of change in the number of jobs, homes and improvement in productivity and interactions between them. The four scenarios are as follows:
- Local Land Use Plans: this relates to the forecasts derived from the EEFM and is the lowest employment growth forecast;
 - Employment Growth - Longer Term Rate: this projection is a continuation of the 1981-2016 trend of employment growth;
 - Employment Growth – Shorter Term Rate: this projection is a continuation of the 2010-2015 employment growth trends based upon recent IER⁷ data, which suggest much higher rates of growth; and

⁶ CE now maintain the East of England Forecasting Model

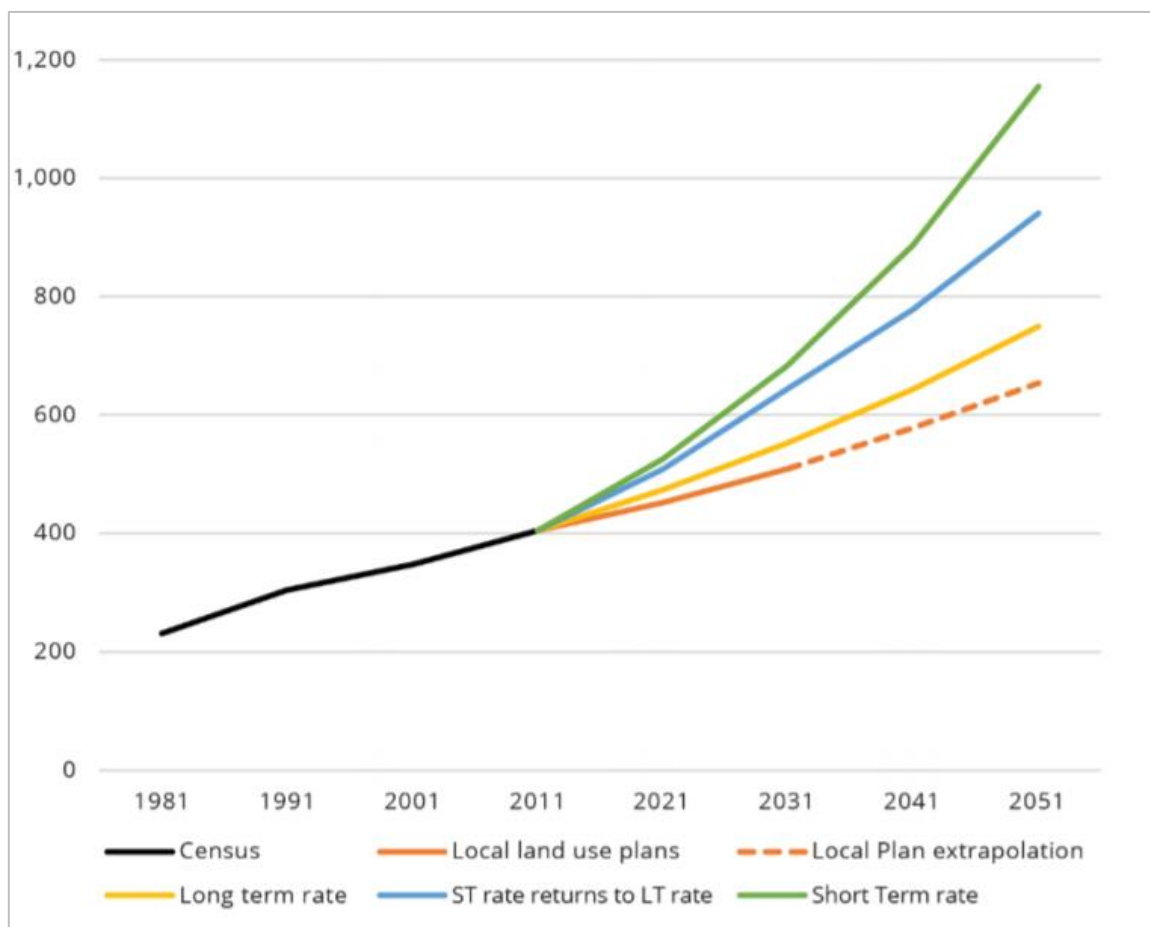
⁷ Independent Economic Review

- Employment Growth – Shorter Term Rate Returning to Longer Term Rate: this projection assumes first a continuation of growth rates closer to higher recent ONS employment growth rates, before gradually returning to longer term ONS growth rates.

2.48 As we understand it, the modelling has used workplace-based Census data on employment for 1981, 1991, 2001 and 2011. The long-term rate scenario then uses BRES data to extend employment trends from 2011-16. The short-term scenario instead uses the blended IER data (which combines BRES and Cambridge Ahead figures).

2.49 The fourth projection is the CPIER's 'central case' employment projection, whereby employment at the Combined Authority level would need to increase from around 480,000 jobs in 2018 to around 900,000 jobs by 2051 for the regions' potential to be maximised. The four employment growth scenarios are shown in the Figure below.

Figure 2.4: Employment Growth Rates in Different Scenarios – Cambridgeshire & Peterborough



Source: Dy Ying Jin, University of Cambridge, CPIER, Figure 1

2.50 Alongside the 'central' employment projection, the CPIER also sets out an employment growth scenario based on the local land use plans scenario, where constraints on growth prevent the region's

potential from being realised. This ‘business as usual’ scenario – otherwise referred to as the base case - indicates employment increasing to around 650,000 by 2051 across Cambridge and Peterborough, compared to around 900,000 in the ‘central’ scenario – a difference of around 250,000 jobs by 2051 at the Combined Authority level.

- 2.51 The CPIER sets out that although it will be challenging to double GVA over the 25 year period to 2042, it does not mean its unattainable.
- 2.52 It is important to bear in mind that the employment figures set out in the various CPIER Scenarios are predicated on significant improvements in productivity. The CPIER Report states that *‘future growth will have to involve elements of both employment growth and productivity growth, with the dial pushed firmly in the direction of productivity improvement’*. The implied annual productivity growth (i.e. growth in GVA per job) in different scenarios is set out below:

Table 2.1 Necessary Rates of Improvement in Productivity for the CA

	Implied Avg. Productivity Growth
Local Land Use Plans	1.6%
Employment Growth – Longer Term Rate	1.2%
Employment Growth – Shorter Term Rate	0.2%
Employment Growth – “Central Projection”	0.8%

Source: CPIER, page 35

- 2.53 The CPIER’s central projection of longer term growth returning to shorter term rates would require 0.8% productivity; which the Commission acknowledge is *‘challenging (given current stagnant productivity growth), though not impossible’*.

Iceni consider that it would be appropriate to inform the next stage of the plan to undertake some sensitivity modelling around productivity improvements, particularly recognising the potential that actual productivity performance could be weaker. This in turn would have an upward impact on employment and housing need.

- 2.54 Turning to housing, the CPIER sets out that the objectively-assessed housing need (OAN) for the Combined Authority is 4,670 homes per annum based on existing SHMA studies; but that in addition to this there would still need to account for under-delivery over the preceding 10 years of just under 10,000 homes. At the very least, the Commission states, “this deficit needs to be caught up with” by adding on a further 985 homes a year, resulting in a target of 5,655 homes per annum. Iceni would note that this is however not a credible position as it is based on evidence which used the approach set out in the 2012 NPPF.

2.55 However, the Commission recognises that there is a question as to how much higher housebuilding rates might need to be, if employment growth continues to be significantly above what is forecast by EEFM. The CPIER notes that the Futures work finds that **the rates of housebuilding required to maintain growth at the central employment growth projection without further inflationary pressure could be as high as 9,000 homes per annum across the Combined Authority area.**

2.56 In arriving at a figure which sits in the middle range of these two figures, which is considered to be more feasible, whilst achieving the overall level of employment growth and achieving the economic output target, the Commission states **it might be necessary to build in the range of 6,000 to 8,000 homes per annum over the next 20 years across the CA.** It sets out that clearly the differences between the current targets and the figures considered by the commission are sufficiently large that that better understanding is required as a matter of urgency.

2.57 Key recommendation #5 set out on this basis that:

“There should be a review of housing requirements based on the potential for higher growth in employment than currently forecast by the EEFM. This review should take into account the continuing dialogue between ONS and the Centre for Business Research on employment numbers as well as the impact of the Cambridge–Milton Keynes–Oxford Arc. This should be used to set new targets which are likely to be higher than those already set – at the very least adding on accumulated backlog.”

2.58 There is no robust justification for why a midpoint position between two projections derived at different times and on a fundamentally different basis is robust. In line with the endorsed recommendations from the NIC, **Iceni’s view is that the Greater Cambridge Plan needs to consider how the area’s economy is expected to perform; and to plan for sufficient housing to both support this and address the evident affordability challenge in the area.** This is necessary for the Plan to be sound including in responding to the endorsed recommendations of the NIC which are material considerations for plan-making.

2.59 In concluding on the housing challenge in the context of economic growth, the Commission makes it clear that:

“it is indisputable that high rates of employment growth have put great strain on the housing market in Cambridgeshire and Peterborough, particularly around Cambridge. The result is exceedingly high living costs, longer commutes, social stratification, and extra cost for business. Ambitions for house building should be increased to deal with a housing deficit that has grown up following under-projections of growth” (our emphasis)

2.60 It is thus clear from the evidence that there are both economic and social dimensions justifying that higher housing provision is needed to ensure sustainable development.

Cambridgeshire & Peterborough Local Industrial Strategy

2.61 The Cambridgeshire and Peterborough Local Industrial Strategy (“LIS”), published in June 2019, builds on the CPIER’s baseline of evidence about the local economy; and in line with CPIER, recognises that the full economic potential of the region can only be realised by identifying its diverse strengths including Peterborough’s rapid growth and Cambridge’s global research strengths.

2.62 The LIS aims to improve the long-term capacity for growth in Greater Cambridge by supporting the foundations of productivity, increasing sustainability, broadening the base of local economic growth including in the north of Cambridgeshire, and building on the clusters and networks that have enabled Cambridge to become a global leader in innovative growth.

2.63 The LIS notes upfront that the Cambridgeshire and Peterborough economy is thriving, with it contributing £22bn to the UK; whilst **the economy has outperformed the UK in overall growth since 2009 and growth in employment has significantly outpaced official figures**. It states that the area is an internationally recognised centre for artificial intelligence, life sciences, food production and advanced manufacturing. On Cambridge specifically, it states that:

“Cambridge is a global leader in innovation and the commercialisation of new ideas. Local partners’ ambition is to continue to build an industrial ecosystem that is globally known for tackling the biggest challenges facing society, and in so doing to nearly double gross value added (GVA) over 25 years [in line with the Devolution Deal]”.

2.64 Linking back to the CPIER, it recognises the three sub-economies, with Greater Cambridge being defined as the largest and most international; characterised by high levels of output and skills, a rich mix of biomedical, pharmaceutical, artificial intelligence and other technology companies underpinned by two leading universities, one of which is **amongst the greatest and strongest economies in the world**. The area’s contribution to the Arc through its position as a global centre of life sciences is duly recognised.

2.65 Notably, the LIS recognises that Cambridgeshire and Peterborough is not only a key part of the Arc; it is also the ‘central nexus’ for other important corridors and national connections which will invariably play a role in future growth in the area. These include the:

- **London-Stansted-Cambridge Corridor** which is also known as the UK’s Innovation Corridor. This is an area with the potential to generate 400,000 new jobs by 2036 and an area which plays a significant role in the growth of the Life Sciences sector;

-
- **Cambridge-Norwich Eastern Agriculture and Tech Corridor** which is an area centred on agri-tech and food sciences; presenting opportunities to cement the East of England as a global centre of excellence;
 - **Connections to the Midlands and to the North** which are considered to be just as important as links to London, connecting the area to the regional powerhouses through the East Coast Mainline and the A1 allowing the area to contribute to and benefit from their productivity growth; and
 - **Links to International Ports** including Felixstowe which puts the area in a strong position in the post-EU world to trade worldwide.

2.66 Based on the LIS' independent evidence base, the report set out interventions within it which are specifically and carefully designed to support and achieve further growth. In the short-term, it states that the Combined Authority will work to raise productivity per hour to above the UK average by 2024. In the longer-term, the LIS sets out **three priorities as the 'ambitions for tomorrow' which are:**

- **Improve the long-term capacity for growth in Greater Cambridge by supporting the foundations of productivity;**
- **Increase sustainability and broaden the base of local economic growth; and**
- **Expand and build upon the clusters and networks that have enabled Cambridge to become a global leader in innovative growth.**

2.67 The LIS seeks to establish an 'industrial blueprint' to deliver Cambridgeshire and Peterborough's vision of being a leading place in the world to live, learn, work and do business. The actions included within the strategy look to support the delivery of the Devolution Deal and the recommendations of the CPIER. On the former, the LIS recognises the importance of increasing productivity in achieving the commitment to doubling GVA in 25 years.

2.68 The LIS recognises that whilst overall output growth has outperformed the UK, the area when taken as a whole, has become less productive, relative to the UK, over the last five years. As with other areas across the Arc, growth has been sustained by additional employment as opposed to productivity increases. As a result, the Combined Authority has set a five year target to reverse the trend; seeking to catch up with the national trend by 2024.

