

Greater Cambridge Shared Planning Service
Planning Policy Team
Cambridge City Council
PO Box 700
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Date: 25 September 2023

Our ref: [REDACTED]

Dear Sir/Madam

Greater Cambridge Local Plan (Regulation 18 Preferred Options) Update- Further submission for the J25 Bar Hill site obo Lolworth Developments Limited

We write on behalf of our client, Lolworth Developments Limited ('LDL'), to provide additional information on the J25 Bar Hill site assessment, further to our December 2021 representation ((LDL rep no. 59034) to the Greater Cambridge Local Plan: Preferred Options (Regulation 18) consultation and subsequent update letters of 7 October 2022, 11 January 2023 and 17 May 2023.

This additional information has been prepared to help inform the GCSPS's Housing and Economic Land Availability Assessment ('HELAA') site assessment updates and the next stage of the GCLP, further to our discussions with GCSPS Officers on 26 July and our follow up email of 31 August 2023.

Please therefore find enclosed:

Employment Profile Study (by Lichfields Economics)

This study considers the labour market characteristics of the existing and planned future population living within the J25 Bar Hill ('the site's') 30-minutes' drive time and 60-minutes public transport catchment areas (as explained in the appended **Public Transport, Cycle and Pedestrian Catchments Note** (by SLR Vectos), to identify the potential for supporting the estimated number of jobs at the J25 Bar Hill employment park development. It estimates that the emerging 232,000 sqm employment park development, comprising an anticipated split of 193,000sq m logistics (B8, B2) and 39,000 sqm mid tech (B1) by 2041, has the potential to support an aggregate of c. 4,480 FTE jobs directly equating to a net addition of 3,360 FTE jobs, after allowing for 25 % displacement from existing jobs.

The study finds that these estimated J25 Bar Hill jobs are capable of being taken up by employees from a mix of (1) future committed growth in the labour market (i.e. through house building at strategic site commitments), (2) unemployed residents looking for employment and (3) residents in employment looking for new opportunities in the sector. The majority of these future employees are anticipated to

live within easy non-car borne access to the J25 Bar Hill job opportunities (e.g. Northstowe, which is planned to become a sustainable new town containing 10,000 homes, Longstanton, Oakington, Bar Hill, St Ives, Waterbeach and north Cambridge).

There will be an estimated 3,600 people likely to be interested in occupations related to mid-tech and/or logistics from the 18,600 new homes likely to be built by 2041 in the 60 minutes public transport catchment area (which incorporates the walking and cycling catchment areas), and more from the 30 minutes' drive time catchment. In addition, there are presently 3,800 unemployed residents in the public transport catchment, some c.750 people (20%) of which living in the Arbury, King's Hedges and East Chesterton wards in north Cambridge, within the J25 Bar Hill 30-45 minutes public transport catchment.

Our assessment is that there will be a sufficient number of people likely to be seeking logistics and mid-tech jobs from within the J25 Bar Hill public transport catchment, such that the majority of J25 Bar Hill employees would be expected to live in this area and most of the remainder of the workforce at the employment park can be expected to live within the 30 minutes' drive time from the site.

Local Sustainable Delivery Opportunities Note (by SLR Vectos):

As requested in the Officer meeting on 26th July, we have been exploring the opportunity to provide locally based sustainable 'last mile' deliveries from the J25 Bar Hill employment park proposal, in particular by using cargo bikes from a delivery hub. We find that, given the high-quality existing cycle routes available and the evidence from a local Cambridge based cargo bike operator, the nearby residential areas of Bar Hill, Northstowe, Oakington and Longstanton could be viably served by a cargo bikes. It also finds that this distance could be extended further (depending on the operator and types of goods) to include areas of north Cambridge.

We will also be shortly submitting a '**Vision Document**' to illustrate the vision for a 'leading edge' employment park at the J25 Bar Hill site, its sustainability and design principles and its anticipated phasing. This will include our **Water Supply Strategy**, in the context of Cambridgeshire's potable water supply issues.

Lolworth's hydrology consultant is exploring the opportunities available, aided by the latest technologies, to maximise the on-site water supply and minimise the draw on the local mains supply (provided by the Cambridge Water Company), with the objective for the J25 Bar Hill scheme to be as self-sufficient in water usage as practically possible. This will include advice from the flood risk and drainage consultant on how excess water from the Oakington and Longstanton Brooks could be stored on site to help address the flooding issues that have impacted the catchments downstream of the development.

We trust that this LDL submission, alongside our earlier representations, will be carefully considered by GCSPS Officers, to help inform your HELAA update and the next stage of the GCLP. We would be pleased to discuss any of the points raised above and would welcome further engagement on the GCLP

Yours faithfully



Steven Butterworth

Senior Director

BA (Hons) BPl MRTPI

Copy Stephen Kelly (Joint Director of Planning and Economic Development)
Terry de Sousa (Planning Policy and Strategy Team Leader)
Stuart Morris (Principal Planner)

Appendix 1

Employment Profile Study

J25 Bar Hill Employment Profile Study

Lolworth Developments Ltd

26 September 2023

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1.0 Introduction

1.1 This employment profile study has been prepared by Lichfields on behalf of Lolworth Developments Ltd to assess the current and future labour market potential within the catchment of the proposed employment allocation to the north of the A14, at junction 25, to the north-west of Cambridge, known as the 'J25 Bar Hill' ('the site') location. This report considers how the demands for additional labour generated by the proposal for a mixed logistics and mid-tech employment development at site could be met by reviewing the following:

- 1 The supply of labour within the current local labour market;
- 2 The likely number and range of jobs that could be generated at the site (based on the emerging masterplan for the employment park informing the GCLP-led site allocation promotion);
- 3 Growth in the local labour force associated with planned housing growth; and
- 4 The catchment from where most future employees at the site are likely to reside, and the accessibility of the J25 Bar Hill site by travel mode to them.

Structure of the Report

1.2 The remainder of this report is structured as follows:

- **Section 2.0** provides an overview of the approach to the study, focussing in particular on the approach to determining labour market catchments, establishing a profile of the typical workforce for the site, and the method used to determine current and future labour market trends;
- **Section 3.0** provides an overview of the current labour market context, looking at the key demographic, occupation and skills indicators of the population within the J25 Bar Hill site's catchment;
- **Section 4.0** considers changes to the labour market up to 2041, based on extant permissions and anticipated housing delivery on allocated or other housing site within the J25 Bar Hill catchment;
- **Section 5.0** considers the future employment generation at J25 Bar Hill, based on the emerging masterplan, by focussing on the quantum and nature of employment supported on-site;
- **Section 6.0** considers the balance between the demand for labour (i.e. based on the quantum and nature of development) and future supply of labour within the J25 Bar Hill catchment; and
- **Section 7.0** presents a summary of the findings and conclusions of this study.

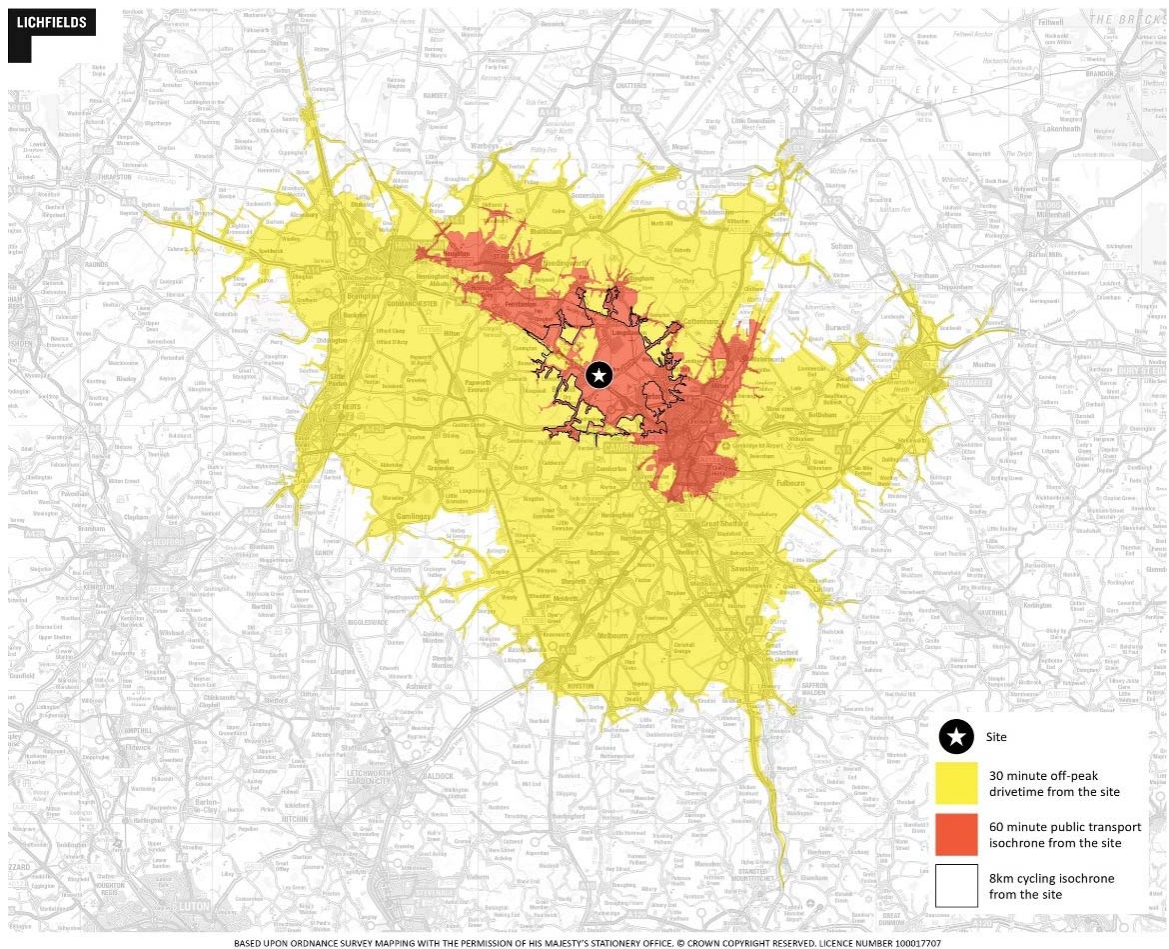
2.0 Approach to the Study

- 2.1 This section explains the approach to the study by focussing in particular on the approach to determining labour market catchments, establishing a profile of the typical workforce for the site, and the method used to determine current and future labour market trends.

