Representations to Regulation 18 North East Cambridge Area Action Plan

On behalf of Trinity College Cambridge

5 October 2020

Contents

Introduction

These representations are made by DP9 and Sphere25 on behalf of Trinity College Cambridge (TCC) as the principal owner and custodian of Cambridge Science Park (CSP).

As an overarching position, Trinity College Cambridge and Cambridge Science Park are supportive of the proposed vision for North East Cambridge set out within the Regulation 18 Area Action Plan (NECAAP) and its aspirations for an inclusive, walkable, low-carbon new city district with a mix of homes, workplaces, services and social spaces which is fully integrated with the surrounding neighbourhood.

TCC fully support the North East Cambridge Area Action Plan's placemaking strategy which is to be guided by the following principles:

- To create a sense of place;
- To deliver a significant number of new homes, range of jobs and supporting facilities;
- To respond to climate and biodiversity through a net zero carbon approach;
- To create a place designed for a healthy and safe community, and
- To be planned around sustainable transport modes first, discouraging car use in order to address climate change.

As one of the principle landowners within the NECAAP, TCC have engaged with the Greater Cambridge Shared Planning Service Team during the preparation of the Regulation 18 document. The comments set out within this response are informed by those discussions and in direct response to the material now published for consultation.

This document provides a composite version of all responses by TCC to the Greater Cambridge North East Cambridge Area Action Plan (Regulation 18:) consultation.

Appended to this response are the following supporting documents:

- Economic Analysis – Volterra (September 2020)
- Transport Topic Paper Review – Vectos (September 2020)
- Response to the North East Cambridge Area Action Plan Transport Evidence Base – Vectos (May 2020)

The Context - Cambridge Science Park and Cambridge Science Park North

Section 2 of the NECAAP Regulation 18 document sets out the context for the area but fails to recognise the importance of Cambridge Science Park. The context includes no reference to the historic economic importance of CSP, nor reference to the type of Research and Development which is undertaken within the AAP area and the importance of this existing employment land to the Cambridge and UK economy. The adopted South Cambridgeshire Local Plan, 2018 recognises this[1] and it is therefore disappointing that the NECAAP which covers a much smaller area does not.

Moreover figure 1 represents an unhelpful and simply false figure of '*4,400 unused car parking spaces on Cambridge Science Park*'. This is an incredibly disappointing inclusion within the draft document, and unfortunately sets the tone for a document which misses the local, regional and national significance of CSP and the asset this presents to the vision for the NEC AAP wider area.

The following provides important context for the team preparing this document.

Cambridge Science Park

Trinity College established the Cambridge Science Park in 1970 in response to recommendations by Harold Wilson's Labour government that UK universities should form better links with the emerging "white-hot" hi-tech industries.

In 1969 at the University of Cambridge, Cavendish Professor Sir Neville Mott and his committee produced a report recommending an expansion of science-based industry close to the city that would enable companies to collaborate with the nearby concentration of world-leading academic scientific expertise. Trinity College and its Senior Bursar, Sir John Bradfield, were impressed with this idea and began masterminding a development scheme for a plot of land to the north of the city which the College had owned since the 1500s.

Planning permission was granted one year later, and the first tenant, Laser-Scan, a spin-out from the Cavendish Laboratory, took occupation of its 10,000 sq. ft premises in 1973.

Today the Park comprises 58 buildings set in 152 acres of landscaped parkland and is home to over 130 companies employing almost 7,500 people. Whilst the College has retained the freehold of the estate, approximately 56% of the land has been let on long leases (excluding areas of public realm). In terms of economic interests, the split is approximately 37% Trinity and 63% long leaseholders.

With its links to the University of Cambridge, prestigious owner and 50-year track record of success, the Park enjoys an enviable reputation as one of the leading Science Parks in the world.

One of the Park's key differentiators when compared to other science and technology Parks is the diversity of its occupiers in terms of sector, size, nationality and age.

Diversity is important because scientific disciplines that were once separate and distinct are now converging. Rather than build in-house capabilities beyond their core area of expertise, companies are sourcing innovation from businesses with complementary competencies. Proximity to relevant

[1] See section 8.14 of the South Cambridgeshire Local Plan, 2018.

scientific expertise is therefore an important factor in a company's choice of location. Increasingly, science-based companies want to be part of a dynamic, multi-sectoral "ecosystem". The Cambridge Science Park offers this level of diversity and therefore provides unrivalled opportunities for companies to form cross-sector collaborations.

Figure 1: Cambridge Science Park Today, Perkins + Will 2020

Given the importance of CSP as one of the world's most prestigious science parks which sits right at the heart of one of the UK's fastest growing economies it is extremely disappointing that the NEC AAP fails to reference either the history of, or the ongoing economic importance of CSP.

From its inception, Cambridge Science Park has played a pivotal role in championing innovation and supporting the 'knowledge economy' that the region has become so famous for. This established park is recognised as a leading technology hub, with a thriving tenant base.

The NEC AAP fails to recognise the value of CSP to the AAP area or the Cambridge economy as an existing asset to the area.

Question 1: What do you think about our vision for North East Cambridge?

Trinity College Cambridge support the general strategic principles for the NECAAP.

Support is given to proposals for an inclusive, walkable, low-carbon new city district with a lively mix of homes, workplaces, services, and social spaces, fully integrated with surrounding neighbourhoods.

Indeed, the prospect of an exciting new urban quarter immediately adjacent to CSP is welcomed and wholeheartedly supported.

The environmental and social sustainability focus of the proposed big themes is commended. The delivery of a significant number of homes is also of paramount importance in a time of national housing need. The policy commitment to delivering 40% of all net additional units as affordable housing is supported. This is especially important in Cambridge and South Cambridgeshire with private housing being significantly more expensive than that of the national average.

In addition, the NECAAP should recognise, develop, and enhance the successful knowledge-based economy based within and surrounding Greater Cambridge. It is crucial that the plan tackles strategic scale thinking to enable plan led economic growth. Having one of the region's most significant employment sites on the NECAAP's doorstep is a substantial benefit for those who will live in the emerging NECAAP area. Ensuring strong connections between the NECAAP area, Cambridge Science Park and Cambridge Science Park North is therefore of paramount importance.

Whilst the overarching principles set out within the NECAAP are supported, at this stage the policy provision within the NECAAP needs to be refined in order to achieve this vision.

Question 2: Are we creating the right walking and cycling connections to the surrounding areas?

The overall approach to mobility outlined in the NECAAP, focusing and prioritising walking and cycling in additional to shared travel opportunities is supported. The shift from a predict and provide approach towards a vision and validate approach is something we advocate. This will help direct investment towards local living and active and shared travel opportunities. The approach will help a move away from investment in infrastructure that prioritises and encourages car use which historically has occurred due to the focus on forecast based evidence.

Through the discussions on the NECAAP Action Plan Evidence Base (September 2019) and resultant implications for the NECAAP area it has become increasingly apparent that there is a requirement for a strategic approach to deliver the step change in modal shift required to facilitate development within the NECAAP area.

In terms of walking and cycling the NECAAP proposes the measures shown in Figure 5.

The cycle route linking under the A14 to the improved Mere Way is supported (reference point 2), as are the commitments to introduce new crossing points over the Guided Busway (reference points 4). Indeed, the emerging Masterplan for CSP further considers how increased legibility through CSP onto the Guided Busway can be achieved and seeks to address this key asset.

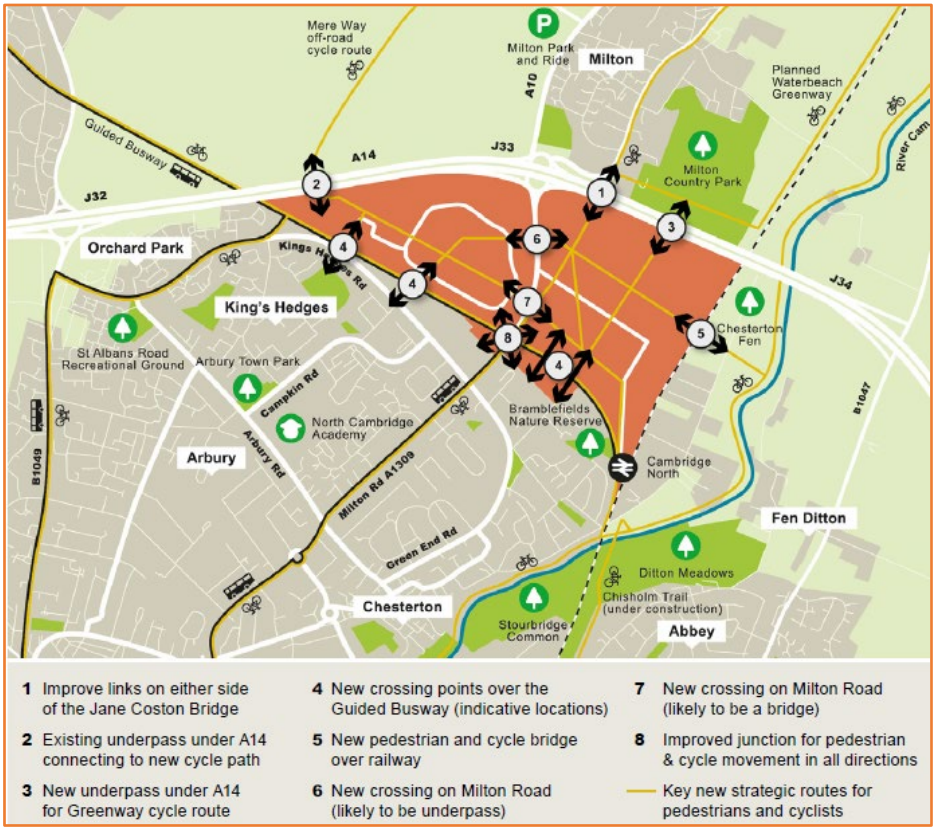

Figure 5: NECAAP walking and cycling improvements (Draft NECAPP, July 2020).

The commitment to prioritising walking and cycling over vehicular traffic should be taken through to the assessment stage. Any benefits in this regard should not be viewed negatively should they result in increased journey times for those travelling in vehicles. Such an approach will truly prioritise walking and cycling. Protecting the status quo for vehicles may act as a constraint to the delivery of walking and cycling measures.

Strategic walking and cycling routes

TCC does not support the strategic route illustrated within the NECAAP through the centre of the CSP. The masterplan for CSP preserves this route as a tranquil area for leisure and wandering. Indeed Figure 19 and Policy 8 within the Draft NECAAP refer to the value of the open space provided within Cambridge Science Park. Research by Strava in 2014 revealed that cycle commuters in Cambridgeshire are the fastest in the UK logging an average speed of 26kmh (16.1 mph); as an average speed the implication would be that much higher speeds need to be accounted for. Commuting cyclists therefore need their own route which is not at odds with the purpose of open space. The current route as illustrated by Figure 36 in the draft NECAAP would potentially frustrate and disincentivise commuting cyclists and put the enjoyment and safety of users of the open space at odds.

The inner ring road within CSP can be modified to provide enhanced facilities for pedestrians and cyclists including the provision of a fully segregated cycle route. This should be reflected in the figure as the strategic cycling route (see figure 6).

Figure 6: Proposed cycle routes through CSP

Cycling & Connections

TCC agree that cycle parking provision in excess of Local Plan requirements are likely to be needed.

Clarity is needed over the following statement where it is not clear how the level of cycle parking will directly demonstrate conformity with the trip budget. ***'Applicants will need to demonstrate that they have fully considered the appropriate levels to provide cycle parking within the Design and Access Statement and Travel Plan that accompany their planning applications to demonstrate that they will meet the trip budget'***.

The acknowledgement that electric cycles or ebikes can enable greater travel and commuting distances is welcomed. This should be recognised by the approving authorities when considering trip attraction and generation within Transport Assessments. The reach of cyclising as a mode of travel can be expanded beyond 'standard' distances.

The reference to Cambridge City Council's Cycle Parking Guide for New Residential Developments needs to be reviewed where this document does not provide guidance on the full range of matters provided in the policy.

Notwithstanding this, to deliver a new district of the scale proposed an implementable package of measures are required. The role of Cambridge Science Park together with Cambridge Science Park North (detailed later in this document), as an extension to the existing Cambridge Science Park offers a solution which incorporates both existing and proposed public transport infrastructure to intercept car movements and further promote the use of sustainable transport modes, including walking and cycling.

Moreover, our proposals seek to provide a step change in the use of private vehicles to access employment destinations within the NECAAP area. Our proposals provide a consolidated location for parking which is linked to a mobility hub providing pedestrian, cycle, PLEV, shuttle and sustainable mass transit facilities for onward travel.

Milton Road Crossing

There is nothing presented within the evidence base at this stage to suggest that the crossing of Milton Road needs to be via a bridge. There does not appear to be any clearly identified reason why grade separation is preferred. Indeed, this approach is also at odds with the principles for at-grade crossings of Milton Road at the busway detailed elsewhere in the NECAAP. The busway link is the most critical route for movements between CRC / CSP and Cambridge North Station. It is not clear why at-grade crossings are acceptable at this location, but grade separation is identified further north.

TCC has significant concerns that once appropriate clearance heights to a bridge and, gradients and ramp lengths for users are accounted for, the provision of a bridge is likely to be unfeasible. At-grade crossing facilities are generally preferable to grade separation. The requirement to funnel people towards the end of the ramp has the clear potential to take people away from their desire line. People will continue to cross Milton Road at-grade.

There is also a wider consistency point for this crossing. Elsewhere in the NECAAP and other supporting documents, the relative roles of grade or at-grade seem to be presented in absolute terms. A more balanced consideration of the crossing type should be considered in this section of the policy.

TCC strongly objects to the wording within Policy 17: … Unless more detailed design can prove the feasibility of a street level crossing of Milton Road, this crossing is likely to be a bridge.

It needs to be acknowledged that the ability to cross at-grade already exists. This will be improved through the implementation of CSP committed development and can be improved even further, especially for cyclists. We maintain that the case for grade separation is unproven, has not been costed and is potentially detrimental to the movement of people, reinforcing the barrier effect of Milton Road and placing people below vehicles in the road user's hierarchy. The Internalisation Topic Paper referred to as providing part of the evidence base sets out that the feature to address at Milton Road would be *'At grade (at street level) or grade separated (e.g. bridge or under-pass) facilities for pedestrians and cyclists to cross the Milton Road...*[2]*'*

Grade separation cannot be seen to be prioritising walking and cycling over vehicle movements in using 1950's style methods to sperate vehicles, pedestrians and cyclists. Quite the opposite.

TCC strongly agree with the statement 'the policy approach focuses on reducing the need to travel and facilitating travel by non-car modes rather than catering for vehicular trips'. These measures begin to provide additional certainty to the narrative of supporting the existing employment sites through the provision of improved sustainable transport measures. However, what is also not clear at present is the timescales and deliverability of these measures.

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Question 3: Are the new 'centres' in the right place and do they include the right mix of activity?

TCC supports the NECAAP's identification of local, neighbourhood and district 'centres' within the NECAAP area. It is crucial that appropriate supporting uses for CSP are supported in the NECAAP as the key employment location in the NECAAP area.

Figure 7: NECAAP identified District, Neighbourhood and Local 'Centres' (Draft NECAPP, July 2020)..

In accordance with the NPPF[3] the planning system should actively manage patterns of growth focusing significant development in locations which are sustainable, limiting the need to travel and offer a genuine choice of transport modes.

TCC are committed to maintaining and enhancing the existing Cambridge Science Park whilst transforming a parcel of agricultural land adjacent to the Cambridge Science Park into a world-leading centre of excellence in skilled manufacturing and development.

TCC commends the Council having identified the need for a consolidation hub for last mile deliveries. TCC would like it on record that such a hub should not be proposed in the Cambridge Science Park local centre, as such an allocation would be disruptive and detrimental to the

[3]NPPF paragraph 102 and 103.

significant number employees of the science park and the tranquil world class environment they work in.

CSPN, however, provides opportunity for this, providing a link from the A14 that would reduce trips on Milton Road. The provision of direct cycle and busway links to the wider area will mean that deliveries by way of cycles, electric vehicles, automated pods or vehicles and drones is realistic and deliverable.

Intercepting deliveries outside the NECAAP area, to no detriment to surrounding residential properties must be a more sustainable option, rather than funnelling these movements onto Kings Hedges Road.

These points are further emphasised in the Policy which states: ***'A hub has been identified within Cambridge Science Park Local Centre, as set out in Policy 10c. An additional hub could be located close to Milton Road where it can be accessed directly from the primary street to reduce vehicle movements within the Area Action Plan area'***.

The references to congestion and no opportunity to increase capacity further provides additional examples of why the Trip Budget incorrectly focuses upon the peak hour. Deliveries are examples of movements that generally take place outside of peak periods where capacity pressures on networks such as the highway network for vehicular traffic is much less. ***'Unconstrained deliveries direct to business premises and properties is, with the growth in e-commerce, likely to generate many trips and exceed the trip budget'***.

Notwithstanding this, the role that a consolidation centre can play in the overall strategy is supported and can be delivered by CSPN.

'Consideration should be given to co-locating the hub with other active uses, such as shops and other services and facilities'. We consider a primary mobility Hub to be an ideal partner to a consolidation centre. Close to remote consolidated parking, storage of parcels and the like for staff members would provide a location for collection in addition to the consolidation of delivery.

Question 4: Do we have the right balance between new jobs and new homes?

In order to fully answer this question, please read this section alongside the supplemental full response prepared by Volterra.

The overarching vision set out for North East Cambridge includes the following principles (among others): 'have a real sense of place', 'firmly integrated with surrounding communities', 'provide a significant number of new homes, a range of jobs for all', 'planned around walking, cycling and public transport, discouraging car use'. Implicit to the success of achieving these principles is the range and mix of uses proposed, and the balance between those proposed uses.

The vision includes plans for an additional 8,000 new homes, with 40% being affordable, the baseline position includes just 3 homes currently on site. Alongside 8,000 new homes, there are plans for an additional 20,000 new jobs within the area on top of the 15,000 existing jobs currently provided within CSP, the existing business parks and on the industrial estates.

This presents a high likelihood of creating an imbalance of jobs relative to working residents within the NECAAP area. In order to ascertain whether this would create an imbalance more widely, it is necessary to consider firstly the need for both homes and jobs, and secondly how this very localised area interacts with the wider area around it.

How balanced is the wider Cambridge and South Cambridgeshire area?

Cambridge and South Cambridgeshire have relatively high economic activity rates, coupled with generally low unemployment rates. The difference between the skill levels of residents is larger in Cambridge, where there are more highly skilled residents but also a higher proportion of residents with no qualifications.

There is currently a slight overbalance towards jobs rather than residents in the two local authorities, particularly within Cambridge City.

The workforces in both local authorities are relatively well-contained, with 82% and 74% of the workforce respectively commuting from within the county of Cambridgeshire. This is broadly in line with the ONS definition of a 'Travel to Work Area' (TTWA), which suggests that approximately 75% of the workforce should commute from within that given area.

The NEC AAP area is an almost exclusively employment-focused area currently, with a higher density of jobs than residents. Employment centres are (expectedly) much more focused than areas where residents live, with the main employment centres existing around the key transport hubs within the local authorities.

What quantum of jobs and housing growth are planned/needed?

In quantitative terms, the Objectively Assessed Housing Need (OAHN) was judged to be 14,000 new dwellings for Cambridge and 19,000 for South Cambridgeshire over the total period, equivalent to

700 and 950 new dwellings per year respectively. In the South Cambridgeshire Local Plan, adopted September 2018, this target for housing rises to 19,500 new homes in the district over the same time period, equivalent to 975 homes per year.

The SHMA deemed that over the plan period (2011 to 2031), the affordable housing need amounted to a total of 15,975 affordable homes across the two areas, of which 10,402 should be in Cambridge and 5,573 in South Cambridgeshire. This amounts to an annual need of 520 affordable homes in Cambridge and 279 in South Cambridgeshire.

