

Greater Cambridge Shared Planning
Planning Policy Team
Cambridge City Council
PO Box 700
Cambridge
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Date: 17 May 2023

Our ref: [REDACTED]

Dear Sir and 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) ('GCLP:PO') consultation and subsequent update letters of 7 October 2022 and 11 January 2023.

Our Representation promotes the J25 Bar Hill site for allocation for a leading-edge sustainable employment park development with business, R&D/Mid Tech and logistics capability, in response to the employment needs and demands across the area. This deliverable site benefits from excellent strategic accessibility and multi modal connectivity (including cycling), lies outside of the Green Belt, and is well located relative to the existing population and the emerging new residential neighbourhoods.

We have read your GCLP Development Strategy Update (January 2023) and the 'GC Economic Development, Employment Land and Housing Relationships Evidence Update (Iceni Projects), December 2022 (updated January 2023)' ('Employment Evidence Update'). We have also listened with interest to the comments and observations from Members when the Committees discussed these matters. All this has informed the scope of the further assessment work undertaken and now submitted.

Further Assessment Work

Since our last update letter, further site assessment work and dialogue with statutory consultees, including National Highways, Cambridgeshire County Council ('CCC'), the Environment Agency ('EA'), Ely Drainage Board ('EDB'), and the Swavesey Internal Drainage Board ('SIDB'), has been undertaken.

We therefore submit, attached to this letter, the following technical appraisals:

- 1 Greater Cambridge Employment Land Evidence (update to 13.12.21 Representation Appendix 1) - Critique of Evidence Update, prepared by Lichfields (Economics) March 2023;
- 2 Transport Connectivity and Highway Capacity Update, informed by three Technical Notes on Accessibility, Trip Attraction and Distribution and Highway Impact Analysis being sent to National Highways and Cambridgeshire County Council, (re. 13.12.21 Rep Appendices 4vi-viii), prepared by Vectos May 2023;
- 3 A14 Landscape Corridor Preliminary Landscape and Visual Appraisal Note (update to 13.12.21 Rep Appendix 4ii), prepared by FPCR April 2023;
- 4 Biodiversity Net Gain Technical Note (re. 13.12.21 Rep Appendix 4iii), prepared by FPCR, May 2023; and
- 5 Flood Risk, Foul Water Drainage and Surface Water Drainage: Update to Flood Risk Technical Appraisal (to 13.12.21 Rep Appendix 4i and 7.10.22 Letter), prepared by MJM April 2023,

Employment Land

Lichfields (Economics) notes that the latest evidence prepared on behalf of the Council ('Evidence Update') identifies:

- 1 **Demand for Employment Space:** An increased warehousing and distribution (within B8 Use Class) requirement to 2041 compared to previous evidence ('2020 ELEDES') – i.e. from c 47,000 sq.m to 200,000 sq.m. This requirement is still below our own estimates of up to 342,500 sq.m of logistics space required for the same period. In addition, the Evidence Update also estimates an updated office need of c 290,000 sq.m, alongside a significant research and development (R&D) floorspace need of 600,000 sq.m. As such, the Evidence Update estimates there to be a total requirement for E(g)/B Use Class space of c. 1.1 million sq.m in Greater Cambridge to 2041 which, based on our estimates, should be increased to c. 1.23 million sq.m.
- 2 **Supply of Employment Space:** A total supply of c 937,000 sq.m **resulting in a shortfall of around 152,000 sq.m to 2041.** Based on our evidence, **this shortfall could vary up to 288,000 sq.m for the same period.** It is, therefore, evident that Greater Cambridge needs to identify additional land to accommodate future employment requirements and that such land has to be suitable to accommodate a significant scale and wide variety of employment uses, by allocating a portfolio of sites to provide choice and flexibility to the market and, critically, is deliverable within the Local Plan period to 2041.
- 3 J25 Bar Hill site (of 100 ha) provides the opportunity for a landscape-led development - as evidenced in the FPCR BNG assessment - that could fully accommodate the above shortfall and provide for a wide range of employment development space - in terms of type and size - for logistics' operators of all scales, R&D and Mid Tech users that are also in high demand across the local area, as well as office-based space that according to the Evidence Update will be short across the Local Plan period.

Transport and Highways

Vectos' transport connectivity and highway capacity analysis demonstrates that:

- 1 full employment development of the J25 Bar Hill site, assuming full development at Northstowe, can proceed with relatively **modest additional highway improvements**, deliverable without third party land.
- 2 if necessary, GC and CCC could use a **Trip Budget** cap to control the level of traffic and ensure it does not exceed the levels assessed and providing flexibility to manage lettings to fit within the cap.

Vectos' transport update also reinforces that the site is located adjacent to an improved junction on the A14, lies in a very sustainable location and is **highly suitable for major employment park development** (including logistics and R&D/Mid Tech) given the:

- 3 **existing connectivity** to existing and future settlements, in particular Bar Hill village and the new town at Northstowe; and
- 4 the **ease of access** by multi-modal forms of transport close to that population, including frequent bus services and being near the Cambridge Guided Busway with bus/active travel links to it.

Landscape and Visual Impact

FPCR's A14 landscape and visual impact appraisal between the Greater Cambridge/ Huntingdonshire boundary to the north-west and the outer boundary of the Green Belt surrounding Cambridge to the south-east (encompassing Junctions 24 and 25) finds that:

- 1 the GC Landscape Character Assessment identifies that the **landscape is relatively poorer/** weaker (in terms of Condition and Character) on the **northern side of the A14** than it is to the South of the A14 where there is relatively greater landform variation and higher ground; and
- 2 the **area east of J25 and north of the A14 is the most suitable** part of the study area within which to successfully assimilate new employment development and is of no greater landscape or visual sensitivity (to future development) than any other parts of the study area.

Biodiversity Net Gain

The Biodiversity Net Gain Technical Note demonstrates how 20% '**BNG**' can be achieved on this predominantly agricultural site, through the retention of medium distinctiveness habitats and the creation of significant green infrastructure including grassland, woodland, mixed scrub, ponds, reedbeds and sustainable urban drainage features (as shown on the Indicative Landscape Strategy Plan in the BNG TN), amounting to almost half the site cover being 'green infrastructure'.

This BNG would **accord with** emerging GCLP:PO **Policy** BG/BG: Biodiversity and Geodiversity, exceed the 10% BNG requirement under the Environment Act 2021 and satisfy the NPPF (paras 174(a) and 174(d)).

Flood Risk, Foul Water Drainage and Surface Water Drainage

The MJM update explains that:

- 1 **Flood Risk** - Further detailed hydraulic modelling of Oakington Brook confirms that the flood risk and out of bank flow on the site is minimal. Discussions have continued with the EA and the EA is to review the hydraulic modelling to inform the major employment park allocation promotion.
- 2 **Foul Water Drainage** - Engagement continues with Anglian Water to procure a new pumping station in the northwest corner of the site and rising mains to the Uttons Drove treatment works. The pumping station will service the site via a network of gravity sewers and pumped rising mains.
- 3 **Surface Water Drainage** - Discussions have continued with the EA and CCC, who are the Lead Local Flood Authority for the area, as well as the respective drainage boards for the eastern (the 'Oakington Brook side' - EDB) and western (the 'Longstanton Brook side' - SIDB) parts of the site.
 - i **Oakington Brook side:** EDB discussions have raised the possibility that flood relief storage could be provided on site that would take water from Oakington Brook during high flows, providing the potential opportunity to achieve off-site flood risk mitigation; and
 - ii **Longstanton Brook side:** An agreement in principle with the SIDB (and their consultants Stantec) has been reached to provide attenuation along the western boundary of the site adjacent to Longstanton Brook, to address existing flooding issues in times of high water in the Swavesey catchment.

Conclusions

The above additional assessment work and technical updates reinforce the suitability of the J25 Bar Hill site to provide a landscape-led major employment park development, to meet much of the very considerable employment land need in Greater Cambridge, logistics and mid tech development, to 2041.

We trust that this LDL submission, alongside our earlier representations, will be carefully considered by GC Officers and Members, to help inform your HELAA updates and the next stage of the GCLP, expected to be published in summer 2023. To assist you and your members, we will consolidate all our GCLP site allocation promotion representations into a short 'J25 Bar Hill employment site allocation – Case Summary' document shortly.

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

Copy Stephen Kelly, Joint Director of Planning and Economic Development, GCSPS
 Jonathan Dixon, Planning Policy Strategy and Economy, GCSPS

Appendices

- Appendix 1** Greater Cambridge Employment Land Evidence (update to 13.12.21 Representation Appendix 1) - Critique of Evidence Update, prepared by Lichfields (Economics) March 2023
- Appendix 2** Transport Connectivity and Highway Capacity Update, informed by the three Technical Notes on Accessibility, Trip Attraction and Distribution and Highway Impact Analysis being sent to National Highways and Cambridgeshire County Council, (re. 13.12.21 Rep Appendices 4vi-viii), prepared by Vectos May 2023
- Appendix 3** A14 Landscape Corridor Preliminary Landscape and Visual Appraisal Note (update to 13.12.21 Rep Appendix 4ii), prepared by FPCR April 2023
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**Appendix 1 Greater Cambridge Employment
Land Evidence (update to 13.12.21
Representation Appendix 1) -
Critique of Evidence Update,
prepared by Lichfields (Economics)
March 2023**

Greater Cambridge Employment Land Evidence

Our ref [REDACTED]
Date 4 April 2023
To Greater Cambridge Shared Planning Service
From Lichfields obo Lolworth Developments Ltd

Subject J25 Bar Hill, Cambridge - Lichfields Critique of Evidence Update

1.0 Introduction

- 1.1 The Greater Cambridge Employment and Housing Evidence Update: Employment Land, Economic Development and Relationship with Housing ('Evidence Update') was published as part of the agenda documentation for the Greater Cambridge Local Plan, Scrutiny and Overview Committee held on 12 January 2023¹. This Evidence Update aims to refresh the Greater Cambridge Employment Land and Economic Development Evidence (ELEDES) 2020.
- 1.2 On behalf of Lolworth Developments Ltd, Lichfields has undertaken a further detailed critique of this Evidence Update, pursuant to our initial review and comment in our 11 January 2023 letter to Mr Kelly and the GCSPS GCLP team. Our initial review found that, in relation to industry and warehousing, we consider the Evidence Update "still significantly **under-estimates** the **actual requirements** for **warehousing and distribution space** across Greater Cambridge to 2041". Our further critique, as explained below, reinforces that opinion.