Determining Labour Market Catchments

- 2.2 The delivery of new floorspace will generate demand for additional labour which is likely to have implications on the area's labour market. To understand these effects, the following assessment is based on a labour market catchment of around 30-minutes' off-peak time drive from the site. This is based on the assumption that a typical employee driving to work in logistics spends up to 30-minutes travelling to work (i.e. in each direction to/from work). In reality, travel options and times will inevitably vary, depending on an employee's specific role and skills levels, with higher-skilled, better paid employees typically willing to undertake a longer commute.
- 2.3 The same assumption applies for mid-tech occupations. Whilst it can be argued that a wider catchment (of up to 45-minutes' drive time) may be more appropriate for the mid-tech sector (as better skilled, better paid employees may be willing to undertake a longer commute), the unique nature of the labour market across Cambridgeshire (which, as outlined below, has a higher proportion of residents with middle and higher-level qualifications) means that a 30-minute peak time drive is also considered to be a reasonable benchmark for labour market performance.
- 2.4 The 30-minutes' off-peak drive time catchment incorporates a 60-minute travel time via walking (i.e. up to 2km), cycling (i.e. up to 8km) and/or public transport (i.e. up to 60-minutes) modes, as identified in the Public Transport, Cycle and Pedestrian Catchments Note (Appendix 1, figures 1-3).
- 2.5 Figure 2.1 overleaf provides an overview of the 30-minutes' driving catchment, alongside the public transport and cycling catchments – the cycling catchment lying within the public transport catchment - from the J25 Bar Hill site.

Figure 2.1 Catchment areas considered in the J25 Bar Hill labour market analysis



Profile of Workforce

- 2.6 Modern logistics and mid-tech¹ employment developments such as that promoted at the J25 Bar Hill site provide a broad range of employment opportunities, ranging from higher-managerial and professional roles to elementary and entry-level occupations.
- 2.7 To help understand the potential alignment between the area's labour market and typical skills requirement, this report considers the local workforce based on the typical profile of an individual who might be employed in logistics and/or mid-tech sectors. Research into current skills requirements for jobs in logistics and/or mid-tech point towards the following five key characteristics:
- **Age of workforce** – the logistics and distribution sector in particular employs individuals from across all age groups but is more likely to employ an overall younger

¹ For the purposes of this study, it is assumed that mid-tech occupiers are generally involved in research and development ('R&D') and innovation with some form of production, light manufacturing and/or distribution included. These industry sectors are broad and would cover areas such as medicine, printing, robotics, automotive and specialist engineering to name a few.

workforce. Research by the UK Commission for Employment and Skills² ('UKCES') suggests that a little over half (i.e. up to 55%) of the sector's workforce is under the age of 45. That being said, this picture is likely to differ when specific roles within the industry are considered. For instance, a 2022 study by Logistics UK³ puts the average age of heavy goods vehicle ('HGV') drivers at 51 years in Q3 2022, having increased from 47.9 years in Q2 2019.

- **Occupations** – the logistics and distribution sector supports roles across a wide range of occupations, each with specific skills requirements. Whilst the sector has traditionally been perceived as being low-skilled, research by Logistics UK⁴ shows that only around 26.4% of roles are considered to be low skilled, with a substantial proportion (of 60.1%) being middle skilled (lower and upper), and 13.6% being higher-skilled. This includes roles such as “director in logistics, warehousing and transport”, “purchasing managers and directors” and other “manager” roles. Likewise, the nature of roles and occupations across the in mid-tech sector are likely to vary, with considerable focus being placed on mid to higher-level occupations.
- **Qualification levels** – qualification requirements vary by role, with the majority of the sector's workforce holding at least GCSE-level qualifications (equivalent to national vocational qualification ['NVQ'] levels 1 and 2 qualification). Research by Logistics UK estimates that around 70% of businesses in logistics consider having a relevant vocational qualification as significant and/or critical in value when recruiting (i.e. in line with having relevant work experience). However, whilst qualification requirements (e.g. GCSEs [incl. Maths and English], A-levels and/or degrees) are less important, the introduction of T-levels (which focus on vocational skills and provide learners with meaningful work experience) in addition to advances in technology (including increased automation and the use of artificial intelligence ['AI']) suggest that the demand for higher-level qualification levels is likely to continue increasing (in line with changing skills requirements).
- **Changing skills requirements** – rapid technological advances (such as the implementation of automated processes alongside more traditional practices), in addition to increased demand for consumer products (accelerated by the shift to online retail throughout the Covid-19 pandemic) are generating demand for different, often higher-level skills (such as experience in information and communication technologies, software engineering and other digital skills). Research by the Freight Trade Association⁵ ('FTE') shows that anxiety associated with increased automation is largely unfounded, and suggests that automation will not replace whole jobs, but will instead lead to the substitution of individual tasks (within specific job roles). As such, automation is therefore anticipated to drive the need for upskilling of the sector's current and future workforce, rather than resulting in jobs cuts.

² UK Commission for Employment and Skills (2014), *Understanding Skills and Performance Challenges in the Logistics Sector*. [Available at: <https://www.gov.uk/government/publications/understanding-skills-and-performance-challenges-in-the-logistics-sector>].

³ Logistics UK (November 2022), *Skills and Employment Update*. [Available at: <https://logistics.org.uk/research-hub/reports/skills-and-employment-update>].

⁴ Logistics UK (2023), *Logistics Skills Review 2023*. [Available at: <https://logistics.org.uk/campaigns/logistics-summary-report-2023>].

⁵ Freight and Trade Association (2019), *Logistics Report, 2019*. [Available at: https://www.santanderco.uk/sites/default/files/documents/fta_logistics_report_2019.pdf].

Determining Current Labour Market Trends

- 2.8 Building on the profile of the workforce outlined above, and data from the 2021 Census of Population, in addition to analysis using Lichfields' proprietary workforce analysis model, this study builds a bespoke picture of current labour market trends for the J25 Bar Hill catchment (i.e. based on best-fit Lower-layer Super Output Areas⁶ ['LSOA'] that are entirely located within and/or intersect with the catchment's boundary).

Determining Future Labour Market Trends

- 2.9 The analysis of future labour market trends draws on a desktop review of strategic site allocations⁷, as well as extant permissions for major sites (i.e. with 500 dwellings or more⁸) located within a 30-minute catchment of the J25 Bar Hill site. Using this as a starting point, the analysis presented in Section 5.0 builds on indicated delivery dates for extant permissions (where available), typical build-out rates, as well as information available within the public domain to generate estimates of the number of residential dwellings and amount of larger-scale employment floorspace that are likely to be delivered by 2031 and 2041.
- 2.10 Using data about households and the labour market located within the 30-minute catchment of the J25 Bar Hill site as a benchmark, this study then generates a high-level overview of future labour market trends. Ultimately, this is then used to consider the balance between the demand for labour (i.e. based on the quantum and nature of the opportunity) and future supply of potential employees within the site's catchment.

⁶ This refers to a statistical geography.

⁷ Based on a review of Local Authority documents, including the *Greater Cambridge Housing Trajectory and Five Year Housing Land Supply Report* (April 2022) published by both South Cambridgeshire District Council and Cambridge City Council, and Huntingdonshire District Council's (2022) *Annual Monitoring Report 2022 Part 1 (Housing Supply)*.

⁸ It should be noted that 500 homes is the benchmark for a strategic site allocation. Whilst acknowledging that this approach will result in a number of sites being excluded from the analysis, the quantum of excluded dwellings is not anticipated to add up to more than 20% of housing delivery within the 30-minute catchment for the J25 Bar Hill site.

3.0 Current Labour Market Context

- 3.1 This section provides an overview of the current labour market conditions within the J25 Bar Hill catchment area. For added context current conditions are compared with the equivalent labour market statistics (where available) for the wider Cambridgeshire and Peterborough Combined Authority area⁹, the East of England region, as well as the national average.
- 3.2 It should be noted that the following analysis is based on the current population and housing stock within the J25 Bar Hill 30 minutes' off-peak drive time catchment, including earlier phases of larger and/or strategic allocation sites (e.g. the early phases of Northstowe).