2.69 In order to achieve this, the LIS is clear that **current patterns of growth must change**; with the LIS' role being to apply new approaches to solve problems. One of these problems identified is that too many of the people working in Cambridge have commutes that are long and challenging which are not

out of choice, but necessity due to high housing costs. By implication the LIS is supportive of a greater focus on growth in/around Cambridge.

2.70 Driven by the distinctive features of the local economy, the Combined Authority's growth target is therefore supported by the three local priorities outlined above i.e.:

- **Improve the long-term capacity for growth in Greater Cambridge:** the LIS states that Greater Cambridge is a '*magnet to companies from across the globe and the home of world-leading digital and life science clusters*'; whilst its labour supply and reputation are of the highest order. However, there are clear signs – which are referenced throughout the reports which inform the LIS – that constraints are beginning to hinder the area.

The LIS acknowledges that modelling shows if housing, energy capacity and transport issues are not dealt with, then the success of Greater Cambridge will be significantly reduced. In order to deal with this, the LIS states that the Combined Authority will invest heavily in housing, transport and infrastructure.

- **Increase the sustainability and broaden the base of economic growth:** the LIS sets out to balance growth across the area; with the interaction between the three economies a potential strength. Through enabling them to work together, the LIS will look to widen the benefits of high growth – most notably in Cambridge – to others. Sustainable transport links are important to this.
- **Expand and build on the clusters and networks that have enabled Cambridge to become a global leader:** the LIS states that the global success of Greater Cambridge has remained localised for the most part. In order to change this, the LIS says that there will be a need to support innovative growth by building an economy-wide eco-system.

2.71 The LIS states that the ambition across the Combined Authority will require a change in how the three sub-economies work; with a need to recreate the conditions that have been Cambridge so successful. However, the LIS is also clear that:

“the success of Greater Cambridge cannot be taken for granted. There are serious risks that without investment in housing, transport and infrastructure that the area needs, the global businesses there may take flight to more attractive global centres of innovation-based growth and it will make it harder to achieve the national 2.4 per cent R&D target.

Avoiding long-term risks to the productivity and growth of the local and national economy requires a focus on these issues in Greater Cambridge and its business base.” (our emphasis)

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- 2.72 In terms of how the local priorities will be delivered, the LIS establishes the five foundations of productivity including (1) Ideas, with a focus on innovation, (2) People, in respect of training and education, (3) Infrastructure, centred on housing and transport, (4) Business Environment, in terms of supporting start-ups and scale-ups; and (5) Places, including recognising the needs of different areas across the Combined Authority. It is the actions set out against each of these five foundations which are expected to deliver the three priorities.
- 2.73 Considering Infrastructure specifically, the LIS, the Combined Authority and partners have recognised that infrastructure is a broad issue comprising transport, housing, digital connectivity and energy. All of these matters, the LIS highlights, are experiencing critical issues in Cambridgeshire and Peterborough and ultimately, insufficient infrastructure is hampering productivity growth and constraining growth potential overall.
- 2.74 The LIS states that on top of clear transport issues are housing difficulties. Employment growth is closely linked to demand for housing, with much of the employment need being met by people moving to the area. In order to meet the need, the LIS notes the Combined Authority Housing Strategy has established a £40m revolving fund to enable the Combined Authority to go beyond the Devolution Deal target of 2,500 affordable homes.
- 2.75 Moving forward, the LIS sets out interventions to sustaining and de-risking the area's full potential for economic growth – which is reliant on 'transforming' the housing, infrastructure and transport capacity – including by progressing key infrastructure priorities (including the Cambridgeshire Autonomous Metro); working with Government across the Arc to explore new funding approaches (as set out in the Government response to the NIC report) and continuing to deliver the City Deal.

The Local Industrial Strategy is a resolutely pro-growth one, which recognises Greater Cambridge's unique assets; and which seeks to foster and develop what is an internationally significant, strongly performing economy with significant growth potential. It is clear that to support sustainable development, land use planning should be aligned with this.

- 2.76 To support this strategy, the need for a substantive boost in housing delivery is clear. The issue is also coming to a head – with the evidence being clear that in the absence of this, and of greater housing provision in/around Cambridge in particular, the types of high value innovation-based businesses and activities which underpin Cambridge's economic success could be lost.

The Cambridge, Milton Keynes, Oxford, Northampton Growth Corridor Report for the National Infrastructure Commission

- 2.77 The Cambridge, Milton Keynes, Oxford, Northampton Growth Corridor report, prepared by SQW and published in November 2016 for the NIC presents research on the economic growth potential and economic rationale for infrastructure investment in the growth corridor area.
- 2.78 As part of the research, an economic framework was developed which explains the key drivers of and constraints on growth and specialisations; and then investigates the nature of the inter-relationships between the four main urban centres that comprise the 'corridor'. A definition was agreed as part of the research to allow the complex geography to be split into four sub-geographies with Greater Cambridge and northern Hertfordshire forming one of these four areas.
- 2.79 The report highlights that over the last two decades, Cambridge has seen 'substantial growth' (some of which has been physically within South Cambridgeshire); with knowledge-based sectors central to this. IT-related businesses have grown 'erratically' with bioscience central to the narrative over the last decade with major inward investors, most notably Astra Zeneca.
- 2.80 The report acknowledges that the Cambridge area has several science parks, innovation centres and incubators that have supported the growth of early stage science-based businesses. Cambridge Science Park and St John's Innovation Centre were established early on, but more recently, Babraham Science Park and Granta Park have also been important, and Cambridge Biomedical Campus is currently being developed.
- 2.81 However, the report notes that looking ahead towards the future, Cambridge faces a wide range of challenges. The report states that housing and employment space provision has been constrained within the City; with the result being that employment sites and housing developments have been located outside the city boundaries. This development has brought problems of its own, the report sets out; with workers commuting long distances, extreme congestion issues and housing under very significant pressure.
- 2.82 A key output of the work, the report then works through three scenarios for economic growth and presents the results for population, employment and productivity across the study area. The three scenarios use the following key assumptions:
- **Business as Usual Scenario:** this scenario is based on existing levels of housing delivery being maintained. The ONS principal population projection is realised; existing infrastructure

commitments and plans from CP5 and CP6⁸ are carried through – including the completions of East-West Rail and the Girton to Huntingdon A14 update, with basic infrastructure improvement and maintenance carried out but no further ambitious schemes realised.

- **Incremental Enhancements Scenario:** this scenario is based on assumptions informed by evidence gathered in the main body of the report which effectively identifies an urgent need for enhanced housing provision and transport networks in both Cambridge and Oxford. The report says this is in recognition of the ‘rapidly growing economic footprint of the areas’.

The assumptions in this scenario include sufficient additional housing provision to support the ONS high migration projection across the study area, and t additional infrastructure provision around Oxford and Cambridge in particular, to both maximise the impact of the anticipated East-West Rail link and coincidentally release currently constrained employment growth potential in these two areas.

- **Transformational Enhancements Scenario:** this scenario is based on addressing the concept of the Cambridge-Milton Keynes-Oxford corridor as a “*globally competitive knowledge cluster*”; with the aim of reducing the gravitational pull of London so there is more cross-movement and strength in the middle of the area.

The assumptions in this scenario include a significantly enhanced house building rate of 23,000 new houses per year, and significant improvements to transport infrastructure (including provision such as the Oxford-Cambridge Expressway), and thus driving enhanced interaction and collaboration across the corridor.

2.83 The scenarios draw on ONS population projections, UK level forecasts of employment growth and GVA. The baseline ‘business as usual’ scenario draws on CE’s Local Economy Forecasting Model (“LEFM”) to provide results at a local authority level; with the two higher scenarios also being broken down. The three defined scenarios for Cambridge and South Cambridgeshire are set out in the Table below.

⁸ Control Periods for infrastructure spending with 5 year timespans

Table 2.2 CE/SQW Forecasts for Cambridge and South Cambridgeshire

	2014	2025	2050	% p.a. 2014-25	% p.a. 2014-50
Cambridge Baseline	104,000	112,000	126,000	0.7	0.5
South Cambs Baseline	84,000	91,000	102,000	0.7	0.5
Cambridge Incremental	104,000	117,000	153,000	1.1	1.1
South Cambs Incremental	84,000	96,000	127,000	1.2	1.1
Cambridge Transformational	104,000	121,000	171,000	1.3	1.4
South Cambs Transformational	84,000	99,000	142,000	1.4	1.5

Source: CE/SQW Cambridge, Milton Keynes, Oxford, Northampton Growth Corridor Report, November 2016

- 2.84 The report’s conclusions set out that the incremental scenario is considered to ‘both maximise the impact of the anticipated East-West Rail link and coincidentally release currently constrained employment growth potential’ in Cambridge; whilst the transformational scenario would result in an additional 700,000 jobs across the study area and an associated productivity boost of £6,000 per worker.
- 2.85 Most notably however, the report states that what is clear, is that without the housing and infrastructure interventions in these two scenarios, “*employment, and productivity growth in the four key sub-areas is unlikely to be maintained at current rates, and genuinely transformational changes will be required to realise the full potential of the study area*”.

It is recognised that the SQW report’s transformational scenario for growth, which assumes 23,000 homes per annum will be delivered across the Arc, has partly informed the NIC study’s conclusions **that to meet local and strategic needs and meet economic growth potential would require up to 1 million homes to be delivered between 2016-50** which is equal to 30,000 new homes per annum.

The NIC’s Planning for Prosperity report noted that:

“Estimates prepared for the Commission suggest that meeting the needs of the arc’s future population and workforce could require 23,000 – 30,000 net new homes per year. While completion rates at the lower end of this range (around 23,000 net new homes per year) may be sufficient to meet the needs of the arc’s own future workforce, further development may be required to mitigate the impact of growth and under-delivery of homes in neighbouring, land-constrained markets such as London.” (our emphasis)

Opting for the higher figure, the NIC set out that as employment in the capital continues to grow, and as London struggles to meet its housing need, there is a risk that relatively highly-paid commuters

relocating to the Arc could make it more difficult for those who live and work locally to access housing. This would diminish the impact that new housing provision could have on local firms' access to labour. Addressing this issue could require up to a further 7,000 new homes per year.

This higher annual figure of 30,000 homes is the basis for the NIC's ambition - which the Government has endorsed - to build up to one million high quality homes by 2050 to maximise the economic growth of the Arc.

- 2.86 It should be noted that since the preparation of this report, there has been further work undertaken as part of the CPIER (which postdates this) to understand levels of employment growth in the Greater Cambridge economy; and a recognition that official figures and the CE LEFM Model (as used in the NIC Report) has tended to under-estimate the growth trajectory and potential of the Greater Cambridge economy. This is a relevant consideration in interpreting the scenarios in this NIC Report.

3. THE GREATER CAMBRIDGE ECONOMY

- 3.1 This section drills down to consider further the strength of the Greater Cambridge economy.
- 3.2 As recognised by the CPIER, economic growth, driven by high value industries and rising employment, has brought many benefits to Greater Cambridge whilst the contribution the area makes to the UK economy has been and continues to be significant.

Human Capital

- 3.3 The Greater Cambridge area has a wealth of economic assets. It is characterised by high levels of economic output, a strong skills base, a rich mix of biomedical, pharmaceutical, artificial intelligence and other technology companies underpinned by two leading universities, one of which is amongst the greatest in the world. As a result of this, the area is also rich in human capital; which the CPIER notes is *'where the biggest potential for this area is'*. Drawing this into focus, the Table below provides an overview of the strength of Greater Cambridge area's labour market, compared with wider comparative geographies.

Table 3.1 Greater Cambridge Labour Supply

	Employment Rate (% 16-64)	Degree and Above Skills	No Qualifications	Occupation Group 1-3 (Managerial & Professional)
Cambridge	80.3%	61.5%	6.7%	64.0%
South Cambridgeshire	84.5%	51.4%	5.1%	61.5%
East of England	78.3%	35.2%	7.4%	46.7%
England	75.8%	39.0%	7.6%	47.7%

Source: ONS Annual Population Survey, 2019

- 3.4 As the analysis shows, Greater Cambridge's labour market is particularly strong in comparison to the region and England. **The area has one of the most highly skilled workforces in the country.** This is one of the key components of the Cambridge eco-system which links to the Cambridge brand, the strength of the economy and pool of highly educated graduates; which in turn enables the area to attract highly skilled workers.