2.0 Evidence Update Findings

- 2.1 The Evidence Update has identified a significantly increased warehousing requirement from 46,933 sq.m to 200,000 sq.m for the 2020 to 2041 study period. Although this represents an increase of over 325%, it is still below the warehousing requirements estimated by the J25 Bar Hill, Cambridge Logistics Land Need and Supply Assessment prepared by Lichfields in December 2021 and submitted in support of the J25 Bar Hill Local Plan representation ('Lichfields' Study'), which indicates that the requirements for warehousing more realistically should range between 276,000 sq.m and 342,500 sq.m.
- 2.2 The Evidence Update also estimates an updated office need for 289,700 sq.m, alongside a significant research and development (R&D) floorspace need of 600,000 sq.m. As such, the Evidence Update estimates there to be a total requirement for E(g)/B Use Class space of 1.1 million sq.m in Greater Cambridge to 2041.

¹ Available at <https://scams.moderngov.co.uk/documents/s129887/Background%20doc-Greater%20Cambridge%20Employment%20and%20Housing%20Evidence%20Update%20Jan%2023%201.pdf>

- 2.3 Against these requirements, the Evidence Update identifies a total supply of 634,600 sq.m which, when combined with 40,500 sq.m of recent completions, implies a shortfall of around 152,000 sq.m.
- 2.4 Across the different employment uses, it is estimated that most of the shortfall relates to warehousing (-150,000 sq.m) followed by offices (-80,000 sq.m). In terms of R&D, there is an estimated 77,600 sq.m of surplus identified by the Council's evidence.
- 2.5 Based on the Lichfields' Study, the warehousing shortfall varies between c 219,100 sq.m and 285,600 sq.m increasing the total employment shortfall up to 288,000 sq.m.
- 2.6 It is therefore evident that Greater Cambridge needs to identify additional land to accommodate future employment requirements and that such land has to be suitable to accommodate a significant scale and wide variety of employment uses, by allocating a portfolio of sites to provide choice and flexibility to the market and, critically, is deliverable within the Local Plan period to 2041.

3.0 Greater Cambridge Employment Evidence Update Review

- 3.1 This section reviews the Evidence Update to understand if previous deficiencies across the ELEDES 2020, as highlighted within Lichfields' Study, have been addressed by the Evidence Update, alongside to ensure that a robust and sound approach underpins the Councils' evidence. It is reported that this has been a key requirement of the Evidence Update brief (as set out in the Evidence Update para 1.3 first bullet point on pg. 9)– i.e., *“An appropriate and proportionate check of the published ELEDS drawing on up to date data, accounting for substantive representations on completed Local Plan consultations”*.

Updated Market Signals

- 3.2 Through the property market signals section (Chapter 2.0 of the Evidence Update) it is recognised that *“industrial demand has risen considerably in recent years and supply has failed to keep pace”*. It is also stated that *“E-commerce accounts for a greater proportion of demand than in the past”* without, however, estimating the exact contribution or assessing how this could impact future warehousing requirements.
- 3.3 It is also noted with the Evidence Update that the increasing need for strategic logistics has been raised through the stakeholder engagement and paragraph 2.88 (pg. 47) summarises the increased demand for “big box units” post pandemic and the moderate role that Greater Cambridge has played so far due to lack of supply. The constrained supply is also compared with the speculative built space provided in Bury St Edmunds aiming to justify that demand in Greater Cambridge is met in the wider sub region due to the various supply constraints in Greater Cambridge, implying primarily the current extent of Green Belt boundaries.
- 3.4 This argument is further supported in paragraph 2.89 which states:

“Cambridge is reported to be rated as one of the UK's towns with the least amount of warehouse space available as a ratio of registered businesses, suggesting local under provision”.

- 3.5 In interpreting such evidence, it is clear that there is latent demand for strategic distribution space in Greater Cambridge that has not been provided for within the administrative area of the City or South Cambridgeshire previously due to the adopted policy direction. However, the continuation of such an approach would not be justifiable within the new Local Plan in the context of the scale of needs that have been identified within the Councils' Evidence Update and the Lichfields Study, and in the context that suitable and deliverable land is promoted for such purposes - specifically at J25 Bar Hill.
- 3.6 It is also important to consider the increasing demand for “*mid tech*” space (defined by the Evidence Update as flexible research, production and storage space, and also referred to by the commercial market as “smart sheds”) that is currently crowding out space for warehousing and light industrial in the area. Therefore, the Evidence Update recognises and reports the strong market signals around industrial and logistics in the area, however, these signals have not been fully translated into future needs based on the approach adopted by the Evidence Update (see paragraph 3.13 below).

Net Employment Need

- 3.7 The labour demand scenario reports an overall employment change of +66,600 jobs to 2020-41 Plan period (recommended Central Growth Scenario, Table pg. 62). This is based on the Cambridge Econometrics (CE) Local Economic Forecasting Model (2022, ‘LEFM’) baseline scenario which is further revised to include the population inputs derived from the Census 2021 (rather than the 2018 sub-national projections).
- 3.8 There have also been some further adjustments to “key sectors” where the future outlook is expected to perform above the LEFM outcome. It is suggested that these are the sectors expected to drive the performance of the local economy. It is reported that the selection of the key sectors is based on the historic performance compared with the baseline projection, as well as feedback from stakeholders (para 4.9, pg. 63). Although the Evidence Update reports that there have been strong market signals, and the discussions with the various stakeholders (as presented in Section 2.0) show that there is increasing need for logistics space, distribution-based sectors have not been included as a “key sector” in the Evidence Update. On the same basis, the increased emphasis on mid tech/smart sheds space reported throughout the Evidence Update is also not clearly reflected in the selection of the key sectors. In our view, this absence of logistics space and distribution-based sectors as a “key sector” represents a major omission from the analysis and does not reflect the requirements of the brief for the Evidence Update.
- 3.9 This scenario is then translated to a baseline net need figure of 629,700 sq.m which comprises 222,900 sq.m of offices, 354,400 sq.m of R&D space, 82,700 sq.m of warehousing space and -30,300 sq.m of industrial space (Central Scenario Standard occ., Table pg.80) based on typical density assumptions. Compared to the ELEDES 2020, this Evidence Update includes an improved outlook for office demand based on updated employment forecast by CE, an enhanced adjustment for industrial (suggested through the key sector adjustments, albeit this is not demonstrated clearly) and an improved baseline employment forecast for warehousing (but not adjusted). Taken together, this results in a

net employment need increase of 215,300 sq.m (i.e. 629,700 sq.m minus 414,400 sq.m identified in ELEDES' Central Scenario, Table pg.80).

Gross Employment Need

- 3.10 The updated approach (which deviates from that adopted in the ELEDES 2020) also includes a flexibility margin to account for forecast errors as well as to provide for flexibility to allow for planning delays and enhance the choice of sites to accommodate demand. This is estimated to account for 2 years of gross completions (this is typically 2 to 5 years) or around 20% of the needs estimated in the Central Scenario (para 5.16, pg.81), which based on Lichfields' experience is an appropriate allowance.
- 3.11 In addition, a further vacancy allowance is provided that adds 7.5% to the requirements (para 5.17, pg. 81). This typically varies between 7.5% and 8% across the various employment evidence nationwide, and it aims to balance to the market equilibrium reflective of a market that can function effectively.
- 3.12 These adjustments cumulatively increase the total need under the Central Scenario to 826,00 sq.m. This comprises 289,700 sq.m for offices, 443,900 sq.m for R&D space, -13,700 sq.m for industrial and 106,200 sq.m for warehousing (Central Growth Scenario Standard occ., Table pg. 82).
- 3.13 The approach also considers past development rates based on both local authorities' monitoring evidence as well as CoStar's net absorption rates. The later presents an increased need position for B2 and B8. Although this has some specific limitations (as explained in para 5.22 (pg.86) of the Evidence Update), it is considered a useful benchmark that reflects market activity. This suggests that if the last 5-year net absorption rates are rolled forward, there will be a need for 233,000 sq.m of B2/B8 uses in Greater Cambridge for the 2020 to 2041 period (Table pg. 86).
- 3.14 Finally, the Evidence Update has provided for an additional allowance in relation to industrial (incl. warehousing) losses in the future. Based on CoStar data, 52% of the total industrial floorspace was constructed pre-1990, and, on this basis it is assumed (in simplistic terms) that half of this stock is needed to be replaced (and the rest lost to structural change). With 50% replaced on existing sites this would amount to around 100,000 sq.m of additional need based on CoStar's 940,000 sq.m of all stock (para 5.25, pg. 87). On this basis, the Evidence Update concludes that the level of broad estimation in this exercise is recognised and *"for the labour demand requirements to get closer to the market absorption trends, replacement demand of 100,000 sqm is considered a starting point"* (para 5.28, pg. 88).
- 3.15 Although we agree in principle with such an allowance, the robustness of the approach could be questioned. In addition, the approach presented (in paras 5.26 to 5.28) demonstrates that the Evidence Update has assumed the lower end of such an allowance for planning policy purposes when the report itself highlights the fact that an increasingly ageing stock, as well as pressures on EPC ratings, will make this approach more challenging in the future (para 5.26), suggesting realistically that a higher level of allowance should be assumed.

- 3.16 Considering the above, the Evidence Update concludes (in Table pg. 94) that there is a total need of circa 1.1 million sq.m comprising 289,700 sq.m for office, 600,000 sq.m for R&D and 200,000 sq.m for industrial and warehousing space. This updated evidence revisits some key issues and inconsistencies raised by the Lichfields' Study; however, it does not address one key factor that was highlighted – namely, the strategic distribution requirements across the wider area, discussed further below.

Lack of Strategic Distribution Consideration

- 3.17 The Evidence Update does not consider strategic distribution requirements across the Functional Economic Market Area (FEMA) or the Property Market Area (PMA)². It focuses solely on the “indigenous” requirements of Greater Cambridge although there is commentary throughout the report and, particularly within the market signals section, regarding the wider need for strategic industrial and warehousing space (e.g. see paragraphs 3.2 to 3.6).
- 3.18 These market signals have been reinforced by the Lichfields Study that highlighted the need to properly assess and have regard to the requirements for storage and distribution operations of all scales aligned with NPPF Para 83.
- 3.19 According to the Lichfields Study there is a need for c. 499 ha of strategic B8 uses across the PMA within which Greater Cambridge is located. As it is also highlighted within the Evidence Update, Greater Cambridge has made no contribution to accommodating any of these needs which has resulted in additional pressures on surrounding authorities primarily within the FEMA and particularly Bury St Edmunds and Peterborough.
- 3.20 The Evidence Update implies that such needs could not be met in Greater Cambridge due to supply constraints, but that conclusion appears to prejudge an actual assessment of land which could be made available as part of the Local Plan, and not soundly-based given that J25 Bar Hill has been identified to the Council as providing a sustainable and deliverable site to accommodate warehousing space as well as potentially a wider range of employment uses.