Population

- 3.3 Located off Junction 25 on the A14 which connects Huntingdon in the west with Cambridge to the east and the M11 motorway, the J25 Bar Hill site is located within a well-connected part of Cambridgeshire with **around 175,900 dwellings** and **a total population of around 395,400 residents** in its catchment. Data from the Office for National Statistics ('ONS') shows that since 2011, the number of dwellings within the J25 Bar Hill catchment has increased by around 22,700 homes (or +14.8%), whilst the area's population has increased by 28,400 people (or +7.7%).
- 3.4 A snapshot of the catchment's population indicates that **66.5% of residents are of core working age** (i.e. defined as those aged 16 to 64), accounting for **262,800 residents**. The proportion of core working age residents within the J25 Bar Hill catchment is higher than the average seen across the Cambridgeshire and Peterborough Combined Authority area (of 63.7%), the East of England region (of 61.6%) and England (63.0%) more widely. The data shows that around 64.1% of working age residents within the J25 Bar Hill catchment are aged 16 to 44, totalling 168,600 residents. Likewise, the evidence suggests that the core working age population within the J25 Bar Hill catchment is younger, with a higher proportion of core working age residents under 45, compared with the greater sub-region (of 60.6%), the East of England (of 57.6%) and nationally (of 59.1%).

Labour Force

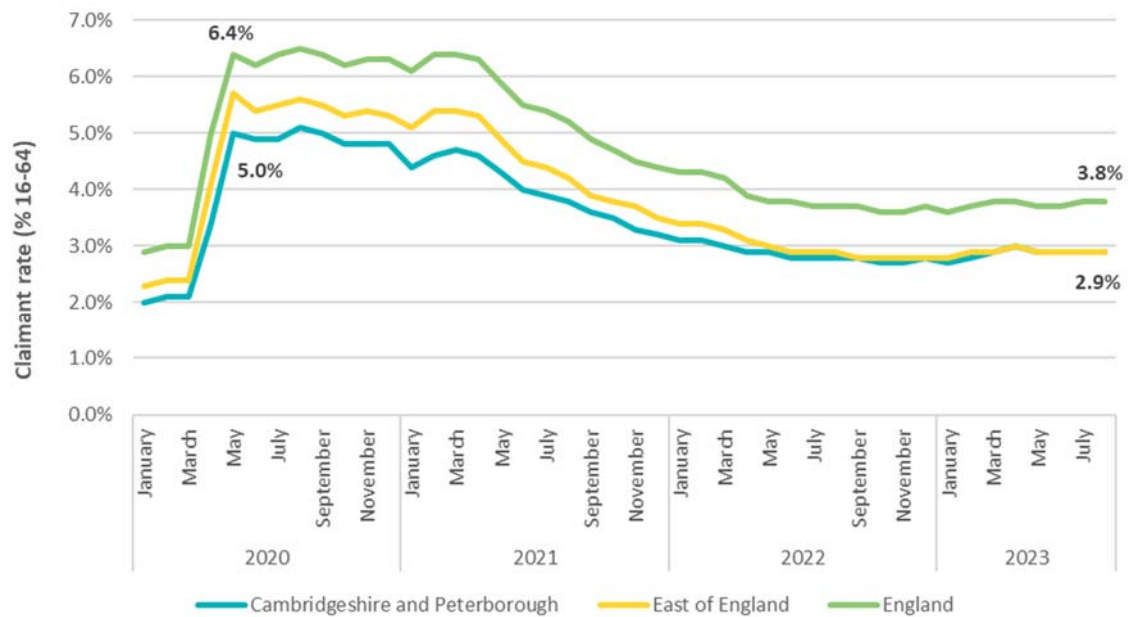
- 3.5 Labour market engagement (otherwise referred to as economic activity) within the J25 Bar Hill catchment can be measured through a range of socio-economic indicators, including economic activity, employment, as well as the level of local unemployment and proportion of working age residents claiming benefits.
- 3.6 The economic activity rate measures the proportion of core working age residents who are either in employment and/or unemployed but actively looking for a job. For the purposes of this study, both economically active and inactive students have been excluded from the analysis. Furthermore, it should be noted that the economic activity rate does not include residents who are unemployed and not actively seeking employed. Based on this definition, it is estimated that the J25 Bar Hill catchment has an overall **economic activity rate of 69.9%**, which is equivalent to around **183,600 residents**. This is below the labour

⁹ Comprising Cambridge City, South Cambridgeshire, East Cambridgeshire, Huntingdonshire, Fenland and Peterborough.

market participation rate across the Cambridgeshire and Peterborough Combined Authority area (of 74.0%), the East of England (of 75.2%) and nationally (of 72.5%).

- 3.7 The employment rate measures the proportion of core working age residents who are in employment. Data from the ONS indicates that the J25 Bar Hill catchment has an overall **employment rate of 67.5%**, which equivalent to around **177,400 residents in employment**. In line with the overall lower economic participation rate, the overall employment rate within the J25 Bar Hill catchment is below that seen within the Cambridgeshire and Peterborough Combined Authority area (of 71.2%), and the East of England (of 72.0%), but is closer to the national average (of 68.9%).
- 3.8 The difference between the number of economically-active residents, and residents in employment determines the overall unemployment rate for an area. On this basis, it is therefore estimated that there are currently **around 6,200 unemployed residents within the J25 Bar Hill 30 minutes driving catchment**, representing an unemployment rate of 2.4%. This is lower than the equivalent rates for all comparators considered (incl. the Cambridgeshire and Peterborough Combined Authority area – of 2.8%; the East of England region – of 3.2%; and nationally (of 3.6%). An estimated 3,800 (or 61%) of all unemployed residents within the J25 Bar Hill catchment live within the public transport catchment highlighted in Figure 2.1 above.
- 3.9 Overall, it is estimated that, of those unemployed, there are currently **4,300 registered claimants** within the J25 Bar Hill 30 minutes' drive time catchment, representing an overall claimant rate of **1.8% of the area's core working age population**. This is below the equivalent averages for the Cambridgeshire and Peterborough combined authority area (of 2.9%), the East of England region (of 2.9%) and nationally (3.8%).
- 3.10 A review of claimant data from the start of 2020 shows that the claimant rate within the Cambridgeshire and Peterborough combined authority area has increased sharply from 2.0% in January 2020 to 5.1% in August of the same year. However, the claimant rate at combined authority's level was below the peak experienced across the East of England region (of 5.6%) and nationally (of 6.5%). Despite the fall in the claimant rate across all areas, this remains higher than pre-pandemic levels.

Figure 3.1 Change in claimant rate from January 2020 onwards

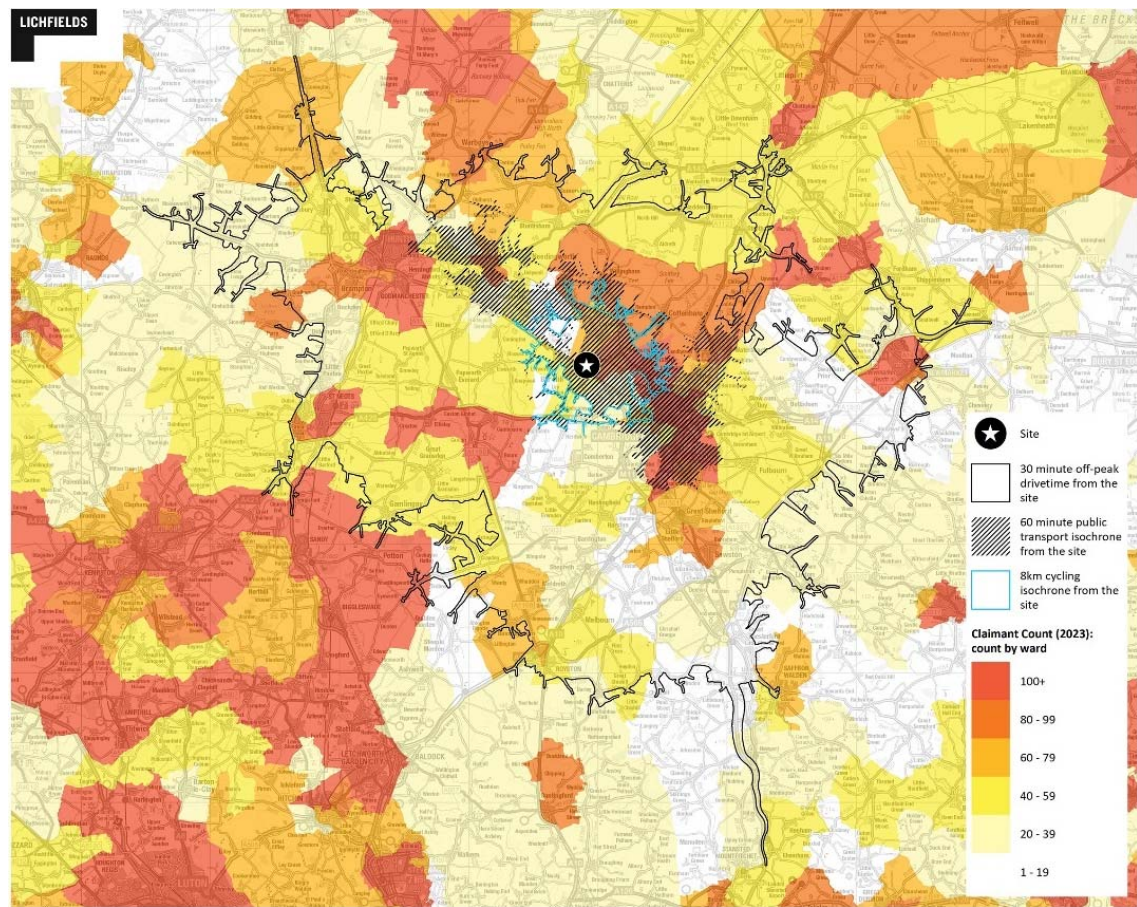


Source: Office for National Statistics (2023), Claimants

3.11

A detailed look at the quantum and location of claimants within the J25 Bar Hill catchment indicates that there are a high number of claimants in north and east Cambridge (including Arbury), in addition to areas north-east of the site (including Cottenham and Longstanton). ONS data suggests that there are currently **over 3,300 claimants within the public transport catchment**, representing an overall claimant rate of 2.0% (which is higher than the average observed across the J25 Bar Hill 30-minute catchment considered above).