With regards to employment, Policy S/5 of the South Cambridgeshire Local Plan establishes a target of 22,000 new jobs to be provided in the district in the twenty years to 2031. According to research by Cambridge Econometrics, sectors anticipated to grow in the future include professional services, computing and business services, construction and health. Considering this 20-year target on an annual basis, South Cambridgeshire would need to deliver 1,100 new jobs per year on average to deliver the target amount. It should be noted that the number of jobs is a forecast and not a target to be met at all costs. The Employment Land Review identifies that employment growth on this scale would generate a net demand for around 143,000m2 of additional employment floorspace or 43ha of land in the 'B' use classes.

Employment has been growing at a faster rate than housing is being delivered in both local authorities. This could represent a problem going into the future, whereby both local authorities already relying on in commuting the need for which will increase if this disparity is not addressed.

<u>What would this vision mean for the NEC area?</u>
The NECAAP specifies an additional 234,500m2 of B1-use office space to be delivered in the North East Cambridge area to 2040. The AAP justifies this quantum of space as follows:

"The amount of employment floorspace identified for North East Cambridge has the potential to provide a significant increase in the quantity of B1 accommodation in the area to meet future business needs."

As of 2018, there are an estimated 10,400 people working in office-based employment in the Local Area, with an estimated 34,250 and 35,000 respectively in the districts of Cambridge and South Cambridgeshire. The main office hubs within the borough are in the Cambridge city centre, around Cambridge station, and around Cambridge North station in close proximity to the NEC AAP area. The densest area of the borough on this measure is around Cambridge station.

Over the period 2009-2018, office-based employment in the Local Area, defined to act as a proxy for the NEC AAP area, has grown by 35%. This is equivalent to an average annual growth rate of 3.9%, below the average annual growth rates of office employment in South Cambridgeshire (6.4%) and Cambridge (4.1%) respectively.

The 234,500m2 of B1 floorspace outlined within the NECAAP is estimated to deliver an additional 16,600 full-time equivalents (FTEs) in the North East Cambridge area by 2040, assuming a standard density of one FTE per 12m2 of commercial office space. After accounting for 2018 part-time working patterns in the NEC area, this amounts to an estimated 18,700 office-based jobs. This increase therefore represents a 180% uplift (almost tripling) in the amount of 2018 office-based employment supported in the Local Area, as well as a 27% uplift for Cambridge-based and South Cambridgeshire-based 2018 office employment combined.

To put this into context, this 180% uplift in local area office employment would need an average of 8.2% office employment growth every year over the period 2018-2040, in order to achieve the scale of B1 office growth that the NECAAP is targeting. This is more than double the average annual growth rate in office employment recorded since 2009 in the local area (3.9%), highlighting the potentially over ambitious B1 targets set out in the draft AAP.

In absolute terms, the local area has increased its office employment by an estimated 2,700 over the past decade. The equivalent figures for the whole of Cambridge and South Cambridgeshire are 9,250 and 12,800 new office jobs respectively. This means that over the period to 2040, the NECAAP area would need to deliver seven times more new office jobs than it has over the past decade, or 85% of the office jobs delivered across the whole of the two boroughs. This suggests a very considerable uplift in future growth rate, and an extreme concentration of this future growth in one specific location.

The need for more residential growth

We estimate the number of residents that could be supported in the proposed 8,000 homes. We do this in two ways, firstly using the current residents per dwelling ratio in the two districts (2.31 residents per dwelling), and secondly using the GLA Population Yield Calculator – set in Outer London achieving an average PTAL rating of 3-4 – and assuming an even split of units between 1 to 4-bed residential units, with a 60-40 split of private versus affordable. The resident per dwelling method results in an estimated 18,500 new residents, and the GLA calculator estimates that 20,800 residents could be supported by the 8,000 units.

Over the period April 2019 – March 2020, the (weighted) average 16-64 economic activity rate across Cambridge and South Cambridgeshire was 82.3%. Of these residents, approximately 11,900-15,100 would be expected to be of working age (16-64). Applying the average economic activity rate in Cambridge and South Cambridgeshire to these working age residents, we'd expect 9,800-12,500 of these residents to be economically active.

Clearly, it is not conceivable that all of these 9,800-12,500 economically active residents moving into the area would be seeking work, as many would already be employed. However, in the scenario where they were all seeking work, there would still be a shortfall of 7,500-10,200 between new jobs and residents in the NEC area. Including the existing 15,000 jobs already within the NEC area would further accentuate this imbalance. Therefore, in order to support the planned levels of new jobs and

new homes, there would clearly need to be a substantial amount of in-commuting to the area, which can have a range of adverse impacts such as noise and congestion. This analysis suggests that the proposed balance might not be quite right.

Instead, there should perhaps be more of a focus on homes rather than jobs in the NEC area. The combined targets for housing and employment delivery over the period 2011 to 2031 across Cambridge and South Cambridgeshire are as follows:

- Employment: 44,100 new jobs, equivalent to 2,205 additional jobs a year; and
- Housing: 33,500 new homes, equivalent to 1,675 additional homes a year.

Comparing this to the target for the NEC area, the 20,000 new jobs would amount to 45% of the total employment growth targeted for both local authorities combined over the plan periods. In contrast, the 8,000 new homes targeted for the NEC would only deliver 24% of the combined housing target for the local authorities, highlighting the clear bias towards employment in the area when compared to residential need.

<u>What types of jobs & homes are needed?</u>

Creating a community requires a mix of uses: commercial, residential and community uses, but also different types of jobs within the commercial uses. The NECAAP at present clearly has a focus on the additional provision of office jobs. Whilst these jobs are often seen as highly skilled and high value, they may not necessarily be the sorts of jobs that local residents, and those residents who most need access to employment opportunities, are most suited to and hence may not be the most accessible for those who need them most.

According to the Skills, Training & Local Employment Topic Paper jointly released by Cambridge City Council and South Cambridgeshire District Council , in Cambridge approximately 30% of the city's jobs are in the knowledge intensive sector, and these jobs require specialist skills and are highly-paid. Unfortunately, however, there is a small but growing proportion of jobs in the city that are paid below the real living wage (13.1% in 2018).

In addition to this, due to success of the tech sector and the world-renowned university:

"there are large numbers of high-skilled jobs, some unskilled or low-skilled jobs, but very few jobs requiring mid-level skills compared to other parts of the country. This makes it very difficult for people with limited qualification or skills to secure jobs with salaries that are high enough to meet the high cost of living and housing in the city."

To counter this, the councils are aiming to reduce the skills gap in the local authorities through the following sorts of measures:

- 400 new apprenticeships through partnership with Cambridge Regional College;
- For school leavers looking to further their career, Anglia Ruskin University (ARU) has set up degree apprenticeships with a range of employers paying tuition fees alongside Government funding;

- Training and employment opportunities from developers secured through s106 agreements during the construction phase of development; and
- Operational developers should provide an Employment and Skills Plan (ESP).

Whilst these sorts of measures should all be viewed positively, to truly assess whether the appropriate types of jobs are being provided we need to assess the current conditions of the local NEC area. Analysis carried out on socio-economic indicators show that the NEC area is close to many groups of people who desperately require future economic opportunities to be provided to them, not all of which will be B1 office opportunities.

We have analysed the index of multiple deprivation (by sub-domain) for the local area surrounding Cambridge Science Park (CSP) and the local authorities of Cambridge and South Cambridgeshire. The three figures below show that the area surrounding both CSP and the NECAAP area are among the most deprived in the local authorities, with respect to overall deprivation, as well as employment and skills deprivation levels. Clearly, if the residents living near the NEC area are among the most deprived in terms of education, skills and training, the provision of highly-skilled office jobs in the local area is likely going to do very little to improve their outcomes in life, as these types of jobs will not be accessible to them and will instead be filled by in-commuters.

Instead, some lower skilled, entry level, but good quality career jobs are needed in the NEC (or wider local) area in order to offer opportunities for these groups.

Previous work by Volterra and CSP identified the opportunity for 7,500 new jobs in skilled manufacturing at CSP North, just north of CSP and on the outskirts of the AAP area. As explained previously, with appropriate collaboration with partners, including the CRC, it is highly likely that these types of jobs would be better suited to addressing the future employment needs of some of the more deprived parts of the area, whilst also delivering growth in a highly exportable sector. When combining this potential employment growth along with that planned at the NEC area, it further underlines the potential imbalance between jobs and homes, and the importance of delivering the right kinds of jobs to maximise benefits for all, including importantly those who need improved opportunities most.

Referring back then to some of the NECAAP's principles: *'firmly integrated with surrounding communities', 'provide a significant number of new homes, a range of jobs for all'*, it becomes clear that the balance of types and quantum of jobs proposed in the NEC area will not deliver these objectives in isolation. Combined with the opportunity presented at CSP North, along with a reconsideration of the NEC quantum of growth in favour of homes, however, these principles could be met.

Cambridge Science Park North

Trinity College is proposing to transform a parcel of agricultural land adjacent to the Cambridge Science Park into a world- leading centre of excellence in skilled manufacturing and development. Branded Cambridge Science Park North, it will be an extension of, and benefit from the successful innovation ecosystem of the Science Park. It will promote social inclusion by facilitating the creation of skilled, well paid jobs in local companies where people from all backgrounds work together. The Centre will be nestled in 250 acres of stunning parkland with recreational facilities open to local residents.

Cambridge benefits from an incredibly successful Research and Development based economy. Indeed, Cambridge is home to companies that are famous for innovation. Trinity College through its development and nurturing of Cambridge Science Park has always been a pioneer in terms of supporting growth in Science and Technology in Cambridge.

Innovation involves a high degree of risk; in particular, the risk that products may not perform in the real world in the same way they did in the laboratory or workshop. Often products need to be re-designed, re-tested and adapted to meet the needs of the market. Moreover, in order to stay ahead of their competitors, research intensive companies need to implement a programme of continuous innovation.

Already, a number of Technology companies manufacture close to their research base where changes in design can easily be implemented and new product ideas rapidly prototyped and tested. This is an increasing trend particularly in the case of the low-volume, high value products such as robotics, medical devices, electronics and batteries - areas where Cambridge leads the world.

Whilst there is a good supply of premises suitable for undertaking product research, when it comes to high quality, affordable manufacturing and testing space, there is a significant shortage in Cambridge. This type of employment typically needs to operate from larger buildings with more of a quality industrial nature and do not readily operate from the stock of offices and laboratories currently available within the local market. There is now a shortage of suitable manufacturing and testing space in the Cambridge area and the existing Cambridge Science Park. This is in part due to Cambridge's success in providing the right conditions for Research and Development organisations to grow, however this has resulted in increasing office and laboratory values; while significant areas of potential new land have also been lost as a result of past and proposed housing development and allocations.

This shortage of suitable available space means companies are being forced to undertake their manufacturing potentially in other regions of the UK, however given the global competition for attracting the economic benefits of this type of employment overseas locations will increasingly be considered if nearby premises are not available.

The geographic distance between their research and manufacturing facilities can negatively impact business performance, leading to long term strategic business decisions focussing on the availability of whole lifecycle premises. CSP competes on a global scale with places such as Kista Science City, Stockholm, WISTA Science and Technology Park, Berlin

Crucially though, without these manufacturing companies in Cambridge, there is a shortage of job opportunities for people who want to work in a technical or engineering environment but do not have the qualifications to undertake the roles that require a university degree. Opportunities that could benefit students at the Cambridge Regional College and North Cambridge Academy. As part of our work we have engaged with Cambridge Regional College who are very supportive of these proposals. Further conversations have also been held with Impington Village College and will be held with the North Cambridge Academy to understand the opportunities for their students.

If Cambridge can supply the manufacturing space required by these companies, a new category of jobs could be created (illustrated in Figure 8). This would help to close the inequality gap in the city, and help lift families out of poverty, particularly those in the immediate vicinity of the proposed development such as Arbury and Kings Hedges.

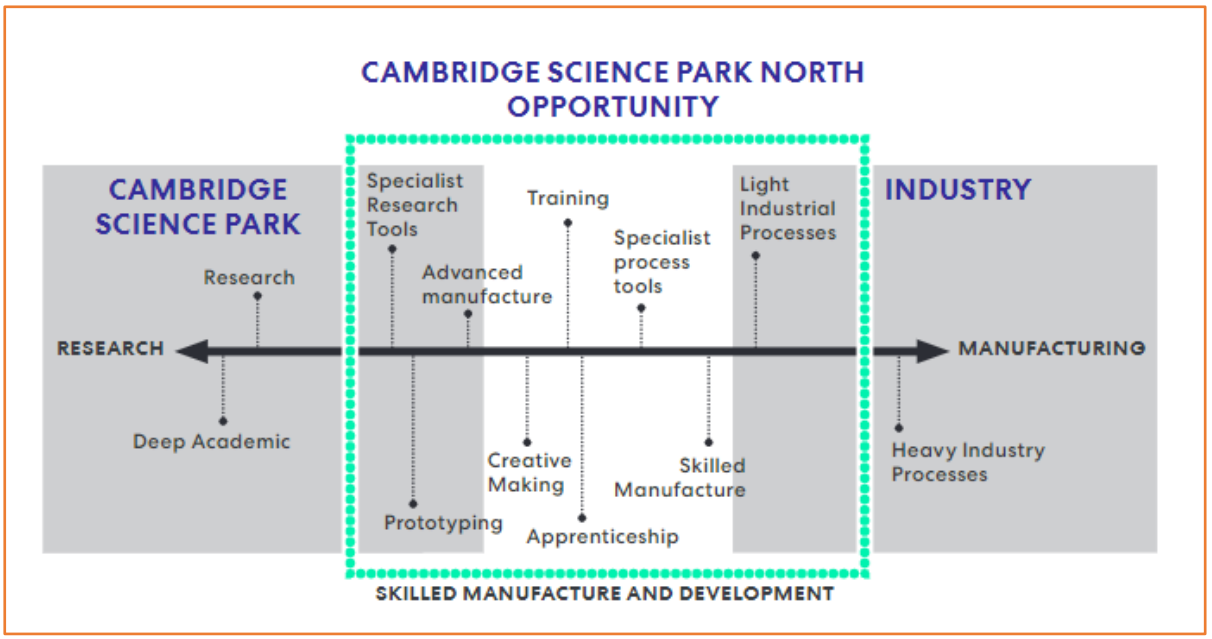

Figure 8: Skilled Manufacturing and Development

The benefit to the wider economy of skilled manufacturing and development in this location need to be considered by Greater Cambridge. This development within close proximity to Cambridge Science Park, the Guided Busway, Cambridge North Station and Cambridge Regional College presents this unique opportunity.

This site is located On the Edge of Cambridge: Green Belt AND on Public Transport Corridors as identified as potential locations for growth within the Emerging Local Plan[4] – both of these factors are of equal importance to this type of development.

[4] https://www.greatercambridgeplanning.org/emerging-plans-and-guidance/greater-cambridge-local-plan/

Question 5: Are we are planning for the right community facilities?

Creating a cohesive and sustainable community requires certain community uses to be provided that support local residents. The kind of community facilities that should be provided alongside residential homes include community centres, general practices, educational institutions, play space and open space. Broadly, the layout of the proposed masterplan within the NEC area appears to be appropriate, as the proposed uses appear to be close to the proposed residential units.

It is crucial to the future success of this area as a community, however, that these community uses are indeed delivered, otherwise additional pressure will be placed on existing services and/or the place will lack the desired 'sense of place' for prospective new residents.

Question 6: Do you think that our approach to distributing building heights and densities is appropriate for the location?

Question 6 and the relevant sections within the NECAAP need to relate back to the response to Question 4. Are the densities and the building heights proposed in direct response to the context of the immediate area and good place making; or are they as a result of an imbalanced proposition including an excess of office employment provision?

At present it is not clear should the office employment provision reduce, would densities and heights reduce, or would additional housing be provided. If so, open space and community infrastructure needs would increase and therefore density may still reduce.

At the heart of the new urban quarter should be good placemaking, and therefore building heights and densities should reflect the needs of the area in terms of environmental, social and economic benefits.

Question 7: Are we planning for the right mix of public open spaces?

Having reviewed Section 5.3 whilst there is provision for public open space the document should acknowledge Public Health England's March 2020 document *'Improving access to greenspace: A new review for 2020'.*[5] This document advocates that good design integrates green infrastructure into the holistic masterplan in ways that promote active travel, recreation and leisure, and support community and social engagement. Greenspace must be recognised as critical infrastructure that will help meet a range of local priorities and is not just something 'nice to have'.

Whilst brownfield in nature, the relocation of the Waste Water Treatment Works (WWTW) does provide a somewhat blank canvas in terms of the potential masterplan for the area. However, the balance of green and blue infrastructure appears to heavily rely on that already provided within CSP, with the introduction of a linear park and triangular space which fit around the built form, rather than a landscape rich approach.

Figure 20 within the draft NECAAP illustrates the proposed Cowley Triangle Park providing 1.1 hectares of new open space and the Proposed Linear Park providing 8.5 hectares. The Open Space Topic Paper sets out a total Open Space Provision of 66.3 hectares, 40.4 being dedicated to informal open space and equipped children's play areas. This poses the question as to where this additional open space provision can and will be accommodated. Cambridge Science Park currently includes circa 8 hectares of amenity landscaping, which is included within the NECAAP is short of at least 22 hectares of informal open space and play areas according to the supporting Topic Paper.

Reference is made to improvements to Milton Country Park, Chesterton Fen and Bramblefields Nature Reserves in lieu of appropriate on-site provision. However, whilst in theory this could provide part of the solution, it is questionable as to how this investment will support the initiatives set out within the Anti-Poverty and Inequality Topic Paper. This points to the wards of Arbury and Kings Hedges which neighbour the NECAAP area has falling within the most deprived areas within Cambridge. That same paper sets out the importance of providing access to open space as a means to address health inequalities. Guidance for Outdoor Sport and Play[6] sets out recommendations for walking distances to varying open space typologies, which are all below the distance from Kings Hedges to the off-site improvements.

One solution to the lack of new open space provision would be through Cambridge Science Park North which is being developed as a location that can provide compensatory improvements to a substantial (circa 90 hectares) area of remaining Green Belt land providing:

- A network of new green infrastructure; with links to Milton Country Park, Histon & Impington, and Arbury and Kings Hedges.
- Woodland planting of sufficient scale to provide meaningful woodland carbon capture;

[5]https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904439/Improving_access_to_greenspace_2020_review.pdf
[6] http://www.fieldsintrust.org/Upload/file/guidance/Guidance-for-Outdoor-Sport-and-Play-England-Apr18.pdf

- Landscape and visual enhancements taking existing agricultural land and creating a valuable green asset for neighbouring communities and employees.
- Improvements to biodiversity, habitat connectivity and the introduction of natural capital to an area of low ecological value agricultural land.
- New and enhanced walking and cycle routes, linking into the planned improvements to Mere Way; and
- Improved access to new recreational and playing field provision.

These proposed uses are all entirely compatible with both the purposes of the Green Belt and uses which are deemed as appropriate within the Green Belt i.e. material changes in the use of land for outdoor sport and recreation.

Question 8: Are we doing enough to improve biodiversity in and around North East Cambridge?

As per the previous response, whilst brownfield in nature the relocation of the WWTW does provide a somewhat blank canvas in terms of the potential masterplan for the area. However, the balance of green and blue infrastructure appears to heavily rely on that already provided within CSP, with the introduction of a linear park and triangular space which fit around the built form, rather than a landscape and biodiversity rich approach.

The 2020 Biodiversity Assessment which supports the draft NECAAP sets out a number of recommendations, which TCC believes development of CSPN would help to achieve as follows:

- Recommendation 4: All developments and projects should deliver a measurable biodiversity net gain with a target of 10% gain.

- Recommendation 12: Develop green loops to encourage engagement and contact with nature to promote well-being and to deliver health benefits.

- Recommendation 17: Encourage the provision of priority habitats within NEC including woodland, ponds, drains, grasslands, hedgerows and living roofs. Emphasis should be placed on delivering a mosaic of habitats to ensure diversity in opportunities for the species using them.

One solution to the acknowledged difficulty in providing biodiverse development within the AAP area would be through Cambridge Science Park North which is being developed as a location that can provide compensatory improvements to a substantial (circa 90 hectares) area of remaining Green Belt land providing:

- A network of new green infrastructure; with links to Milton Country Park, Histon & Impington, and Arbury and Kings Hedges.
- Woodland planting of sufficient scale to provide meaningful woodland carbon capture;
- Landscape and visual enhancements taking existing agricultural land and creating a valuable green asset for neighbouring communities and employees.
- Improvements to biodiversity, habitat connectivity and the introduction of natural capital to an area of low ecological value agricultural land.
- New and enhanced walking and cycle routes, linking into the planned improvements to Mere Way; and,
- Improved access to new recreational and playing field provision.