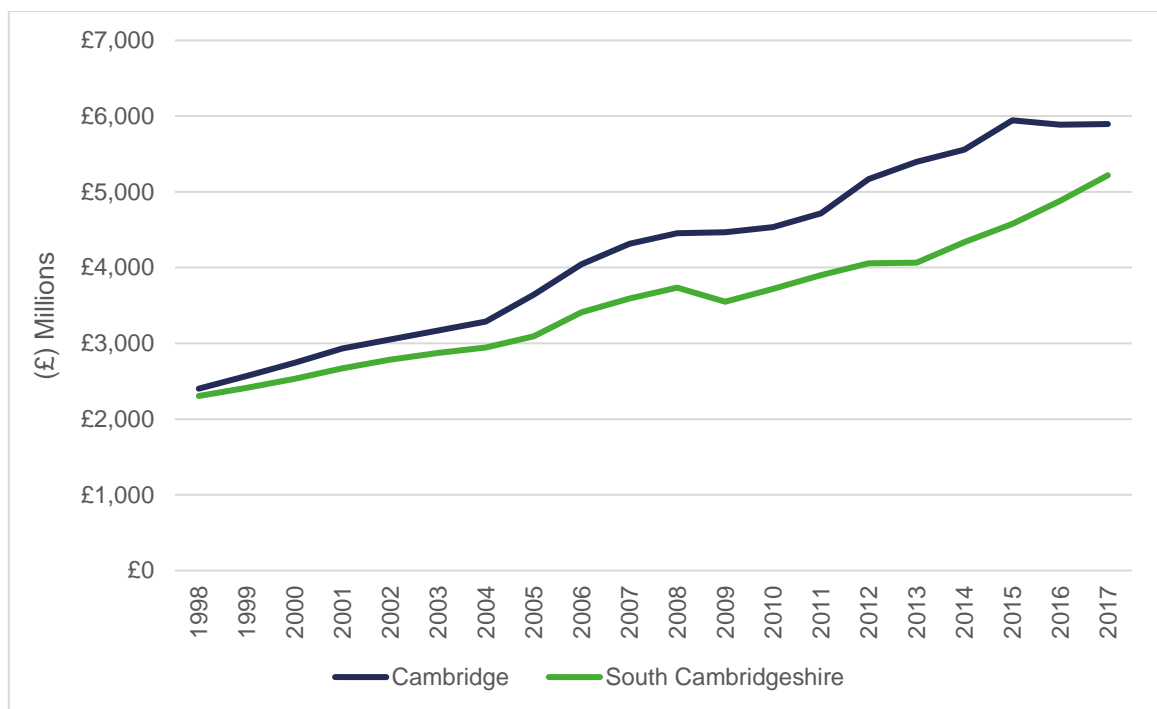
Economic Output

- 3.5 The impact of such a strong set of skills, human capital and cutting-edge research can be seen in the Figure below dealing with balanced GVA growth over the period from 1998 to 2017. This calculates

the income generated by workers and companies in the creation of goods and services; and the 'balanced' measure takes into account both 'income' and 'production' factors.

3.6 Greater Cambridge's economy has seen substantial growth on this basis, with at an annual growth rate of 4.8% in Cambridge and 4.4% in South Cambridgeshire since 1999 pointing to remarkably strong economic performance. Cambridge's economy also appears to be particularly resistant, with no dip during the economic downturn in 2009-10.

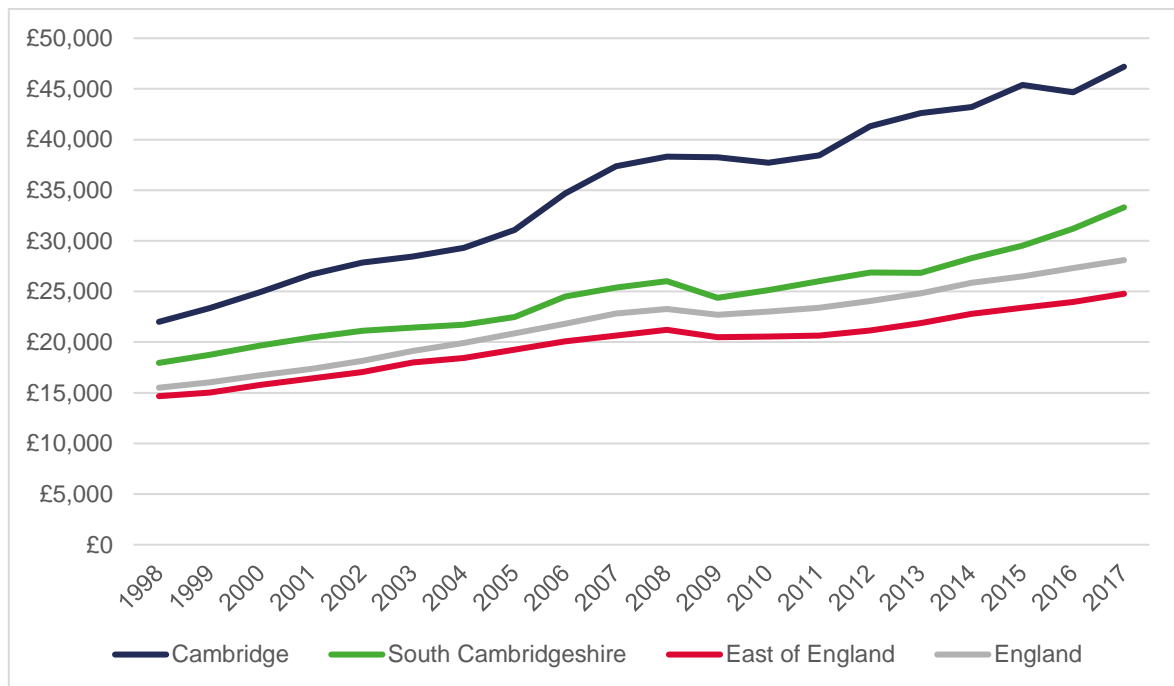
Figure 3.1: Economic Performance – GVA Growth in Greater Cambridge



Source: ONS Balanced GVA

3.7 Similarly, by looking at GVA per head across the two authority areas, we can better understand the economy's position within a wider context. The Figure below sets out the performance of the economy in Greater Cambridge set against the region and England.

Figure 3.2: Economic Performance – GVA Growth per head in Greater Cambridge



Source: ONS Balanced GVA

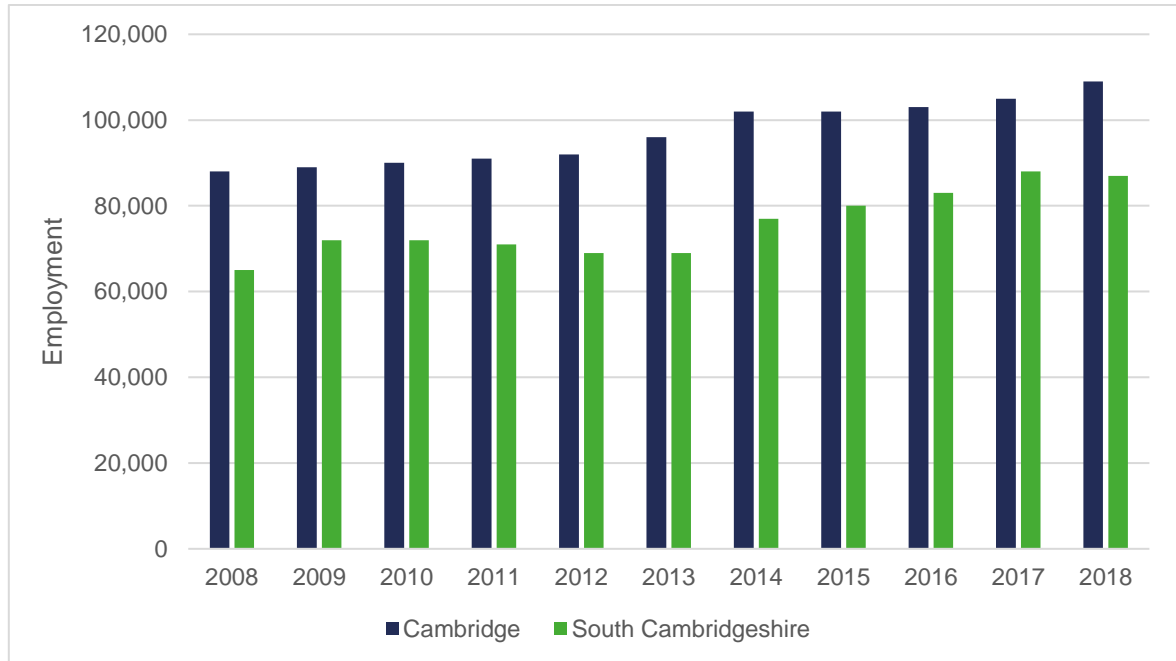
- 3.8 As the Figure shows, GVA increased from around £22,000 per head in Cambridge in 1998 to around £47,000 per head in 2017, equal to 114% growth. In South Cambridgeshire, economic output per head has increased from around £18,000 to around £33,000, equal to 83% growth. In comparison, GVA per head was £24,772 in the East of England in 2017
- 3.9 Combined, these two sets of data demonstrate that Greater Cambridge is a large and nationally significant economy within England, with productivity levels and growth potential well above the nationwide average. **It is clear that Cambridge in particular has strong potential to achieve higher value-added growth, driving productivity improvements which is an important aim of Government economic policy, as expressed both in the national Industrial Strategy and NPPF (Para 80).**

Employment Growth

- 3.10 It is also useful to briefly consider employment growth over the last decade; which as the CPIER states, is “what drives increased demand for housing, and higher levels of commuting”. Drawing on ONS’

BRES data for employment⁹ in the first instance, it is clear from the Figure below that there has been notably strong employment growth.

Figure 3.3: ONS Employment Growth in Greater Cambridge, 2008 to 2018



Source: ONS BRES

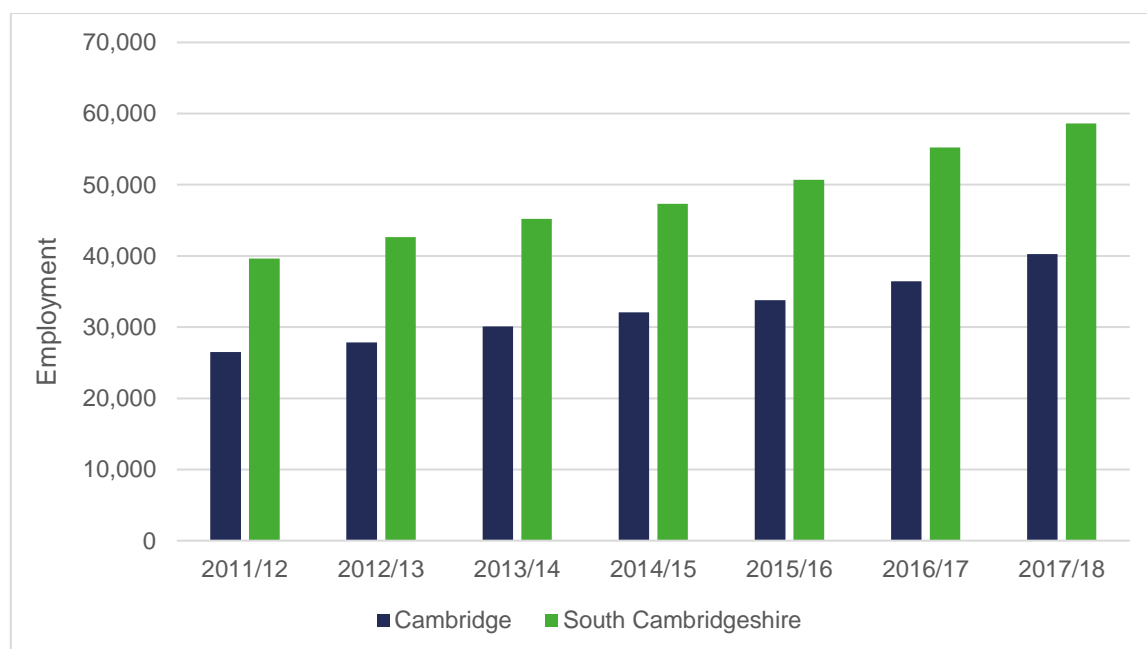
- 3.11 On the basis of the analysis in the Figure above, employment growth has been increasing at an average annual rate of 2.2% in Cambridge and 3.0% in South Cambridgeshire over the ten year period between 2008 and 2018. In comparison, the East of England experienced growth rates of 1.5% and England of 1.2% per annum over the same period; indicating very strong relative employment growth in Greater Cambridge.
- 3.12 In 2018, the largest proportion of employment was contributed by the education sector in Cambridge, somewhat unsurprisingly given its world-renowned Universities, at 22% of all employment; followed by the health and professional, scientific and technical sectors. In South Cambridgeshire, the largest sector is the professional, scientific and technical sector, accounting for 23% of all employment; following by manufacturing. It is clear why the area, as defined by the LIS, is an internationally recognised centre for artificial intelligence, life sciences, food production and advanced manufacturing.

⁹ BRES data will capture principally employment in companies with PAYE. It thus does not fully capture self-employment and will under-estimate total employment. It is commonly recognised that there can be particular issues with BRES which is survey-based, does not fully record self-employment and can record employment in locations where people are paid, rather than where they actually work.

3.13 In addition to ONS' BRES data, Cambridge Ahead working with the University of Cambridge's Centre for Business Research ("CBR") have produced a separate corporate database which allows a greater insight into employment growth in the Knowledge Intensive sectors. The CPIER Interim Report noted that *"over the past few years the CBR database of all companies based within the Combined Authority has been indicating faster growth rates than those suggested by BRES data"*.

3.14 This was reiterated in the CPIER Final Report which stated that *"by studying the global employment of all companies based in our area, we come to the conclusion that this [employment growth] is higher still"*. The Figure below draws on the data from the Cambridge Ahead Corporate Database looking back to its establishment in 2011/12; which the CPIER was partly based on in addition to BRES.