Figure 3.2 Claimant count for residents within J25 Bar Hill catchment



- 3.12 Nevertheless, the evidence presented above indicates that the J25 Bar Hill 30 minutes' drive time catchment is considered to have an overall healthy labour market participation and employment levels. These are characteristics of an engaged workforce that is more likely to be proactive in seeking new work opportunities, in addition to workplace-based training and skills development. This has the potential to contribute towards workers' career progression and wider social mobility aspirations and, in the process, contribute towards the local levelling up agenda.

Skills and Occupations Profile

- 3.13 Analysis of residents' occupations shows that there are **around 24,300 residents (or 13.1% of the catchment's working age residents in employment)** within the J25 Bar Hill catchment who are in occupations typically associated with roles in logistics and distribution. This includes residents employed as process, plant and machine operatives, as well as residents in elementary occupations. This is lower than the equivalent proportion of residents in occupations which are typically associated with roles in logistics and distribution across all comparator areas considered (incl. the Cambridgeshire and Peterborough Combined Authority area - of 18.0%; the East of England region – of 16.7%; and nationally (of 17.3%).

- 3.14 However, as outlined above, the logistics sector and indeed mid-tech both offer a diversity of roles that require a wide range of occupations. Research by Logistics UK estimates that, whilst around 26.4% of roles in the sector are typically considered to be lower skilled (such as elementary storage, delivery operatives and elementary storage supervisors), **a substantial proportion (estimated to be around 60.1%) are middle-skilled roles**. These include people working administrative roles, in addition to HGV and van drivers. Furthermore, it is estimated that 13.6% of roles in the sector can be classed as higher-skilled, and include occupations such as purchasing managers, directors in logistics, warehousing and transport, as well as clerks and assistants.
- 3.15 Overall, it is estimated that the J25 Bar Hill 30 minutes' drive time catchment is home to around **107,900 residents in higher-level occupations**, representing **58.2% of the catchment's residents in employment**. This is higher than the equivalent estimates for all comparators, all of which are below 50%. It should be noted that this analysis reflects the wider labour market within the drive time catchment, and incorporates working age residents across all sectors of the economy (i.e. not just logistics and distribution).
- 3.16 Reflecting the wide range of occupations required, research by the UKCES and UK Logistics highlighted above show that the sector employs people with varying qualification levels, including some GCSEs (i.e. usually defined as up to NVQ level 2), some A-levels (i.e. defined as NVQ level 3) or BTEC/degree-level qualifications (i.e. defined as NVQ level 4 and over).
- 3.17 Based on the above definition, it is estimated that there are currently around 59,000 residents with level 1 and 2 qualifications within the J25 Bar Hill catchment, which is equivalent to 17.9% of the catchment's core working age residents. The area is also home to an additional 13,800 residents (or 4.2%) with apprenticeships, around 59,000 residents (or 17.6%) with level 3 qualifications, and around 151,100 residents (or 45.9%) with BTEC/Degree-level (i.e. level 4+) qualifications.
- 3.18 Overall, the evidence presented in Table 3.1 below suggests that residents within the J25 Bar Hill catchment tend to have higher-level qualifications, with lower proportions attaining level 1 and 2 qualifications, and a higher proportion with level 4+ qualifications.

Table 3.1 Qualifications levels, 2021

	J25 Bar Hill	CPCA	East of England	England
Levels 1 & 2 qualifications	17.9%	22.4%	25.2%	23.0%
Apprenticeships	4.2%	5.1%	5.5%	5.3%
Level 3 qualifications	17.6%	16.3%	16.8%	16.9
Level 4+ qualifications	45.9%	36.7%	31.6%	33.9%

Source: Office for National Statistics (2021), *Census of Population, 2021*

4.0 Future Labour Market Change

- 4.1 This section considers how the labour market within the both the 30-minute drive and 60-minute public transport catchments could evolve in future years, particularly as site allocations across Cambridge, South Cambridgeshire and the wider sub-region are built out.

Housing Delivery

- 4.2 Table 4.1 below presents an overview of the total number of potential dwellings with extant permissions and/or on strategic sites within a 30-minutes' catchment from the J25 Bar Hill site. The analysis presented in the table excludes emerging allocations and homes built to date (such as the earlier phases at Northstowe) as these are already included within the baseline analysis. Furthermore, it should be noted that it has not been possible to include smaller sites¹⁰, which means that the following analysis is to some degree likely to underestimate the total number of net additional homes (and therefore labour market potential) in the future.
- 4.3 Based on the above, it is estimated that between 2021 and 2031 a total of just under 13,800 net additional homes are likely to be built within the J25 Bar Hill 30 minutes' drive time catchment. The number of homes is anticipated to increase by around 23,400 between 2021 and 2036, as construction on a number of strategic allocations are built out and occupied. By 2041, over a twenty years' period, it is estimated that a total of more than **31,500 new homes** will be built **within** the J25 Bar Hill site's **30-minute drive time catchment**, (representing an increase of 17.9% over the catchment's current baseline of 175,900 homes).
- 4.4 This is influenced by the delivery of a significant number of new homes between 2021 and 2041 on allocations such as at Northstowe (over 5,300 homes), Alconbury, incl. Alconbury Weald, RAF Alconbury and Ermine Street (almost 5,000 homes), Waterbeach New Town (almost 5,000 homes) and the Eastern Expansion of St Neots (just over 3,900 homes).
- 4.5 More detail on the anticipated housing trajectory within the J25 Bar Hill catchment from 2021 up to 2041 is provided in Table 4.1 below.

Table 4.1 Anticipated housing delivery from 2021 within 30-minute catchment by 2031, 2036 and 2041

	2031	2036	2041
*Bourn Airfield	430	1,180	2,130
*Northstowe	2,317	3,817	5,317
Trumpington Meadows	53	53	53
Cambourne West	1,529	2,279	2,497
*Waterbeach New Town	1,891	3,391	4,891
*Cambridge East (Cherry Hinton)	180	420	420
*Cambridge East (Land North of Newmarket Road)	1,154	1,154	1,154
*North West Cambridge (Eddington)	523	938	1,042
*North East Cambridge	75	1,350	2,650

¹⁰ Due to the number of sites and volume of planning extant permissions, often with multiple permissions per site.