These proposed uses are all entirely compatible with both the purposes of the Green Belt and uses which are deemed as appropriate within the Green Belt i.e. material changes in the use of land for outdoor sport and recreation.

Question 9: Are we doing enough to discourage car travel into this area?

With regard to the private car, first and foremost Trinity College Cambridge and Cambridge Science Park have committed to and begun implementing measures aimed at reducing the modal split away from the use of the private car as the primary means of accessing CSP.

We have previously responded to the 2019 Transport Assessment and include within this response our response to the Transport Topic Paper.

TCC and CSP take issue against the false premise contained with the draft NECAAP which refers to prolific and unconstrained car parking at CSP. This statement as a particularly unhelpful, and frankly false inclusion within a document that also refers to 4,400 'unused car parking spaces on Cambridge Science Park' (another unevidenced and incorrect statement).

Given the document contains both unsubstantiated comments it is unclear whether the document seeks to claim there is prolific, unconstrained car parking, or whether there are 4,400 unused spaces. Neither statement is true.

On the 20th December 2019 a Section 106 agreement was signed by South Cambridgeshire District Council, Cambridge City Council, Cambridgeshire County Council and Trinity College Cambridge with regard to Cambridge Science Park agreeing to the implementation of a Parking Management Strategy for the entire CSP area. This agreement committed CSP to limit the total number of parking spaces within the site to 7,498 and to use reduce this to 6,977 by the December 2029.

The S106 Agreement sets out the complex leaseholder arrangements within CSP, and the commitment to remove and reduce parking spaces from tenancies and lettings as leases either expire or are renewed. The commitment to achieve this is there.

However, in order to achieve this step change a commitment is needed via a package of measures required to facilitate non-car access to this key employment destination.

Vectos have produced a note setting out how CSP can support the measures set out within the 2019 Transport Assessment, and we believe CSPN has to be viewed as an important part of the solution.

To conclude therefore, whilst the principle of the draft NECAAP is supported, the balance between the provision of homes and office space is questioned. Finally, there remain key questions relating to the open space and biodiversity provision and the transport solutions required to enable any homes to be built in this location. Key areas which CSPN can help to achieve. Given the latest adoption of the LDS considers the opportunity to link delivery of the new Local Plan and the NECAAP, it would seem sensible at this stage to consider the potential for a wider area to deliver the crucial infrastructure required to enable the development of this new neighbourhood.

CSPN Supporting Sustainable Transport

Part of the rationale behind locating this new hub of excellence in skilled manufacturing and development in this location relate to the fact the site is extremely well linked to existing public transport corridors, located on the existing guided busway to Northstowe and within close proximity to Cambridge North Railway Station (see Figure 9). The recently published consultation for CAM includes a Cambridge Science Park North stop, which Trinity College Cambridge supports and wholly endorses as a forward-thinking approach to infrastructure provision.

A key challenge facing delivery of the NECAAP area will be bringing forward both residential and employment land uses whilst adhering to the proposed vehicle trip budget in accordance with the emerging AAP.

Through the discussions on the NECAAP Transport Study and resultant implications for the NECAAP area it has become increasingly apparent that there is a **requirement for a strategic approach** to deliver the step change in modal shift required to facilitate development within the AAP area.

The site provides an opportunity to provide growth together with an enhanced transport solution. The strategic transport solution required to unlock the AAP area for housing will need to be funded through the commercial development of CSPN and the wider AAP area.

Ongoing work reviewing the Transport Study baseline figures, using a different model, and reviewing the assumptions may achieve limited headroom. However, to deliver a new district of the scale proposed an implementable package of measures are required.

CSPN, as an extension to the existing Cambridge Science Park offers part of the solution which incorporates both existing and proposed public transport infrastructure to intercept car movements before they enter the AAP area whilst also promoting the use of sustainable transport modes.

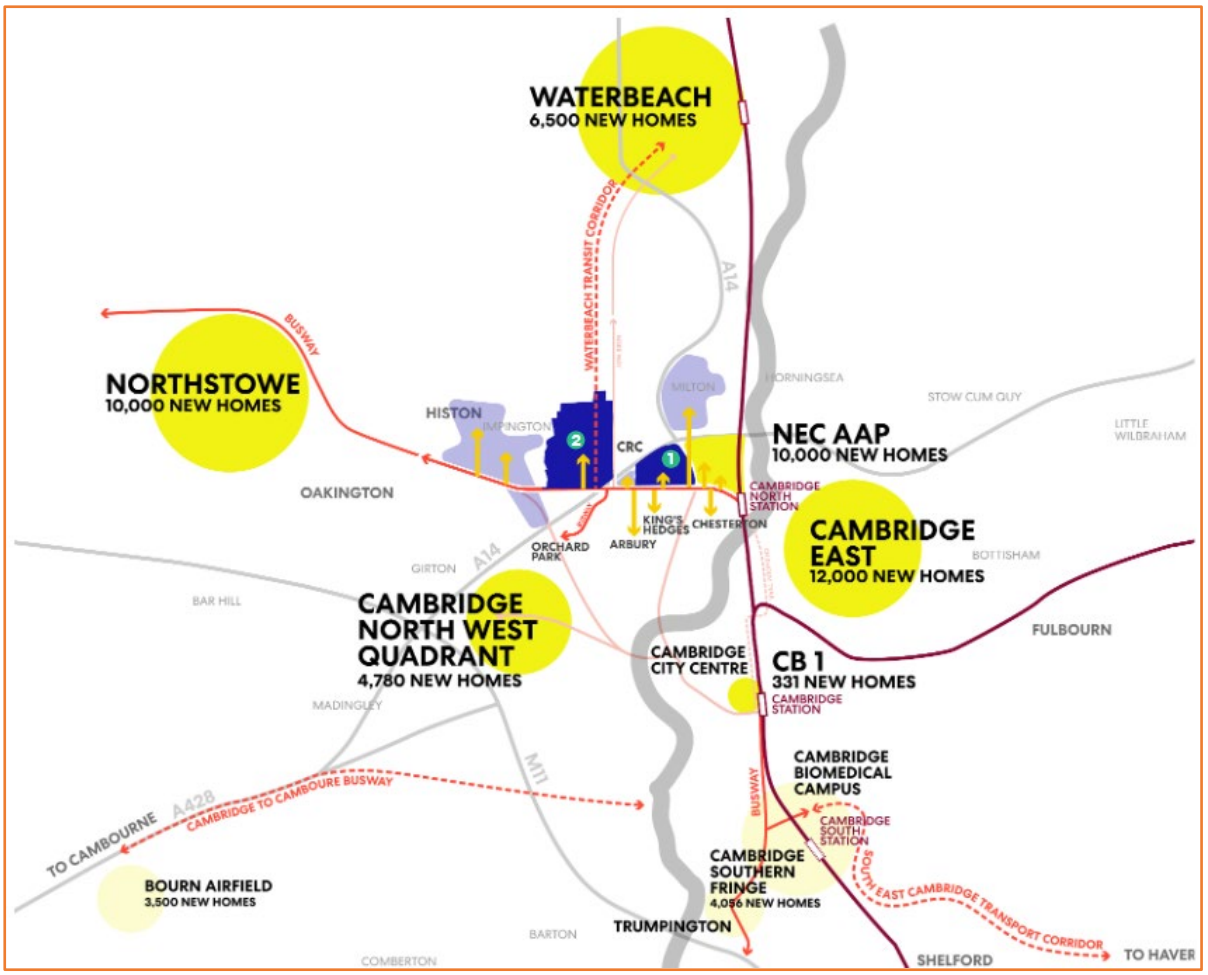

Figure 9: Site Context

The A10 suffers peak hour congestion and there are few alternatives at present. Additional movements along the A10, many of which will be towards the employment areas in North East Cambridge, may add sufficient pollution levels to trigger Air Quality exceedances in the AAP area. CSP and CSPN have the opportunity to intercept those trips and provide a workplace destination for future residents. The emerging Cambridge Autonomous Metro would be the obvious way of travelling to and from work in this location, providing a direct and convenient route.

A core contemporary planning approach is the promotion of transit-oriented developments (also referred to as TODs) with greater emphasis on encouraging sustainable growth around public transport corridors and interchanges. Locating employment on a key transport node makes strategic planning sense[7].

TCC's proposals provide a consolidated location for parking which is linked to a mobility hub providing pedestrian, cycle, PLEV, shuttle and sustainable mass transit facilities for onward travel.

[7] https://www.urbantransportgroup.org/system/files/general-docs/The%20place%20to%20be%20-%20Urban%20Transport%20Group%20FINAL%20WEB.pdf

A shift towards accessing alternative modes for the last mile of travel to employment destinations in itself providing health, wellbeing, pollution and climate change benefits.

The consolidated mobility hub can also provide a micro-consolidation centre, reducing the number of delivery vehicles and intercepting deliveries before they enter the AAP area.

Waterbeach Route of Cambridge Autonomous Metro

At the local level we are examining the opportunity to potentially relocate the Park & Ride facility on Butts Lane to a mobility hub location within the expansion land (see Figure 10). We have been liaising with the Cambridge and Peterborough Combined Authority team that are investigating options for the 'Waterbeach Route' and made clear our willingness to work with them and accommodate the CAM route within our own planning.

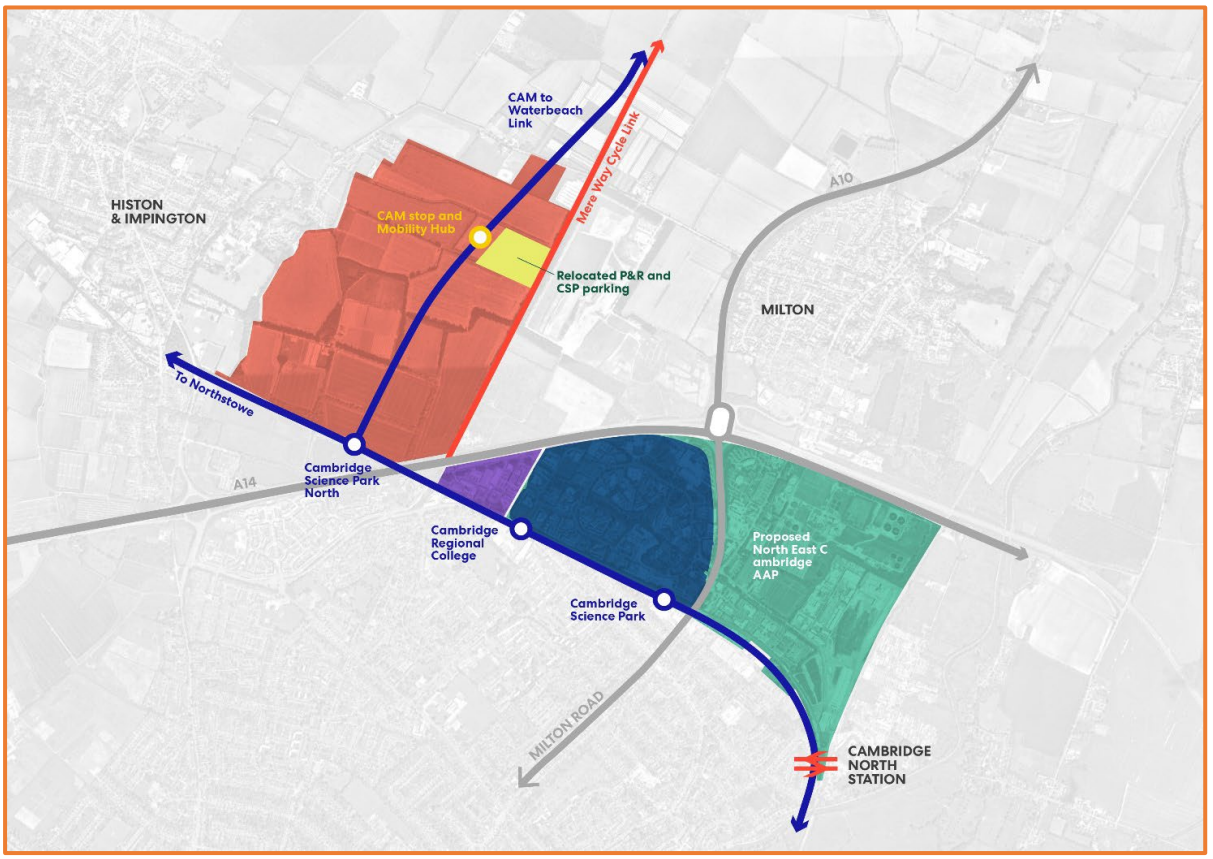

Figure 10: Local Scale Indicative Proposals

Placing the Waterbeach CAM route through CSPN has a number of advantages including:

- Linking the existing guided busway with the proposed CAM route alongside the committed pedestrian / cycle improvements to Mere Way;
- Integrating Waterbeach sustainable transport proposals with NEC AAP proposals;
- Utilising existing infrastructure under the A14, reducing overall costs and timescales for delivery of the first phase of the Waterbeach connections;

- Re-routing the Park & Ride shuttle service off the A10 onto a congestion free, dedicated transit route;
- Associated reliability and speed of Park & Ride services to employment within Cambridge Science Park, Cambridge Regional College, and other employment land within the wider AAP;
- Linking Park & Ride arrivals with a multi-modal choice of sustainable transport options to reach employment locations within Cambridge Science Park and beyond;
- Air Quality improvements by reducing traffic on the A10 and reducing congestion on Junction 33 of the A14;
- Direct links into the existing transit corridor linking Cambridge North railway station to St Ives;
- As submitted within the recent call for sites, the 163ha site to the north of the A14 will incorporate circa 90 hectares of land intended to remain within the Green Belt, but providing substantial areas of accessible natural green space, biodiversity improvements and sport and recreation facilities. Providing a sustainable transport hub in close proximity to this will increase accessibility to this resource;
- The route would directly serve new employment at CSPN;
- Cambridge Regional College the largest further education provider for 16 to 19 year olds in the region, which is set to accommodate increasing numbers of pupils, would be directly served by CAM routes from all directions;
- Cambridge Regional College would additionally benefit from a new park & ride stop assisting in their own step change in parking.

The potential benefits of this route option for the Waterbeach to Cambridge route need to be considered as part of the assessment of the NECAAP. Route options are at a relatively early stage, and this potentially substantial piece of infrastructure and the economic, social and environmental benefits should be considered as part of the emerging NECAAP.

Question 10: Are we maximising the role that development at North East Cambridge has to play in responding to the climate crisis?

The NECAAP has the potential to play a key role in achieving net zero carbon by 2050 within the context of the policies supporting future growth.

Tied into this are the opportunities for Cambridge to play a leading role in the development of emerging technologies to accomplish local, national and international carbon targets. The NECAAP should seek to support and encourage ongoing research and development, prototype development and high-tech and skilled manufacturing to support the achievement of net zero carbon.

The development at Cambridge Science Park North will commit to all of the themes highlighted above. Through the provision of circa 90 hectares of green space there will be opportunities to incorporate carbon capture through enhancement of the natural environment. The building fabric, layout and alignment with public and sustainable transport infrastructure will all work toward the achievement of net zero carbon by 2050.

Crucially the co-location of Research and Development and Skilled Manufacturing will support development of market ready zero carbon solutions in expedited timeframes. Cambridge Science Park North offers Greater Cambridge and the UK an opportunity to develop and importantly deploy technologies that can transform and achieve net zero carbon.

For example, Cambridge Consultants based on Cambridge Science Park partnered with Redbarn Group to develop VeriTherm, a fast and simple tool to verify the thermal performance of new buildings. In a letter of support from the UK's Ministry of Housing, Communities & Local Government, the Ministry stated that they are: "…keen that [VeriTherm] is further developed and a workable method to measure the thermal performance of homes comes to market" and continued, "this product could therefore contribute to reducing CO2 emissions from homes, reducing occupant bills and to the UK meeting its carbon budgets."

Trinity College Cambridge fully support the list of climate change mitigation measures provided for within Policy 2 and would recommend the addition of the following:

• Supporting initiatives to increase opportunities for virtual renewable energy generation, sharing, trading and procurement, including community participation and affordability initiatives.

• Supporting local and community initiatives and amenities that encourage residents to stay local and travel short distances on foot, by bicycle and non-fossil fuel transport.

• Reinforcing the infrastructure required to support electric vehicles.

There is a clear commitment by Trinity College to go over and above the standard approach to climate adaptation and resilience on Cambridge Science Park North. A real opportunity exists for an exemplar scheme with the potential to trial and showcase natural resilience features due to the scale and critical mass available on site. In addition, due to the nature of work undertaken there are

opportunities to cultivate and trial emerging technologies on site allowing innovation to develop more quickly and solutions to move to market at enhanced speeds.

Within emerging policies, support should be given to innovation in energy and renewable technologies. Cambridge has a key role to play in the research and development of solutions to the climate challenge. For example, CSP is exploring the feasibility of establishing an Energy & Renewal Technologies Centre on the Park. The aim would be to co-locate companies developing related technologies under one roof where they can share facilities, knowledge and best practice.

Policy 27: Planning Contributions

A holding objection to the inclusion of this policy is made, given that neither the Infrastructure Delivery Plan nor the Viability Assessment have been made available prior to, or during the Regulation 18 consultation.

Conclusions

In summary, support is given to proposals for an inclusive, walkable, low-carbon new city district with a lively mix of homes, workplaces, services, and social spaces, fully integrated with surrounding neighbourhoods. However, the draft NECAAP fails to recognise the value of CSP to the AAP area or the Cambridge economy as an existing asset to the area.

The overall approach to mobility outlined in the NECAAP, focusing and prioritising walking and cycling in additional to shared travel opportunities is supported. TCC does not support the strategic route illustrated within the NECAAP through the centre of the CSP. The inner ring road within CSP can be modified to provide enhanced facilities for pedestrians and cyclists including the provision of a fully segregated cycle route. TCC strongly objects to the wording within Policy 17: … *Unless more detailed design can prove the feasibility of a street level crossing of Milton Road, this crossing is likely to be a bridge*. This is unsupported by any evidence and as yet uncosted therefore at this stage this statement cannot hold any weight.

TCC supports the NECAAP's identification of local, neighbourhood and district 'centres' within the NECAAP area. However, CSP is not the location for a consolidation centre, TCC would suggest this can be better accommodated within land to the north of the A14 – enabling deliveries to be made from this consolidation centre to hubs located within the entire NECAAP area via cycles, electric vehicles, automated pods or vehicles and drones.

There should perhaps be more of a focus on homes rather than jobs in the NEC area. Compared against the combined targets for housing and employment delivery over the period 2011 to 2031 across Cambridge and South Cambridgeshire the 20,000 new jobs would amount to 45% of the total employment growth targeted for both local authorities combined over the plan periods. In contrast, the 8,000 new homes targeted for the NEC would only deliver 24% of the combined housing target for the local authorities, highlighting the clear bias towards employment in the area when compared to residential need

This imbalance also results in a deficit on site of open space and biodiversity provision, off-site improvements to which are focussed to the north and east, turning their back on the identified areas that would benefit from additional resource to the south west.

Finally with regard to the private car, first and foremost Trinity College Cambridge and Cambridge Science Park have committed to and begun implementing measures aimed at reducing the modal split away from the use of the private car as the primary means of accessing CSP.

We have previously responded to the 2019 Transport Assessment and include within this response our response to the Transport Topic Paper.

TCC and CSP take issue against the false premise contained with the draft NECAAP which refers to prolific and unconstrained car parking at CSP. This statement as a particularly unhelpful, and frankly false inclusion within a document that also refers to 4,400 'unused car parking spaces on Cambridge Science Park' (another unevidenced and incorrect statement).

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However, in order to achieve this step-change a commitment is needed via a package of measures required to facilitate non-car access to this key employment destination.

Vectos have produced a note setting out how CSP can support the measures set out within the 2019 Transport Assessment, and we believe CSPN has to be viewed as an important part of the solution.