Demand and Supply Balance

- 3.21 The supply position has been revised since the ELEDES 2020 based on December 2022 data. The updated position (Table pg. 94) has not changed for warehousing (reporting a total of 71,500 sq.m), but has increased for other employment uses resulting in a total supply position of 897,300 sq.m (compared against 634,600 sq.m reported in the ELEDES). Most of this supply (i.e. 475,600 sq.m) relates to R&D space.
- 3.22 Compared with the identified need, the Evidence Update reports that there is a substantial shortfall in industrial and warehouse floorspace, which is estimated to be 149,164 sq.m. There is also a shortfall of over 80,000 sq.m for office space, however there is a surplus for R&D of 77,500 sq.m resulting in an overall employment shortfall of 151,900 sq.m to 2041.

² Comprising the FEMA as defined by ELEDES 2020 alongside parts of Northamptonshire, Bedfordshire and Hertfordshire (refer to Figure 5.1 of the Lichfields Study, 2021).

- 3.23 It should be highlighted that the Evidence Update provides particular commentary regarding the provision of large industrial/warehousing allocations by stating in paragraphs 0.17 (pg. 7) and 5.55 (pg. 97) that:

“whilst there are dedicated proposed allocations for industrial space, in order for the forecast needs to be met it is necessary for some of the larger general allocations, notably Cambridge East, to emphasise the inclusion of appropriate industrial floorspace in order to avoid under provision.”

- 3.24 However, based on the First Proposals consultation notes (see Evidence Update para 5.47, pg. 95), Cambridge East *“could include 9,000 jobs on the ‘safeguarded land’ identified in the 2018 Local Plans at Cambridge Airport (although these may not [emphasis added] all be delivered by 2041). This is to include offices, workshops and other uses, providing a variety of opportunities to support not only Cambridge’s high technology clusters, but also industry and creative uses, including local jobs to provide for existing communities and help contribute to community integration”*.

- 3.25 Considering such a range of uses proposed to be allocated, alongside the proposed allocation for 7,000 new homes on Cambridge East (Proposed Policy S/CE), it is considered that the site’s context would not be suitable for accommodating large scale industrial or warehousing uses. On this basis, there is no industrial allocation across Greater Cambridge, apart from 14 ha allocated to the South of the A14 to accommodate for industrial and warehousing needs.

4.0 Conclusions

- 4.1 The Evidence Update suggests that there is a need of 200,000 sq.m for ‘indigenous’ logistics and industrial requirements, alongside 289,700 sq.m need for offices and 600,000 sq.m for R&D, to 2041 (Table pg.94). The Update identifies a supply shortfall for warehousing space of -150,000 sq.m, meaning significantly greater levels of provision will need to be identified.
- 4.2 As noted above, while some of the deficiencies of the original ELEDES have been addressed, for a number of reasons it is considered that the forecast requirement for warehousing space is still likely to be an underestimate. This reflects some of the specific assumptions that have been applied (e.g. not considering logistics as a key sector), and the lack of appraisal of needs across the wider FEMA (i.e. wider strategic logistics requirements).
- 4.3 If the strategic logistics requirements (based on Lichfields’ Study) are added to the identified need, logistics requirements could increase to 342,500 sq.m. Against the identified supply, there is an emerging shortfall for employment space (including strategic B8 requirements) in Greater Cambridge of up to 288,000 sq.m to 2041, even higher than the figure estimated by the Update study.
- 4.4 The Evidence Update also highlights that the level of need for R&D is significant and this is reinforced by the market evidence. In particular, paragraphs 2.83 and 2.84 highlight a ‘severe lack’ of lab space in the market primarily in relation to health science and the fact

that the sector will continue expanding fast for the next 10 to 15 years indicating that the shortfall will get worse across the Plan period.

- 4.5 It should be noted that modern R&D requirements can vary significantly from small incubation space and small laboratories to “mid tech” space (defined as flexible research, production and storage space), and also referred to by the commercial market as “smart sheds”.
- 4.6 Considering the identified supply and in particular large allocations for R&D in North East Cambridge, Cambridge East, Cambridge Biomedical Campus and Babraham Research Campus, the evidence suggests that there is no shortfall for R&D. However, the same evidence (at paragraph 5.36) highlights the importance of deliverability compared to availability of sites by stating that:

“It is recognised that the current level of demand for labs is very high but rather than making a needs-based adjustment, it is considered that this is also a factor of delivery of sites rather than necessarily availability of land supply.”
- 4.7 On this basis, it is expected that the needs for R&D are unlikely to be fully accommodated within the Plan period, with an emphasis on the shorter to medium term deliverability. This shortfall is additional to the identified need – based on the Councils’ Evidence Update – of 150,000 sq.m for logistics, which realistically should be increased up to 286,000 sq.m³.
- 4.8 Such space requirements could be accommodated at J25 Bar Hill which is an available and deliverable site that would significantly increase the choice and the range of Greater Cambridge’s pipeline and help to support a functioning local commercial property market. In particular, J25 Bar Hill is well placed to meet co-location requirements for various commercial uses that are in high demand across Greater Cambridge, including logistics but also increasingly blended requirements with R&D uses, for example through “mid tech” space. Compared to the identified supply pipeline currently identified, the allocation of land at J25 Bar Hill would make a significant contribution to ensuring a soundly-based Greater Cambridge Local Plan can accommodate employment requirements to 2041.

³ Based on Lichfields Study which suggests a B8 shortfall in Greater Cambridge of up to 71.5 ha.

Appendix 2 Transport Connectivity and Highway Capacity Update, informed by the three Technical Notes on Accessibility, Trip Attraction and Distribution and Highway Impact Analysis being sent to National Highways and Cambridgeshire County Council, (re. 13.12.21 Rep Appendices 4vi-viii), prepared by Vectos May 2023

J25, Bar Hill

Local Plan Representations: Transport Connectivity and Highway Capacity Update, April 2023

184265/N22

Introduction

1. Lolworth Developments Limited is pursuing a long-term vision for a new employment development, north of Bar Hill, taking advantage of its strategic location northwest of Cambridge and adjacent to the A14. The site location is shown at **Figure 1**. The emerging proposals are for a new Major Employment Park. The employment park allocation sought is to have business, R&D/Mid Tech and logistics capability.

Figure 1: Broad Site Location



2. The site has been put forward as part of the emerging Local Plan process for Greater Cambridge. Following this, a Housing and Economic Land Availability Assessment (HELAA) of the site was undertaken by Greater Cambridge, which included consideration of a number of transport elements.

3. Vectos has now undertaken further transport analysis which supports the suitability of the site and which, we consider, should lead to a review of the transport and highway elements of the original GCSPS HELAA assessment and our own HELAA review analysis (in Dec 21).
4. This note summarises the results of the additional assessment with the detailed work being contained in a number of appendices that have been submitted to National Highways and Cambridgeshire County Council.

Site Sustainability

5. The site is well located to existing and emerging communities and transport networks. The attached plans show that connectivity.
6. A common strand through the Local Plan process is the importance of connecting homes and jobs, ensuring that they are located close to each other and accessible.
7. Hence, the close proximity of the site to the emerging Northstowe community with 10,000 new homes planned and the existing community at Bar Hill is a clear benefit and in accordance with Local Plan objectives. We consider this matter should be given significant weight in any analysis of the site.
8. This proximity is further supported through the excellent transport connectivity that is already in place.
9. Cycle routes are in place across the site boundaries that provide connections to surrounding residential areas.
 - Northstowe can be accessed through the cycle route to the west or the improved bridleway that passes through the site. This journey is approximately a 2km (6-minute) cycle from the edge of the site to the edge of the Northstowe development;
 - The new bridge across the A14 connects Bar Hill to the J25 Bar Hill site;
 - The centre of Cambridge is accessible via Huntingdon Road in a 20 to 30 minute cycle (potentially quicker using e-bikes) using a largely continuous cycle route.
10. Existing public transport passes adjacent to the site, providing links to several areas. The busway to North East Cambridge and Cambridge North railway station can be connected to the site. The busway provides services every 10 minutes directly into Cambridge via Cambridge North Station. Cambridge North Station provides services from London Kings Cross, London Liverpool Street, Ely and Norwich with train frequencies typically one every 30 minutes to an hour from the various destinations.
11. The opportunity to use sustainable travel infrastructure that is already in place, that can be added to through a transport strategy, within close proximity to existing and emerging communities means

people travelling to work will have real active and sustainable travel options in accordance with the Local Plan objectives.

12. In terms of vehicle access, the ease of access to the wider Strategic Road Network the A14, A428 and M11 and routes into Cambridge via Huntingdon Road are clear.
13. Based on the above analysis and considering the site as an employment site, the current Amber score should be increased to a more positive Green score.

Site Access

14. The layout of the site is not fixed but primary access from the A1307 to the south with a secondary access from Dry Drayton Road to the east is proposed. The primary access accommodates pedestrians, cyclists and horse riders travelling along the new A1307 active travel route.
15. The principle of the access arrangement has been discussed and agreed with the highway authority subject to more detailed analysis and design.
16. The access proposals are progressed to a point where the positive Amber score provided in the HELAA is appropriate.

Highway Capacity

17. Since the HELAA scoring was undertaken, a more detailed assessment of the local highway network and access to the Strategic Road Network via Junction 25 of the A14 has been undertaken. The analysis assumes the development at Northstowe in full. The analysis uses baseline traffic data obtained after completion of the recent upgrades to the A14, providing an up-to-date understanding of traffic movements. This information was not available at the time of the previous HELAA assessment.

Trip Rates

18. Trip forecasts for the proposed employment development have been derived by using industry standard database information, supplemented by detailed surveys from other sites of a similar scale. The approach ensures that a larger pool of sites is created, ensuring more robust trip assumptions for the development.
19. The approach has been reviewed by AECOM on behalf of National Highways who have suggested undertaking assessments using different trip rate assumptions as a sensitivity test. This has been incorporated into our analysis.

Outcomes of Assessments

20. The results of our analysis demonstrate that, whether Vectos or National Highway trip rates are used, initial phases of the development can come forward in advance of any improvement to the highway

network. However, as development proceeds, capacity improvements to the A1307 traffic signals and Junction 25 of the A14 would be required. All these improvements can be delivered on land within Lolworth Developments control or on highway land and are consistent with what might be expected for a scheme of this nature. The only effect of using different trip rates is the scale of highway improvements required.

21. Given the lack of certainty over the exact users that will occupy the site and their trip generating characteristics, one approach is to use Trip Budgets/Monitor and Manage to control development on the site. This would effectively fix the amount of trips the development can generate in total and prior to interventions such as capacity improvements. This gives the highway authorities a high level of certainty over the impacts of the development, and the appropriate time to introduce improvements and allows the site owner to manage development in an efficient way. This Trip Budget approach is advocated for strategic sites across Cambridgeshire and has similarly been accepted by National Highways across the country (most recently for major developments at Dartford and Stansted Northside).
22. The above approach is also helpful given the development would be delivered within Local Plan timescales and that Northstowe is similarly a long-term development and hence the future traffic situation is far from certain. The Monitor and Manage initiative continually ensures the right intervention is delivered at the right time.
23. The assessment provides confidence that for Transport and Roads, the HELAA score can be adjusted to reflect a more positive Amber/Green score.