Figure 3.4: CBR Employment Growth in Greater Cambridge, 2011 to 2018



Source: CBR Corporate Database

3.15 Although work is ongoing around how the CBR and ONS data works together, what is clear is that **employment is growing at a remarkable rate in Greater Cambridge and the 'Cambridge Phenomenon' is still continuing, fuelled to a significant degree by the growth of Greater Cambridge's innovation-rich boom as recognised by the CPIER.** The Figure below suggests that over the six year period from 2011/12, Cambridge has experienced an employment growth rate of 7.2% per annum and South Cambridgeshire has experienced a growth rate of 6.7% per annum.

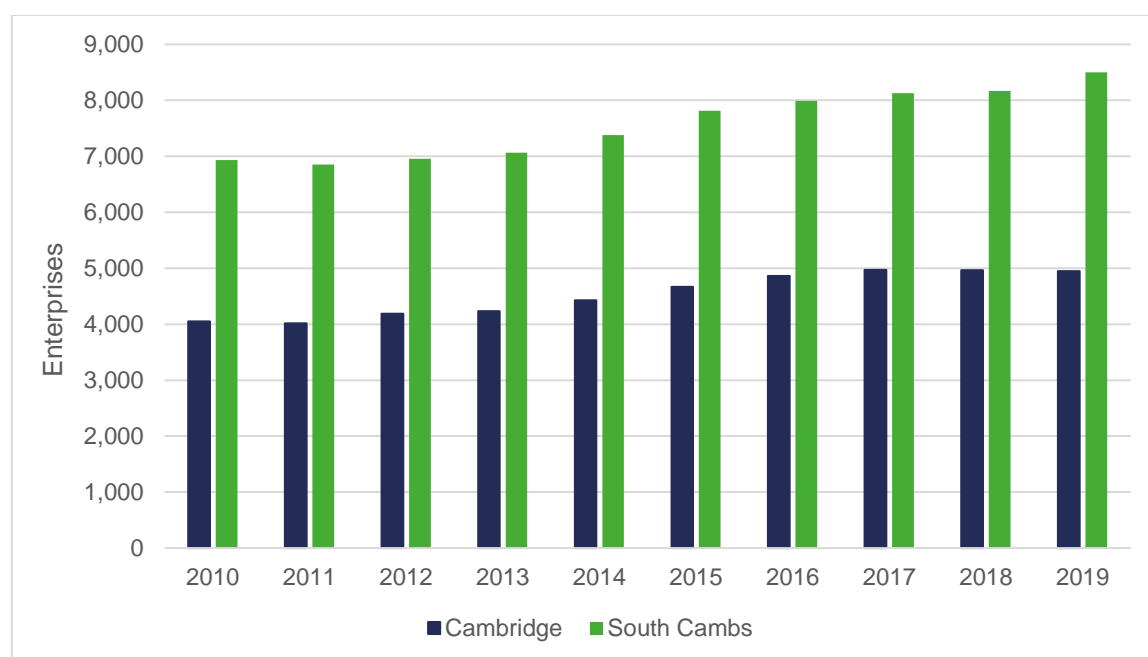
Business Growth

3.16 Another measure of this remarkable strength and the vibrancy of the economy is enterprise growth. Drawing on ONS data, we note that Cambridge currently has 4,950 businesses; whilst South Cambridgeshire has 8,500 businesses. According to the business count data, 97% and 98% of the

businesses are defined as SMEs in Cambridge and South Cambridgeshire respectively; which indicates that the business base is clearly vibrant, and in a strong position to foster innovation.

3.17 The Figure below shows that enterprises have grown by 22% in Cambridge and 23% in South Cambridgeshire since 2010 equal to absolute growth of 900 enterprises and 1,570 enterprises respectively. Notably, growth of micro enterprises of 9 employees or less accounted for 84% of all enterprise growth in Cambridge; and 90% of all enterprises in South Cambs.

Figure 3.5: Business Count in Greater Cambridge, 2010-2019



Source: ONS Business Demographics

3.18 In sectoral terms, the professional, scientific and technical; and telecommunication sectors have accounted for 60% of all enterprise growth in Cambridge; whilst in South Cambridgeshire, these two sectors in as well as the manufacturing sector accounted for 61% of all enterprise growth. The evidence is clear that business growth is thus principally occurring in higher value-added sectors.

3.19 The level of enterprise growth and the profile of this enterprise growth is significant; as it demonstrates that there are solid foundations for significant future growth of these small businesses and the knowledge intensive sectors; and as the impacts of the Devolution Deal and other initiatives are realised; the economy will only become stronger, evolve and look to expand further. However, businesses access to labour and knowledge; and in turn labour's access to transport, housing and other services become critical to this growth.

The Greater Cambridge Economy

It is clear why Greater Cambridge is an area of high national and international importance. It is an area which specialises in science, technology and innovation; has an economic output and productivity which is substantially above the national level and benefits from one of the strongest labour force pools in the country, with a strong skills base.

Employment growth, which drives demand for housing has been increasing at an average annual rate of 2.2% in Cambridge and 3.0% in South Cambridgeshire over the ten year period between 2008 and 2018. In comparison, the East of England experienced growth rates of 1.5% and England of 1.2% per annum over the same period; indicating very high growth. Housing growth has not been keeping pace, driving increasing affordability issues and growth in longer distance commuting which in turn create congestion problems.

Cambridge Ahead, through analysis undertaken to inform the CPIER, have reached the clear conclusion that recent employment growth rates have been stronger than indicated by ONS figures, and Cambridge Ahead and the CBR believe that the area can continue to deliver rapid growth with the right support.

Cambridge remains top of the UK league for economic growth prospects; and recent enterprise growth shows strong signs that interventions including the Devolution Deal and the Greater Cambridge City deal are and will continue to enable a new wave of innovation-led growth.

Greater Cambridge has a critical and essential contribution to make to drive the Government's commitment to overall growth at a national level and across the Cambridge-Milton Keynes-Oxford Growth Arc – a nationally significant growth area; and it will be imperative that businesses and the area's labour supply are supported through ensuring that issues around housing and infrastructure do not hinder the local economy's ability to contribute.

4. THE GREATER CAMBRIDGE HOUSING MARKET

- 4.1 This section provides an overview of the documented challenges around Greater Cambridge's housing market, dealing with house price and rental affordability, tenure changes and housing delivery; set against the exceptionally strong economic growth in the area.

Overview of Greater Cambridge's Housing Market

- 4.2 **The Greater Cambridge housing market is one of the most unaffordable housing markets in the country.** The Table below shows that median house prices now stand at £430,000 in Cambridge and £362,250 in South Cambridgeshire; with median affordability ratios standing at 12.95 and 10.25 times workplace-based earnings respectively. Combined our analysis shows a median affordability ratio of 11.3 across Greater Cambridge.

Table 4.1 Median and LQ House Price Affordability in Greater Cambridge

	LQ House Price	LQ Affordability	Median House Price	Median Affordability
Cambridge	£335,000	13.31	£430,000	12.95
South Cambs	£280,500	10.50	£362,250	10.25
East of England	£209,000	9.92	£283,000	9.72
England	£155,000	7.29	£239,000	8.00

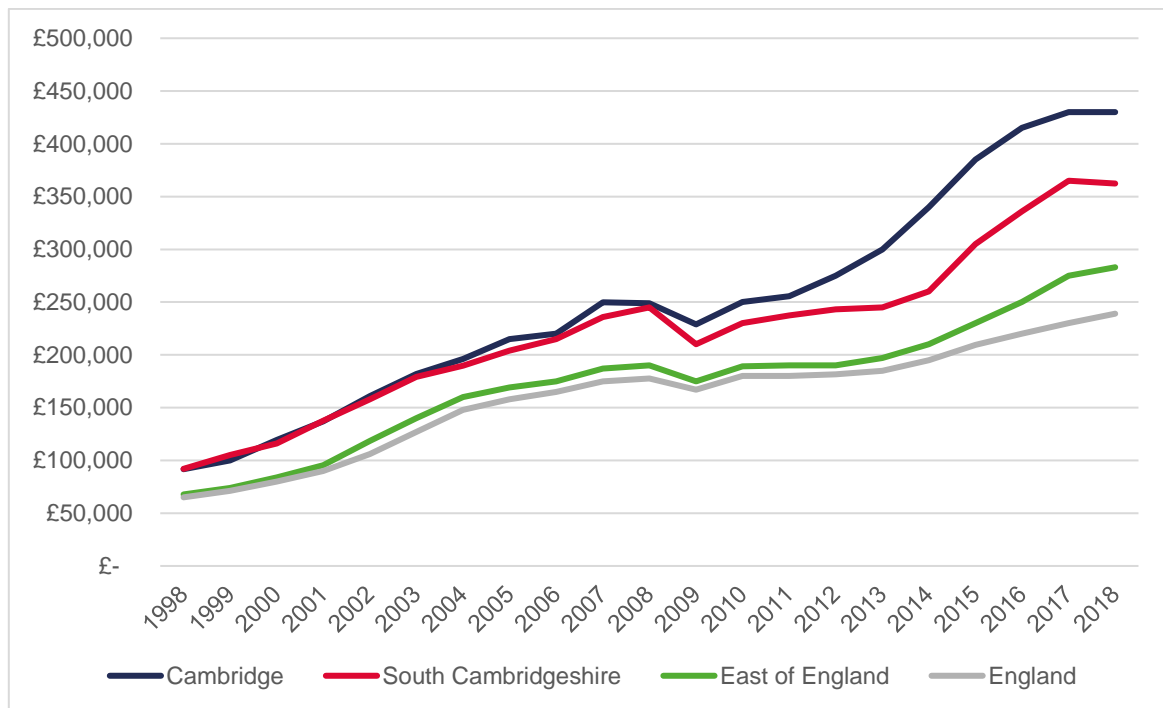
Source: ONS House Price Statistics, September 2018

- 4.3 As referenced throughout the key literature in Section 2 of this report, the exceptional demand for housing which exists is influenced by (a) the international significance of a Cambridge economy that is resilient and dynamic; (b) the University of Cambridge which has positively contributed to develop Cambridge as a centre of excellence and world leader in the fields of education and research; and (c) the concentration of high technology businesses and links between the universities in the City.

House Price Affordability

- 4.4 The significant house price growth shown in the Figure below since 1998, with particular focus on the post-recessionary period, brings the success of the economy's impact on housing into sharp focus when set against the regional and national trajectory of house price growth.

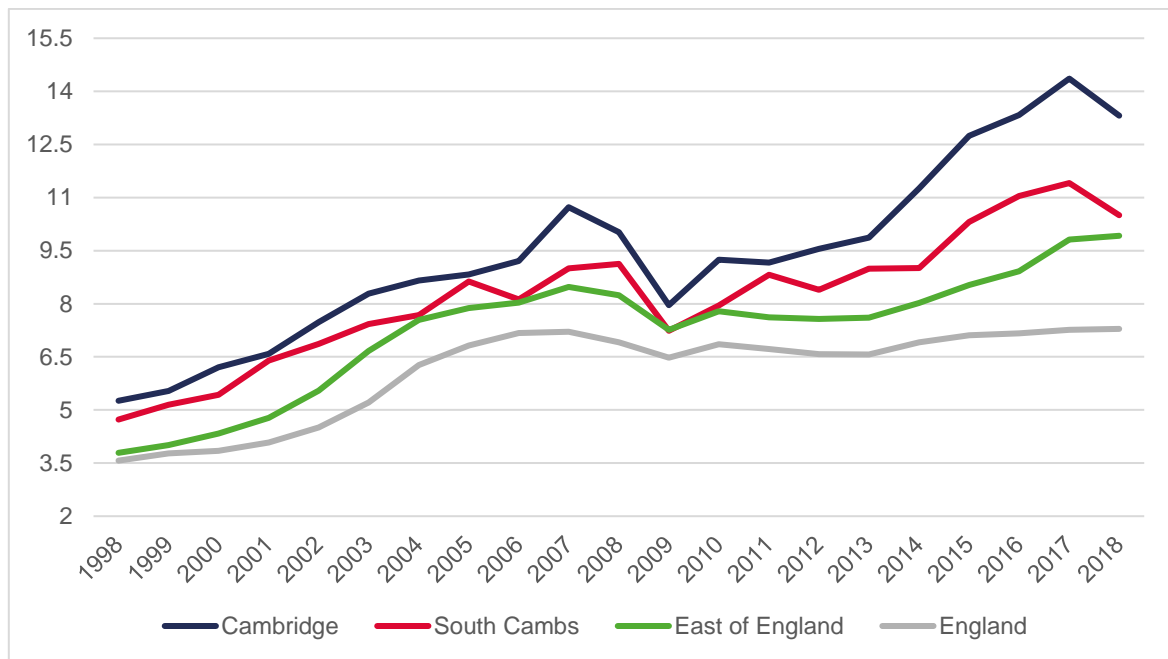
Figure 4.1 Median House Price Growth, 1998-2018



Source: ONS & HM Land Registry

- 4.5 Although house prices in Greater Cambridge have always been above the regional and national median the situation has been deteriorating rapidly with relative affordability worsening. Median house prices in 2009 were 37% and 26% above the national average in Cambridge and South Cambs respectively. In comparison, median house prices as at 2018 have grown to 80% and 52% above the national average respectively. In other words, house prices have risen quicker and sharper in Greater Cambridge; pointing to a significant strategic housing supply and demand imbalance.
- 4.6 In Greater Cambridge, the large number of established knowledge-based companies, which have been growing, and the pool of skilled graduates from the Universities has supported strong demand for housing. The supply/demand balance has been so severe that the area is now **the least affordable market outside London**. It is no surprise that the particularly strong house price growth in recent years aligns with the particularly strong employment growth across the area; as shown in Figure 3.3 and Figure 3.4.