To conclude therefore, whilst the principle of the draft NECAAP is supported, the balance between the provision of homes and office space is questioned. Finally, there remain key questions relating to the open space and biodiversity provision and the transport solutions required to enable any homes to be built in this location. Key areas which CSPN can help to achieve.

Given the latest adoption of the LDS considers the opportunity to link delivery of the new Local Plan and the NECAAP, it would seem sensible at this stage to consider the potential for a wider area to deliver the crucial infrastructure required to enable the development of this new neighbourhood and deliver much needed HIF funded homes in this location.

Appendix 1

1 VOLTERRA RESPONSES TO AREA ACTION PLAN

1.1 The Draft North East Cambridge Area Action Plan (hereafter referred to as the 'NEC AAP') consultation contains a number of questions directly relating to socio-economic issues. The questions deemed most relevant for socio-economic considerations are listed below:

- Question 1 : What do you think about our vision for North East Cambridge?
- Question 3: Are the new 'centres' in the right place and do they include the right mix of activity?
- Question 4 : Do we have the right balance between new jobs and new homes?
- Question 5: Are we planning for the right community facilities?

1.2 The remainder of this document provides relevant socio-economic considerations in response to those questions.

Question 4

Do we have the right balance between new jobs and new homes?

Question 3

Are the new 'centres' in the right place and do they include the right mix of activity?

Question 1

What do you think about our vision for North East Cambridge?

Volterra response

What defines balance?

1.3 The overarching vision set out for North East Cambridge includes the following principles (among others): 'have a real sense of place', 'firmly integrated with surrounding communities', 'provide a significant number of new homes, a range of jobs for all', 'planned around walking, cycling and public transport, discouraging car use'. Implicit to the success of achieving these principles is the range and mix of uses proposed , and the balance between those proposed uses.

1.4 The vision includes plans for an additional 8,000 new homes, with 40% being affordable. This is on top of just 3 homes currently on site. Along with the addition of 8,000 new homes, there are plans for an additional 20,000 new jobs to the area on top of the 15,000 existing jobs in business parks and on the industrial estates . Within the AAP area itself then, this presents a high likelihood of creating an imbalance of jobs relative to working residents. In order to ascertain whether this would create an imbalance more widely, it is necessary to consider (i) the need for both homes and jobs, and (ii) how this very localised area interacts with the wider area around it.

How balanced is the wider Cambridge and South Cambridgeshire area?

1.5 **Table 1** provides some key statistics related to both employment and demographics for the wider area. By the wider area, we mean the two respective local authorities of interest to the NEC AAP, namely Cambridge and South Cambridgeshire.

1.6 As the table below shows, both local authorities have relatively high economic activity rates, coupled with generally low unemployment rates. The difference between the skill levels of residents is larger in Cambr idge, where there are more highly skilled residents but also a higher proportion of residents with no qualifications.

1.7 Office employment accounts for a larger proportion of the total (40% vs. 32%) in South Cambridgeshire. In Cambridge, however, there are more jobs than there are working age

residents (a ratio of 1.23 jobs per working resident), suggesting that substantial in-commuting into the local authority is required to meet workforce requirements. This leads us to conclude that there is currently a slight overbalance towards jobs rather than residents in the two local authorities, particularly Cambridge.

Table 1 Key statistics

Indicator	Source	Cambridge	South Cambridgeshire
Total population	ONS, 2020. Mid-year population estimates 2019.	124,800	159,100
Working age population (16-64)	ONS, 2020. Mid-year population estimates 2019.	86,700 (69%)	95,900 (60%)
Total dwellings	MHCLG, 2019. Number of dwellings by tenure and district.	55,200	67,600
Economic activity rate (16-64)	ONS, 2019. Annual population survey.	81.8%	84.5%
Unemployment rate (16-64)	ONS, 2019. Annual population survey.	1.4%	2.6%
% with no qualifications (NVQ) (16-64)	ONS, 2019. Annual population survey.	6.7%	5.8%
% with NVQ4+ (16-64)	ONS, 2019. Annual population survey.	69.5%	53.5%
Total employment	ONS, 2019. Business register and employment survey 2018.	108,500	86,500
Office employment[1]	ONS, 2019. Business register and employment survey 2018.	34,300 (32%)	35,000 (40%)
Jobs to Working Age (16-64) Residents Ratio 2018	Volterra Calculations, 2020.	1.23	0.91

1.8 **Table 2** provides a summary of the commuting statistics for both local authorities of interest. As the table shows, the workforces in both local authorities are relatively well-contained, with 82% and 74% of the workforce respectively commuting from within the county of Cambridgeshire. This is broadly in line with the ONS definition of a 'Travel to Work Area' (TTWA), which suggests that approximately 75% of the workforce should commute from within that given area. The commuting statistics are only available from the 2011 Census, so the absolute levels do not align with the jobs numbers presented above for 2019, although it is the likely pattern of commuting movements that is interesting from a containment perspective. These findings align with those presented in the CPIER (see Figure 1).

Table 2 Commuting (containment) statistics

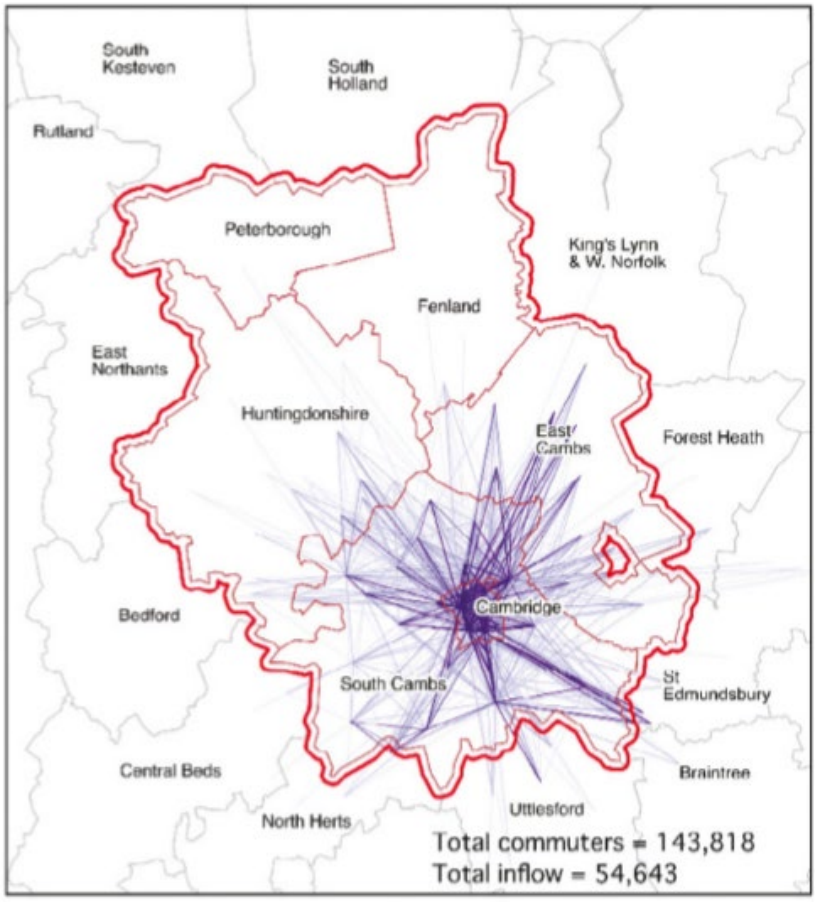
Usual Residence	Place of work			
	Cambridge		South Cambridgeshire	
	Gross	% Total	Gross	% Total
Cambridge	33,700	40	8,300	14

[1] Defined here as the sectors: J (Information and communication), K (Financial and insurance), L (Property), M (Professional, scientific and technical), and N (Business administration and support services).

Usual Residence	Place of work			
	Cambridge		South Cambridgeshire	
	Gross	% Total	Gross	% Total
East Cambridgeshire	7,200	8	4,600	8
South Cambridgeshire	23,400	27	23,800	41
Fenland	1,000	1	1,000	2
Huntingdonshire	4,700	6	5,800	10
County of Cambridgeshire	70,000	82	43,400	74
United Kingdom	85,000	100	58,800	100

Source: ONS, 2011, The Census. Location of usual residence and place of work. Note figures may not sum due to rounding.

Figure 1 Community patterns for Cambridge and South Cambridgeshire



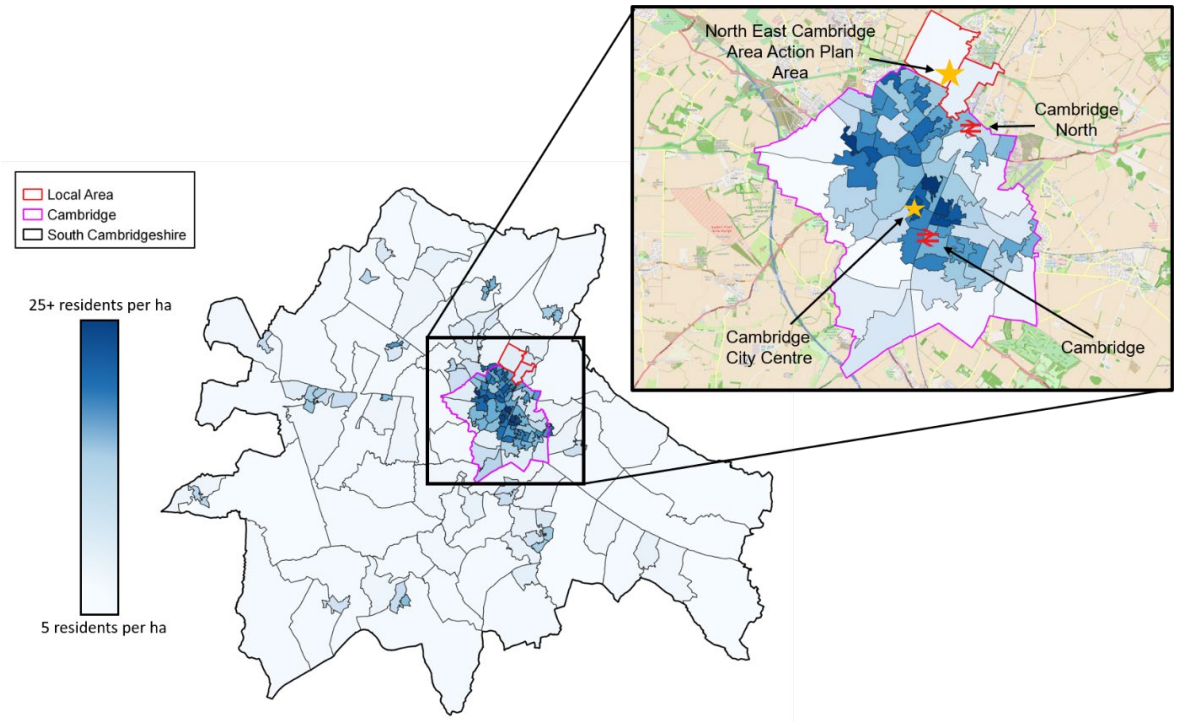
Source: ONS, 2011. The Census. Figure extracted from: CPIER, 2018. Cambridge and Peterborough Independent Economic Review.

1.9 In our final consideration of how balanced the Cambridge and South Cambridgeshire areas are in terms of residents versus employment, two density maps are provided below that highlight the areas that are residential-focused and areas that are employment-focused within the local authorities.

1.10 As the figures below show, the NEC AAP area is a much more employment-focused area currently, with a higher density of jobs than residents. Employment centres are

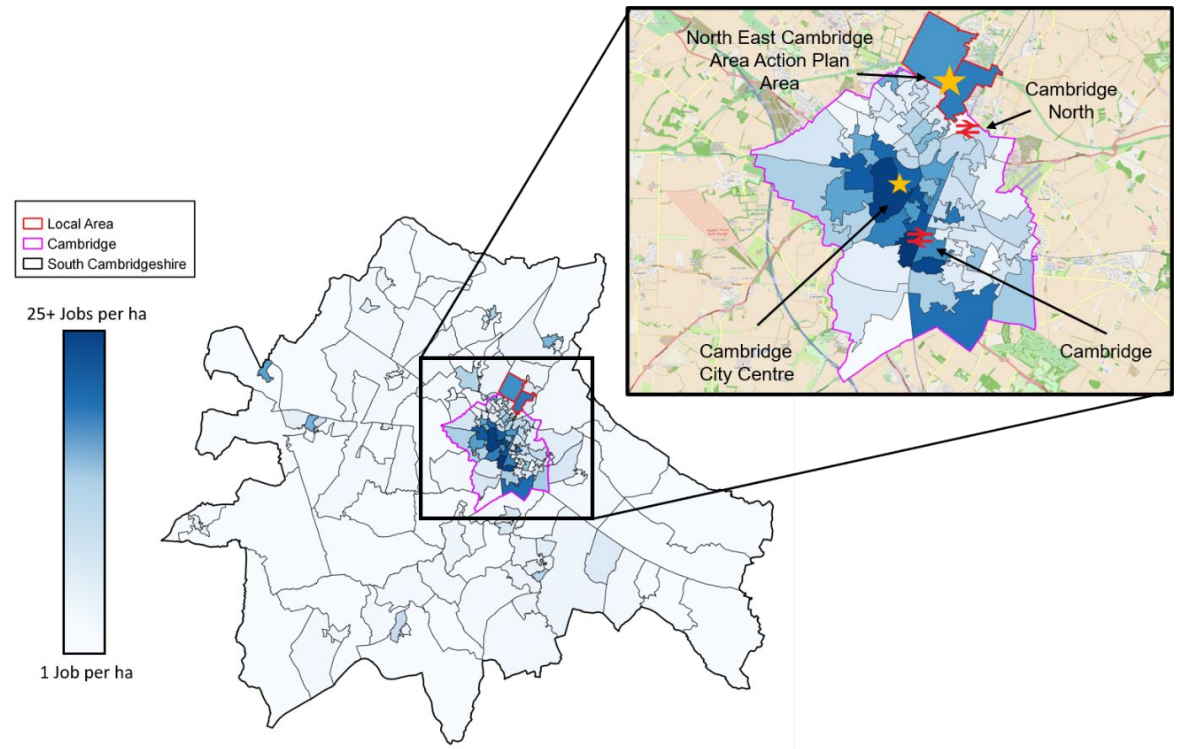
(expectedly) much more focused than areas where residents live, with the main employment centres existing around the key transport hubs within the local authorities.

Figure 2 Residential density, 2018



Source: ONS, 2019. MYE Population estimates 2018. ONS, 2011, The Census.

Figure 3 Employment density, 2018



Source: ONS, 2019. Business register and employment survey 2018. ONS, 2011, The Census.

What quantum of jobs and housing growth are planned/ needed?

1.11 This section first provides some context by establishing what employment and housing targets have been set out in the respective policy documents for Cambridge and South Cambridgeshire.

1.12 With regard to housing, the objectively assessed housing need (OAHN) for the two local authorities was established by Peter Brett Associates[2] in 2015 for the plan period 2011 to 2031. In quantitative terms, the OAHN was judged to be 14,000 new dwellings for Cambridge and 19,000 for South Cambridgeshire over the total period, equivalent to 700 and 950 new dwellings per year respectively. In the South Cambridgeshire Local Plan, adopted September 2018, this target for housing rises to 19,500 new homes in the district over the same time period, equivalent to 975 homes per year.

1.13 As well as the OAHN, this study also calculated the need for affordable housing within the local authorities. The SHMA deemed that over the plan period (2011 to 2031), the affordable housing need amounted to a total of 15,975 affordable homes across the two areas, of which 10,402 should be in Cambridge and 5,573 in South Cambridgeshire. This amounts to an annual need of 520 affordable homes in Cambridge and 279 in South Cambridgeshire.

1.14 With regards to employment, Policy S/5 of the South Cambridgeshire Local Plan[3] establishes a target of 22,000 new jobs to be provided in the district in the twenty years to 2031. According to research by Cambridge Econometrics, sectors anticipated to grow in the future include professional services, computing and business services, construction and health. Considering this 20-year target on an annual basis, South Cambridgeshire would need to deliver 1,100 new jobs per year on average to deliver the target amount. It should be noted that the number of jobs is a forecast and not a target to be met at all costs. The South Cambridgeshire Local Plan reports that the Employment Land Review (ELR) identifies that employment growth on this scale would generate a net demand for around 143,000m^2 of additional employment floorspace or 43ha of land in the 'B' use classes. This figure appears to come from the 2012 ELR update. However it is disappointing that the 2019 ELR was not available to review as it has not yet been published. It is worth noting that the 2012 and previous 2008 ELR studies resulted in markedly different conclusions on this point, meaning it is difficult to place much reliability on these estimates.

1.15 The Cambridge Local Plan[4] states that the Council will support the forecast growth of net additional jobs equivalent to 22,100 by 2031, including a net gain of some 8,800 jobs in the 'B' use classes (office and industry). Of this 8,800, 7,000 net additional jobs are forecast to be in the B1(a) industries. On an annual basis, this amounts to 1,105 total net additional jobs, of which 440 will be in B use class industries. Growth on this scale would generate a net demand for around 7.4ha of additional employment land, although when considering B1(a) use class employment land specifically, the requirement is deemed to be higher at 12.2ha.

1.16 The Cambridge Local Plan notes that demand for housing is currently high in the local authority, with high rents and high house prices,[5] as shown in **Table 3**. The South Cambridgeshire Local Plan also acknowledges that the local authority has "high house

[2] Peter Brett Associates, November 2015. Objectively assessed housing need: further evidence.
[3] South Cambridgeshire Council, 2018. South Cambridgeshire Local Plan.
[4] Cambridge City Council, 2018. Cambridge Local Plan.
5 Cambridge City Council, 2018. Cambridge Local Plan

prices in relation to earnings". The median incomes in the Local Area[6]/Cambridge are £34,500,[7] whilst the respective median house prices are £336,000 and £435,000,[8] giving respective median house price to median income ratios of 9.7 and 12.6, which are both higher than comparators (9 in the East of England and 8 in England as a whole), illustrating a need for additional housing.

Table 3 Ratio of median house prices to median incomes, 2019

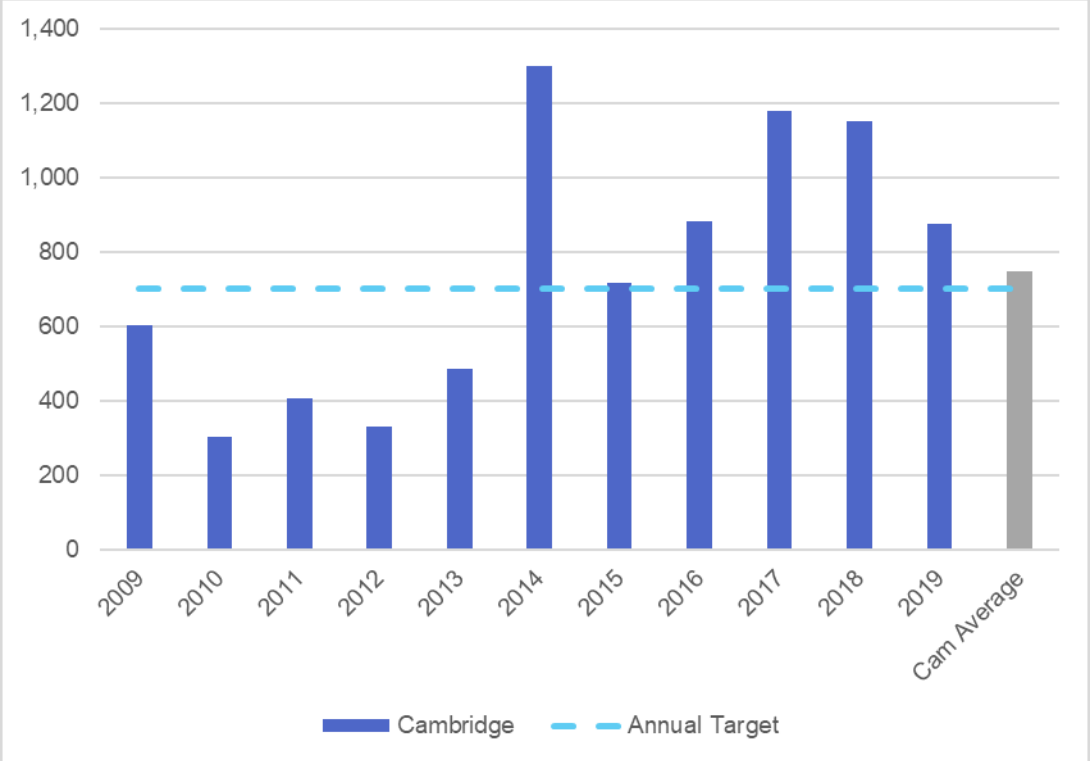
Area	Median house price (2019)	Median income (2019)	Median house price to median income (2019)
Local Area	£336,000	£34,500	9.7
Cambridge	£435,000	£34,500	12.6
South Cambridgeshire	£370,000	£40,000	9.2
East	£288,000	£32,000	9.0
England	£244,000	£30,500	8.0

Source: ONS, 2019. Median house prices for administrative geographies; ONS, 2019. Annual Survey of Hours and Earnings; NB: Figures have been rounded.