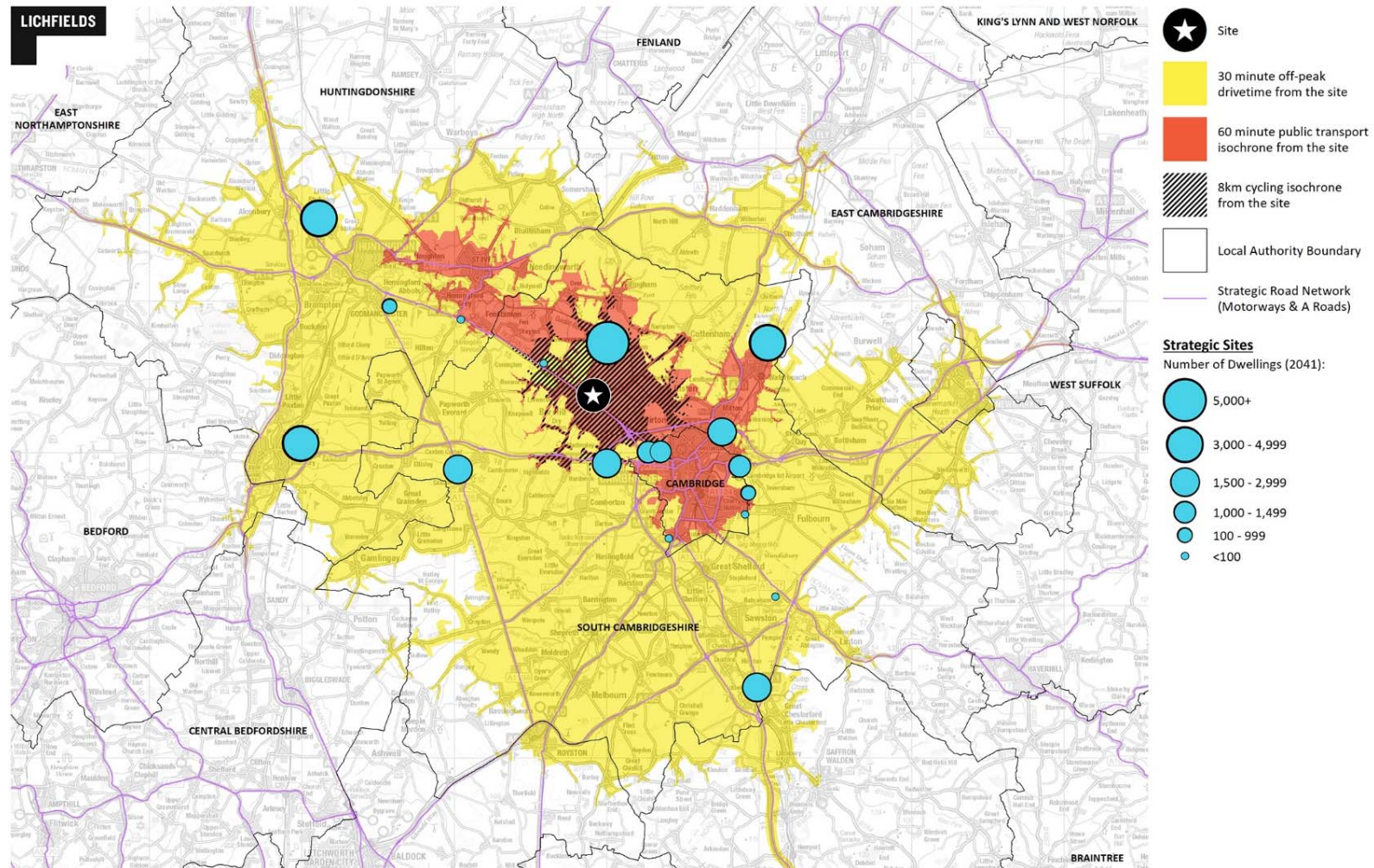
	2031	2036	2041
*Land between Huntingdon Road and Histon Road (Arbury)	600	1,000	1,000
Genome Campus	1,200	1,500	1,500
Alconbury Weald/RAF Alconbury/Ermine Street	1,696	3,196	4,696
Bearscroft Farm	213	213	213
Eastern Expansion (St Neots)	1,916	2,916	3,916
Total within 30-minute catchment	13,777	23,407	31,500
Total within public transport catchment	7,170	13,250	18,604
% of total within 30-minute catchment	52.0%	56.6%	59.1%

Source: Based on extant permissions and Local Plan site allocations.

*These sites are located entirely within and/or within 100m from the public transport catchment of the J25 Bar Hill site

- 4.6 A number of the strategic allocations identified (such as Northstowe and Waterbeach New Town) are located entirely inside and/or within 100 metres of the public transport catchment of the J25 Bar Hill site. In total, eight strategic sites are inside (or within 100 metres of) the public transport catchment, which together have potential to see **around 18,600 new homes (some 59% of total additional homes within the 30-minutes drive time catchment) delivered between 2021 and 2041.**
- 4.7 Figure 4.1 below shows all the housing allocations that fall within the J25 Bar Hill 30-minute drive-time and public transport catchments, many of which are planned as urban extensions and/or new communities.

Figure 4.1 Locations of housing allocation sites within the J25 Bar Hill's 30-minute drive time catchment



Source: Lichfields analysis

- 4.8 The following analysis is based on the anticipated net additional homes delivered within the both the 30-minutes' drive and 60-minutes' public transport catchments from the J25 Bar Hill site by 2041, which have been multiplied to average household sizes for the local authority in which each allocation is located in 2041¹¹. The estimation of labour market characteristics is based on current labour market characteristics within the J25 Bar Hill catchment (as outlined in Section 3.0 above).
- 4.9 Furthermore, it should be noted that the following analysis is based on the assumption that all homes will be occupied by new residents to the catchment (i.e. net additional residents). It is likely that some of the new homes will be taken up by residents already living within the catchment, resulting in fewer net additional residents. However, in the longer-term this could still be expected to result in population growth, as homes vacated will 'free up' accommodation that could be occupied by new households moving into the area.

30-minutes' Drive Time Catchment

Population

- 4.10 It is estimated that between 2021 and 2031 the population within the J25 Bar Hill 30-minutes' catchment is likely to increase by 31,300 residents, of whom 20,800 are anticipated to be of core working age (i.e. aged 16-64). The **net additional resident population** is anticipated to peak at **around 71,500 residents by 2041**, which would see the core working age increase by a further 47,600 residents over the current 2021 baseline estimate.

Labour Force

- 4.11 Drawing on current estimates of labour market participation, economic inactivity and local unemployment, it is estimated that around 70% of all net additional residents will participate in the labour market, which means that **by 2041 the local labour market is anticipated to increase by a further 33,200 residents over a 2021 baseline**. Of these, around 32,100 are likely to be in employment, with around 1,100 residents being unemployed. In reality, the number of unemployed residents has potential to be lower as newer homes typically tend to be occupied by people in employment.

Skills and Occupations Profile

- 4.12 Analysis of data from the 2021 Census of Population indicates that 8.0% of residents in employment within the J25 Bar Hill catchment work in manufacturing, whilst 11.3% work in transport and communication. Using these sectors as a proxy, it is therefore estimated that around **2,600 residents are likely be interested in mid-tech**, in addition to a further **3,600 residents who are likely to be interested in opportunities in logistics**.
- 4.13 It should be noted that the above estimates are based on current labour market trends being extrapolated forward.

¹¹ Taken from 2018-based Household projections for England. [Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/householdprojectionsforenglanddetaileddataformodellingandanalysis>].

Public Transport Catchment

- 4.14 Using a similar approach to that outlined above, it is possible to estimate how the labour market within the public transport catchment is likely to change over the period to 2041.

Population

- 4.15 Once built and occupied, the **18,600 new homes within the public transport catchment** are likely to increase the catchment's population by 42,800 residents between 2021 and 2041, of whom 28,400 are anticipated to be of core working age.

Labour Force

- 4.16 Based on current labour market participation, it is estimated that 70% of all net additional residents of core working age (i.e. 16-64) within the public transport catchment will be economically active. This means that by 2041, **a further 19,900 economically active residents** will reside within the public transport catchment, of whom 19,200 are likely to be employed, in addition to a further 700 who are likely to be looking for employment opportunities (i.e. those unemployed).

Skills and Occupation Profile

- 4.17 Using current labour market trends, it is therefore estimated that around **1,500 and 2,200 core working age residents** (i.e. aged 16-64) in employment within the public transport catchment are likely to be **interested in employment opportunities in mid-tech and logistics respectively**.
- 4.18 Table 4.2 below presents an overview of the key changes in the local population and labour market within both public transport and 30-minutes' drive-time catchments of the J25 Bar Hill site. It shows that growth in the public transport catchment represents almost 60% of the anticipated growth within the overall 30-minute catchment of the J25 Bar Hill site.

Table 4.2 Net additional increase in local population and labour market by 2041

	Public Transport Catchment	30-minutes' drive-time catchment
Net additional population	42,800	71,500
Core working age (16-64)	28,400	47,600
Economically active	19,900	33,200
In employment	19,200	32,100
Unemployed	700	1,100
Claiming benefits	500	800
Working age residents in mid-tech roles	1,500	2,600
Working age residents in logistics	2,200	3,600

Source: Lichfields analysis

5.0 Future Employment Needs at J25 Bar Hill

- 5.1 For the purposes of this analysis, it is assumed that the J25 Bar Hill site will deliver around 232,000 sq.m of commercial floorspace across three phases, delivered by 2031, 2036 and 2041 respectively, reflecting the emerging masterplan informing the site allocation promotion in the Greater Cambridge Local Plan ('GCLP').

Direct Employment

- 5.2 The precise number and nature of jobs that will be supported on-site will ultimately depend on the type and nature of the end users that occupy the completed development. However, it is possible to estimate the completed development's potential impact on direct (i.e. on-site) employment supported by applying typical employment densities to the quantum of floorspace within the emerging masterplan. The following employment density ranges informed by guidance from the (former) Homes and Communities Agency¹² ('HCA') have been considered:

- Logistics and distribution (use class B2, B8) - 45-70 sq.m/FTE job; and
- Mid-tech (use class E, formerly B1) - 37-45 sq.m/FTE job.

- 5.3 Table 5.1 below provides an overview of the emerging quantum of floorspace per phase, the proposed uses and the overall number of (gross) direct jobs that could be supported on-site once each phase is operational. For the purpose of this report, the mid-point between high and low-range estimates has been used, the range being approximately 3,620 to 5,340 for the whole development.

Table 5.1 Overview of future employment on-site

Phase	Use Class	Floorspace (sq.m)	Employment Density (sq.m/FTE)	Direct Employment (FTEs)
Phase 1	Logistics (B8, B2)	102,000	45-70	1,860
	Mid-tech (E - B1)	17,000	37-45	420
	Total	119,000	-	2,280
Phase 2	Logistics (B8, B2)	75,000	45-70	1,370
	Mid-tech (E - B1)	12,000	37-45	300
	Total	87,000	-	1,670
Phase 3	Logistics (B8, B2)	16,000	45-70	290
	Mid-tech (E - B1)	10,000	37-45	250
	Total	26,000		540
Total Phases 1, 2 and 3		232,000	-	4,480*
Total logistics (B8, B2)		193,000	45-70	3,520*
Total mid-tech (E - B1)		39,000	37-70	960*

Source: Lichfields analysis

*Please note that some numbers may not add up due to rounding.