Figure 4.2 Entry-Level Affordability, 1998-2018



Source: ONS & HM Land Registry

- 4.7 In Cambridge, lower quartile house prices now stand at 13.3 times typical earnings of younger households working in the City; whilst lower quartile prices now stand at 10.5 in South Cambridgeshire. Despite a recent fall – mirroring the London’s markets response to political uncertainty - clearly both are at a level which point to significant barriers for younger and young family households seeking to buy a home.
- 4.8 On the basis of loan to income ratios used by most mortgage lenders of 4.5 times annual income¹⁰, the Table below seeks to consider the impact on younger households by setting out the monthly entry-level housing costs in Greater Cambridge using the likely entry-level purchase price.

Table 4.2 Entry Level House Purchase Costs, 2018

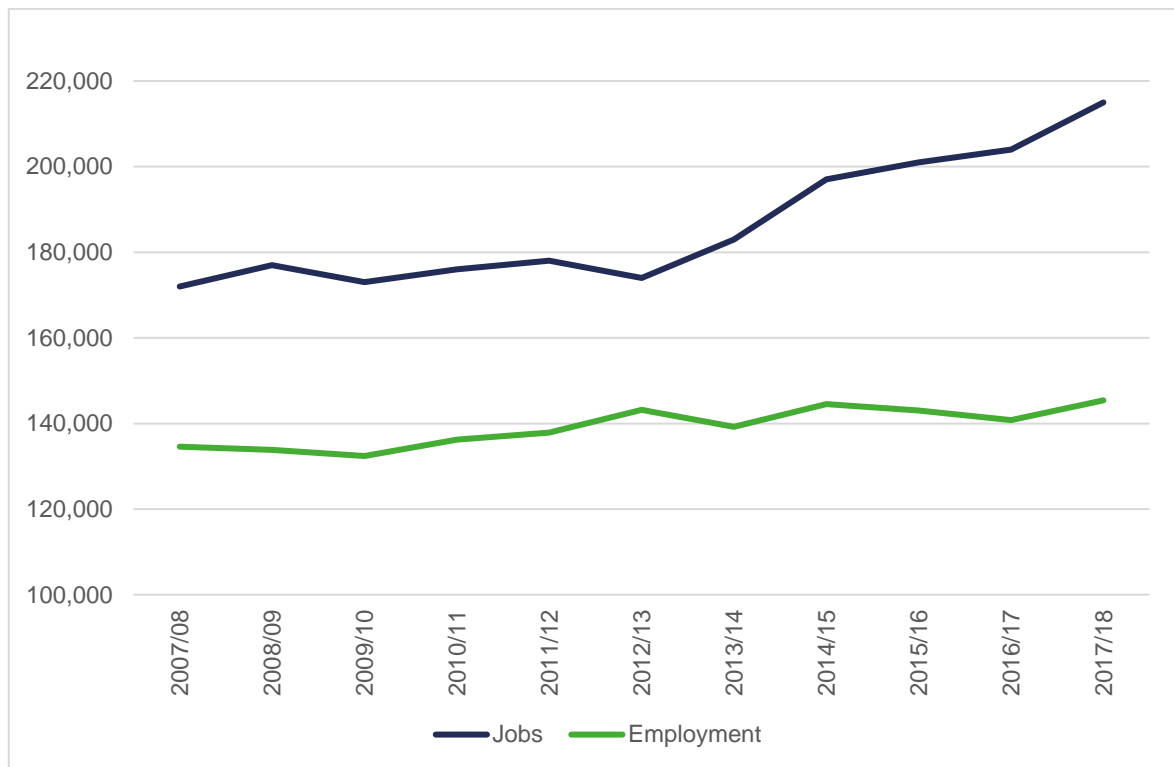
Area	LQ Purchase Price 2018	Monthly Mortgage Cost (3% interest)	Stress-Test Monthly Mortgage Cost (6% interest)
Cambridge	£335,000	£1,943	£2,530
South Cambridgeshire	£280,500	£1,627	£2,119
East of England	£209,000	£1,212	£1,579
England	£155,000	£661	£899

Source: House Price Statistics for Small Areas, Icenii Calculation and The Money Advice Service, April 2019

¹⁰ Calculations assume a 10% deposit, repayment term of 25 years and a 3% interest rate over the term (6% for the Stress Test). It is assumed that there is no existing housing equity available to purchasers

-
- 4.9 Overall, it is clear that the entry level house purchase costs represent a significant barrier and challenge for many younger households with monthly mortgage payments in excess of £1,600 in South Cambridgeshire and £1,900 per month in Cambridge; and the requirement for significant savings to access deposit finance.
- 4.10 If entry-level housing affordability is poor, it can prove a deterrent to young professionals hoping to live and work in Greater Cambridge – particularly those leaving the City’s Universities and those moving to Cambridge (both domestically and internationally). If these workers are unable to remain and work in Greater Cambridge or are put off from moving to the Cambridge area, it is highly likely that positions in the knowledge-intensive sectors would go unfilled, weakening Greater Cambridge’s competitiveness; and could lead to companies moving out of the area.
- 4.11 The Figure below demonstrates that this is already happening to a certain extent in Greater Cambridge. Drawing on ONS data, it is clear that although the number of residents in employment has always been below jobs – reflected in a particularly high jobs density and significant net in-commuting to Greater Cambridge - the situation has been worsening rapidly. With strong jobs growth over the last decade in the area **it is clear that population and housing growth have not been keeping up with growth in employment, particularly over the last five years**. This will have resulted in increasing longer distance commuting into the area, which is not a sustainable long-term strategy. It is clear that it is also inhibiting companies ability to recruit and retain staff.
- 4.12 Over the last five years the number of jobs has grown by 41,000 in Greater Cambridge, but workforce growth has failed to keep up, growing by a much more modest 2,200. There has thus been a very substantial imbalance between growth in jobs and workers, which can only be resolved through significant growth in in-commuting from outside of the area. The scale of the difference is both significant and stark.

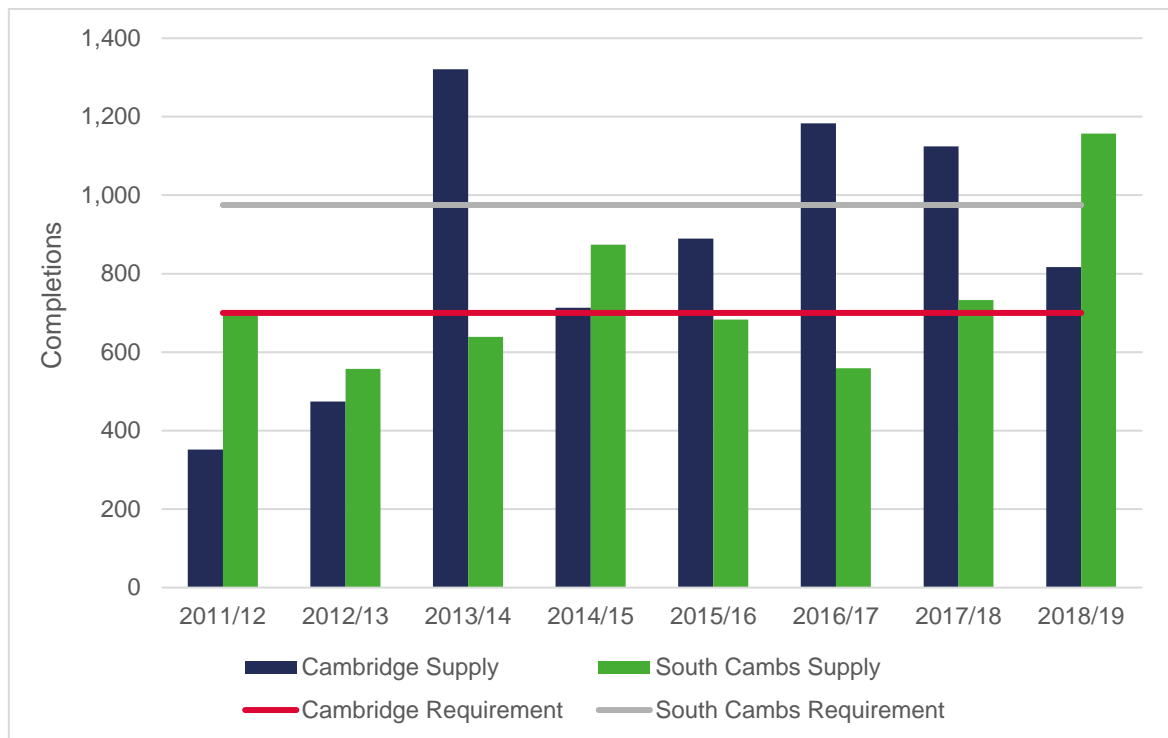
Figure 4.3: Workforce Growth vs. Jobs Growth in Greater Cambridge, 2007-2018



Source: ONS BRES and APS, 2019

- 4.13 If we consider recent delivery performance looking back to the beginning of the current plan periods in 2011, the analysis shows that Cambridge has delivered a net total of 6,873 homes and South Cambridgeshire 5,896 homes. As a result, Cambridge has delivered a surplus of over 1,250 homes against the Local Plan requirement – although this has been driven largely by 3 years of very high completions. On the other hand, South Cambs has under-delivered by almost 2,000 homes, exceeding the Local Plan requirement in the last year of monitoring only. Together housing delivery has fallen c. 15% below target.
- 4.14 But given the wider indicators relating to employment growth, house price growth and deteriorating affordability it is quite clear that housing delivery has not been keeping pace with need/demand; and that housing targets fall substantively below the actual housing need.

Figure 4.4: Housing Supply in Greater Cambridge, 2011-2019



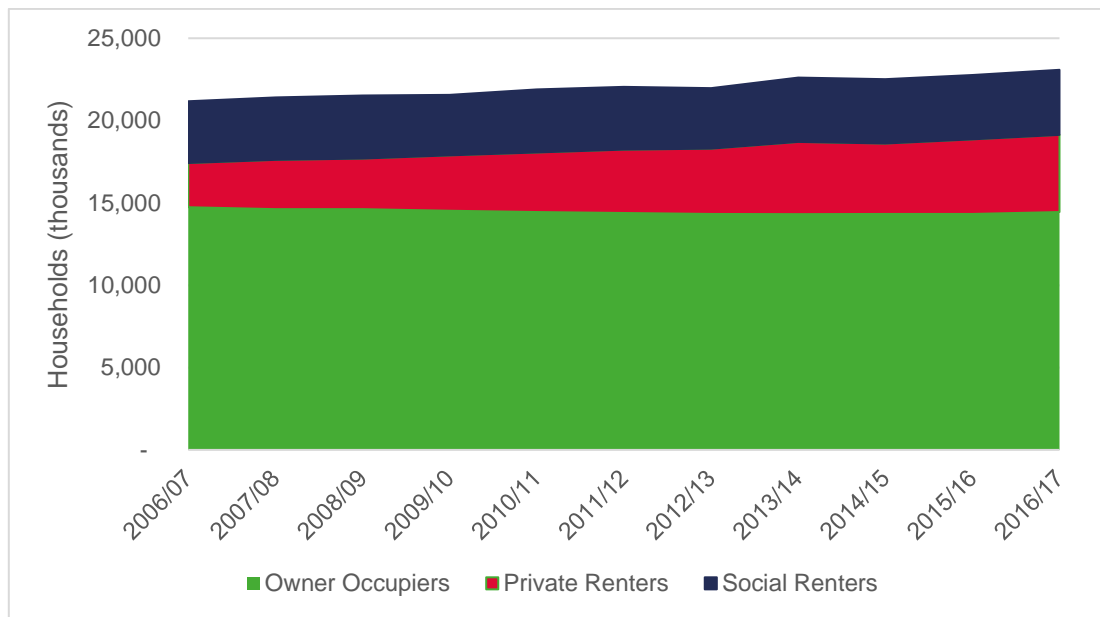
Source: Annual Monitoring Reports

- 4.15 On the basis of recent housing delivery rates – despite Cambridge having delivered a large surplus of housing against the Local Plan requirement; we have seen little in the way of improvements to entry-level affordability or median affordability in the Greater Cambridge. This demonstrates, when set against the affordability analysis, that demand for new housing in this area has been exceptionally high, and housebuilding has not kept up.

Trends in Home Ownership & Private Renting

- 4.16 Nationally, there has been a clear knock-on effect of unaffordability on home ownership levels in recent years. The Figure below shows the growth in the sector from 2006/07 to 2016/17 across England; drawing on English Housing Survey data.