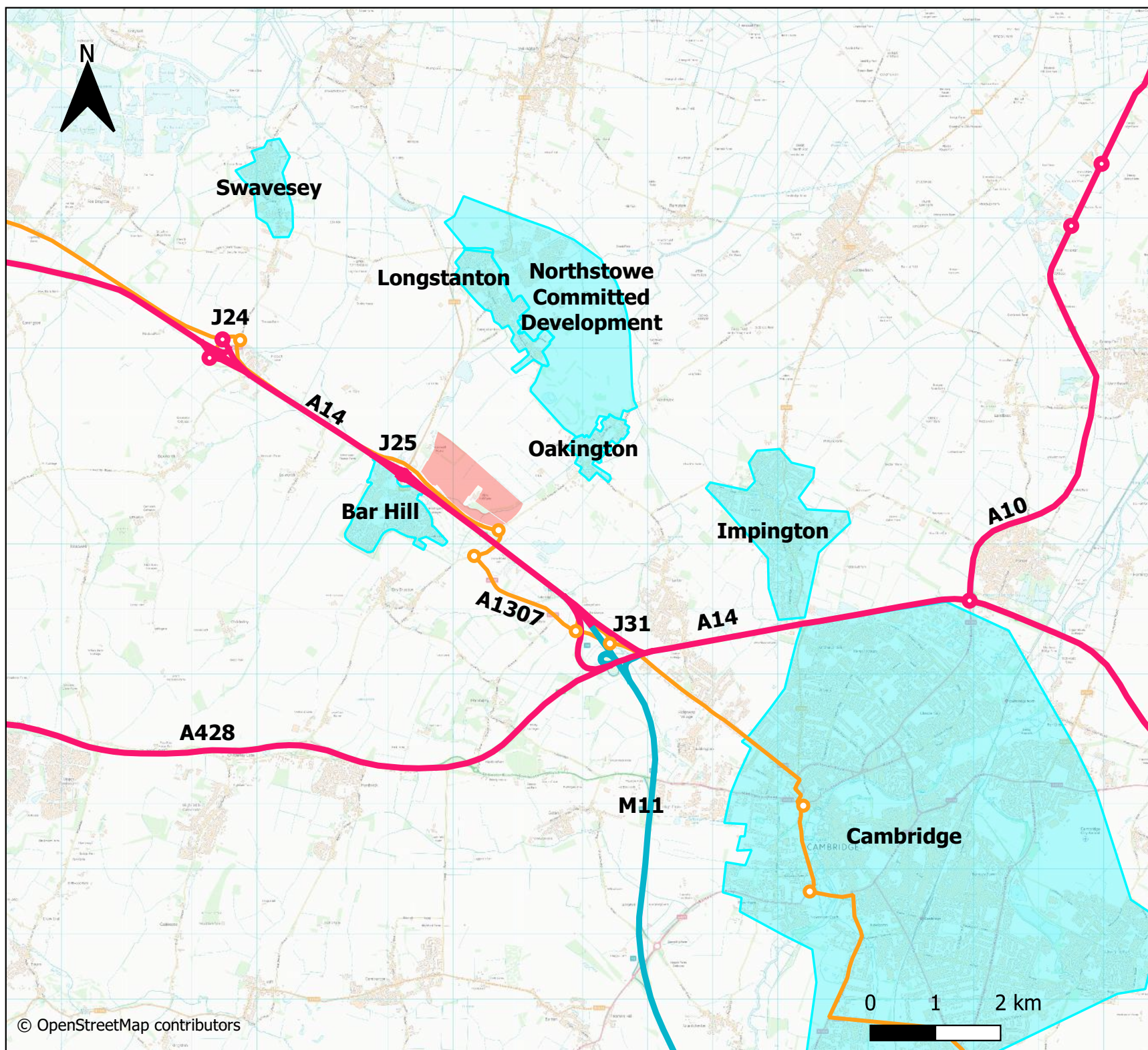
Summary

24. The analysis prepared by Lolworth Developments and summarised above shows:
 - The site is suitable for a Major Employment Park being adjacent to an improved junction on the A14.
 - It is a very sustainable location, being:
 - accessible via a range of existing transport infrastructure
 - adjacent to a major new community at Northstowe;
 - close to the existing community of Bar Hill;
 - served by frequent bus services;
 - Cambridge Guided Busway is nearby with bus/active travel links to it;
 - active travel connections to Bar Hill, Northstowe and Cambridge already in place.

- That full development of the site, assuming full development of Northstowe, can proceed with relatively modest additional highway improvements, deliverable without third party land requirements.

25. In reality, and if considered necessary, in due course the authorities could control use of the site by means of a Trip Budget. This gives control of the level of traffic and ensures it does not exceed the levels assessed. It gives the developer flexibility to manage lettings to fit within the cap.
26. However, in whichever way the site is controlled in due course, the key conclusion from the above analysis is that the site can deliver a Major Employment Park and, with modest improvements, there is sufficient capacity in the adjacent highway network.

Figures



Legend

- Site Location
- Key Residential Areas
- A-Road
- Strategic A-Road
- Motorway

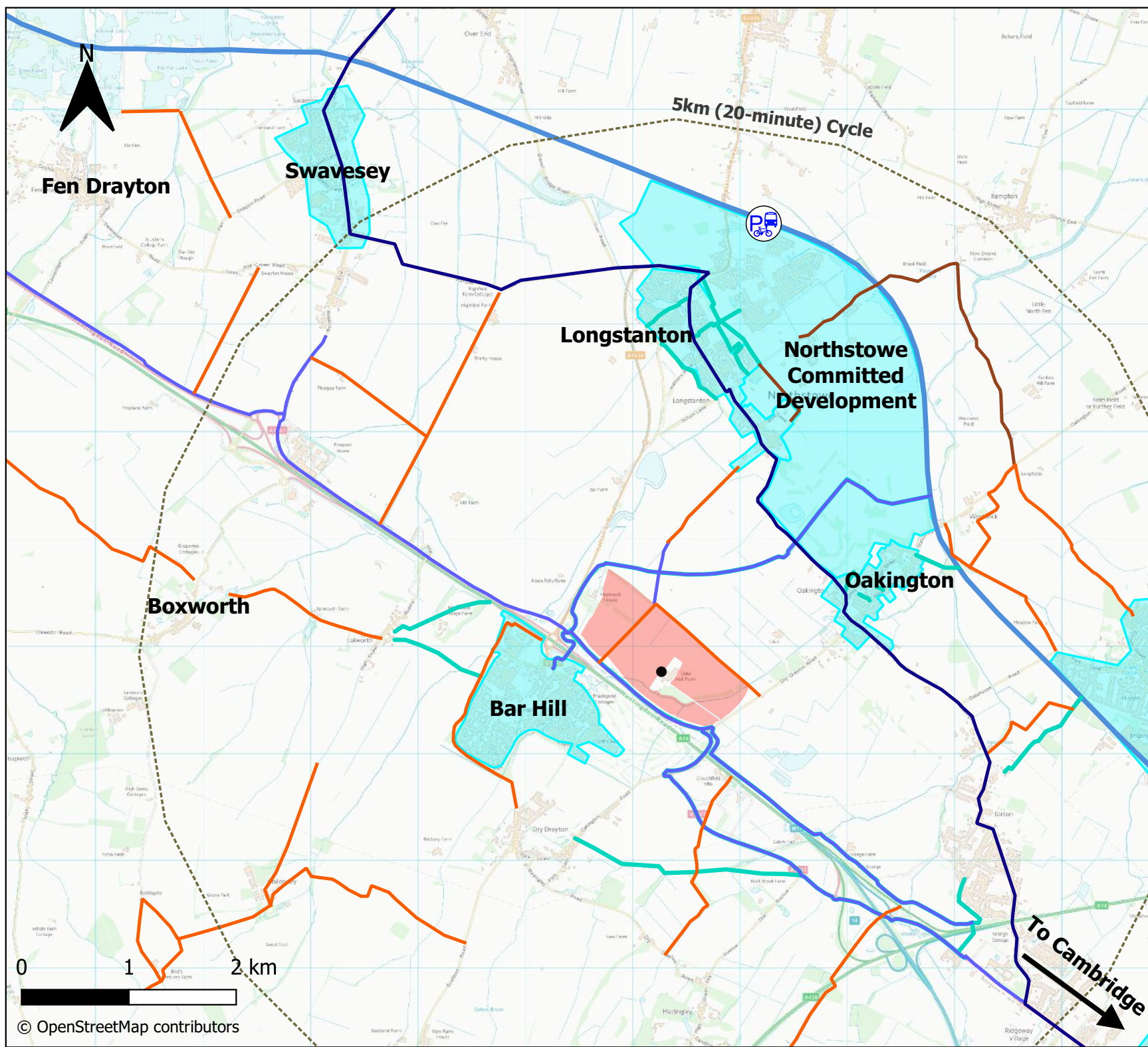
Lolworth Developments

Junction 25, Bar Hill

Highways Plan

vectos.
— PART OF SLR

Drawn By:	Checked By:	20/04/2023
MO	RB	Figure 1



Legend

- Site Location
- Key Residential Areas
- 5km Distance From Centre of Site
- Centre of Site
- Travel Hub
- Existing Footpath
- Existing Byway
- Existing Bridleway
- Existing Footway/Cycleway or Cycle lane
- NCR 24
- Existing Guided Busway/Bridleway/NCR51