5.4

¹² Homes and Communities Agency (2015), *Employment Density Guide*, 3rd edition.

- 5.5 It is estimated that the J25 Bar Hill site has potential to **support around 4,480 FTE jobs in total**, once all three phases are completed and fully operational. It is estimated that **3,520 FTE jobs** (or 78.6%) will be in logistics, whilst **960 FTE jobs** (or 21.4%) will be mid-tech.
- 5.6 The overall quantum of employment on-site is anticipated to slowly add up as each phase becomes operational as follows:
- From 2031 - 2,280 FTE jobs;
 - From 2036 - 3,950 FTE jobs; and,
 - From 2041 – 4,480 FTE jobs.
- 5.7 As highlighted above, **the J25 Bar Hill site has potential to support roles across a wide range of occupations**, all of which will require different skills and qualification levels. Whilst it is difficult to precisely define the nature of jobs roles that will be supported on-site, it is possible to generate estimates based on a typical profile of occupations within the key proposed employment sectors.
- 5.8 Using the employment estimates identified above in addition to typical industry standards for occupations across different skills levels, it is possible to identify the different roles and occupation levels for the employment created at the J25 Bar Hill site. Once fully constructed, the J25 Bar Hill site is likely to generate around 1,180 FTE jobs in lower skilled occupations, with a further 2,700 mid-level occupations, and 610 higher-level occupations.

Table 5.2 Skills levels for occupations at J25 Bar Hill

Skill Level	Proportion of Employees	Direct Employment (FTEs)
Level 1 – Low skilled	26.4%	1,180
Level 2 – Lower-middle skilled	43.0%	1,930
Level 3 – Upper-middle skilled	17.1%	770
Level 4 – High skilled	13.6%	610
Total	-	4,480*

Source: Lichfields analysis, based on benchmarks from Logistics UK¹³ (2023), *Logistics Skills Review*

*Please note that numbers may not add up due to rounding.

¹³ Given the high proportion of mid-level occupations in logistics, a similar proportion is assumed to be applicable for roles in mid-tech.

Net Additionality of On-Site Employment

- 5.9 In reality, not all jobs supported on the J25 Bar Hill site will be net additional to the Greater Cambridge economy, as the increased economic activity supported at J25 Bar Hill could lead to some economic activity within its catchment to be displaced¹⁴. However, given the nature of the emerging masterplan at the J25 Bar Hill site, particularly the focus on mid-tech space in addition to the ever-increasing demand for logistics floorspace, it is therefore anticipated that the overall level of displacement is likely to be limited.
- 5.10 Drawing on benchmarks for low displacement from the HCA¹⁵, at 25%, it is therefore estimated that, once fully built out and operational, the J25 Bar Hill site has potential to support around **3,360 net additional FTE jobs once net additionality is factored in.**

¹⁴ Displacement refers to the number of proportion of outputs (in this case jobs) that are accounted for by a reduction in outputs arising elsewhere.

¹⁵ Homes and Communities Agency (2014), *Additionality Guide, Fourth Edition 2014*.

6.0 Balance of Supply and Demand

- 6.1 This section considers the balance between the demand for labour (i.e. based on the quantum and nature of development), generated by the emerging masterplan for the J25 Bar Hill site, and future supply of labour within the catchment areas identified.

Demand for Labour

- 6.2 The analysis presented in Section 5.0 above estimates that the demand for labour generated by the emerging J25 Bar Hill allocation proposal up to 2041 is likely to add up to around 4,480 FTE jobs, of which 3,360 FTE jobs are likely to be net additional to the Greater Cambridge economy.

Supply of Labour

- 6.3 A review of sites with extant permissions as well as strategic allocations presented in Section 4.0 suggests that by 2041 the J25 Bar Hill 30-minutes' drive time catchment is likely to see the construction of over 31,500 new homes which together have potential to accommodate around 71,500 net additional residents within the catchment, 47,600 of whom are likely to be of core working age (i.e. aged 16-64).
- 6.4 Drawing on typical labour market trends, it is estimated that the proportion of net additional residents engaged in the labour market will amount to around 70% of core working age residents, or the equivalent of 33,200 residents could be expected to be economically active. Assuming that labour market conditions remain unchanged, it is therefore estimated that around 2,600 residents are likely to be interested in opportunities in mid-tech, whilst a further 3,600 residents are likely to be interested in opportunities in logistics.
- 6.5 Closer to the site, it is estimated that around **18,600 new** homes are likely to be located inside (or within 100 metres) of the **public transport catchment**. Using a similar approach to that outlined above, it is therefore estimated these homes have potential to accommodate in the region of 19,900 net additional residents, 19,200 of whom are likely to be economically active. Furthermore, it is estimated that based on current labour market trends, around **1,500 and 2,200 of core working age residents** within the public transport catchment are likely to be interested in opportunities **in mid-tech and logistics respectively**.
- 6.6 Based on the above analysis, it is evident that the demand for labour generated by the emerging masterplan at the J25 Bar Hill site could be fulfilled by the net additional residents living within the 30-minutes' drive time catchment, with a total of up to 6,200 residents in employment likely to be interested in opportunities in logistics and mid-tech respectively. Based on sites that can be easily reached via **public transport**, it is estimated that up to **3,700 residents** in employment are likely to be interested in opportunities **in logistics and mid-tech**.

Other Considerations

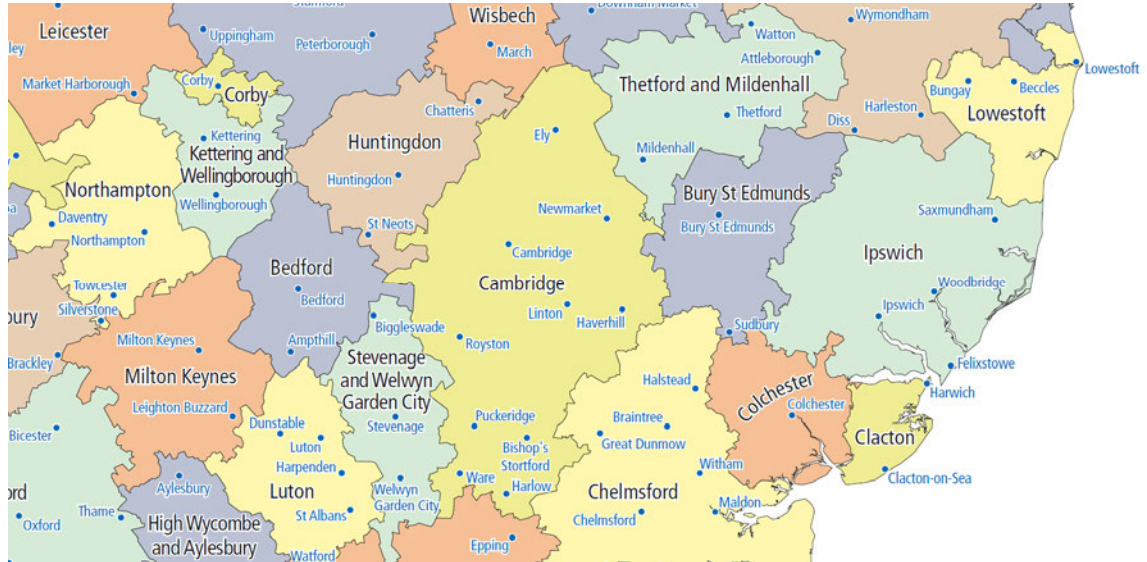
- 6.7 Clearly, not all residents with potential to work in mid-tech and/or logistics within the site's 30-minute catchment (or indeed the public transport catchment) are going to be interested in opportunities at the J25 Bar Hill site. However, people's propensity to choose a job at J25 Bar Hill (versus elsewhere) is likely to be higher for residents of site allocations within walking/cycling proximity of the site (such as Northstowe) and/or site allocations which can be easily reach via public transport modes (such as Arbury).
- 6.8 Furthermore, people are also likely to be attracted to the site for its proximity to Cambridge¹⁶ (including residents in north and east Cambridge) and the amenities offered on-site. Workplace amenity is a growing objective for operators in logistics and mid-tech, with the greater interest stemming from the need to ensure that a facility can attract and help retain key talent (and therefore secure tenancies of sites).
- 6.9 Whilst the allocation masterplan is still being developed, it is anticipated that the J25 Bar Hill site will incorporate existing cycling and walking paths to connect with nearby settlements such as Bar Hill and Northstowe, and Cambridge city more widely, in addition to a high quality landscape that promotes employee wellbeing. As a consequence some of Bar Hill and Northstowe lie within the 2km walking catchment. **All of Bar Hill** (i.e. around 2,200 homes in 2021), **Northstowe** (a sustainable new town planned to expand by around 5,300 homes over the next twenty years, with a planned target of 10,000 homes), **Cotenham, Dry Drayton, Girton, King's Hedges and Arbury, lie within the 8km cycle catchment** (see Appendix 1).
- 6.10 So far, the analysis has focussed on the net additional working population arising as a result of new homes on strategic sites within the J25 Bar Hill catchment. However, new employment opportunities at the J25 Bar Hill site will also be of interest to unemployed residents looking for new work opportunities within the site's catchment. Analysis of data from the 2021 Census of Population indicates that there are currently an estimated **6,200 unemployed residents** (2.4%) within the **site's 30-minutes' catchment**, including **over 3,800** (2.2%) living **within the public transport catchment area**.
- 6.11 Furthermore, a detailed review at unemployment levels at ward level indicates that there are relatively high levels of unemployment in north and east Cambridge. This includes 250 unemployed residents (3.8%) in Arbury ward, 270 residents (3.5%) in King's Hedges ward, and 230 unemployed residents (3.5%) in East Chesterton ward. In aggregate (**750**), these **Cambridge wards** represent almost **20% of the unemployed residents, all of whom lie within or close to the 8km cycle catchment and all within the 30-45 minutes public transport catchment**.
- 6.12 However, not all unemployed residents will be looking for opportunities in logistics or mid-tech. Furthermore, it should be noted that whilst the unemployment rate will fluctuate over time, the overall rate of unemployment is not anticipated to change significantly¹⁷. It should also be expected that some employees at the J25 Bar Hill employment park will be drawn from other parts of both the Cambridge and Huntingdon Travel to Work Areas ('TTWA'), as defined by the ONS (shown below), beyond the 60 minutes public transport catchment and

¹⁶ Also referred to as a 'gravity model' where proximity may play a greater role in driving choice.