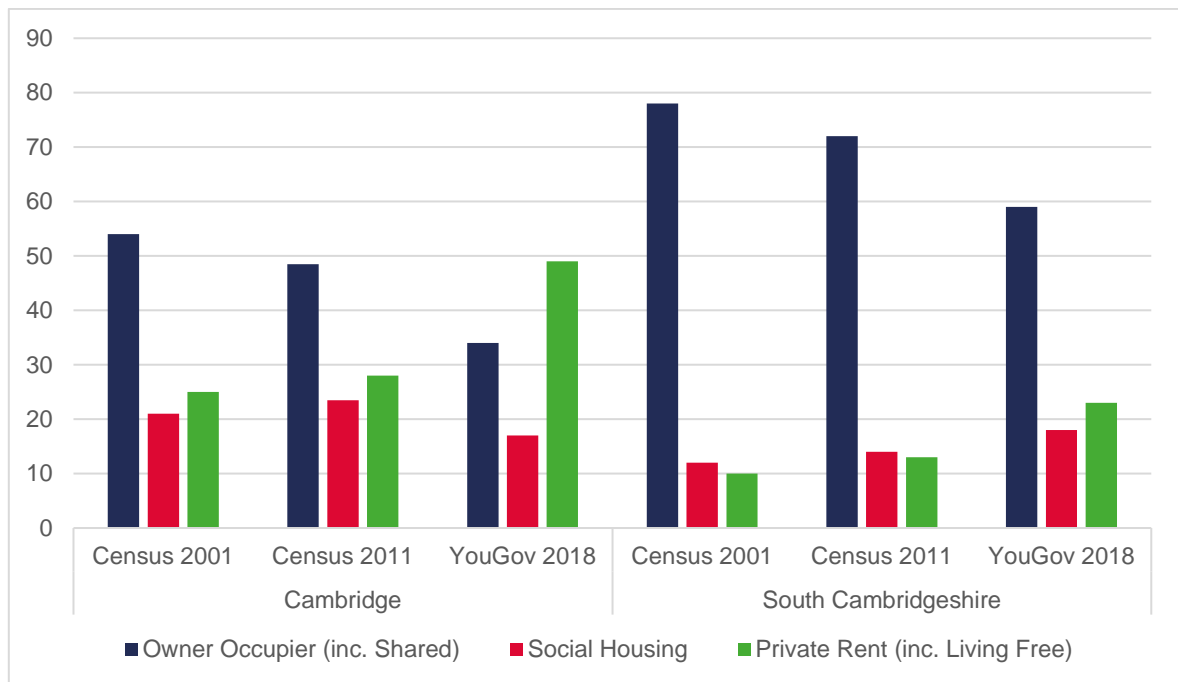
Figure 4.5: National Household Tenure Trend, 2006-2017



Source: English Housing Survey, 2018

- 4.17 The trend shows strong and continual growth in the private rented sector moving from the third largest housing tenure in England in 2006/07 to the second largest in 2011/12 before moving to account for a fifth of all households in England in 2016/17. The Survey also found that financial reasons were the most common for reason for those moving from home ownership to private renting; with 71% of private renters stating they would not be able to afford to buy.
- 4.18 This trend is particularly apparent in Greater Cambridge. The Figure below charts the changes in tenure across Cambridge looking back to the 2001 Census up to recent analysis undertaken by YouGov on behalf of Shelter.

Figure 4.6: Greater Cambridge Tenure Change, 2001-2018



Source: ONS Census and Shelter

4.19 With regards to Cambridge specifically, the area is now expected to have the second highest proportion of private renters as a percentage of all households in England, behind only the London Borough of Camden; with the private rented sector now the largest sector in the City. South Cambridgeshire, despite home ownership accounting for almost 80% of all households in 2001 has also experienced a notable shift.

4.20 Data recently published by ONS¹¹ points to a slightly lower 37% of the dwelling stock in Cambridge and 16% in South Cambridgeshire falling within the Private Rented Sector. It shows that the PRS has grown from 28% to 37% of stock within just 5 years.

4.21 As recognised in the Councils Housing Strategy, housing options for those on lower incomes are scarce and there is also a growing affordability gap where, notably, middle income households are being squeezed out of the market; with limited housing options for low cost home ownership or the private rented sector.

Private Rental Market Affordability

4.22 Despite a larger proportion of Greater Cambridge residents being forced to turn away from home ownership and move to the private rented sector in order to live and work in the area; the evidence

¹¹ ONS Sub-national dwelling stock by tenure estimates,

suggests it is not necessarily an affordable option. Turning therefore to recent rental affordability in Greater Cambridge; the Table below draws on the latest available evidence set against the regional and national comparatives.

Table 4.3 Rental Affordability in Greater Cambridge

	LQ Rent	% LQ Earnings Spent on Rent	Median Rent	% Median Earnings Spent on Rent
Cambridge	£925	44%	£1,200	43%
South Cambs	£825	37%	£950	32%
East of England	£625	36%	£795	33%
England	£525	30%	£695	28%

Source: ONS and VOA, 2019

4.23 The analysis shows that whilst someone on lower quartile earnings may spend 30% of their (gross) earnings on rent nationally, in Cambridge, they would need to spend 44% of their earnings on rent, and 36% of their earnings in South Cambridgeshire. This is clearly at an unaffordable level for younger households, young professionals and family households.

4.24 For those on median earnings, there remain affordability issues within the rental market. Whilst someone on median earnings would have to spend 28% of their income on rent nationally, the situation in Greater Cambridge ranges from 32% in South Cambridgeshire to 43% in Cambridge.

Table 4.4 Median Rental Price Statistics in Greater Cambridge

	Room	Studio	1 Bed	2 Bed	3 Bed	4+ Bed
Cambridge	£525	£780	£950	£1,250	£1,350	£1,900
South Cambs	£520	£625	£750	£895	£850	£1,375
East of England	£500	£550	£650	£775	£900	£1,350
England	£390	£575	£615	£675	£760	£1,320

Source: VOA, March 2019

4.25 The latest ONS Private Rental Market Statistics data set out in the Table above shows that rental levels are notably above the national average across Greater Cambridge for all property sizes. **In Cambridge, median rent for a 2 bedroom property is a substantial 64% above the national equivalent;** whilst in South Cambridgeshire it is also higher at 18% above.

4.26 Overall, it is clear that the shift away from home ownership towards the private rented sector in Greater Cambridge does not in itself offer an affordable alternative.

The Greater Cambridge Housing Market

Bringing the analysis together, it is clear that the housing market in Greater Cambridge is strong but ultimately unaffordable both in respect of the rental and sales market; with the likelihood of this improving without transformational intervention - set against a strong and improving economy - highly unlikely. The Councils are not unaware of the issue. Indeed, the Greater Cambridge Housing Strategy 2019 - 2023 (April 2019) recognises explicitly that:

“Greater Cambridge is an expensive place to buy or rent a home. High prices are fuelled by high demand, which itself is fuelled by the strength of the local economy and in-migration of highly skilled workers...”

There is a recognised mismatch between growth in employment and the corresponding slower growth in house-building and infrastructure, and the adverse impacts this can have on both people and businesses. It is therefore essential for local economic success that the pace of delivery of new homes overall is increased and that we can stimulate the housing market in the case of any market failure.”

The existing evidence therefore points to significant affordability issues within Greater Cambridge which are showing no signs of improving on the basis of current housing delivery rates in the area; and ultimately, if not addressed, this is likely to lead to significant consequences for the Greater Cambridge economy.

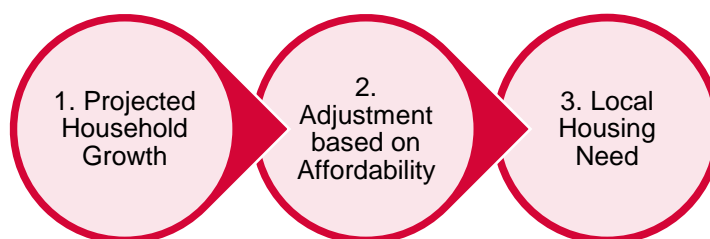
5. SCENARIOS FOR HOUSING NEED

- 5.1 Icenis's preceding analysis has shown that there are acute affordability issues in the Greater Cambridge area, in both the rental and sales markets; that the area has a strong, growth-orientated economy which is of national significance; and that in recent years there has been a structural imbalance between housing need and housing delivery which has resulted in both worsening affordability issues, and is now a threat to the area's continued economic success.
- 5.2 This section seeks to take this forwards to establish and consider scenarios for future housing and economic growth in Greater Cambridge. It recognises the interaction between the economy and housing market, which has been identified and recognised by the NIC, the Combined Authority and the two authorities of Cambridge City and South Cambridgeshire themselves. It also recognises the need for strategic investment in infrastructure, and how this can both influence housing need and the area's economy on the one hand, and how strategic scale growth can contribute to a compelling case for investment in strategic infrastructure.

The Standard Method Starting Point

- 5.3 Planning Practice Guidance ("PPG") on Housing Need Assessment sets out a standard method to be used in calculating a housing need. The PPG then sets out a three-step process.

Figure 5.1: Overview of the Standard Method for calculating Local Housing Need



- 5.4 The first step is to establish a demographic baseline of household growth. This is to be taken directly from published household projections, with the Government directing use of the 2014-based Household Projections in the methodology at the current time. Projected annual average household growth over a 10-year period from the current year is calculated. For the purposes of this report a 10-year period from 2019 to 2029 has been used.
- 5.5 The second step of the proposed methodology seeks to adjust the demographic baseline on the basis of affordability characteristics of the area. This uses the published ONS ratio of median house prices

to median (workplace based) earnings ratio for the most recent year for which data is available (2018 at the time of preparing this report).

- 5.6 The final step in the proposed standard method is to consider whether the affordability adjustment should be capped. There are two situations where a cap is applied. The first is where an authority has reviewed their plan (including developing an assessment of housing need) or adopted a plan within the last five years. In this instance the need may be capped at 40% above the requirement figure set out in the plan. The second situation is where plans and evidence are more than five years old. In such circumstances the cap is applied at 40% above either the projected household growth or the housing requirement in the most recent plan (where this exists), whichever is the higher. However Government has been clear in the PPG that the cap does not reflect the actual scale of need, and that plans taking forward a capped requirement will require early review. In the context of a long-term plan looking to 2040 within a major growth area, Icen consider that it is not appropriate to take forward a capped figure. In any case, at the current time it affects neither authority.
- 5.7 Table 5.1 below shows the resultant current minimum local housing need is for 1,779 homes a year across Greater Cambridge; which when applied over the 23 year plan period generates a minimum need for 40,900 homes.

Table 5.1: MHCLG Standard Method Housing Need Calculations

	Cambridge	South Cambridgeshire	Greater Cambridge
Annual Growth in Households, 2019-29	418	812	1,230
Affordability ratio (2018)	12.95	10.25	-
Affordability uplift to household growth	56%	39%	-
Minimum Local Housing Need (uncapped)	651	1128	1,779

- 5.8 The NPPF and Planning Practice Guidance is however clear that the standard method is a minimum figure. As alluded to in the introduction to this report, the national planning policy and guidance is clear that the actual housing need in some areas will be greater, with the PPG setting out:

“The government is committed to ensuring that more homes are built and supports ambitious authorities who want to plan for growth. The standard method for assessing local housing need provides a minimum starting point in determining the number of homes needed in an area. It does not attempt to predict the impact that future government policies, changing economic circumstances or other factors might have on demographic behaviour. Therefore, there will be circumstances where it is appropriate to consider whether actual housing need is higher than the standard method indicates.

This will need to be assessed prior to, and separate from, considering how much of the overall need can be accommodated (and then translated into a housing requirement figure for the

strategic policies in the plan). Circumstances where this may be appropriate include, but are not limited to situations where increases in housing need are likely to exceed past trends because of:

- *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; or*
- *an authority agreeing to take on unmet need from neighbouring authorities, as set out in a statement of common ground.¹²*

5.9 It is clear from the preceding analysis that both of the first two bullet points above apply in the Greater Cambridge case: it sits within the Oxford to Cambridge Arc, a Devolution Deal has been agreed in which includes a commitment to substantially increase housing delivery; and strategic infrastructure improvements are planned (as explored later in this section). Furthermore the endorsed recommendations of the National Infrastructure Commission, which include a Government commitment to higher housing delivery in the Arc to support economic growth, are material considerations for plan-making.

5.10 Icenii would also note that there is potential for a review of the standard method formula to take place in 2020, which is likely to influence the figure; and therefore undue reliance on the current standard method figures is unwise.

Supporting the Greater Cambridge Economy

5.11 As set out in Section 2 of this report, there is clear evidence underpinned by national and local research which demonstrates that the Greater Cambridge area is unique in the UK. As the CPIER sets out, it has a unique set of economic assets – internationally recognised universities, a uniquely strong skills base, particular sectoral strengths, business growth which is self-perpetuating, high rates of business start-ups and foreign acquisitions. It is an economy which is nationally significant and has been performing very strongly, with particular strong growth in employment in recent years. The need to boost housing provision to support this has been recognised by a range of local partners.

5.12 In order to derive potential scenarios for economic growth across Greater Cambridge, we have used the framework established by the CPIER. Although it is noted that the SQW work and its transformational growth scenario has partly informed the NIC's recommendation that up to one million homes should be built across the Arc, we note that the CPIER states that Cambridge Econometrics'

¹² Reference ID: 2a-010-20190220

projections – through the EEFM - for employment growth in recent years fall considerably below the growth identified by the official ONS employment growth figures (i.e. BRES). By implication, the EEFM is expected to under-estimate future growth potential. IcenI consider is therefore justified to focus principally on the CPIER’s framework and assumptions.