Lolworth Developments

Junction 25, Bar Hill

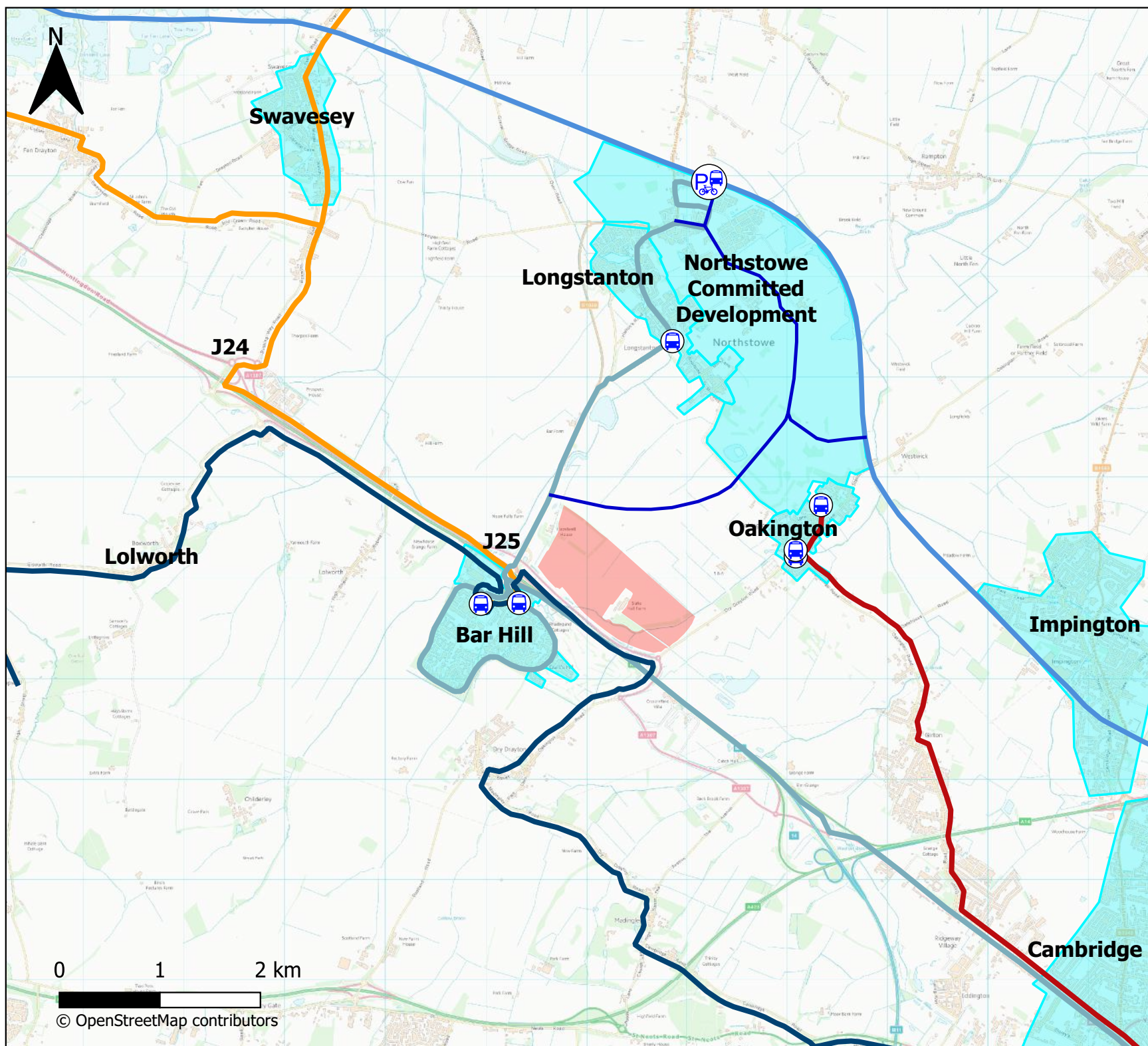
Active Travel Provisions and Connections

vectos.

— PART OF SLR

Drawn By: MO Checked By: RB 20/04/2023

Figure 2



Legend

-  Site Location
-  Key Residential Areas
-  Travel Hub
-  Existing (Closest) Bus Stop
-  Bus Service 1A
-  Bus Service Citi 5
-  Bus Service Citi 6
-  Bus Service 8
-  Existing Guided Busway/Bridleway/NCR51
-  Proposed Bus Links / Service Extensions

Lolworth Developments

Junction 25, Bar Hill

Bus Infrastructure

vectos.

— PART OF SLR

Drawn By: MO Checked By: RB 20/04/2023

Figure 3

**Appendix 3 A14 Landscape Corridor Preliminary
Landscape and Visual Appraisal
Note (update to 13.12.21 Rep
Appendix 4ii), prepared by FPCR
April 2023**



Lolworth Developments Limited

J25 Bar Hill

**A14 LANDSCAPE CORRIDOR
PRELIMINARY LANDSCAPE AND VISUAL APPRAISAL NOTE**

April 2023

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5.0	DISCUSSION AND CONCLUSIONS	7

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Figure 1: Aerial Photograph and Study Area

Figure 2: Extract of Figure 4.2 (Condition of the Greater Cambridge Landscape) taken from the Greater Cambridge Landscape Character Assessment

Figure.3: Extract of Figure 4.3 (Strength of Character of the Greater Cambridge Landscape) taken from the Greater Cambridge Landscape Character Assessment

1.0 INTRODUCTION

- 1.1 This Preliminary Landscape and Visual Appraisal (LVA) Note has been carried out for a landscape Study Area focussed along the A14 between the boundary of Greater Cambridge/ Huntingdonshire to the north west and the outer boundary of the Green Belt surrounding Cambridge to the south east. It encompasses Junctions 24 and 25 of the A14. It has been undertaken by FPCR Environment and Design Ltd (FPCR). The purpose of this LVA Note is to provide a preliminary landscape and visual overview of this landscape corridor, with particular regard to potential future employment development. It is not a site or scheme specific or a detailed landscape and visual assessment study.
- 1.2 FPCR is a multi-disciplinary environmental and design consultancy established over 60 years, with expertise in architecture, landscape, ecology, arboriculture, urban design, masterplanning and environmental impact assessment. The practice is a member of the Landscape Institute and Institute of Environmental Management and Assessment and is frequently called upon to provide expert evidence on landscape and visual issues at Public and Local Plan Inquiries.

Background and Purpose

- 1.3 FPCR prepared a LVA for the site known as 'J25 Bar Hill' to the north of the A14 in December 2021. This site specific LVA accompanied the representations made on the draft (Preferred Options, Regulation 18) Greater Cambridge Local Plan (GCLP), submitted by Lichfield's on behalf of Lolworth Developments Ltd (LDL) on 13 December 2021 (at Appendix 4ii). The LDL representation promotes the c.100ha site for a major employment park allocation in the Plan.
- 1.4 FPCR understand that the GCLP evidence base identifies there to be a need for significant quantum and range of employment or business use development in the lifetime of the GCLP (to 2041) and that the majority of the sites identified in the draft Plan or being promoted for allocation for such development lie along the A14 Corridor to the north west of Cambridge, beyond the outer boundary of the Cambridge Green Belt.
- 1.5 The Study Area of this corridor or area-based LVA is therefore centred along the A14 between the boundary of the Cambridge Green Belt and the Huntingdonshire district boundary, to the south east and north west respectively, so as to broadly encompass the sites promoted for allocation and the land surrounding the A14 road junctions. Figure 1 shows the location and extent of the Study Area.
- 1.6 This area-focussed LVA (April 2023) should be read alongside our site specific LVA (December 2021), the former containing our more detailed preliminary landscape and visual appraisal of the J25 Bar Hill site and the Greater Cambridge Landscape Character Assessment (February 2021) (GCLCA).

2.0 METHODOLOGY

- 2.1 For the purposes of this LVA Note, the approach adopted is based upon the *Guidelines for Landscape and Visual Impact Assessment*, third edition (GLVIA3), published by the Landscape Institute and the Institute of Environmental Management and Assessment, in 2013. This has entailed desk based and field survey and analysis to provide a high level understanding of the existing landscape character and visual amenity of the Study Area.

- 2.2 In terms of baseline studies, the assessment includes a general understanding of the landscape that may be affected, its constituent elements, character, condition and value. For the visual baseline, this includes a preliminary understanding of the area in which the Study Area and potential future development within it may be visible.

3.0 BASELINE CONDITIONS

Greater Cambridge Landscape Character Assessment (GCLCA) (February 2021)

- 3.1 This study was undertaken as part of the evidence base for the future Development Plan. Three Landscape Character Areas (LCAs) lie within the Study Area. To the north of the A14 is LCA 2A: *Longstanton Fen Edge Claylands* and to the south lie LCA 4A: *Croxton to Conington Wooded Claylands* to the west of Junction 24 and LCA4B: *Lolworth to Longstowe Wooded Claylands* to the east.
- 3.2 All three LCA's include a mix of characteristics and sensitivities and all include long ranging views from within parts of the respective LCA's. The GCLCA evaluates the *Landscape Condition* and the *Strength of Character* of the different Landscape Character Types across the Greater Cambridge area.
- 3.3 The GCLCA advises that judgements on the intactness of landscape components have informed the assessment of *Landscape Condition* and judgements on distinctiveness, pattern of physical and cultural attributes and sense of place have informed the assessment of *Strength of Character*.
- 3.4 Both assessments use a three point scale; *Poor, Moderate or Good* for Landscape Condition and *Weak, Moderate or Strong* for Strength of Character.
- 3.5 Within the Study Area, all of the landscape to the north of the A14 (within LCA 2A) is assessed as being of **Moderate** Landscape Condition and **Moderate** Strength of Character. Whereas all of the Study Area landscape to the south of the A14 is assessed as being of **Good** Landscape Condition and **Strong** Strength of Character. Extracts of the GCLCA Figures (4.2 and 4.3) are included at Figures 2 and 3 of this LVA, with the landscapes in relatively better condition and stronger character coloured in Green and the relatively poorer and weaker character landscapes coloured in orange.
- 3.6 The GCLCA thus indicates a clear difference between the Condition and Strength of Character of the landscapes to the north and south of the A14. It indicates that the landscape to the south of the A14 is relatively more intact; in better landscape condition; and with a stronger and more distinctive sense of place, than the landscape to the north.

4.0 PRELIMINARY LANDSCAPE AND VISUAL APPRAISAL

Landscape Overview

- 4.1 The landscape along the Study Area corridor comprises a mix of predominantly open farmland; some settlement (most notably Bar Hill); employment based developments; a roadside service area and a relatively loose framework and pattern of hedgerows, trees and wooded areas. The A14 forms a major feature extending through the Study Area and includes relatively recent major changes, with new junction arrangements (at Junctions 24 and 25), carriageways and associated infrastructure. Distinctive and recognisable cycle/ pedestrian bridges constructed as part of the most recent A14 highway/ junction works are also located at both junctions.

- 4.2 A number of minor watercourses and wet ditches cross the area generally falling from south to north. A series of Public Rights of Way (PROW) also provide some connectivity and access across the landscape and between settlements in the wider landscape, although these are not extensive.
- 4.3 Topographically, the landscape is more varied and undulating to the south of the A14, where a number of small valleys extend into the more noticeable rising slopes and higher ground. The small settlements of Boxworth, Conington and Lolworth sit on the rising slopes and this relatively higher ground and have some long ranging and expansive views towards the north. The relatively larger settlement area of Bar Hill also occupies these rising slopes in the south east of the Study Area, adjoining the outer Green Belt boundary.
- 4.4 The landform to the north of the A14 is relatively lower lying and flatter and very gently undulates and falls gradually towards the north.