¹⁷ A review of unemployment data across Cambridgeshire shows that the current unemployment rate – estimated at around 2.6% in March 2023, is in line with the pre-pandemic average of 2.7%.

30 minutes' off-peak drive time catchment; these employees can be expected to mostly travel by car.

Figure 6.1 Government Travel To Work Areas map, 2011



Source: Office for National Statistics (2015), *Travel to Work Area boundaries*

- 6.13 Finally, data from the 2011 Census of Population shows that at the time, around 15% of Cambridgeshire's residents working in transport and storage (used as a proxy for logistics), estimated to be over 1,700 residents generally travelled over 30km for work. Whilst more recent data (i.e. from the 2021 Census of Population) is yet to be published, this evidence suggests that there may be opportunities for people who travel long distances to/from work to consider new opportunities closer to where they live should these arise.

Reflections on Balance of Supply and Demand

- 6.14 Taking into consideration all of the above, our assessment is that there will be a sufficient number of people likely to be seeking logistics and mid-tech jobs from within the public transport catchment, such that the majority of J25 Bar Hill employees would be expected to live in this area and most of the remainder of the J25 Bar Hill workforce would be expected to live within the 30 minutes' drive time from the site.
- 6.15 This means that the delivery of around 232,000 sq.m of commercial floorspace at J25 Bar Hill is not anticipated to rely upon in-commuting from outside the site's labour market catchment. Furthermore, this is likely to be assisted by the provision of new and improved public transport services which are aimed at better connecting the site with its local and sub-regional context (in particular, Cambourne and Northstowe), and which are aimed at reducing the need for car-based commuting trips.
- 6.16 Finally, the nature and range of roles available within the J25 Bar Hill site are likely to appeal to a wide range of residents, including residents interested in career progression, as well as new and emerging technologies.

7.0 Summary and Conclusion

- 7.1 The proposed site allocation for the J25 Bar Hill site presents a unique opportunity to bring forward an investment which addresses the need for employment floorspace in Greater Cambridge at both the local and sub-regional levels, in particular the need for high-quality logistics floorspace and mid-tech uses. It is anticipated that **J25 Bar Hill** site could deliver around **232,000 sq.m** of employment floorspace across three phases to 2041.
- 7.2 This report has considered the labour market characteristics of the current population living within the site's **30-minutes' off-peak drive time and 60-minutes' public transport catchments**, the site's potential for supporting employment (i.e. in both gross and net additional terms) and therefore its demand for labour, and employment from future population growth within the site's catchment based on strategic site allocations.
- 7.3 Our high-level assessment of the emerging masterplan for the J25 Bar Hill site finds that the site has potential to support an aggregate of around **4,480 FTE jobs directly**, once all three phases are completed and operational. This will include roles across a wide range of occupations, which will require different skills and qualification levels. Based on typical industry standards, it is likely that development of the J25 Bar Hill site will generate aggregate demand for around 1,180 'lower skilled' occupations, with a further 2,700 'mid-level' occupations, and around 610 'higher-level' occupations.
- 7.4 However, it should be noted that not all jobs will be net additional to the local economy. Taking account of the potential for the J25 Bar Hill masterplan to displace some level of employment from other locations within the catchment, it is therefore estimated that an aggregate of around **3,360 net additional FTE jobs could be supported**.

30 Minutes' Catchment

- 7.5 The key points arising from the analysis of the J25 Bar Hill 30-minutes' drive-time are:
- 1 The catchment incorporates around 175,900 dwellings and a total population of around 395,400 residents. With **183,600 residents engaged in the labour market**, the catchment has an economic activity rate of 70%. This includes around **6,200 unemployed residents**, which represent an overall unemployment rate of 2.4% of the area's core working age population.
 - 2 Analysis of the labour market indicates that the catchment has healthy labour market participation and employment levels. These are characteristic of an engaged workforce that is more likely to be proactive in seeking new and exciting opportunities, as well as workplace-based training opportunities which are a key recruitment requirement.
 - 3 A review of extant permissions and strategic housing allocations finds that, between 2021 and 2041, over **31,500 new homes** could be delivered **within the site's drive time 30-minute catchment**. Drawing on average household sizes for the sub-region, it is estimated that, by 2041, the local resident population could increase by a further 70,500 residents, of whom **6,200 (19.3%)** are likely to be interested in **mid-tech and/or logistic occupations**.
 - 4 Based on the above anticipated demand, it is evident that the demand for labour is capable of being fulfilled by the net additional residents living within the 30-minutes'

catchment. However, not all net additional residents with potential to work in mid-tech and/or logistics may be interested in opportunities at the J25 Bar Hill employment park. However, Census data indicates that the catchment is home to around 6,200 unemployed residents, some of which are also likely to be interested in opportunities related to mid-tech and/or logistics.

Public Transport Catchment

- 7.6 The key points arising from the analysis of the J25 Bar Hill 60-minutes' public transport catchment are:
- 1 The site's public transport catchment (which lies entirely within the 30-minutes' drive time catchment) shares many characteristics of the same labour market characteristics.
 - 2 A review of strategic housing allocations within the public transport catchment finds that around **18,600 new homes are likely to be built between 2021 and 2041**, representing 59% of all growth **within the site's 30-minute drive time catchment area**. Once built and occupied, the new homes are estimated to support 42,800 residents, of whom **3,600 people** are likely to be interested in occupations related to **mid-tech and/or logistics**. This figure alone **exceeds the 3,360 net additional FTE jobs** that would be provided at the J25 Bar Hill development by 2041.
 - 3 Furthermore, there will be opportunities for some of the **3,800 unemployed residents** from within the **public transport catchment** to re-join the labour market and access opportunities at the J25 Bar Hill employment park, including around **750 persons unemployed in the Arbury, Kings Hedges and East Chesterton wards**, lie within the 30-45 minutes public transport catchment.
 - 4 A number of residents from Bar Hill and Northstowe live within the 2km walking catchment to the J25 employment park. **All residents of Bar Hill** (i.e. around 2,200 homes in 2021), **Northstowe** (a sustainable new town planned to expand by around 5,300 homes over the next twenty years, with a planned target of 10,000 homes), **Cotenham, Dry Drayton, Girton, King's Hedges and Arbury, lie within the 8km cycle catchment**.

Balance of Supply and Demand of Labour

- 7.7 Taking into consideration all of the above, it is therefore concluded that the **employment opportunities arising from the proposed employment allocation of the J25 Bar Hill can be accommodated** by a mix of (1) future growth in the labour market (i.e. through house building), (2) unemployed residents looking for employment and (3) residents in employment looking for new opportunities in the sector, the majority of whom are anticipated to live within easy non-car borne access to the J25 Bar Hill job opportunities (e.g. Northstowe and north Cambridge).
- 7.8 This report demonstrates that the J25 Bar Hill employment park proposal will provide jobs close to homes and that **there will be a sufficient number of people likely to be seeking logistics and mid-tech jobs**, from within the site's public transport catchment and 30 minutes' drive time, **to support the delivery of 232,000 sq.m of logistics and mid-tech floorspace at the J25 Bar Hill site**.

Appendix 1 Public Transport, Cycle and Pedestrian Catchments Note, by SLR Vectos

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Appendix 2

Last Mile Logistics Catchment Study

Lolworth Development Ltd Junction 25, Bar Hill

Local Sustainable Delivery Opportunities

25 September 2023

184265/N25

Introduction

1. Vectos has been commissioned by Lolworth Developments Limited to provide traffic and transportation advice in relation to land at Junction 25, Bar Hill in Cambridgeshire.
2. Lolworth Developments Limited is pursuing its vision for a Major Landscape Led sustainable Employment Park, north of Bar Hill (referred to as “the site”), taking advantage of its strategic location northwest of Cambridge and adjacent to the A14.
3. Given the commercial nature of the proposed development and the proximity of significant existing and future housing there is the opportunity to provide locally based, sustainable delivery, in particular by using cargo bikes from a delivery hub. This note explores that opportunity based on local operator experience and evidence from elsewhere.