- 5.13 First, we have sought to establish an up to date baseline position for employment for Greater Cambridge, following the CPIER’s approach, drawing on the 2011 Census data. This provides us with a robust starting point on which to develop a more recent baseline position. This first step shows that across Greater Cambridge, there was around 160,500 people in employed in the area at 2011.
- 5.14 Second, we have incorporated absolute employment growth across Greater Cambridge drawn from the Cambridge Ahead Corporate Database over the period from 2011 to 2017. This is the start date of the Greater Cambridge Local Plan. The Cambridge Ahead data shows that there has been absolute growth of 32,688 people since 2011 across the area. For comparison purposes, ONS data indicates that there has absolute growth of 31,000 people over the same period; however, as the CPIER recognises, BRES is likely to underestimate employment growth.
- 5.15 This process is shown in the Table below; arriving at a baseline position in 2017 of 193,320 people in employment in Greater Cambridge. This figure has then been used as the starting point for modelling economic growth and housing need across the area.

Table 5.1 IcenI Employment Baseline Position in Greater Cambridge

	2011 Census	Cambridge Ahead, 2011-2017	2017 Baseline
Cambridge	88,145	13,749	101,894
South Cambridgeshire	72,487	18,939	91,426
Greater Cambridge	160,632	32,688	193,320

Source: ONS and Cambridge Ahead/CBR data

- 5.16 The CPIER set out three scenarios above the baseline position. IcenI have followed the framework to each of these scenarios, whilst seeking to update the information used to inform each scenario. Our modelling is therefore based on the following three scenarios and assumptions:
- **A Short-Term Growth Rate** – this scenario takes the Cambridge Ahead/BRES blended rate of employment growth which has been calculated over the period from 2010/11 to 2016/17 and is set out in Table 1 and Figure 22 of the CPIER. The blended rate is based on a combination of ONS BRES data and Cambridge Ahead’s Corporate Database data over this period. This combines employment growth rate data for the corporate sectors where Cambridge Ahead have the most knowledge; and the ONS growth rates in other sectors (retailing etc.).

The ST Growth Rate assumes a growth rate for Greater Cambridge of 3.3% p.a.

- **A Long-Term Growth Rate** – this scenario takes employment growth from the 1981 Census up to our 2017 baseline position for Greater Cambridge; and projects this trend forwards.

The *LT Growth Rate* assumes a growth rate for Greater Cambridge of 2.2% p.a.

- **A Blended Growth Rate** – this scenario is a combination of the short-term and long-term growth rate. The short-term growth rate above, which is linked to the Cambridge Ahead/BRES blended rate of employment growth, is applied up until 2031 before the long-term growth rate, reflecting the trend from 1981 to 2017 is applied from 2031 to 2040 i.e. the end of the plan period. This recognises that recent growth rates have been exceptional, accelerated by the construction of new science parks and premises, and that this notably strong growth is likely to continue for a period of time due to strategic transport improvements and notable Government investment. It is then assumed that rates will return to longer-term ONS growth rates (which do not necessarily reflect weak growth).

The *Blended Growth Rate* assumes a growth rate for Greater Cambridge of 2.8% p.a.

5.17 The Table below sets out Icení’s employment growth forecasts to 2040 i.e. the end of the Greater Cambridge Local Plan period. The short-term scenario shows overall growth of around 218,000 jobs, equal to 3.3% growth per annum across Greater Cambridge. The long-term scenario shows growth of around 125,000 jobs, equal to 2.2% p.a.; and the blended rate shows growth of around 171,000 jobs, equal to 2.8% p.a.

Table 5.2 Greater Cambridge Employment Forecasts, 2017-2040

Scenario	2017	2040	Change	CAGR
Short-Term	193,320	411,331	218,011	3.3%
Long-Term	193,320	318,608	125,288	2.2%
Blended	193,320	364,015	170,695	2.8%

Source: ONS and Cambridge Ahead

5.18 Building on this framework drawn from the CPIER and Icení’s forecast employment growth, Icení’s modelling has built in a number of other assumptions which are set out in Table 5.3 below, in order to calculate the level of housing needed to support the level of employment growth forecast through each scenario. These are standard modelling assumptions for this type of work.

Table 5.3 Icení Modelling Assumptions

Variable	Source	Description
Population Estimates	2016-based SNPP	n/a
Fertility/Mortality Rates	2016-based SNPP	2016-based mortality rates are higher than those in 2014-based SNPP as used in the standard method, which would have a downward impact on housing need. This is considered reasonable as it reflects the latest data.
Migration	2016-based SNPP	Migration assumptions in the base projection and the profile of migration by age are taken from the 2016-based SNPP. Migration is then adjusted to support employment growth.
Household Representative Rates	2014-based SNHP	The 2014-based Stage 1 headship rates are used as a starting point. Assumptions incorporate a part-return to 2008-based SNHP trends for the 24-44 age groups to support improvements in affordability over time.
Commuting Ratios	2011 Census	A commuting ratio of 0.632 for Cambridge and 1.063 for South Cambridgeshire, derived from 2011 Census data is used. This is held constant in the modelling.
Double Jobbing	2019 APS	Trends based on data over the period 2004 to 2018 which result in a double jobbing average of 6.4% for Cambridge and 5.1% for South Cambridgeshire.
Unemployment	2019 APS	Assumption is that there are no further changes to unemployment moving forward from 2017 for both authorities.
Economic Activity Rates	OBR and 2011 Census	Projected changes in the OBR July 2018 Fiscal Sustainability Report are applied to a baseline from 2011 Census data. The projected change is set out in Figure 5.1 and Figure 5.2.
Vacancy Rate	2018 MHCLG	Assumptions incorporate a vacancy uplift from households of 3.0% in Cambridge and 2.7% in South Cambridgeshire.

5.19 The Figures below show the projected changes in economic activity rates over the 2017-40 plan period for Cambridge and South Cambridgeshire.

Figure 5.1: Projected Changes to Economic Activity Rates in Cambridge, 2017-2040

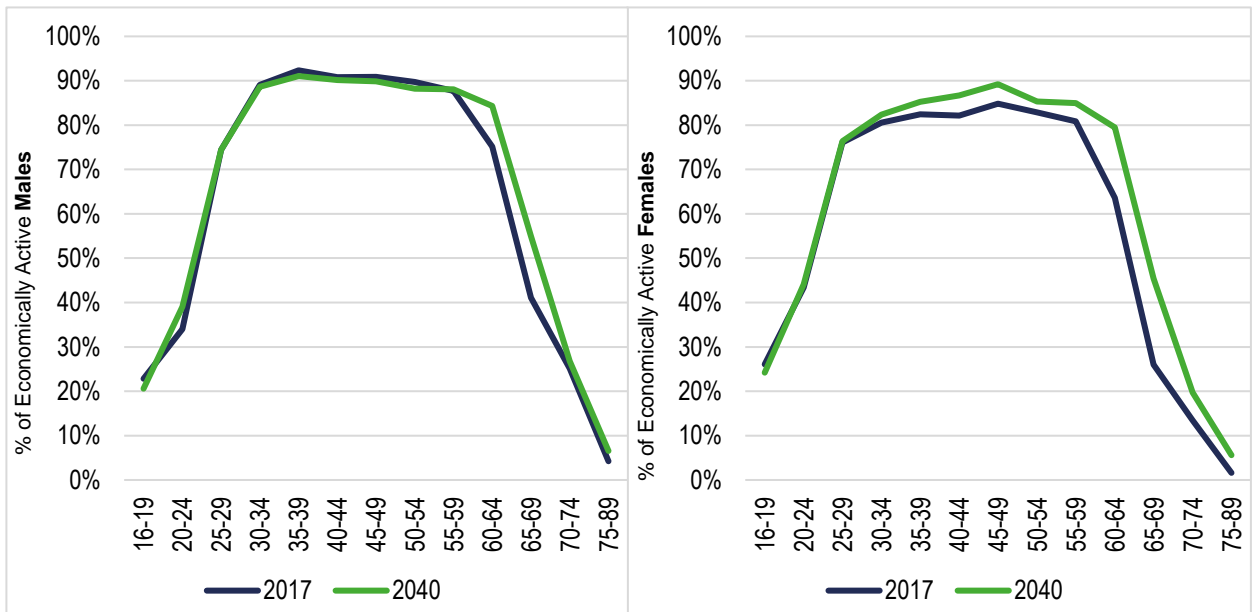
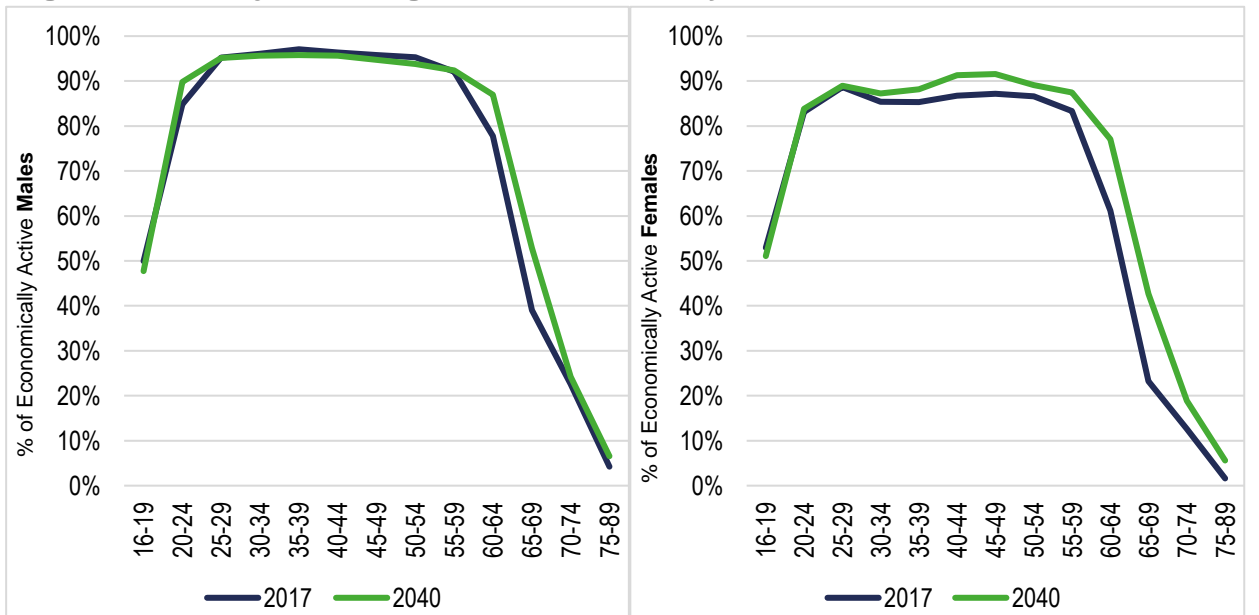


Figure 5.2: Projected Changes to Economic Activity Rates in South Cambs, 2017-2040



Source: OBR and Census 2011

5.20 Building on our assumptions on commuting patterns and double jobbing set out above, the Table below calculates the change in economically active population needed to meet job forecasts linked to our three scenarios for Greater Cambridge. This is forecast over the period 2017 to 2040 which is the plan period for the emerging Greater Cambridge Local Plan.

Table 5.4 Change in Economically Active Population Needed in Greater Cambridge

Scenario	Forecast Job Change	Allowance for Net Commuting	Allowance for Double Jobbing (=Change in Economically Active)
Short-Term	218,011	199,852	189,007
Long-Term	125,288	97,812	92,130
Blended	170,695	148,063	139,844

- 5.21 The long-term scenario would generate an additional 92,130 residents in employment; the short-term scenario would generate an additional 189,007 residents in employment whereas Icenis's blended growth rate scenario would generate an additional 139,844 residents in employment. In each case, the assumed workforce growth (in the right hand column) is lower than projected jobs growth as we assume that there continues to be a level of net in-commuting to the Greater Cambridge area.
- 5.22 Taking the calculated change in economically active population, we can then calculate the resultant housing need for Greater Cambridge under each of the three scenarios. This step takes the demographic projections and adjusts the migration assumptions (upwards or downwards) until the population growth provides the required increase in the resident workforce. The changes to migration have been applied on a proportionate basis; and the methodology assumes that the age/sex profile of both in- and out-migrants is the same as that which underpins the 2016-based SNPP with adjustments being consistently applied to both internal (domestic) and international migration.
- 5.23 Once the level of economically active population matches the employment growth forecasts under each of the scenarios, projected household growth is calculated by applying household representative rates. Our assumptions include adjustments to ensure that the ability of younger households to form is not constrained.
- 5.24 In converting household growth figures into dwellings, we have assumed a 3.0% vacancy uplift in Cambridge and 2.7% vacancy uplift in South Cambridgeshire in accordance with the latest MHCLG data on the vacancy rates across Greater Cambridge.
- 5.25 The results are shown in the Table below for the whole plan area. A detailed breakdown is provided by authority at Appendix AX.