Views and Visual Overview

- 4.5 Much of the Study Area landscape is relatively open due principally to the nature of the landform and limited presence of woodland, hedgerows and trees. Open and long ranging views across the Study Area and beyond are possible from various positions in and around the area. These are most prevalent from open positions on the rising slopes and higher ground to the south of the A14. These include relatively more sensitive views from some properties, PROW and positions within and around the small settlement areas on the higher ground to the south.
- 4.6 Bar Hill in the south east of the Study Area, occupies a more visually enclosed position on the rising slopes, with views northwards from within the settlement area restricted by mature trees and tree belts and buildings within the settlement.
- 4.7 From lower lying positions, predominantly to the north of the A14, the wooded areas, trees and hedgerows that do exist do overlap to interrupt and limit some longer ranging views.
- 4.8 Existing views from the A14 are presently relatively open across much of the landscape, to both the north and south of the road. These views are however relatively more open and expansive in the north west of the Study Area and around Junction 24 and relatively more contained and restricted to the east of Junction 25.
- 4.9 It is likely that views from this stretch of the A14 within the Study Area will however become relatively more constrained and interrupted over time, as the recent planting undertaken along the road corridor (as part of the highway works) begins to establish and mature.

Conclusions

- Rising slopes and sensitivities associated with smaller settlements and PROW on higher ground for the landscape south of A14.
- The landscape is relatively more open and visible around and to the west and north of Junction 24.
- Landscape is relatively more enclosed and with more recognisable and defined boundary features and mature planting to the north east of Junction 25. Longer ranging views to/ from the A14 are more restricted to the east of Junction 25
- Bar Hill occupies a visually enclosed position, with limited views to/ from the settlement area.

Study Area Appraisal

1. Huntingdonshire Boundary to Junction 24

a) North of A14

- 4.10 This landscape stretches between Mill Rd in the north west and Bucking Way Rd in the south east. It comprises predominantly flat open arable fields with limited mature woodland and trees. Huntingdon Rd runs alongside the northern side of the A14 and Swavesey Rd/ Rose and Crown Rd lies broadly along the outer Study Area boundary.
- 4.11 The north western part of the area includes existing residential and commercial developments to the south west of Fen Drayton. The central and south eastern part of this landscape, towards Junction 24 is dominated by open arable fields and is sparsely vegetated, with no discernible enclosure from existing woodland, tall hedgerows or other features and it includes wide ranging views, across and beyond the landscape.

b) South of A14

- 4.12 This landscape extends between the northern edge of Conington and the Cambridge roadside services and Boxworth Rd to the south east. It is similarly dominated by open arable fields and is sparsely vegetated, with limited mature woodland, trees or tall hedgerows. It is a broad open landscape, with the most notable difference to the existing landscape immediately to the north of the A14 being the change in topography and presence of small settlements (Boxworth and Conington) on the higher ground close to the edge of the Study Area.
- 4.13 A north – south ridge of higher ground extends into the central southern part of this landscape from Boxworth, and comprises relatively steeper and more visible slopes, particularly the north and north east facing slopes that are visible from the A14 and wider landscape to the north and north east. Wider ranging and distant views are possible from a relatively elevated Public Right of Way (PROW) to the north west of Boxworth.

2. Junction 24 to Junction 25

c) North of A14

- 4.14 Buckingway Business Park and Bucking Way Rd lie in the north west of this area with the B1050 and Junction 25 defining the south easterly limits. This landscape includes a number of uses and elements yet is still primarily under arable use. Buckingway Business Park occupies a position in the north west alongside Junction 24, with the A1307 running alongside the A14. A sewage works set within a mature framework of trees and planting, a short line of residential properties (Hill Farm Cottages) and Hill Farm House lie within the central part of this landscape between Junctions 24 and 25. The south eastern part of this area, extending up to Junction 25 is dominated by open arable farmland. A PROW (bridleway) and a number of ditches cross the area.
- 4.15 This landscape includes relatively more development and features than that existing within the Study Area landscape to the north west of Junction 24 and relatively more mature planting and vegetation around the existing development and sewage works. This does interrupt and limit some views from the A14 yet wider and longer ranging views across and beyond this landscape are still

possible. The landscape immediately to the north and north west of Junction 25 and B1050 remains however sparsely vegetated and open, particular towards the wider landscape to the north.

d) South of A14

- 4.16 This landscape stretches between Cambridge roadside services and Boxworth Rd in the north west to the edge of Bar Hill in the south east. This landscape includes relatively steeper and more visible slopes with the small settlement of Lolworth sited on the rising and higher slopes immediately to the south of the Study Area. Boxworth also lies on the rising ground immediately to the south west of the Study Area. The north western part of this area is relatively more open with the existing roadside services readily visible close to Junction 25. The south eastern part of this area, between Robin`s Lane and the edge of Bar Hill includes rising ground, mature woodland and Grange Farm. This part of the area is more visually contained and sub divided with a small valley and steeper slopes extending southwards into the higher ground.

3. Junction 25 to Outer Green Belt Boundary

e) North of A14

- 4.17 This landscape comprises predominantly arable farmland contained between the B1050 in the north west and Dry Drayton Road in the south east. The A1307 extends alongside the A14 on the southern edge of the area and a small commercial/ industrial area sits relatively centrally within this landscape. A further small Business Park (Oakington Business Park) also lies within this landscape, further from the A14 and a small number of existing buildings/ properties are situated within the north west of the area close to the B1050. The landscape includes a number of wooded areas/ tree belts, lines of mature trees and a small watercourse in the south east.
- 4.18 The existing wooded areas and trees provide some visual enclosure and sub division and in conjunction with the road, junctions and bridges to the north west and south east create a relatively more physically and visually contained stretch of landscape. Views to and from Bar Hill to the south of the A14 are largely limited by the existing mature trees and planting immediately surrounding this settlement to the south (see below). A new road corridor (serving Northstowe) lies relatively close to north of this part of the Study Area.
- 4.19 This area encompasses the site known as 'J25 Bar Hill', as shown on Figure 1.

f) South of A14

- 4.20 This landscape is dominated by the built up area of Bar Hill, with The Cambridgeshire Golf Course lying immediately to the south east (within the Green Belt). The majority of the settlement comprises residential development, with existing employment and commercial development situated in the north west of the settlement and alongside Junction 25. Existing mature woodland and trees effectively surround the majority of Bar Hill and clearly delineate and contain this existing built up area.

5.0 DISCUSSION AND CONCLUSIONS

- 5.1 This Preliminary Landscape and Visual Appraisal has focussed upon a Study Area centred along the A14 (including Junctions 24 and 25), between the Huntingdonshire boundary to the north west and the Cambridge Green Belt (outer) boundary to the south east. Its purpose is to provide a preliminary landscape and visual overview and appraisal of this landscape corridor, with particular regard to potential future employment development. It is not a site or scheme specific or detailed landscape and visual assessment study, although it has considered the suitability of this landscape for potential future employment development.
- 5.2 The Study Area landscape is not subject to any landscape designations at a national or more localised scale (eg National Parks, AONB's, Special Landscape Areas etc).
- 5.3 For the Study Area, the Greater Cambridge Landscape Character Assessment (GCLCA) (2021) indicates that the condition and strength of character of the landscape is relatively better and stronger to the south of the A14, than it is to the north (Refer to Green and Orange Areas on Figures 2 and 3). It is however recognised that this published study is not site specific and is a more strategic level assessment. Thus, the differences in these landscape aspects can sometimes be less clear cut and defined at a more localised scale. Notwithstanding this, the landscape of the Study Area does vary to either side of the A14 and to the south includes greater landform variation with rising and higher ground and relatively more visible slopes. This is in contrast to the flatter and lower lying land to the north of the A14.
- 5.4 To the south of the A14, three small settlements (Conington, Boxworth and Lolworth) also lie alongside the Study Area, on the rising and relatively higher ground and include some listed buildings and intrinsic landscape and visual sensitivities. Bar Hill in the south east of the Study Area represents the most notable built up area and this occupies a relatively enclosed position with existing mature woodland and trees surrounding the settlement. North of the A14, existing settlements generally sits a little further removed from the A14, although Fen Drayton to the north west and Oakington to the south east lie close to the Study Area.
- 5.5 In landscape terms much of the Study Area comprises arable farmland yet with some existing development around both Junctions 24 and 25 and other scattered development and properties. It is generally an open landscape yet the landscape in the south east and east of Junction 25 is relatively more visually enclosed. This is due to the presence of relatively more wooded areas, tree belts and trees, in addition to the Bar Hill settlement area, adjoining golf course and the embankments and road infrastructure around Junction 25.
- 5.6 Existing woodland and trees are relatively sparser and the landscape relatively more open and visible to the west and north of Junction 24. Between the Junctions 24 and 25, the landscape is more variable in terms of features and enclosure, being relatively more contained by the landform variations and wooded areas to the south and relatively more open across the flatter landscape to the north of the A14.
- 5.7 The relative differences along the Study Area present both opportunities and constraints in landscape and visual terms to future development. Relatively greater existing visual enclosure can assist in limiting the subsequent visible extents and effects of development. Similarly, the presence of relatively more existing woodland and trees can also assist in positively assimilating and integrating development, providing this existing planting can be substantially conserved.

- 5.8 By contrast, relatively more open and exposed locations and those with fewer existing woodlands, trees and hedgerows may possess fewer physical constraints to future development yet may be more widely visible and may rely on more extensive and new mitigation planting to achieve an acceptable solution. This may also take longer to become effective.
- 5.9 In this instance, the arrangement of existing woodland, trees and other features east of the Junction 25 (and including the 'J25 Bar Hill' Site) are capable of forming a robust landscape framework for future development. The small watercourse and associated trees and planting within this area are also capable of being conserved as part of a 'landscape led' future development.
- 5.10 In conclusion, this Preliminary LVA indicates that there are locations and sites capable of being developed for employment uses along this stretch of the A14, close to Junctions 24 and 25. The GCLCA indicates that the landscape is relatively poorer/ weaker (in terms of Condition and Character) on the northern side of the A14, and to the south of the A14 there is relatively greater landform variation and higher ground. There is also a relative, albeit not a marked change between the general openness and extent of woodland and tree/ hedgerow cover between the north west and south east of the Study Area. The south east being relatively more visually enclosed and including a relatively greater proportion of existing woodland and trees. This part of the Study Area may be more capable of successfully accommodating future development, subject to a well-planned and designed scheme and the substantial conservation of existing planting.
- 5.11 The potential landscape and visual effects arising from development within any part the Study Area will inevitably be strongly influenced by the respective design, layout and parameters of any proposals. It is however considered that the 'J25 Bar Hill' Site, to the north of the A14 and east of Junction 25 presents a suitable location within the relatively poorer/ weaker landscape area (as per the GCLCA study) and the relatively more enclosed part of the Study Area. This Site is capable of successfully accommodating new employment development as part of a 'landscape led' solution.
- 5.12 Other general locations and sites within the Study Area may also be capable of accommodating new employment development yet may present greater challenges in delivering an acceptable design solution and/or satisfactory landscape and visual mitigation. The rising land to the south of the A14 and the relatively greater openness and visibility of the landscape in other parts of the Study Area will require particular attention for any proposals.
- 5.13 Overall, it is considered that the part of the Study Area east of Junction 25 and north of the A14 (including the 'J25 Bar Hill' Site) represents a suitable location for future employment development in landscape and visual terms and that this area is of no greater landscape or visual sensitivity (to future employment development) than any other parts of the Study Area. In fact, in landscape and visual terms, this area is potentially the most suitable part of the Study Area within which to successfully assimilate new employment development.