1.17 In this note, we use data released by MHCLG on net additions to the dwelling stock to analyse housing delivery in recent years. Over the last decade, the local authority of Cambridge has delivered an average of 748 net additional dwellings per year,[9] whilst the targeted provision for the borough is 14,000 new homes to 2031, equivalent to 700 dwellings per year. Delivery over the last decade has therefore been slightly higher (40 houses per year) than targeted levels, with a noticeable increase in delivery over the more recent 5 year period relative to the first 5 years of the decade.

6 The Local Area has been defined as consisting of two small areas – referred to as Lower Super Output Areas (LSOAs) - which approximately cover the NEC AAP area: these are South Cambridgeshire 007C and Cambridge 003B. This was considered the best fit for the purposes of this assessment.
7 ONS, 2019. Annual Survey of Hours and Earnings
8 ONS, 2019. Median house prices for administrative geographies
9 MHCLG, 2019. Live tables on housing supply: net additional dwellings

Figure 4 Net additional housing delivery, Cambridge



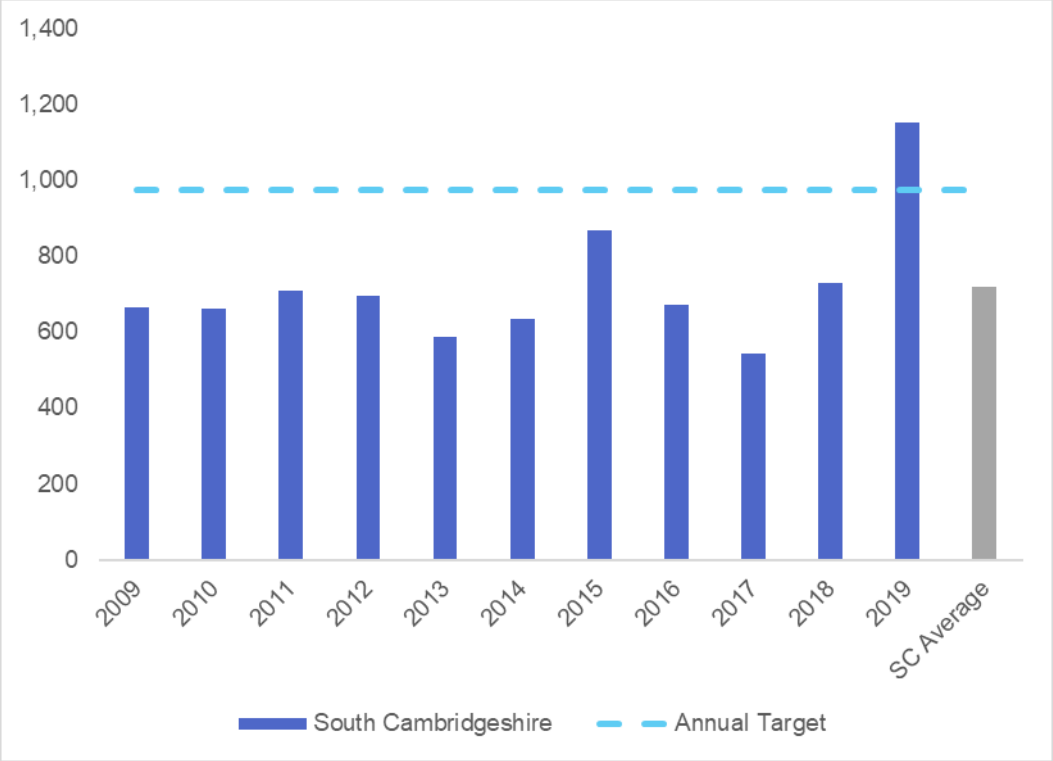
Source: MHCLG, 2019. Live tables on housing supply: net additional dwellings

1.18 In contrast, South Cambridgeshire's delivery has been below targeted levels over the last decade. Average annual delivery over the period 2009-2019 has been 720 net additional dwellings a year, substantially below the 975 additional dwellings per year required as per Local Plan policy. This highlights the need for additional housing to be delivered in the borough, and more than offsets the surplus created within Cambridge over the past decade if the two districts are combined.

1.19 This shortfall is reflected in the South Cambridgeshire Local Plan itself, where the council states that:

"Taking account all forms of housing supply, comprising: completions in 2011 -2015 of 2,735 homes; supply of housing on the existing allocations in adopted plans (including those with planning permission) expected by 2031 of 8,771 homes; unallocated sites with planning permission of 1,179 homes; and the Council's forecast windfall allowance of 2,450 homes, in 2015 the Council had a supply of 15,135 homes towards the 19,500 home requirement. This required sufficient new land to be identified to deliver a further 4,365 new homes in the district between 2011 and 2031."

Figure 5 Net additional housing delivery, South Cambridgeshire

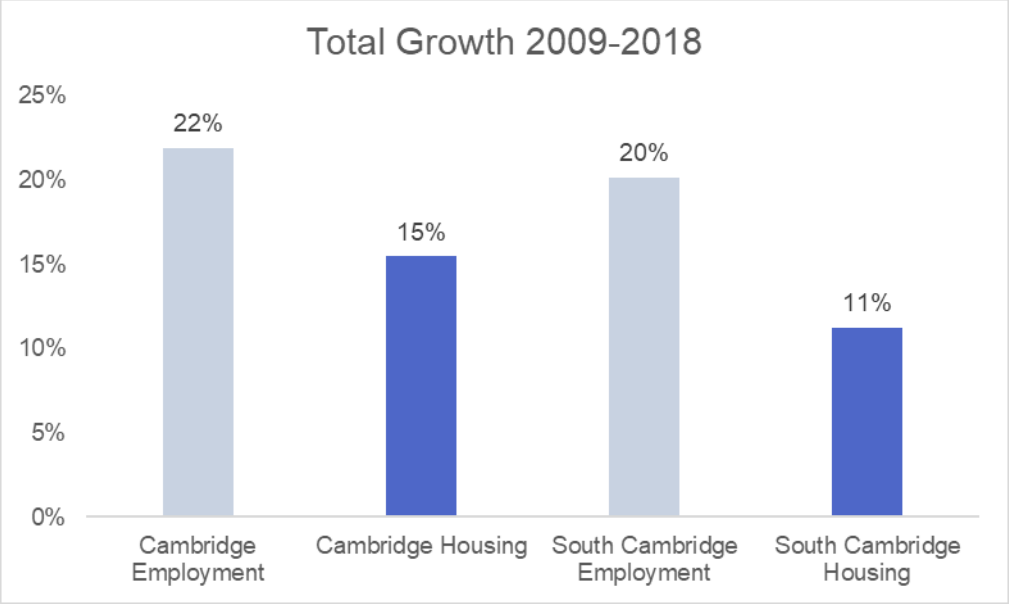


Source: MHCLG, 2019. Live tables on housing supply: net additional dwellings.

1.20 This issue is amplified when considering job growth projected in the two local authorities to 2031, which is equivalent 22,100 new jobs in Cambridge and 22,000 new jobs in South Cambridgeshire. Job growth per year is projected to be 32% higher each year than the targeted delivery for net additional dwellings in the districts, which will reinforce the current imbalance of jobs to housing. Despite the support for B1 office space and jobs growth within the NEC AAP, we believe the plan should include additional housing at the expense of commercial space, in order to support the increasing demand for housing.

1.21 The graph provided in the figure below supports this point. While it is clear that forecast employment growth is more ambitious than targeted housing growth, it is also important to look at past delivery. The graph below provides a comparison in the delivery of additional employment and housing in both local authorities of interest over the past decade (2009-2018). It is clear that employment has been growing at a faster rate than housing is being delivered in both local authorities. This could represent a problem going into the future, as **Table 2** already showed that both local authorities were already relying on in-commuting, which will need to increase in the future if this disparity is not addressed.

Figure 6 Comparison of past delivery



What would this vision mean for the NEC area?

An appropriate scale of office growth? A comparison with the current conditions

1.22 The NEC AAP specifies an additional 234,500m ^{2} of B1-use office space to be delivered in the North East Cambridge area to 2040, as shown in Figure 7 below. The AAP justifies this quantum of space as follow:

"The amount of employment floorspace identified for North East Cambridge has the potential to provide a significant increase in the quantity of B1 accommodation in the area to meet future business needs."

Figure 7 Office space (B1) delivery

Source: Greater Cambridge Shared Planning, 2020. North East Cambridge Area Action Plan

1.23 As of 2018, there are an estimated 10,400 people working in office-based employment[10] in the Local Area, with an estimated 34,250 and 35,000 respectively in the districts of Cambridge and South Cambridgeshire (**Table 4**). For comparison, there are 797,000 within the East of England, and 7.4m in England as a whole.

Table 4 Office-based employment, 2018

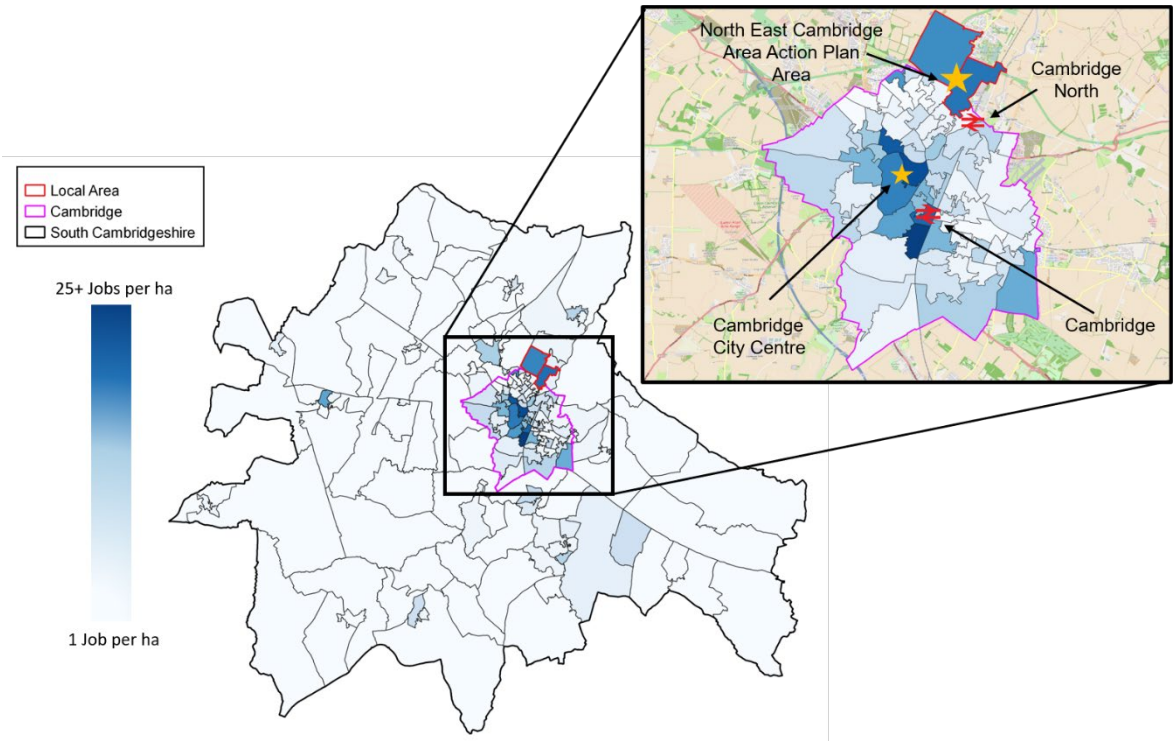
Area	Office -based employment
Local Area	10,400
Cambridge	34,250
South Cambridgeshire	35,000
East	797,000
England	7.4m

Source: ONS, 2018. Business Register and Employment Survey; NB: Figures have been rounded.

1.24 Looking at which areas within Cambridge & South Cambridgeshire are dominated by office-based employment, **Figure 8** shows that the main office hubs within the borough are in the Cambridge city centre, around Cambridge station, and around Cambridge North station in close proximity to the NEC AAP area. The densest area of the borough on this measure is around Cambridge station.

[10] 'Office-based employment' here is defined using ONS Business Register and Employment Survey Sectors J-N: (i) J – Information and Communication; (ii) K – Financial and Insurance; (iii) L – Property; (iv) M – Professional, Scientific and Technical; and (v) N – Business Administration and Support Services.

Figure 8 Office jobs density, 2018

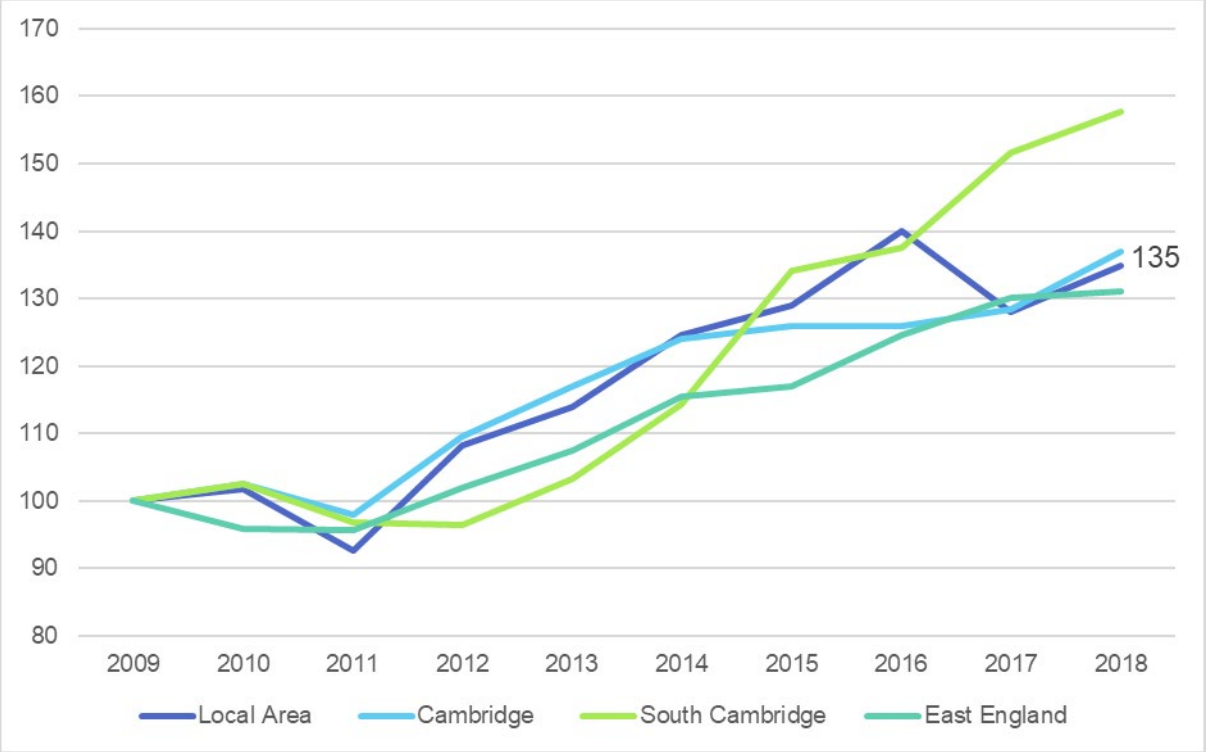


Source: ONS, 2019. Business Register and Employment Survey.

1.25 Over the period 2009-2018, office-based employment in the Local Area[11], defined to act as a proxy for the NEC AAP area, has grown by 35%, as illustrated in **Figure 9**. This is equivalent to an average annual growth rate of 3.9%, below the average annual growth rates of office employment in South Cambridgeshire (6.4%) and Cambridge (4.1%) respectively.

[11] Consisting of two LSOAs: (1) E01017971 Cambridge 003B; and (2) E0108274 South Cambridgeshire 007C.

Figure 9 Office employment growth, 2009-2019



Source: ONS, 2018. Business Register and Employment Survey

1.26 The 234,500m^2 of B1 floorspace outlined within the AAP is estimated to deliver an additional 16,600 full-time equivalents (FTEs) in the North East Cambridge area by 2040, assuming a standard density of one FTE per 12m^2 of commercial office space. After accounting for 2018 part-time working patterns in the NEC area, this amounts to an estimated 18,700 office-based jobs. This increase therefore represents a 180% uplift (almost tripling) in the amount of 2018 office-based employment supported in the Local Area, as well as a 27% uplift for Cambridge-based and South Cambridgeshire-based 2018 office employment combined.

1.27 To put this into context, this 180% uplift in local area office employment would need an average of 8.2% office employment growth every year over the period 2018-2040, in order to achieve the scale of B1 office growth that the NEC AAP is targeting. This is more than double the average annual growth rate in office employment recorded since 2009 in the local area (3.9%), highlighting the potentially over ambitious B1 targets set out in the draft AAP.

1.28 In absolute terms, the local area has increased its office employment by an estimated 2,700 over the past decade. The equivalent figures for the whole of Cambridge and South Cambridgeshire are 9,250 and 12,800 new office jobs respectively. This means that over the period to 2040, the NEC AAP area would need to deliver seven times more new office jobs than it has over the past decade, or 85% of the office jobs delivered across the whole of the two boroughs. This suggests a very considerable uplift in future growth rate, and an extreme concentration of this future growth in one specific location.

The need for more residential growth

1.29 We estimate the number of residents that could be supported in the proposed 8,000 homes. We do this in two ways, firstly using the current residents per dwelling ratio in the

two districts (2.31 residents per dwelling), and secondly using the GLA Population Yield Calculator[12] – set in Outer London achieving an average PTAL rating of 3-4 – and assuming an even split of units between 1 to 4-bed residential units, with a 60-40 split of private versus affordable. The resident per dwelling method results in an estimated 18,500 new residents, and the GLA calculator estimates that 20,800 residents could be supported by the 8,000 units.

1.30 Over the period April 2019 – March 2020, the (weighted) average 16-64 economic activity rate across Cambridge and South Cambridgeshire was 82.3%.[13] Of these residents, approximately 11,900-15,100 would be expected to be of working age (16-64). Applying the average economic activity rate in Cambridge and South Cambridgeshire to these working age residents, we'd expect 9,800-12,500 of these residents to be economically active.

1.31 Clearly, it is not conceivable that all of these 9,800-12,500 economically active residents moving into the area would be seeking work, as many would already be employed. However, in the scenario where they were all seeking work, there would still be a shortfall of 7,500-10,200 between new jobs and residents in the NEC area. Including the existing 15,000 jobs already within the NEC area would further accentuate this imbalance. Therefore, in order to support the planned levels of new jobs and new homes, there would clearly need to be a substantial amount of in-commuting to the area, which can have a range of adverse impacts such as noise and congestion. This analysis suggests that the proposed balance might not be quite right.

1.32 Instead, there should perhaps be more of a focus on homes rather than jobs in the NEC area. The combined targets for housing and employment delivery over the period 2011 to 2031 across Cambridge and South Cambridgeshire are as follows:

- **Employment:** 44,100 new jobs, equivalent to 2,205 additional jobs a year; and
- **Housing:** 33,500 new homes, equivalent to 1,675 additional homes a year.