Table 5.5 Projected Change in Households and Housing Need in Greater Cambridge

Scenario	Households 2017	Households 2040	Change in Households	Annual Change	Homes per Annum
Short-Term	110,501	238,679	128,178	5,573	5,727
Long-Term	110,501	180,000	69,499	3,022	3,108
Blended	110,501	208,883	98,382	4,278	4,398

Source: Demographic Projections

-
- 5.26 On the basis of the three scenarios set out and our demographic modelling, IcenI derive an annual need for housing in Greater Cambridge of between 3,100 homes per annum in the long-term scenario to 5,700 homes per annum in the short-term scenario; with a blended scenario indicating a need for around 4,400 homes per annum.
- 5.27 Whilst the level of housing need is clearly sensitive to assumptions on how the economy might perform, IcenI consider that it would be appropriate to plan on the basis of the middle, “blended” scenario.
- 5.28 It is important to first ensure employment growth is aligned to the economic strategy for Greater Cambridge through the LIS and the Combined Authority Devolution Deal if affordability issues are not to worsen. As cited in this report, the ambition of local partners of the Combined Authority is to continue to build an industrial ecosystem that is globally known for tackling the biggest challenges facing society, and in so doing to nearly double GVA over 25 years.
- 5.29 The Commission, in preparing the CPIER, considered the aim of doubling GVA in this area by 2040 to be realistic, and acknowledged this will be achieved in part by attracting knowledge-intensive businesses which would not locate elsewhere in the UK. The Commission recognised that success in Greater Cambridge is of national significance; however, it will only be attained, they said, if there is more ambition with regard to the development of new housing, and a careful prioritisation of infrastructure projects. The CPIER set out clearly that “without current sites being delivered, and new ones coming on stream, the target of doubling GVA will not be achieved”.
- 5.30 At the Combined Authority level, through the CPIER’s ‘Central Projection’ i.e. its blended employment growth scenario, employment would need to increase from around 480,000 in 2018 to over 900,000 by 2051 for the regions’ potential to be maximised. **The CPIER recognised however that “the bulk of the heavy lifting of this target will be done by the larger economies of Cambridge, South Cambridgeshire and Peterborough”; and that in order to double an economy over twenty-five years would require “an annual average growth rate of 2.81%”.**
- 5.31 Focussing on Greater Cambridge, IcenI therefore considers that on this basis, the ambition of the wider Combined Authority area implies alignment with our Blended Growth Rate scenario which sees employment increase from 193,320 in 2017 to over 364,000 in 2040; equal to 2.8% per annum.

There is a compelling case for higher housing provision to support economic growth. It is important that the strategies for homes and jobs are aligned with one another; and that the Local Plan contributes to the delivery of the Devolution Deal. To do so, IcenI’s analysis indicates a need for delivery of at least 101,200 homes over the plan period (4,400 homes per year) aligned with the Blended Scenario herein.

Improving Affordability

- 5.32 As the housing market analysis in Section 4 herein shows, there are some major issues with affordability in Greater Cambridge; and a significant need for housing which is affordable to younger households. House prices are 11.3 times earnings across Greater Cambridge, and
- 5.33 The importance of this in order to retain young professionals graduating from the Universities and ensure the best talent is not lost to London has been recognised by the NIC, the Combined Authority and the Greater Cambridge authorities in the Councils' Housing Strategy.
- 5.34 There is a clear and urgent need to improve the affordability of housing and to boost affordable housing delivery.
- 5.35 To address overall market affordability, as a starting point Iceni would suggest that **housing delivery need to keep pace with growth in employment**. The evidence clearly shows that this has not happened in recent years, and as a result affordability has deteriorated substantially with the workplace-based affordability ratio deteriorating in Cambridge from 8.14 in 2008 to 9.61 in 2013 to 12.95 in Cambridge in 2018; with a similar deterioration in South Cambridgeshire from 7.71 to 10.24.

Table 5.6 Changes in Median Affordability Ratio (Workplace-based)

	Cambridge	South Cambridgeshire
1998	5.32	4.77
2003	8.28	7.12
2008	8.14	7.71
2013	9.61	7.74
2018	12.95	10.24

- 5.36 Our core modelling has assumed some improvement in the ability of younger households to form over time, which we anticipate would arise through a substantive increase in housing delivery rates.
- 5.37 The second consideration is the ability to deliver affordable housing. We have not seen an up-to-date assessment by the Councils on the need for affordable housing, but this should be prepared to support the new Local Plan. In developing the Local Plan, the Councils then need to give consideration to what housing provision might be necessary to support affordable housing delivery. Planning Practice Guidance sets out¹³:

¹³ ID: 2a-024-20190220

The total affordable housing need can then be considered in the context of its likely delivery as a proportion of mixed market and affordable housing developments, taking into account the probable percentage of affordable housing to be delivered by eligible market housing led developments. 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.

The inter-relationship between Growth and Infrastructure

- 5.38 The second of the two principal constraints to economic growth in Greater Cambridge after housing affordability is infrastructure. This has been recognised through a breadth of research which has then been endorsed by Government. As a result, there is now major game-changing infrastructure proposed, most notably East West Rail and the Oxford to Cambridge Expressway. Combined, these two large scale strategic infrastructure projects have the potential to radically transform travel across the Cambridge-Oxford corridor; creating a central growth spine; and developing economic and labour market interactions across the Arc. Government has been clear within Planning Practice Guidance that strategic infrastructure improvements may justify higher housing provision.
- 5.39 The East West Rail proposals will reinstate an east-west rail link across the region, connecting communities and businesses from Oxford through to Cambridge to cater for future growth, with the support of new local services.
- 5.40 The Oxford to Cambridge Expressway proposals will deliver a fast, high quality road link to better connect Oxford, Milton Keynes and Cambridge; delivering faster, safer and more reliable journeys, and increasing opportunities for economic growth and new homes.
- 5.41 The first recommendation set out in the NIC's Planning for Prosperity report was that the Government should progress work on East West Rail and the Expressway through a single co-ordinated delivery programme. The aim of this programme, the NIC said, should be to unlock opportunities for transformational housing growth through the creation of well-connected new communities. In response, the Government endorsed the recommendation to create a single co-ordinated delivery programme, noting the Government had established a cross-Whitehall Programme in spring 2018 to take an integrated approach to planning and delivery of infrastructure, home and business growth in the Arc.
- 5.42 On East West Rail, the Government endorsed the principle of accelerating work on the development of the central section of East West Rail, between Bedford and Cambridge. The Government has tasked East West Rail Company to accelerate delivery of the central section of East West Rail between Bedford and Cambridge, with the aim for passenger services to begin from the mid-2020s, subject to necessary consents. £20 million development funding was allocated to the East West Rail company to do explore which route can best support the Government's housing ambitions.

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- 5.43 On the Expressway, the Government set out that it was committed to the ambition of “*opening the missing link of the Oxford-Cambridge Express and to accelerate development work*”. The government is accelerating development work, completing option selection and detailed design work on the ‘missing link’ elements of the Expressway between the M1 and Oxford so that it is ready to open in 2030, subject to necessary consents. The Expressway’s central corridor will follow the route of East West Rail.
- 5.44 Overall, the Government has committed more than £4.5 billion in funding for the Oxford to Cambridge Expressway, East West Rail and Cambridgeshire and Peterborough’s Transforming Cities Fund. The Government is clear that these two strategic infrastructure projects and the significant levels of funding which have been allocated to them is fundamentally centred on allowing for future growth in the corridor.
- 5.45 Furthermore a recent feasibility study, commissioned by the Cambridgeshire & Peterborough Combined Authority has considered the potential for a Cambridge Autonomous Metro (“CAM”) which could create an **additional** 100,000 jobs, together with up to 60,000 additional homes to support this level of employment growth, according to the study.
- 5.46 The Strategic Case for CAM centres on its ability to enable and accelerate additional economic growth within Greater Cambridge, through supporting the sustainable delivery of additional jobs, housing, and GVA through investment to alleviate the region’s transport constraints. The Strategic Case demonstrates that a combination of limited transport capacity and accessibility undermines future development, exacerbates housing unaffordability, and puts future growth at risk.
- 5.47 The vision for the project is an expansive metro network that seamlessly connects Cambridge City Centre, key rail stations (Cambridge, Cambridge North and future Cambridge South), major city fringe employment sites and key ‘satellite’ growth areas, both within Cambridge and the wider region. The CAM would connect Cambridge City to expanding villages such as Cambourne and Waterbeach, as well as region towns including St Neots, Huntingdon, St Ives, Mildenhall and Haverhill.
- 5.48 In the CAM’s circumstances, the scale of growth which it can support in Greater Cambridge becomes particularly important in being able to secure infrastructure investment, supporting the business case for investment; and in a context whereby key government schemes – e.g. the Housing Infrastructure Fund (“HIF”) – are seeing funding aligned in particular to how it opens up housing growth. As recognised in the CAM’s business case, “transport infrastructure is a fundamental ‘enabler’ to supporting the additional housing and jobs growth required to deliver the wider growth ambitions of the Combined Authority and its partners”.
- 5.49 The funding allocated through the HIF is awarded to local authorities on a highly competitive basis, providing grant funding for new infrastructure that will unlock new homes in the areas of greatest

housing demand. The premise of HIF funding is to make more land available for housing in high demand areas, resulting in new additional homes that otherwise would not have been built; whilst supporting ambitious local authorities who want to step up their plans for growth and make a meaningful difference to overall housing supply.

- 5.50 Tied to this funding, there are also a number of large, strategic transport schemes currently under construction or in the pipeline which are expected to result in significant improvements in long-distance connectivity; including the £1.5 billion update to motorway standard of the A14 between Cambridge and Huntingdon; which will provide additional capacity and relieve congestion in the area.

Together, this major infrastructure underpinned by substantial investment and Government support will drive economic growth and support housing market attractiveness – the link being two way, in which the scale of growth influences the ability to fund the infrastructure, but the infrastructure contributes to economic growth and housing demand in Greater Cambridge. This should therefore be reflected in the ambition of the Greater Cambridge authorities, looking ahead to 2040.

6. DRAWING THE EVIDENCE TOGETHER

- 6.1 This HEDNA Report has examined the inter-related issues of economic growth, affordability and housing need in Greater Cambridge.
- 6.2 A strong strategic case has been articulated by the National Infrastructure Commission and the Cambridge and Peterborough Combined Authority and LEP that there is a need to substantially increase housing delivery in order to support the economic growth potential of the area and address the significant affordability issues which exist now.
- 6.3 The Greater Cambridge area is at the heart of the UK's knowledge economy. It is an economy which has been growing rapidly over a sustained period and has further growth potential, focused in particular on some key sectors such as bioscience, digital/ IT and AI. The success and growth potential of the area is underpinned by the concentration of high-tech, knowledge-based businesses; the universities and research institutes based in Cambridge; an unrivalled skills base, with 60% of the workforce having degree level skills; an enterprise culture; and an ability to capture foreign direct investment and venture capital.
- 6.4 However the evidence points to there being a fundamental imbalance between rates of economic growth and housing delivery, fuelling acute affordability issues. Median house prices are more than 11 time earnings, and a particular imbalance has been evident between recent employment growth and housing delivery, resulting in real impacts on people's ability to find homes and indeed to live in the area. The undersupply of homes presents a fundamental challenge to the area's future economic growth, with evidence and local stakeholders accepting that workers are being priced out of the area; and firms in the Greater Cambridge area are finding it difficult to recruit. The CPIER states that the area is now at a cross-roads, with innovation rich firms making choices between 'Cambridge or overseas' and affordability issues being one of the balancing factors in these decisions. If housing supply and affordability issues are not now addressed, the result is that the area could see disinvestment. These issues appear now to have been recognised at a local level, and indeed are recognised nationally by Government through its designation of the Oxford-Cambridge Arc as a key economic priority, and area in which housing delivery levels need to double.
- 6.5 The Cambridge and Peterborough Devolution Deal commits the authorities in the area to planning to double economic output by 2040, and substantially increasing housing delivery. Our evidence shows strong potential for higher value-added economic and business growth in the Greater Cambridge area; but equally at the moment strong affordability barriers for households seeking to live/ move to the area. Someone on lower quartile earnings would need to spend for instance 44% of their earnings on rent in Cambridge.

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- 6.6 Icen's analysis has explored three scenarios for future economic performance. If the Greater Cambridge economy grew at the rate it has done in the short-term since 2010, employment would grow at 3.3% pa and it would need 5,727 homes pa. The long-term growth rate of 2.2% growth per annum, based on trends since 1981, would require 3,108 homes per annum. Our conclusion however is that planning should be based on a blended growth rate of 2.8% pa, based on short-term trends to 2031 and longer-term trends thereafter. This aligns with the recommendation from the CPIER; and sees the rate of employment growth in Greater Cambridge aligned to the intentions of the Devolution Deal and Local Industrial Strategy for the area. Aligning the housing and economic strategies is common planning practice, with our analysis showing that this would require provision of 101,200 homes (4,400 dpa) over the 2017-40 plan period across the Greater Cambridge area.
- 6.7 The scale of growth envisaged in this scenario is transformation, but so is the economic growth potential of the Greater Cambridge area; and the scale of planned infrastructure investment. These clearly point to it being a realistic scenario on which strategic planning should be based.