Policy Context

4. Cargo bike delivery hubs are at the forefront of emerging policies within Greater Cambridge with the aim to complement sustainability objectives.
5. Policy I/FD: *Freight and delivery consolidation* within the emerging Greater Cambridge Local Plan (EGCLP) (reg 18: preferred Options 2021) states that:

“We propose to support development / enhancement and safeguarding of local delivery hubs that help consolidate deliveries into Cambridge and reduce vehicle traffic, where they accord with other policies in the plan, provided they do not cause unacceptable impacts on Greater Cambridge’s strategic road networks, and:

- *reduce road danger, noise and emissions from freight trips*
- *enable sustainable last-mile movements, including by cycle and electric vehicle[...]*”

6. The definition of ‘Delivery Hubs’ within the EGCLP states that:

“Delivery hubs help consolidate deliveries into a smaller number of vehicles which can help reduce vehicle traffic and enable the onwards last mile delivery by cargo-bike or electric vehicle”

7. More generally, delivery hubs are considered to be a key part of a comprehensive sustainable transport package and something that should be embedded when creating new places. Within the “Garden City Standards for the 21st Century – Guide 13 – Sustainable transport”, cargo bikes form a key facility in the design of mobility hubs with the aim of lowering emissions.

Cargo Bike Range

8. A key element of the feasibility of such a facility is the catchment that a cargo bike delivery hub can serve. This is primarily based on two criteria:
 - The distance cargo bikes can travel (including e-bikes); and
 - The economic viability of serving a catchment by cargo bike.
9. The distance an e-bike can travel on one charge ranges with the make and model of specific e-bikes/ cargo bikes, the load of the bike and how fast it is being ridden. A review of bikes on the market suggests that charges last in excess of 20km and, as such, this is not considered to be the key constraint when considering the Bar Hill site since the surrounding catchment is accessible well within this distance. The constraint, therefore, is considered to be economic viability which is considered further below.

Local Operator Experience

10. Initial advice on the principle of a delivery consolidation hub at the site has been obtained from the cargo bike delivery operator Zedify, who operate in and around Cambridge. Zedify has confirmed that there would be good opportunities to provide such a facility at the site to serve the local communities at Bar Hill, Longstanton, Oakington and Northstowe.
11. The range limit advised by Zedify for cargo bike deliveries is 4.8km (3 miles). This balances the distance cargo bikes might reasonably travel against the economics of the operation and likely parcel load.

Other Experience

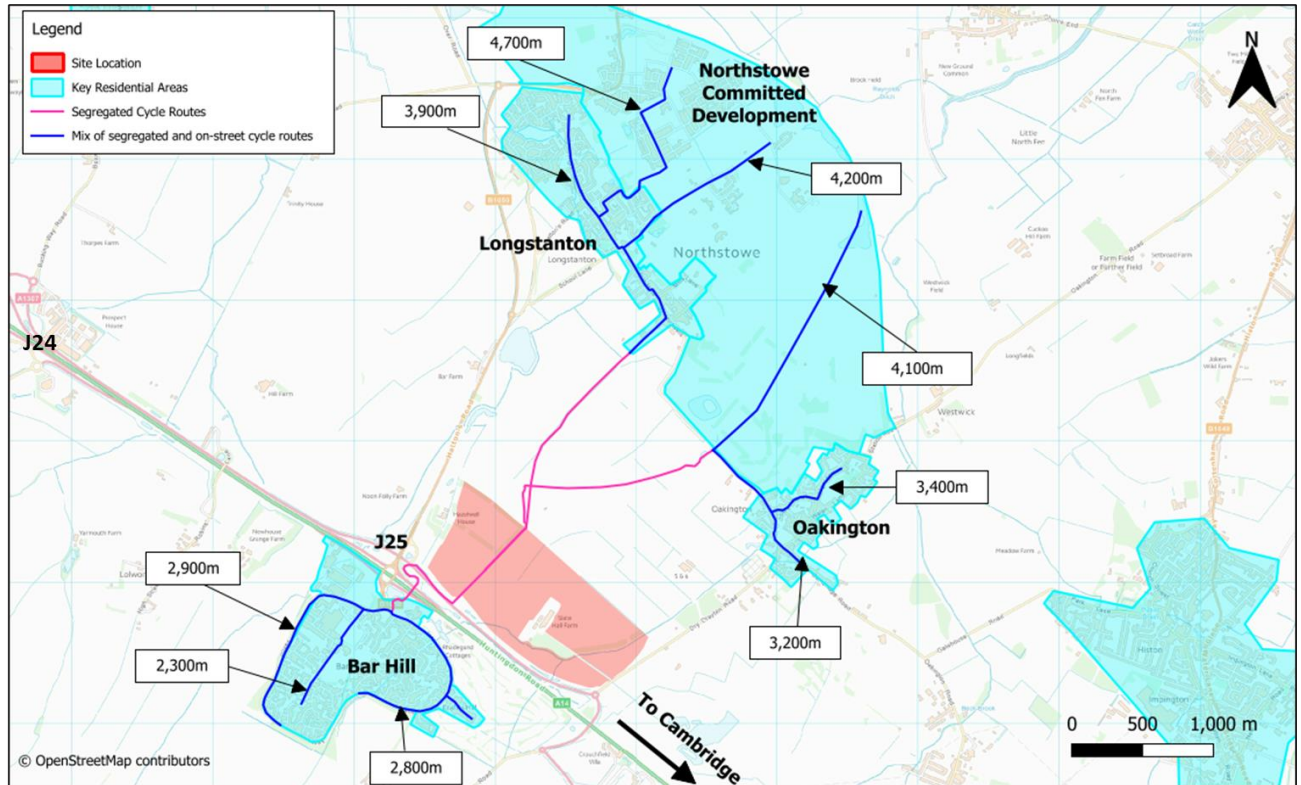
12. Wider literature on the subject of cargo bike deliveries is limited. However, a Cycle Freight study was undertaken by TfL in March 2018. This document sets out the benefits and constraints to cycle freight. It states that uptake for cycle freight would be greatest in areas where:
 - *“There is a high density of [Residential], offices or retail businesses within a radius of two to eight kilometres.*
 - *Local conditions favour cycle freight, including general traffic congestion, motor vehicle access restrictions, narrow streets and low motor vehicle parking availability.*
 - *One or more national parcel carrier depots are located”..*
13. The TfL report goes on to state that:

14. *“Cycle freight works well for operations in dense urban areas but becomes less feasible over longer distances. In the mail and parcel sector, cycle freight riders can cover total distances of up to 80-100 kilometres per day. However, to match the number of deliveries per day that a van can make (10-15 per hour), cycle couriers typically need to reload, which limits the service radius to between two and eight kilometres. For small businesses delivering fewer parcels per day (less than 10 per day), longer distances can be covered. For example, individual trips up to 15 kilometres may be possible, depending on the rider.”*
15. The local catchment is further considered by a European Transport Research Review (ETRR) which looked into ‘*Measuring delivery route cost trade-offs between electric-assist cargo bicycles and delivery trucks in dense urban areas*’ undertaken in 2019.
16. The ETRR identified that:
 - *“where the distance between DC [Distribution Centre] and delivery neighbourhood was greater than 2 miles (3.2 km), it was more costly [to have cargo bikes over van deliveries]”*
 - *“If the DC were to be located closer to the delivery neighbourhood, at least less than 2 miles (3.2 km) away, it would be slightly more cost effective to use EA [Electric Assisted] cargo bikes on the route observed”*
 - *“In this scenario, the distance between the DC and delivery neighbourhood is modelled from 0 to 10 miles (16.1 km). The route cost is more cost effective using EA cargo bikes for up to 6 miles (9.7 km) between the DC and neighbourhood. Beyond a 6-mile (9.7 km) distance, delivery trucks are more cost effective for this scenario.”*
17. It should be recognised that the two research papers referred to are from 2018/19 which is some 5 years ago and the use of cargo bikes has developed and grown significantly since that time. On this basis and their local knowledge, we consider the experience of Zedify is likely to be the most relevant.
18. Summarising the above, the core distance over which cargo bikes are suitable is up to circa 4.8km. However, in certain circumstances, additional distances up to circa 8-9km may be appropriate.

Bar Hill Site Catchment

19. The local catchment surrounding the site is highlighted in **Figure 1**, which indicates the site’s accessibility to Bar Hill, Oakington, Longstanton and Northstowe. These locations are not only within acceptable and practical distances of the potential delivery hub (max 4.7km) but are **already** well-served by local dedicated cycle infrastructure; for example the foot/cycle bridge over the A14 and the dedicated cycle routes to Northstowe, all of which provide cycle linkages to the site. Within the settlements themselves cyclists will use a mix of dedicated routes and residential streets to access the residential properties.

Figure 1: Cargo delivery bike routes and distances



20. Within the catchment area shown the adult population, once Northstowe is built out, is circa 15,500.

Conclusion

21. In conclusion, based on the studies undertaken (and in particular discussions with a local operator), the density of existing and future housing surrounding the proposed development, and the high-quality cycle routes that are available, it is concluded that the nearby residential areas of Bar Hill, Northstowe, Oakington and Longstanton as well as local employment areas could be **viably** served by cargo bikes from the site. Bearing in mind the limited range of ebikes and the requirement for those bikes to be situated in close proximity to where people live, the J25 Bar Hill site is **ideally positioned** relative to the existing settlements mentioned above and the significant planned growth of those settlements **to support a sustainable delivery hub using cargo bikes**.