1.33 Comparing this to the target for the NEC area, the 20,000 new jobs would amount to 45% of the total employment growth targeted for both local authorities combined over the plan periods. In contrast, the 8,000 new homes targeted for the NEC would only deliver 24% of the combined housing target for the local authorities, highlighting the clear bias towards employment in the area when compared to residential need.

What types of jobs & homes are nee ded?

1.34 Creating a community requires a mix of uses : commercial, residential and community uses, but also different types of jobs within the commercial uses. The NEC AAP at present clearly has a focus on the additional provision of B1 jobs. Whilst these jobs are often seen as highly skilled and high value, they may not necessarily be the sorts of jobs that local residents, and those residents who most need access to employment opportunities, are most suited to and hence may not be the most accessible for those who need them most.

1.35 According to the Skills, Training & Local Employment Topic Paper jointly released by Cambridge City Council and South Cambridgeshire District Council [14], in Cambridge approximately 30% of the city's jobs are in the knowledge intensive sector, and these jobs require specialist skills and are highly -paid. Unfortunately, however, there is a small but growing proportion of jobs in the city that are paid below the real living wage (13.1% in 2018).

[12] GLA, 2020. Population Yield Calculator.
[13] ONS, 2020. Annual population survey.
[14] Cambridge City Council and South Cambridgeshire District Council. Appendix C7: Skills, Training & Local Employment topic paper.

1.36 In addition to this, due to success of the tech sector and the world-renowned university:

"there are large numbers of high-skilled jobs, some unskilled or low-skilled jobs, but very few jobs requiring mid-level skills compared to other parts of the country. This makes it very difficult for people with limited qualification or skills to secure jobs with salaries that are high enough to meet the high cost of living and housing in the city."

1.37 To counter this, the councils are aiming to reduce the skills gap in the local authorities through the following sorts of measures:

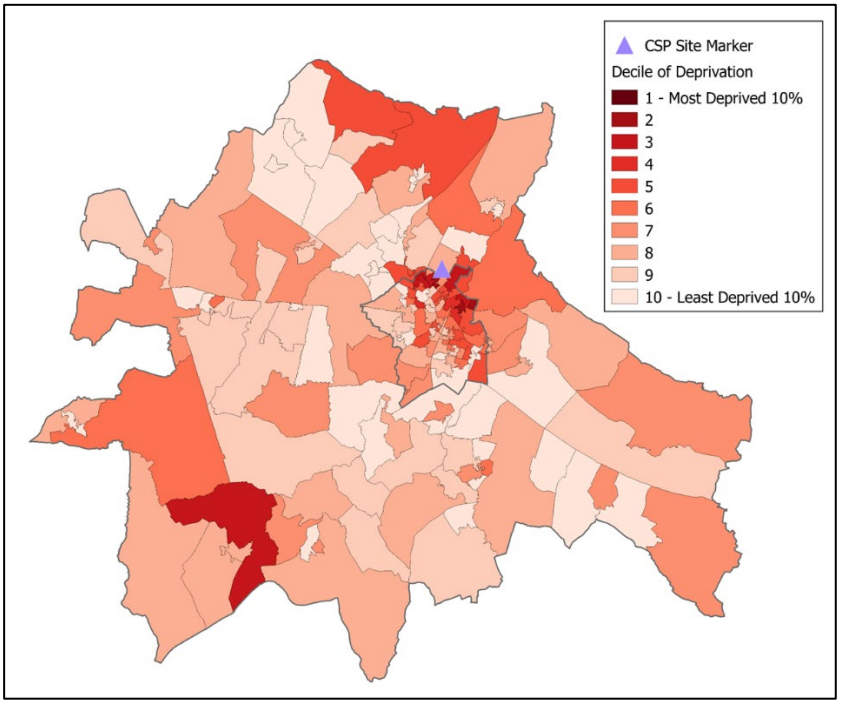
- 400 new apprenticeships through partnership with Cambridge Regional College;
- For school leavers looking to further their career, Anglia Ruskin University (ARU) has set up degree apprenticeships with a range of employers paying tuition fees alongside Government funding;
- Training and employment opportunities from developers secured through s106 agreements during the construction phase of development; and
- Operational developers should provide an Employment and Skills Plan (ESP).

1.38 Whilst these sorts of measures should all be viewed positive, to truly assess whether the appropriate types of jobs are being provided we need to assess the current conditions of the local NEC area. Analysis carried out on socio-economic indicators show that the NEC area is close to many groups of people who desperately require future economic opportunities to be provided to them, not all of which will be B1 office opportunities.

1.39 We have analysed the index of multiple deprivation (by sub-domain) for the local area surrounding Cambridge Science Park (CSP) and the local authorities of Cambridge and South Cambridgeshire. The three figures below show that the area surrounding both CSP and the NEC AAP area are among the most deprived in the local authorities, with respect to overall deprivation, as well as employment and skills deprivation levels. Clearly, if the residents living near the NEC area are among the most deprived in terms of education, skills and training, the provision of highly-skilled office jobs in the local area is likely going to do very little to improve their outcomes in life, as these types of jobs will not be accessible to them and will instead be filled by in-commuters.

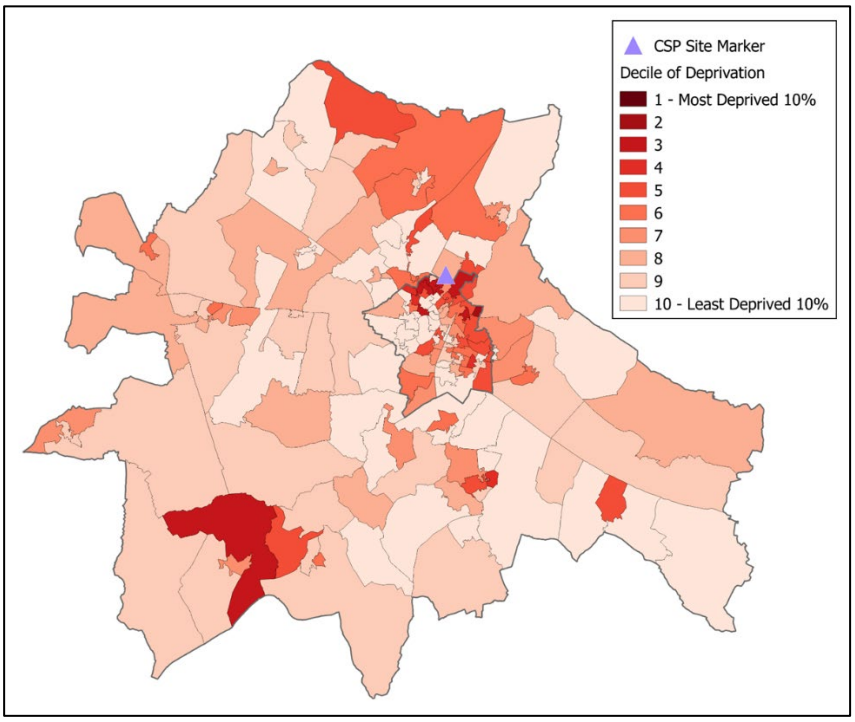
1.40 Instead, some lower skilled, entry level, but good quality career jobs are needed in the NEC (or wider local) area in order to offer opportunities for these groups.

Figure 10 Overall index of multiple deprivation ranking, 2019



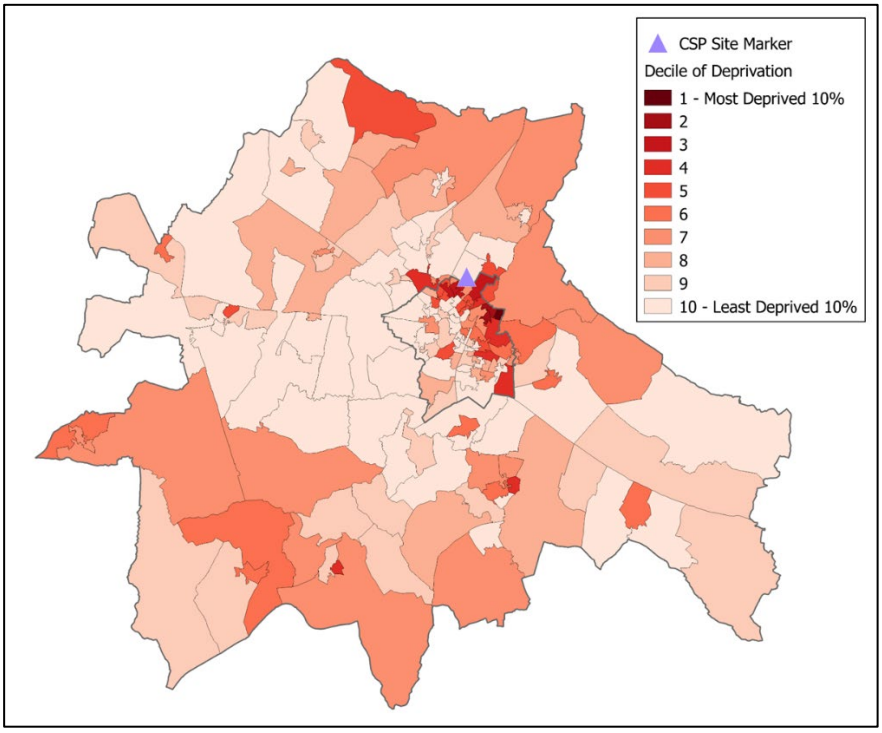
Source: Ministry for Housing, Communities and Local Government (2019) Overall Index of Multiple Deprivation.

Figure 11 Employment deprivation, 2019



Source: Ministry for Housing, Communities and Local Government, 2019. Employment domain of Multiple Deprivation.

Figure 12 Education, skills and training deprivation, 2019



Source: Ministry for Housing, Communities and Local Government, 2019. Skills domain of Multiple Deprivation.

1.41 There is the opportunity for 3,000-4,000 new jobs in skilled manufacturing at CSP North, just north of CSP and on the outskirts of the AAP area. With appropriate collaboration with partners, including the CRC, it is highly likely that these types of jobs would be better suited to addressing the future employment needs of some of the more deprived parts of the area, whilst also delivering growth in a highly exportable sector. When combining this potential employment growth along with that planned at the NEC area, it further underlines the potential imbalance between jobs and homes, and the importance of delivering the right kinds of jobs to maximise benefits for all, including importantly those who need improved opportunities most.

1.42 Referring back then to some of the AAP's principles: 'firmly integrated with surrounding communities', 'provide a significant number of new homes, a range of jobs for all', it becomes clear that the balance of types and quantum of jobs proposed in the NEC area will not deliver these objectives in isolation. Combined with the opportunity presented at CSP North, along with a reconsideration of the NEC quantum of growth in favour of homes, however, these principles could be met.

1.43 It is therefore our recommendation, based on the evidence set out, that it would makes sense that the AAP area should be widened to include the CSP North area. The commercial and residential balance, as well as the types of commercial uses, should then be revisited so as to ensure that there is a more appropriate balance between the jobs and people. Finally, the types of jobs delivered need to meet the needs of the people most in need of job opportunities, whilst also addressing the economic trends and need for future innovative forms of employment generating spaces. Including the growth potential at CSP North within the AAP vision would address these issues.

Question 5

Are we planning for the right community facilities?

Volterra response

1.44 Creating a cohesive and sustainable community requires certain community uses to be provided that support local residents. The kind of community facilities that should be provided alongside residential homes include community centres, general practices, educational institutions, play space and open space. Broadly, the layout of the proposed masterplan within the NEC area appears to be appropriate, as the proposed uses appear to be close to the proposed residential units.

1.45 It is crucial to the future success of this area as a community, however, that these community uses are indeed delivered, otherwise additional pressure will be placed on existing services and/or the place will lack the desired 'sense of place' for prospective new residents.

1.46 The table below provides some benchmark provision levels for a selection of different community facilities. These benchmarks should be kept in mind if deciding to increase the provision of residential units within the NEC area, as was suggested earlier on in this note. Also provided within the table is the theoretical additional capacity that would be required within these community facilities, if the 8,000 new homes supported an estimated 20,800 new residents within NEC. The primary and secondary class requirements equate to approximately 9 forms of entry (FE), so this could be delivered across three 3FE schools, for example. The delivery of schools would require appropriate phasing to ensure deliverability.

Table 5 Community facilities benchmark provision

Type of facility	Source	Benchmark	Requirement for planned additional residents
General Practices	NHS HUDU	1 FTE GP per 1,800 patients	12 FTE GPs
Community centre	Barton, Grant and Guise, 2003. Shaping Neighbourhoods: A Guide for Health, Sustainability and Vitality	A minimum of 4,000 residents per community centres to justify financial viability.	A maximum of 5 community facilities.
Community centre	Barton, Grant and Guise, 2010. Shaping neighbourhoods for local health and global sustainability	A maximum of 7,000-11,000 residents per community centre.	A minimum of 2 community facilities.
Play space[15]	Fields in Trust, 2015. Guidance for outdoor sport and play.	0.25ha per 1,000 residents	5.2ha
Parks and gardens	Fields in Trust, 2015. Guidance for outdoor sport and play.	0.8ha per 1,000 residents	16.6ha
Open space (natural and semi-natural)	Fields in Trust, 2015. Guidance for outdoor sport and play.	1.8ha per 1,000 residents	37.5ha

[15] For this type of residential provision, all three types of play space should be provided: (i) Local Area for Play (LAP); (ii) Locally Equipped Area for Play (LEAP); and (iii) Neighbourhood Equipped Area for Play (NEAP)

Type of facility	Sourc e	Benchmark	Requirement for planned additional residents
Primary education (5-11)	Assumption	30 students per class	64 classes
Secondary education (12-17)	Assumption	30 students per class	58 classes

Disclaimer

Appendix 2

NEC AAP

Greater Cambridge Local Plan (Regulation 18: Issues and Options 2020)

Transport Topic Paper Review

September 2020
194827/N15

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1. The overall approach to mobility outlined in the AAP, focusing and prioritising walking and cycling in additional to shared travel opportunities is absolutely supported. The shift from a predict and provide approach towards a vision and validate approach is something we advocate. This will help direct investment towards local living and active and shared travel opportunities.

2. The approach will help move away from investment in infrastructure that prioritises and encourages car use which historically has occurred due to the focus on forecasts, based upon backward facing, rear view mirror evidence.

Introduction

'In essence, new development will only be considered acceptable if it can demonstrate that it will not result in increased traffic movements on the surrounding road network'.

3. This statement suggests that network capacity will be the measure of success. There are other measures.

4. As a point of principle, the focus should be on sustainable travel and active and shared mobility, some increase in vehicle movements may be acceptable in the round.

'This topic paper should be read alongside the NEC Transport Evidence Base study'

5. As such the summary provided in the topic paper is predicated on the analysis presented in the Evidence Base.

Existing issues

6. It is good to see that Climate Change and Pollution are considered first before matters of highway network performance. This theme should continue across topics within the AAP.

Congestion

'This will put increasing pressure on the highway network and if nothing is done to address it road traffic is forecast increase by 30% at peak in Cambridge'

7. If the network is at capacity, then additional traffic cannot occur. People can choose to travel by other modes that do have capacity, travel at different times or not travel at all.

'The 2011 Census indicated that around 71% of work trips to the North East Cambridge area were made by car'.

8. This is used in the evidence base and is not reflective of the current situation at CSP. 52% drive according to 2019 figures. The most recently available data should be used to establish a baseline.

'In view of the evidence of existing and future highway constraints, a trip budget approach is proposed for managing car trips to and from the area. The trip budget essentially establishes a cap on the number of future vehicle trips the area can make based on current trip levels'.

9. The principle of focusing on a range of mobility options and effectively limiting car use is supported and agreed as an appropriate way forward. However, the rigidity of the Trip Budget approach as currently expressed, combined with the concerns associated with the baseline data that it is based requires assessment. See separate note on these points where discrepancies in the baseline assumptions are made.

Land Use and Parking

'Responses to the Issues and Options consultation raised concerns about existing employees currently parking on the streets within Milton'.

10. This does not correspond to the suggestion in the evidence base that on-site car parking is underutilised.

'A range of responses were received to whether there should be lower levels of car parking across the AAP area, with broad support provided there are suitable alternatives in place'.

11. In order for CSP to reduced car parking, innovative and significant transport interventions are required.

Severance

'The AAP provides an opportunity to reduce the severance effect and enhance community safety and social inclusion through the provision of new and improved pedestrian and cycle crossings and networks'.

12. This approach is agreed. CSP will help delivery various elements including a more active frontage to the Busway.

13. Details associated with Milton Road and the various crossing opportunities that are available need to be outlined and clarified. At present there are several refences through the AAP which appear to alternate in terms of preference of grade or grade separation.

Delivery of transport infrastructure and services

'The delivery of transport infrastructure and service improvements is dependent on several partners including local authorities and private companies, available funding, as well as planning processes'.

14. The relative role of all parties is agreed. In that context, strategic infrastructure should be led by those with the power to deliver those measures.

'The AAP provides a conduit through which the necessary infrastructure and service requirements can be identified, appropriate funding mechanisms put in place, and their delivery coordinated and secured. This is the role of the NEC Infrastructure Delivery Plan'.

15. With reference to later statements regarding developers identifying how people may travel from more distant destinations the attached is relevant.

Transport Opportunities and Key Issues

Quantum of Development

16. The baseline development for CSP considered in the evidence base is not correct.

17. It is uncertain how unimplemented consented floor space has been considered in both arriving at the trip budget and also testing future additional floorspace. It is also not clear that this floor space is reflected in the modelling as consented schemes should represent the comparable baseline, not the existing situation.

18. Are the job numbers in Table 1 additional to what is already in place? Do they consider consented schemes?

19. A further question is how the allocation has been assumed across each site. It is not clear what proportion of jobs is allocated to CSP. This is important in understanding the Trip Budget and scale of development assumed for CSP.

20. Whilst the current development scenario presented in the AAP correlates with Option 4 tested in the Evidence Base, the specific allocation across sites and clear alignment between the Evidence Base approach and AAP development schedule should be made to define the Trip Budget and required mode share.

21. A significant omission is the logistics / last mile delivery faciality that the AAP allocates to CSP. We consider this to contribute positively to the overall strategy and has the potential to reduce trips.

22. The Masterplanning for CSP envisages accommodating this at CSP North. Directing deliveries to CSP North for onward delivery by drone, bike or electric vehicle can be achieved with direct utilisation of the Busway and internal road network. This can include the wider NEC area.

23. The approach of locating this faciality at CSP North will directly reduce trips on Milton Road.

Trip Budget

24. The principle of a vehicular Trip Budget is accepted in principle. Effectively this is part of supporting a sustainable mobility strategy for a site in setting targets for car and vehicle use and prioritising active and shared mobility. By default, a target for the proportion of travel undertaken by car should be set.

25. As a general point, it should be explicitly stated that this is a Vehicular Trip Budget, not a cap on overall movement.

26. There are however outstanding concerns over the rigidity of the Trip Budget as absolute figures and its application to specific periods of the day. Furthermore, the baseline data which has been utilised to determine the Trip Budget requires clarification where it appears inaccurate and the reliance on a relatively basic traffic model is not considered appropriate.

27. The main matters that we would require clarification on before agreeing to the specific vehicular trips budget are:

- Question whether a single day survey from 2017 is adequate to set the trip budget.
- The focus on peak hours is not appropriate. How people live and in the context of a Trip Budget, travel across the day is more relevant.
- The Trip Budget is based in incorrect assumptions associated with existing floor areas, job numbers and car parking provision.
- The Linsig model that is used to fix the Trip Budget can only focus on single hours and represents a simple pass or fail expressed in capacity terms.
- It is unclear why the approach exposes a restriction on increasing highway capacity and yet promotes just this by altering the CSP access junction. Why only this junction?
- Approach does not seem to account for committed developments.
- No indication of how the trip budget may be allocated across individual development sites within the AAP area.
- The approach to separate Kings Hedges and Milton Road trip budgets requires further consideration given they do and will continue to interact.
- The AAP schedule should be tested within the Trip Budget. No evidence this is the case.
- Does not appear to have factored in the traffic attraction that the Evidence Base assumes might be associated with a greater quantum of car parking provision
- The Trip Budget is predicated on there being no effect on the local highway network and that vehicular movements and the convenience of car drivers cannot be affected in any way.