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Aerial imagery © Microsoft Corporation

-  Study Area
-  Greater Cambridge & Huntingdonshire Boundary
-  Green Belt Boundary
-  Site Boundary



client
Lolworth Developments Ltd

project
J25 Bar Hill
Bar Hill

drawing title
AERIAL PHOTOGRAPH
& STUDY AREA

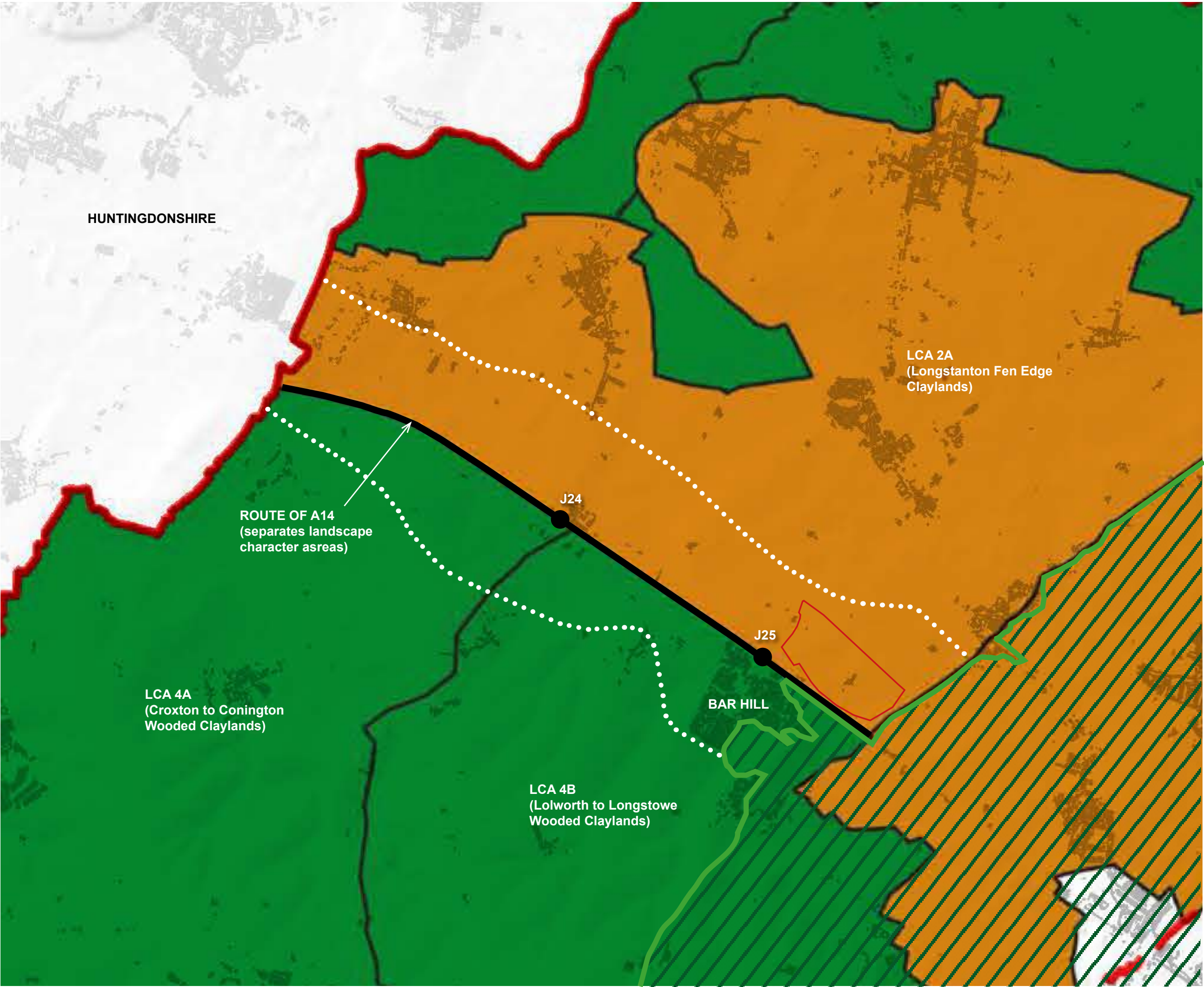
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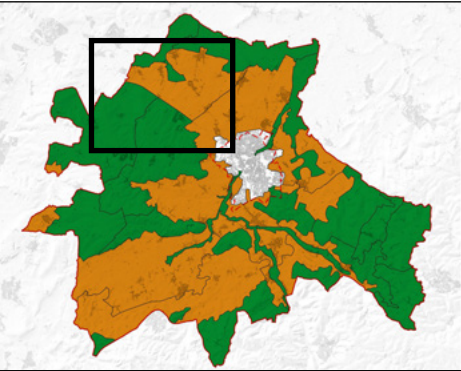
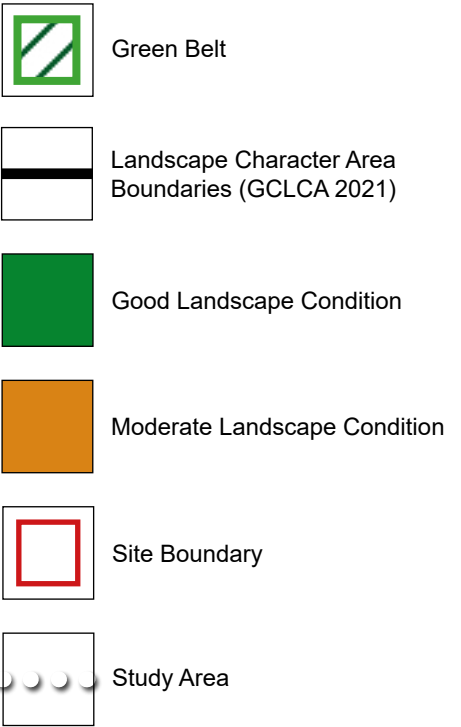
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Figure 1 A



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Extract of Fig 4.2 taken from the Greater Cambridge Landscape Character Assessment (Feb 2021)
Site Boundary, Study Area & Green Belt added to GCLCA Fig 4.2.





client
Lolworth Developments Ltd

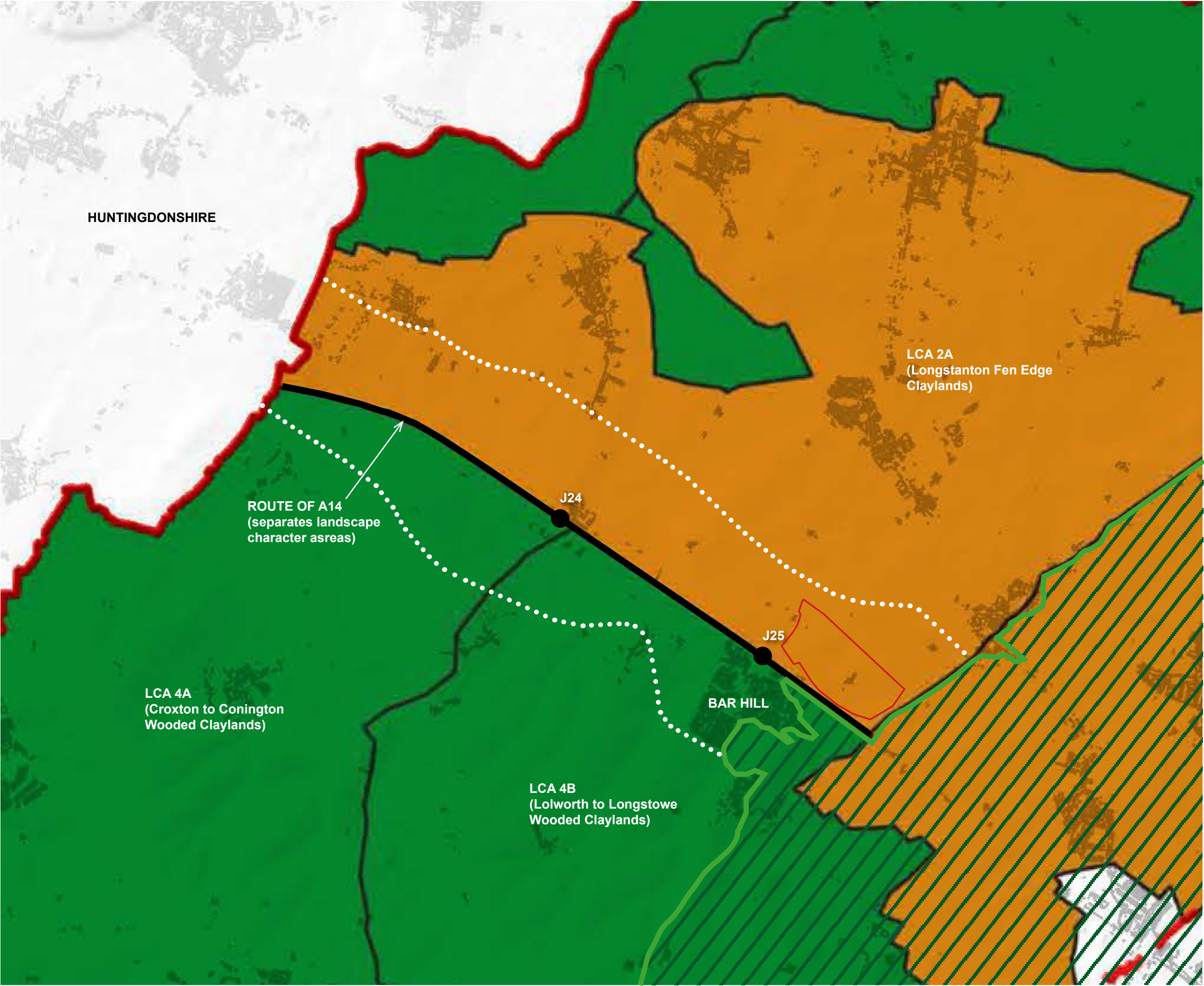
project
J25 Bar Hill
Bar Hill

drawing title
EXTRACT OF FIGURE 4.2
(CONDITION OF THE GREATER
CAMBRIDGE LANDSCAPE)
issue date 03 April 2023