- The trip budget is lower than existing levels of trips entering the NEC AAP site. As such, trips need to firstly be reduced in order for development to come forward once the trip budget is in place. The natural conclusion of this is that development may not come forward in advance of measures that have reduced existing vehicular trips.

Inclusion of additional development areas within the NEC AAP site

Car Showrooms

28. Unclear why this land use should have its own trip budget. Why is this not the case for other land uses such as St Johns, Cambridge Business Park and Cambridge Science Park as examples?

'The inclusion of the Car Show rooms situated to the south of Kings Hedges Road is unlikely to have a significant impact on the operation of the area as a whole as this is an existing use and therefore already generates trips on Milton Road in the peak periods and throughout the day'.

29. CSP similarly is an existing use and already generates trips on Milton Road during the peaks and across the day.

30. It is not clear why other land uses are asked to reduce their vehicular trips but this particular site is not. The point is further emphasised in the following:

'If this site is included within the AAP area it would need to have its own trip budget and parking target so as not to add to the existing levels of congestion on Milton Road'.

31. Remaining sentences seem to suggest the reason for this is simply so as to not revisit the Evidence Base as follows:

'The setting of a trip budget for this area would not alter the trip budget already set out in the Transport Evidence Base'.

32. Overall it seems that if the approach is for all sites with NEC to achieve the objectives set in the Evidence Base, then the same approach is should be applied to each.

CRC

'The existing trip budget and car park levels apply to trips accessing the AAP area via Milton Road and therefore, the introduction of a trip budget for the Kings Hedges Road access would not result in any reduction in the trip budget set out in the Transport Evidence Base (September 2019) assuming that the internal road network within the Cambridge Science Park (CSP) does not allow for through trips from Milton Road to Kings Hedges Road and vice versa'.

33. This requires further consideration. People working towards the east of CSP may access from Kings hedges. Equally, those working to the west may access from Milton Road. There are also through movements along the highway that runs through CSP. Access to Kings

Hedges road is also via Milton Road and to Milton Road from Kings Hedges Road to Milton Road.

34. It is therefore perhaps too simplistic to define trip budget in the way currently set out.

35. Milton Road Trip Budget is based on an assessment of highway capacity defining the maximum number of trips. This approach has not been undertaken for Kings Hedges Road.

Car Parking Provision

'Car parking provision has a strong relationship with trip generation and so parking standards will have an important role to play in helping to manage traffic levels associated with development'.

'The management of car parking can be important in managing traffic levels. It is not agreed that absolute numbers define this. Car sharing spaces, disabled parking provision and perhaps spaces that are only available a certain times of the day can all play a part.

The following sections set out the resulting parking levels for the CSP and College needed to accommodate the predicted trip budget set out above'.

36. This statement is clearly drawing a direct correlation between car parking and the attainment of the trip budget. It states that parking needs to be constrained in order to achieve this. However, as proven by the results for CRC, the current provision above levels that the analysis suggests are necessary, indicates that this 'overprovision' is not fettering travel by other means. The link between car parking provision / availability and vehicular peak hour trips is not absolute.

The impact of traffic from the AAP area on the A14

37. 'Therefore, trips from the NEC area should not contribute to additional vehicles on the A14. However the car mode share indicated for the AAP area is significantly lower than is currently the case for any of the existing uses within the AAP area therefore it will be important as the development progresses to ensure that there is not an increase in the number of trips on the A14 that are then parking off site and using other modes for the last part of the journey. The developers of North East Cambridge will need to demonstrate that longer distance trips to the area are captured further out to minimise the impact of any development at the scheme on the A14 as part of the Area Wide Transport Strategy'.

38. This statement is unclear in the context that the role of the Milton Road Park and Ride might have. The Evidence Base places a great emphasis on the role that the park and ride might play in contributing positively to the trip budget. This would naturally mean some additional trips diverting from the A14 to the faciality rather than travelling on Milton Road to park on-site.

39. The Evidence Base places importance on the role that a segregated link would have in strengthen park and ride facilities. The proposal for CSP North with parking and a direct segregated link to the existing Busway, connected with electric vehicles, buses or even AVs would represent a significant addition to the overall Transport Strategy.

40. The diversion of trips from the SRN is the approach being undertaken by CCCs own application for the SW Travel Hub. Movements from the M11 to the travel Hub will actively be encouraged parking off site undertaken and other modes for the last part of the journey used.

41. The faciality at CSP North can therefore contribute positively, providing remote parking for those journeys that are made by car.

'The developers of North East Cambridge will need to demonstrate that longer distance trips to the area are captured further out to minimise the impact of any development at the scheme on the A14 as part of the Area Wide Transport Strategy'.

42. This is a regional strategic measure that cannot realistically be delivered by the NEC AAP. The strategy should absolutely consider the role of emerging proposals such as the Cambourne to Cambridge busway, Waterbeach to Cambridge public transport corridor and SW Transport Corridor proposals which can facilitate this. The proposals for CAM will clearly represent a step change.

43. It is identified elsewhere in the Topic Paper that the IDP will take a lead on this.

Area Wide Transport Strategy and Transport Assessments

'To demonstrate the deliverability and achievability of the scale of development proposed for NEC within the prescribed trip budget (Table 2), the developers will be required to prepare an area wide Transport Strategy.'

44. The role of the Evidence Base and strategy contained therein and expressed in this Topic Paper is unclear in the context of the above.

45. An area wide Transport Strategy to deliver the NECAAP is a necessary requirement that a reviewing inspector will expect to see. It is therefore the responsibility of the Local Planning Authority to produce this. CSP are more than willing to contribute.

'The Councils will expect that there will need to be a phased reduction in car parking provision across the AAP area to facilitate and reinforce the delivery of the aims of the Transport Strategy'.

46. In order for this to be established beyond the strategy already agreed for CSP, the wider innovation and significant strategy needs to be identified.

'Each individual developer will then need to produce a site-specific Transport Assessment that sets out how their development sits within the area wide Transport Strategy and what mitigation the individual site needs to provide, including towards strategic, local and site specific infrastructure and provisions'.

47. It is agreed that individual Transport Assessment for each site will be required and that those assessments should set out how the proposals fit with the overall strategy.

48. Strategic infrastructure cannot be delivered by individual sites but may be facilitated through accommodating specific infrastructure within the site, ensuring linkages to those measures and delivering early stages that are relevant to each site.

Car parking displacement and enforcement

'The Transport Strategy is likely to require a reduction in car parking across the area, in tandem with further improvements to public transport services, cycling and walking infrastructure to deliver upon the required mode share'.

49. In other areas and documents, the need to reduce car parking is more explicitly stated whereas this statement is more ambiguous. Clarity on the requirements is needed.

50. It is noted that within the Topic Paper, specific car parking numbers is not outlined for the Milton Road Trip Budget but that parking numbers are set out for the Kings Hedges Road Trip Budget.

51. The AAP will include a requirement to monitor the existing car parking situation in the area surrounding the AAP area. If this monitoring indicates that there is additional parking in the surrounding area as a result of development within the AAP area, then it may be appropriate to introduce wider control measures, such as Controlled Parking Zones. Developers should incorporate a monitoring and mitigation plan within the Area Wide Transport Strategy.

52. There is concern that specifically identifying car parking that might be associated with NECAAP (and particular land uses) is to achievable. The wider AAP suggests this area should extend to cover a significant area which is also greatly impractical.

Transport Position Statement for Development Management Decisions

53. The overarching position appears to be that any development needs to accord with the agreed area wide transport strategy. If this is additional to that contained in the Evidence Base, as suggested in the Topic Paper, then this strategy must first be agreed before development scan be approved.

Preferred approach for relevant policy development

'That NEC facilitates and encourages a modal shift to sustainable modes to meet the trip budget'.

54. The focus on sustainable modes is agreed but the trip budget as the ultimate measure of success is not supported.

55. The inclusion of the Trip Budget within this statement highlights the importance of clarifying the baseline data and using an effective tool to measure and quantify the trip budget.

56. The focus should be more on placemaking, climate emergency, air quality, healthy living and wellbeing. The convenience of the car commuter should not be a primary consideration, particularly where all other reasons are supported within the design.

57. The impact on the highway network is simply a measure and whilst clearly highway safety is a key factor, is not the ultimate measure of success. There should be flexibility in this and the wider statement in this section that, particularly in the context of ***'no unacceptable impact on the highway network'*** should be explored further.

58. This is a different approach to the evidence base which simply seeks to ensure the network performs in the same way as the Linsig model from 2017. The Linsig model employs a simply pass or fail based on a peak hour consideration of capacity. It does not account for the effects of capacity being exceeded. It is considered that a more refined and updated approach is taken.

59. The context of the above is made not to increase vehicle trips (and the trip budget) but to consider how a scheme that perhaps reallocates road space to pedestrians and cyclists to the detriment of road capacity will not be acceptable, even if it benefits a greater number of people.

Appendix 3

Greater Cambridge Shared Planning Service
FAO Matthew Paterson

21st May 2020

BY EMAIL

Trinity College Cambridge Response to the North East Cambridge Area Action Plan Transport Evidence Base

DP9 and Sphere25 are making these responses on behalf of Trinity College Cambridge (TCC), as the principal owner and custodian of Cambridge Science Park (CSP). This response has been prepared in consultation with Vectos as Specialist Transport Consultants advising TCC.

This response relates to the following documents:

- North East Cambridge Area Action Plan Transport Evidence Base (Mott Macdonald, 20 September 2019)
- Transport Position Statement: Approach to planning applications on the A10 northern corridor (Transportation Assessment Team, February 2020)
- NEC Transport Study Addendum (3rd April 2020)

The Transport Study Addendum posed specific discussion points which this response seeks to address.

In addition, this response sets out part of our submitted response to the CAM consultation, especially as it relates to the Waterbeach connections discussed during the NEC AAP Landowners Meeting on the 6th May 2020.

Integral to the reading of this response is the position of TCC and CSP that reducing the reliance of single occupant travel to work via private diesel and petrol cars is unequivocally supported.

Background

In December 2019 Trinity College Cambridge signed a S106 Agreement with South Cambridgeshire District Council, Cambridge City Council and Cambridgeshire County Council capping the number of parking spaces at CSP to a maximum of 7,498 reducing to a limit of 6,977 by December 2029. The reduction of over 500 spaces over this time frame is supported by a Parking Management Strategy and Monitoring Framework.

At the NEC AAP Landowners Meetings on the 24th April and 6th May, it became clear that whilst there were valid issues with the data and models, ultimately an implementable solution of sufficient scale was required to address the step change in modal shift required to release the quantum of car parking required.

CSP Data

Attached to this response is Appendix 1 which sets out in more detail the data set out below.

TCC supports the principle of reducing single occupant car journeys to work.

CSP currently has a parking cap of **7,498** spaces, reducing to **6,977** by December 2029. The September 2019 Transport Study proposes a cap of 4,800 car parking spaces for employment land across the entire AAP area. CCC provided an allocation illustration which allocates **2,163** car parking spaces to CSP.

This represents **a reduction of 5,335 spaces within the AAP Plan Period**.

These figures also need to consider the complex layers of leaseholder interest across CSP. 4,952 of the 7,498 total car parking spaces are under the control of long leaseholders. Of the remaining TCC controlled spaces, protected lease arrangements also need to be considered.

Policy E/1: New Employment Provision near Cambridge – Cambridge Science Park, (SCLP, 2018) recognises the importance of and supports the densification of Cambridge Science Park. However, the development scenarios presented within the Transport Study and Addendum represent a spectrum of floor areas including Option 1 and a later CCC spreadsheet representing reductions; Option 2 and 3 representing an increase of just 4,500sqm.

Since it was established by Trinity College Cambridge in 1970, the Cambridge Science Park has played a pivotal role in the "Cambridge Phenomenon" - the transformation of Cambridge from a market town with a world-class university to one of the leading technology hotspots in the world. As custodians of this key site, TCC intends to continue investing in and nurturing the diverse range of companies located on and seeking to join the CSP community through densification of the site in line with adopted policy. Both the floorspace and the number of employees will grow within the plan period. TCC are currently developing a Masterplan for CSP which identifies approximately 4.7 million square feet of floorspace, an increase from 2.7 million square feet (existing, under construction, and permitted) and up to 21,000 jobs, almost triple the current number by 2040.

The Transport Study and AAP should include reference to additional floorspace and employees at CSP.

In its current format the reader may ascertain that the role of CSP within the AAP seems to be to reduce car parking provision and to facilitate the Mobility Strategy without providing for further development.

NEC Transport Study Addendum Discussion Points

The Transport Study Addendum asked for feedback on four discussion points, two being directly relevant to CSP.

Discussion Point 1: The Transport Evidence Base sets out how the mode shares already tested might be met. However, the proposed development stretches this further. Given what we know about the transport schemes coming forward in the Greater Cambridge area, do developers consider the vehicle mode shares for the proposed development mix achievable?

Trinity College Cambridge and Cambridge Science Park are committed to a reduction in car parking provision alongside a move to encouraging non-car modes of transportation.

In order to answer this discussion point, it is important to understand how the vehicle mode shares have been calculated in order to decide whether they are achievable.

As already discussed, the data used to determine the mode share needs to be reviewed in terms of existing and committed floorspace and parking provision. In addition, the proposed development mix needs to acknowledge planned growth in floorspace at CSP.

This level of review may provide additional headroom (or not) in combination with a review of the appropriate model.

Transport Measures

Trinity College Cambridge have committed to a range of measures to achieve the reduction in parking agreed via the S106 which are included within Appendix 2.

The management of car parking through lease events is a core part of the strategy, but this in itself does not prevent car spaces that are not let to tenants being used. Accordingly, methods will need to be implemented to decommission car parking spaces (which are not to be reused or redistributed) and in so doing, prevent them being used.

These measures are agreed to reduce provision by circa 500 parking spaces.

To achieve the level of parking reduction set out, **a substantial solution providing significant changes** in the current parking strategy for the AAP area is required.

In terms of seeking to achieve the modal shift, the September 2019 document sets out a series of potential interventions which the study suggests would be required to facilitate the step change in mode-share.

<u>Local measures include:</u>

- New segregated public transport link from Milton Road P&R to site avoiding interaction with Milton Road and including shared pedestrian / cycling facilities
- Additional P&R spaces at key locations
- Park and cycle opportunities at P&R locations
- P&R shuttle system, and
- Variable Message Signage (VMS) at key locations to inform drivers of P&R spaces and congestion issues at Milton Rd / Milton Interchange

Strategic measures include:

- Additional public transport services (including buses and rail but, in the medium term, taking advantage of the benefits that future forms of mobility and rapid transport will bring)
- Delivery of already planned cycle improvements including the Greenway network and the Chisholm Trail
- Plugging gaps in the wider cycle network to enhance routes to key residential areas
- Delivery of the wider PT network (e.g. CAM)
- Delivery of potential demand responsive feeder services to park and ride sites to potentially reduce the role of car as an access mode to these travel hubs.

These measures begin to provide additional certainty to the narrative of supporting the existing employment sites through the provision of improved sustainable transport measures.

However, what is not clear at present is the timescales and deliverability of these measures.

Trinity College Cambridge have developed a strategic solution which **delivers** a number of the **interventions outlined within the Evidence Base.**

Delivering Strategic and Local Measures.

Through the discussions on the Transport Study and resultant implications for the AAP area it has become increasingly apparent that there is a requirement for a strategic approach to deliver the step change in modal shift required to facilitate development within the AAP area.

Reviewing the baseline figures, using a different model, and reviewing the assumptions may achieve limited headroom. However, to deliver a new district of the scale proposed an implementable package of measures are required.

The role of Cambridge Science Park & Cambridge Science Park North

Cambridge Science Park North, as an extension to the existing Cambridge Science Park offers a solution which incorporates both existing and proposed public transport infrastructure to intercept car movements and promote the use of sustainable transport modes. Moreover, our proposals seek to provide a step change in the use of private vehicles to access employment destinations within the Area Action Plan area.

Our proposals provide a consolidated location for parking which is linked to a mobility hub providing pedestrian, cycle, PLEV, shuttle and sustainable mass transit facilities for onward travel. A shift towards accessing alternative modes for the last mile of travel to employment destinations in itself providing health, wellbeing, pollution and climate change benefits.

The consolidated mobility hub can also provide a micro-consolidation centre, reducing the number of delivery vehicles and intercepting deliveries before they enter the AAP area.

The A10 suffers peak hour congestion and there are few alternatives at present. Additional movements along the A10, many of which will be towards the employment areas in North East Cambridge, may add sufficient pollution levels to trigger Air Quality exceedances in the AAP area.

CSP and CSP North have the opportunity to intercept those trips and provide a workplace destination for future residents. CAM would be the obvious way of travelling to work, providing a direct and convenient route to work.

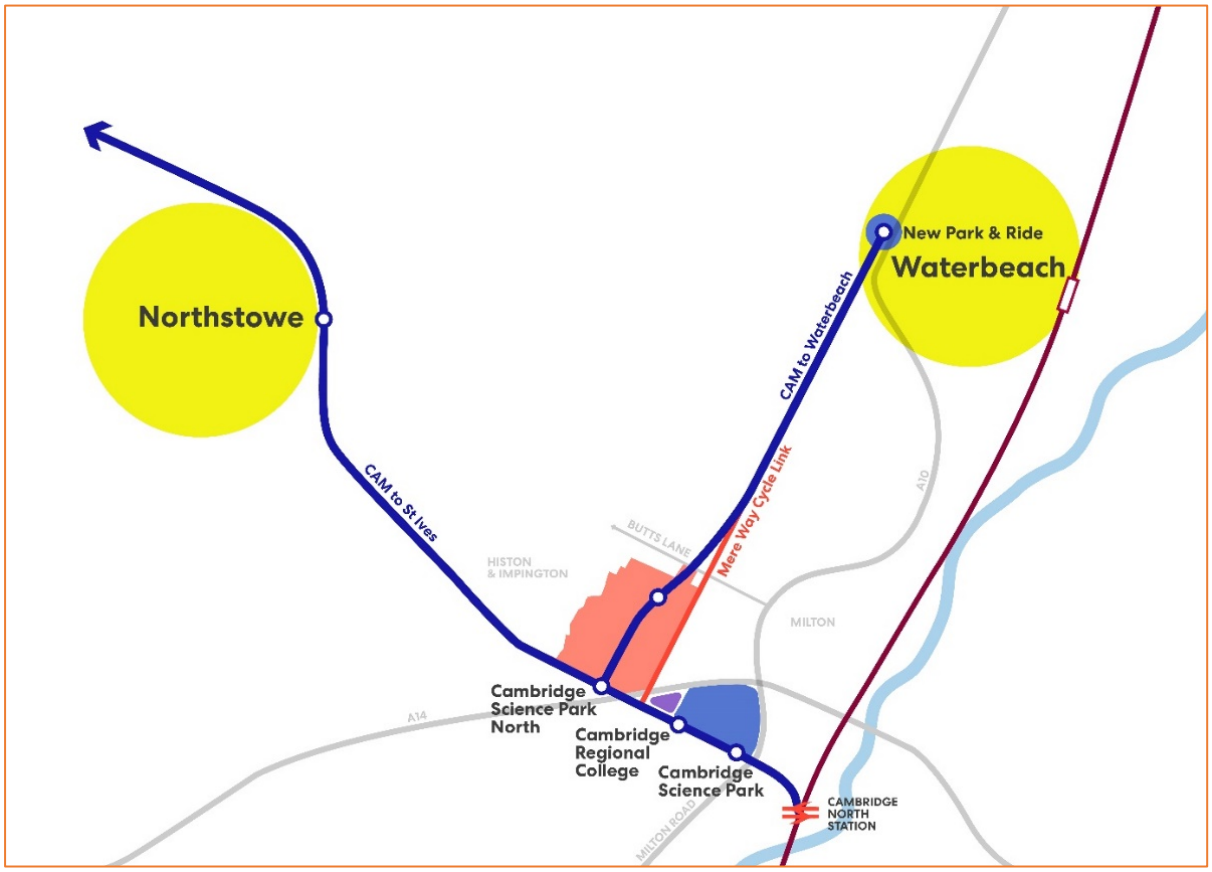

Figure 1: District Scale Indicative Proposals

Currently **26%** of employees who drive to CSP travelling south along the A10 from the direction of Waterbeach.
The consolidated parking facility and segregated busway link has the potential to accommodate consolidated shared car parking for several thousand vehicles. Factoring in attraction as a Park and Ride facility for movements from other directions, the facility has the potential to reduce movements on Milton Road by at least 20%.

Waterbeach Route of CAM

At the local level we are examining the opportunity to potentially relocate the Park & Ride facility on Butts Lane to a mobility hub location within the expansion land (see Figure 2). We have been liaising with the team that are investigating options for the 'Waterbeach Route' and made clear our willingness to work with them and accommodate the CAM route within our own planning.

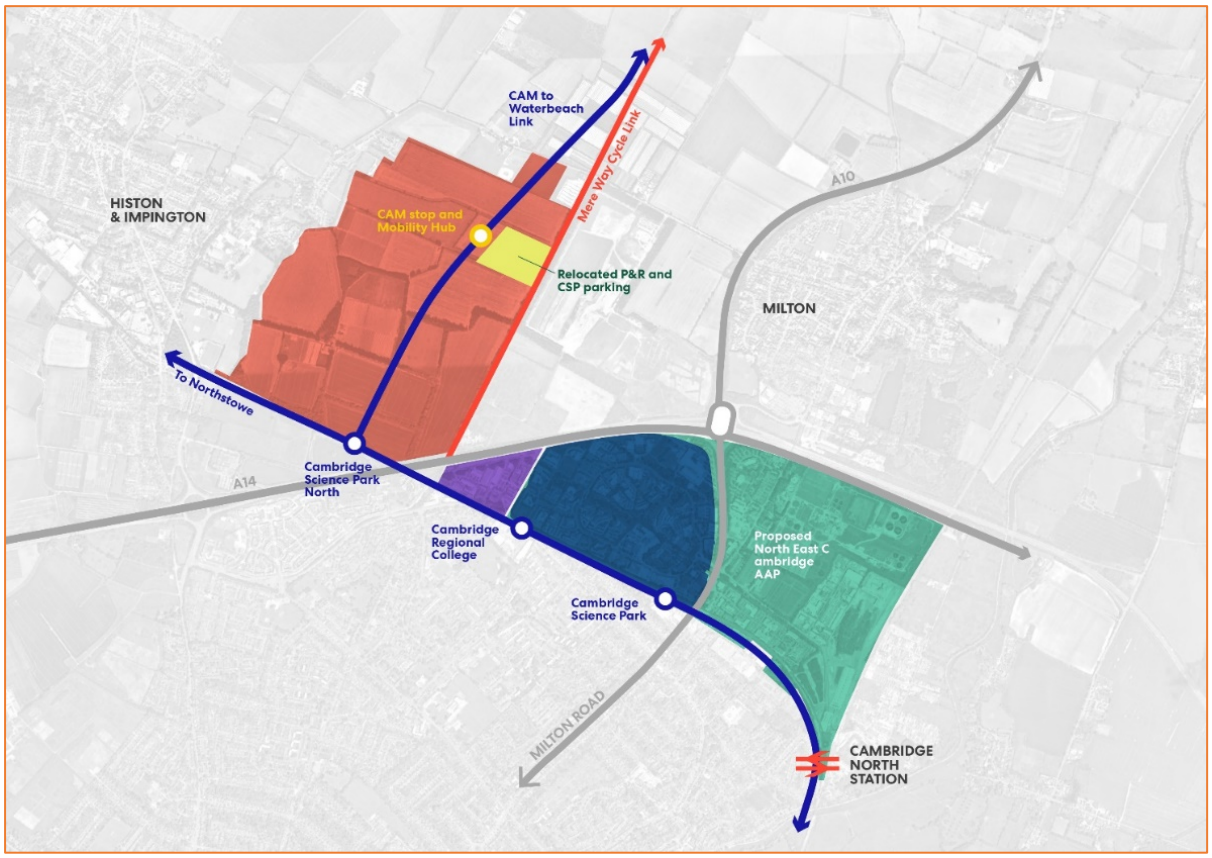

Figure 2: Local Scale Indicative Proposals

Placing the Waterbeach CAM route through CSP North has a number of advantages including:

- Linking the existing guided busway with the proposed CAM route alongside the committed pedestrian / cycle improvements to Mere Way;
- Integrating Waterbeach sustainable transport proposals with NEC AAP proposals;
- Utilising existing infrastructure under the A14, reducing overall costs and timescales for delivery of the first phase of the Waterbeach connections;
- Re-routing the Park & Ride shuttle service off the A10 onto a congestion free, dedicated transit route;
- Associated reliability and speed of Park & Ride services to employment within Cambridge Science Park, Cambridge Regional College, and other employment land within the wider AAP;
- Linking Park & Ride arrivals with a multi-modal choice of sustainable transport options to reach employment locations within Cambridge Science Park and beyond;

- Air Quality improvements by reducing traffic on the A10 and reducing congestion on Junction 33 of the A14;
- Direct links into the existing transit corridor linking Cambridge North railway station to St Ives;
- As submitted within the recent call for sites, the 163ha site to the north of the A14 will incorporate circa 90 hectares of land intended to remain within the Green Belt, but providing substantial areas of accessible natural green space, biodiversity improvements and sport and recreation facilities. Providing a sustainable transport hub in close proximity to this will increase accessibility to this resource;
- The route would directly serve new employment at CSP North;
- Cambridge Regional College the largest further education provider for 16 to 19 year olds in the region, which is set to accommodate increasing numbers of pupils, would be directly served by CAM routes from all directions;
- Cambridge Regional College would additionally benefit from a new park & ride stop assisting in their own step change in parking.

Achievable Mode Share

The Evidence Base target for around 30% of staff to travel by car and 70% by active and shared travel is considered achievable and is indicative of the best performing organisations within CSP. For example, Cambridge Consultants have achieved a mode share of 33%. As a target for the Mobility Strategy these figures are considered to be appropriate and wholly realistic. A proposed mode share of 21% outlined within the Addendum within the plan period is more challenging.

The strategic solution outlined above provides part of a wider strategy. Development at CSP and CSP North will include measures and initiatives which will encourage a move away from private car use and a move towards sustainable mobility. These measures are being embedded within emerging Masterplans and are consistent with and support the interventions presented in the Evidence Base.

Appendix 3 sets out our response to the interventions within the Transport Study and provides our current thoughts on how these might be achieved with regard to CSP. These would all be subject to testing and cost at this stage.

Discussion Point 3: What is the Science Park's view of splitting its internal road network in order to prevent through vehicular traffic?

If preventing through movements on the highway that runs through the centre of the Science Park provides a demonstrable benefit, then this can be supported in principle. However, there are several elements that need to be considered:

- What effect would the closure to through vehicular traffic have upon the network as a consequence of the re-distribution of through movements?

- To come to a view we would need to understand what floor area / proportion of the park would be accessed from the west access and what floor area / proportion from the east. This is not clear from the addendum.

A further point to note more generally is that the western part of the Science Park would still be accessible through the AAP area via Milton Road leading to Kings Hedges Road.

Some trips currently turn right off Milton Road and continue through the highway that runs through the Science Park. Some continue south along Milton Road turning right into Kings Hedges Road. affecting capacity of that network and therefore influencing the trip budget which is ultimately measured against a nil detriment impact on the local highway network.

Whilst these movements are potentially low in number, the ability to access the western areas of the Science Park is clear, even if the street that passes through the Science Park is severed.

Roadmap for delivery

The provision of an initial phase of the Waterbeach to Cambridge North Railway Station mass transit route could be implemented within the first five years of the plan period based on the following timeframes:

Exceptional Circumstances Release

- Pre-Application begins: Autumn / Winter 2020
- AAP / Local Plan Adoption: Mid 2023
- Submit Planning Application: Mid 2023
- Planning Approval: Mid 2024
- Start on Site: Mid 2025 (in line with GCP timeframe)
- Phase 1 In use: End 2025

The current timeframe for the adoption of the new Greater Cambridge Local Plan is scheduled for Summer 2023. It is also understood that following the next round of public consultation on the NEC AAP further work will be paused through the parallel DCO process, and therefore there could be a further 3 years before adoption of the AAP.

At present the GCP are suggesting the Waterbeach public transport link should have a start on site mid 2025.

Our proposals for Phase 1 of this route would deliver a new park & ride facility located within the CSP North site, together with the first stretch of the Waterbeach public transport corridor linking to the existing Guided Busway between Northstowe and Cambridge North Railway Station.

This portion of the route would not require costly engineering solutions to cross the A14 and could be delivered with minimal risk. Land assembly would not be required. No abnormal costs are anticipated in delivering this Phase.

Very Special Circumstances Release

Given the immediate need to address the Transport Study conclusions, and existing and imminent planning applications within the AAP area there may be a need to bring forward an application ahead of the AAP / Local Plan process. This could bring forward delivery of the first phase as follows:

- Pre-Application begins: Autumn / Winter 2020
- Submit Planning Application: Mid 2021
- Planning Approval: Mid 2022
- Start on Site: Mid 2023 (ahead of GCP timeframe)
- AAP / Local Plan Adoption: Mid 2023
- Phase 1 In use: End 2023

Conclusion

In summary, TCC welcomes the opportunity to work with GCSP team and develop a package of solutions. There is a need to provide sufficient public transport capacity and frequency in order to facilitate any reduction in car parking. Cambridge Science Park North provides part of this package of measures as an available, deliverable, cost effective method of reducing car trips into the AAP area.

We welcome the opportunity to discuss this with you further.

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Appendix 1 - Cambridge Science Park – Baseline Data

The Evidence Base presents a range of information for CSP to establish the current position in respect of relevant factors such as job numbers, floor area and car parking. Various sources of information are referenced which extend to information available in 2016 / 2017.

The information presented in the Evidence Base can be compared to information obtained from CSP which reflects the current position in 2020. This is presented in Table 1.

	Evidence Base Assumptions	CSP (Spring 2020)
Number of Jobs	7,459	7,500
Floor Area (sqm)	144,000	181,160
No. of Car Parking Spaces	5,376	6,026

Table 1: Comparison of Existing CSP Floor Area, Jobs and Car Parking

Whilst it is acknowledged that the Evidence Base information is from several years ago, the existing floor areas and car parking numbers are significantly different.

However, using existing figures alone does not provide a sufficient baseline given consented development must also be used to provide a robust and appropriate starting position. That being the situation that the councils have considered acceptable.

Table 7 of the Evidence Base identifies a number of consented schemes within the AAP sites. For CSP, planning consents for a number of plots are identified, totalling 89,024 sqm of Gross Floor Area (GFA). A comparison of the Evidence Base assumptions for the consented development against the figures for unimplemented floorspace provided by CSP are presented in Table 2.

It is unclear how the consented floor area has been assessed within the Evidence Base. It would be usual for planning consents to be considered within the Baseline data, as the likely future scenario, that may occur irrespective of the AAP. Certainly, future Transport Assessments and Environmental Impact Assessments would need to incorporate these planning consents.

Whilst clearly this post-dates the drafting of the Evidence Base, the recent planning consent for the Hub within CSP has not been accounted for. Moreover, there is no acknowledgement of the increased number of car parking spaces or jobs that would arrive with the increase in floor area due to the planning consents.

	Evidence Base Assumptions	CSP (Spring 2020)
Consented / Unimplemented Floor Area (sqm)	89,024 [2]	60,388

Table 2: Comparison of Consented CSP Floor Area

We would therefore suggest that the Baseline for CSP should be established as the sum of the existing (built) floor area and car parking plus additional floor area and parking secured through implementable planning permission (committed development).

Whilst not presented in the Evidence Base, the Baseline for CSP is the sum of the existing (built) floor area and car parking and that which may be implemented as part of consented schemes (committed development).

The Baseline situation as established by existing and consented schemes is presented in Table 3. Whilst consented floor areas and parking provision does not appear to have been factored into the analysis (Linsig modelling for Milton Road), the Baseline that might be established from the Evidence Base data is presented for comparison.

	Evidence Base Assumptions	**CSP (Spring 2020)**
Baseline Floor Area (sqm)	233,024	**241,548**
Baseline Car Parking Spaces	5,376	**7,498**

Table 3: Baseline Figures for CSP

There is a clear discrepancy in the data, most significantly the number of car parking spaces that are assumed.

The additional element not referenced within the Baseline is the lease dimension to parking on Cambridge Science Park (and other existing employment sites within the AAP). As set out within the S106 Agreement, approximately one third of the consented car spaces on CSP are directly controlled by TCC, with the remainder are controlled by various long leaseholders, investors, and occupational tenants.

The Trinity College Cambridge controlled parts of CSP are let under numerous occupational leases and the majority of these leases grant statutory protection to the tenants entitling them to renew the lease on similar terms, with the current level of parking provision (Protected Leases).

- Where appropriate, letting accommodation on CSP with lower levels of parking provision than has historically been the case:
- Removing unused parking spaces, which have been de-allocated from a lease and which are not to be reused or redistributed from future parking use by re-purposing them for alternative uses;
- On all new lettings to only agree with the tenant a maximum parking ratio of 1 space per 40 sqm GIA (except where there is a reasonable prospect of this resulting in a tenant not taking a lease and subject to Trinity College Cambridge being confident that it can claw back the excess spaces elsewhere);
- On all protected lease renewals, or lease renegotiations (re-gears), to act in good faith and encourage tenants to accept that car parking ratios are reduced to a level no greater than 1 space per 40 sqm GIA;
- On all lease renewals of excluded leases to only accept a parking ratio that is no greater than 1 space per 40 sqm GIA except where there is a reasonable prospect of the tenant leaving the Park if the lesser parking provision were insisted upon by the Owner and Trinity College Cambridge is confident that it can claw back the excess spaces elsewhere;
- Where leases benefit from protection, the Owner is not expected to serve hostile section 25 Notices under section 30 of the L& T Act 1954, purely in an attempt to reduce the extent of the parking provision under the lease to be renewed;
- Where a tenant accepts a lower parking ratio than 1 space per 40 sqm GIA, to negotiate a rent to reflect the lower parking ratio agreed;
- Where on a protected lease, a tenant insists on a more generous parking ratio than 1 space per 40 sqm GIA, to use reasonable endeavours to charge a rent to reflect the higher parking provision;
- To encourage tenants and occupiers on the Park to adopt green travel plans and promote modes of transport which are more sustainable than single occupancy vehicles;

Appendix 3 - Cambridge Science Park Response to Proposed Transport Interventions

Table 55: Proposed transport interventions				
Intervention Description	**Ref.**	**Priority**	**Phasing Period**	**Comment**
Internal Measures				
Spatial framework development promoting connectivity and permeability (improving pedestrian/cycle connectivity to enhance linkages to existing key residential areas, wayfinding and urban realm)	IM1	Essential	ST	• Enhanced street network with the Science Park • Hierarchy of pedestrian paths including new pavements • High quality segregated cycle routes through the site • Enhanced access to/from Busway • Facilitating route through to Garry Drive • Implement new signage, wayfinding, street naming, ad art-work to promote improved pedestrian and cycle access
Segregated crossing point(s) on Milton Road	IM2	Essential	ST	• Facilitate underpass to provide links to St Johns site to the east of Milton Road • Preliminary design for at-grade solution to CSP access junction to provide dedicated cycle and separate pedestrian crossing facilities • Enhancements to Milton Road / Busway junction to improve pedestrian and cycle crossing facilities
Crossing points on the busway to reduce barrier effect	IM3	Essential	ST	• New link into CSP to connect to new crossing link to Garry Drive • New Central Plaza and New West Plaza • Re-orientation of building and entrances to address the busway and new Plazas
Highway site access improvements	IM4	Essential	ST	• Improvements to the Milton Road junction to provide enhanced pedestrian and cycle crossing facilities • Improvement to the King's Hedges entrance to the Science Park, adding pedestrian paths promoting connections to Mere Way and CRC
Intra-site shuttle system2	IM5	Essential	ST / LT	• Shuttle service between Park and Ride off Butts lane connecting CRC, CSP and Cambridge North Station via the bus way. • Short term use of electric buses with long term AV pods and shuttles • Currently supporting proposals for AV trial on the Busway
NEC parking strategy (including low levels of onsite parking provision in line with trip budget and parking monitoring and promotion of Controlled Parking Zones / Residential Parking Schemes where required locally)	IM6	Essential	ED / ST / LT	• Commitment to reduce car parking on existing CSP over time through s106 • Implementation of car park management system due for implementation in summer 2020 • Investigating autonomous vehicle parking and robot parking solutions to compress area of land needed for parking • Working with long leaseholders to reduce car parking provision

				• Increase cycle parking at locations near building entrances and aligned to enhanced cycle network.
Travel Plan Measures and Travel Monitoring (inc. e-bikes / e-scooters, incentive programmes, transport subsidies, smartphone apps / information messaging, carsharing, home working / hot-desking culture)	IM7	Essential	ED / ST / LT	• Annual travel plan recording and evaluating changes in behaviour and used to promote behaviour shift through range of Park-wide initiatives (signage, mailshots, etc.) • Movement data related art work to be used as talking point for changing travel behaviour • Real-time data capture sensor trial commissioned as a pilot- opportunity to expand if successful • On-site Mobility hub in place and will be expanded • Electric cycle hire scheme in place at Northstowe, Milton P&R and Cambridge North • Expansion of electric bike scheme to wider areas
Potential changes to development mix / quantum to reduce trip budget impact and increase internalisation levels (e.g. monitor secondary school demand and add provision if needed)	IM8	Desirable	ST / LT	• Range of on-site facilities planned to increase i.e. Flexible Workhubs, gym and leisure facilities, day care
Marketing support to attract residents to the area that are more likely to use alternative travel modes other than car	IM9	Desirable	ST / LT	• Can work with wider coordination • Business support activities used to provide up-to-date information on travel options promoting dialogue and behaviour change through direct contact with employees.
Incentive scheme to maximise resident-to-employee ratio (Potential for a particular housing development associated with employers in the area or for tax reductions for people who work and live in the area)	IM10	Desirable	ST / LT	
Local Measures				
New segregated link from Milton Road P&R to site avoiding interaction with Milton Road	LM1	Essential	ED	• Ability to provide this through CSP North to provide an early intervention with enhanced and relocated P&R facilities

Additional P&R spaces at key locations	LM2	Essential	ED / ST / LT	• Provision of additional capacity at new faciality off Butts Lane
Park and cycle opportunities at P&R locations	LM3	Essential	ED / ST / LT	• Ability to link new P&R facilities to Mere Way and direct t the Busway • Provision of electric bike scheme and link to wider hubs within CSP, the AAP sites and Cambridge North railways Station
P&R shuttle system	LM4	Essential	ED / ST / LT	• Segregated link from new CSP North faciality will enable the early delivery of a shuttle system • Link to wider P&R, CRC / CSP / Cambridge North Station shuttle, • initially electric buses, followed by AVs • Integration of CAM network as the wider strategy is developed
Variable Message Signage (VMS) at key locations to inform drivers of P&R spaces and congestion issues at Milton Rd / Milton Interchange	LM5	Desirable	ED / ST / LT	• Support for provision of facility to complement P&R proposals and live data capture
Additional bus services – extra service buses to enhance links to key areas	SM1	Essential	ST / LT	• Demand Responsive Transport options for local villages and towns. • Proposal developed with commitment from DRT operator which will help provide alternatives for people not connected to wider transport corridors
Additional rail services to be delivered by rail operating companies	SM2	Essential	ST / LT	• Last mile connections from the station provided through shuttle service and Micromobility solutions with hubs at CSP and CSP North
Delivery of already planned cycle improvements	SM3	Desirable	ST / LT	• Links to Mere Way into CSP North, mobility Hub and Park and Ride can be delivered
Plugging gaps in the wider cycle network to enhance routes to key residential areas	SM4	Desirable	ST / LT	• Additional link across the busway to Garry Drive • Links to Mere Way and the Busway • Enhanced Milton Road crossing facilities liking cycle network on either side Milton Road
Delivery of the wider PT network (e.g. CAM)	SM5	Desirable	ST / LT	• Early delivery of Phase 1 of the Waterbeach to Cambridge section of CAM • Facilitating access to CAM stops along existing busway • DRT services for wider area • Shuttle services for last mile Park and Ride and Cambridge North railway station connections