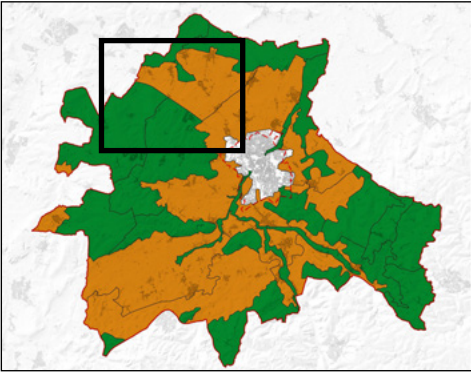
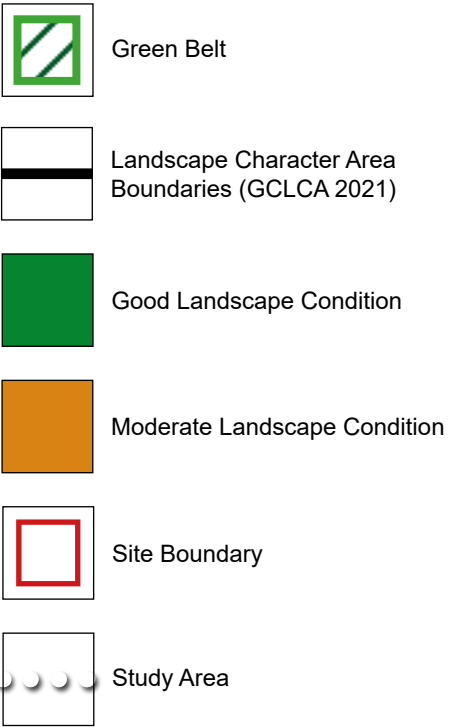
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Figure 2 A



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Extract of Fig 4.3 taken from the Greater Cambridge Landscape Character Assessment (Feb 2021)
Site Boundary, Study Area & Green Belt added to GCLCA Fig 4.3.





client
Lolworth Developments Ltd

project
**J25 Bar Hill
Bar Hill**

drawing title
**EXTRACT OF FIGURE 4.3
(STRENGTH OF CHARACTER OF THE
GREATER CAMBRIDGE LANDSCAPE)**

scale
NTS

drawn
IDR

issue date
03 April 2023

drawing / figure number

Figure 3

Appendix 4 Biodiversity Net Gain Technical Note (re. 13.12.21 Rep Appendix 4iii), prepared by FPCR, May 2023

Biodiversity Net Gain Technical Note

1 Introduction

- 1.1 This note has been produced by FPCR Environment and Design Ltd on behalf of Lolworth Developments Ltd. It details the results of a Biodiversity Net Gain Assessment carried out for a Site located in Bar Hill, Cambridge (hereafter referred to as '*the Site*'), following an Extended Phase 1 Habitat Survey including UKHab, condition and MoRPh assessments of on-site habitats and river corridor, carried out in September 2020 and July 2022, for use in the DEFRA 3.1 Metric.
- 1.2 The Site, approximately 100 ha in size, is dominated by large arable field compartments, with a small component of other neutral grassland and modified grassland in the field margins, with mature trees, areas of woodland, tall ruderal vegetation and river corridor also present.
- 1.3 The Site lies to the north-east of Bar Hill, Cambridgeshire (central grid reference TL 391 640). It is bordered by the A14 and A1307 roads to the south and west, a newly constructed road at its most northern boundary and Dry Drayton Road to the south-east. Farmland lies to the north-east and east.
- 1.4 The Site does not lie within an area covered by a Local Biodiversity Action Plan.
- 1.5 The Site comprises a mixture ecologically desirable and less valuable habitats. Which are assigned a varying degree of Strategic Significance in the baseline and post-development habitat assessment within the metric. Habitats of medium distinctiveness or better within the metric, have been considered of medium strategic significance 'Location ecologically desirable, but not in local plan', whilst habitats of low distinctiveness or worse within the metric, are not considered to contribute to the strategic value of the Site and are classed as lower strategic significance 'Area/compensation not in local strategy/no local strategy'.

2 Overview of Results of Existing Scenario

- 2.1 Habitats of greatest value included the mature trees, woodlands and river corridor, which will be retained, buffered and incorporated into green infrastructure provision where possible.
- 2.2 The remaining habitats consisted of arable field compartments with a small component of other neutral grassland and modified grassland in the field margins and hardstanding, considered to be of low ecological value and their loss does not pose a constraint to development.

3 Biodiversity Net Gain

Technical Information

- 3.1 Biodiversity Net Gain (BNG) is "an approach to development that leaves biodiversity in a better state than before"¹. When applying biodiversity net gain principles, developers are encouraged to bring forward schemes that provide an overall increase in natural habitat and ecological features. The aim of BNG is to minimise losses of biodiversity and help to restore ecological networks.
- 3.2 BNG is an integral part of the National Planning Policy Framework (e.g. NPPF, Para 174(a) and Para 174(d)) although it does not specify a number/percentage for the gain.
- 3.3 The Environment Act 2021 came into force on 9th November 2021, and is scheduled to become mandatory in November 2023. Of particular relevance is the requirement for all developments subject to the Town and Country Planning Act to provide an at least 10% BNG, as calculated using a Biodiversity Metric and a Biodiversity Gain Plan, with habitat used for net gain to be secured for a minimum of 30 years. Delivery of BNG may be on-site, off-site or undertaken using statutory

¹ Natural England 2022. Biodiversity Net Gain – An introduction to the benefits. Available at https://naturalengland.blog.gov.uk/wp-content/uploads/sites/183/2022/04/BNG-Brochure_Final_Compressed-002.pdf

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biodiversity credits. The requirement for BNG does not over-ride the need to apply the mitigation hierarchy (avoidance, mitigation, and compensation) when considering biodiversity assets and their loss and does not change existing environmental and wildlife legal protection.

- 3.4 Whilst the Act, once mandatory, requires, a 10% BNG delivery and for this to be a condition of planning permissions (Part 6 section 98 and Schedule 14 part 1), section 147 (3) states that this will only come into force once the secondary legislation is in place to support this requirement. Therefore, there is a transition period (the length of which is not defined but anticipated as being around 2 years) until the mandated 10% is required under law.
- 3.5 Natural England's published biodiversity net gain metric is an MS Excel spreadsheet that is used to quantify the predicted net-change in biodiversity value ("biodiversity units") of a proposed development site before and after development. It treats the flat "habitats" and linear features "hedgerows" separately, and is based on pre-determined values, along with published written guidance, set by a Natural England-led team of experts.
- 3.6 The latest version of the metric is 4.0, published in March 2023. For the purposes of this assessment metric version 3.1 (published in April 2022) was used to make initial calculations and has continued to be used for the calculations summarised in this document. This is in accordance with Natural England Guidance: *"Users of previous versions of the Biodiversity Metric should continue to use that metric (unless requested to do otherwise by their client or consenting body) for the duration of the project it is being used for. This is because users may find that certain biodiversity unit values generated in biodiversity metric 4.0 will differ from those generated by earlier versions"*
- 3.7 It may be appropriate to move to the 4.0 metric in the future, this will be agreed with the LPA in due course.
- 3.8 Policy BG/BG: Biodiversity and Geodiversity of the Reg 18 version of the Greater Cambridge Local Plan seeks a minimum of 20% BNG.

4 Biodiversity Net Gain Baseline & Post-Development

Analysis – Baseline Habitat Retention, Mitigation Hierarchy & Post-Development BNG Delivery

- 4.1 A preliminary baseline assessment of the habitats and river present on the Site, and based on the condition assessments, areas / lengths, habitat distinctiveness and strategic significance detailed in Tables 1 and 2 resulted in Site baseline of 250 Habitat Units and 9 River Units.

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Table 1. Baseline Habitat Assessment and Habitat Retention

UK Hab Habitat	Distinctiveness	Condition	Strategic Significance	Area (ha)			Habitat Units		
				Total	Retained	Lost	Total	Retained	Lost
Urban - Built linear features	V. Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	0	0	0	0	0	0
Urban - Developed land; sealed surface	V. Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	1	0	1	0	0	0
Total V. Low Distinctiveness Habitats				1	0	1	0	0	0
Cropland - Cereal crops	Low	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	89	0	89	177	0	177
Grassland - Modified grassland	Low	Poor	Area/compensation not in local strategy/ no local strategy	2	0	2	3	0	3
Sparsely vegetated land - Ruderal/Ephemeral	Low	Moderate	Area/compensation not in local strategy/ no local strategy	0	0	0	1	1	0
Total Low Distinctiveness Habitats				90	0	90	181	1	180
Woodland and forest - Other woodland; mixed	Medium	Moderate	Location ecologically desirable but not in local strategy	6	2	3	49	18	31

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UK Hab Habitat	Distinctiveness	Condition	Strategic Significance	Area (ha)			Habitat Units		
				Total	Retained	Lost	Total	Retained	Lost
Grassland - Other neutral grassland	Medium	Poor	Location ecologically desirable but not in local strategy	2	0	2	10	0	9
Grassland - Other neutral grassland	Medium	Moderate	Location ecologically desirable but not in local strategy	1	0	1	10	0	10
Total Medium Distinctiveness Habitats				9	2	7	69	18	50
Total V. Low, Low & Medium Distinctiveness Habitats				100	3	97	250	19	230

Please note there may be minor discrepancies (rounding errors) between the columns and the totals, however, the numbers duplicate those presented within the matrix calculator. All values have been rounded to 0 decimal places.

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Table 2. Baseline River Assessment and River Retention

UK Hab River Type	Distinctiveness	Condition	Strategic Significance	Length (km)			River Units		
				Total	Retained	Lost	Total	Retained	Lost
Other Rivers and Streams	High	Fairly Poor	Low potential/action not identified in any plan	1	1	0	7	7	0
Other Rivers and Streams	High	Moderate	Low potential/action not identified in any plan	0	0	0	2	2	0
Total High Distinctiveness River Type				1	1	0	9	9	0

Please note there may be minor discrepancies (rounding errors) between the columns and the totals, however, the numbers duplicate those presented within the matrix calculator. All values have been rounded to 0 decimal places.

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5 Site Proposals

- 5.1 FPCR (Landscape) were instructed by the client to adopt a landscape-led approach to inform how the proposed employment park allocation might be designed, in particular its Site layout. FPCR have therefore prepared an Indicative Landscape Strategy Plan to illustrate how that approach might be manifest across the whole 100ha Site (see FPCR Figure 9531-SK-02 REV D Indicative Landscape Strategy Plan at Annex A / below). FPCR (Ecology) have been instructed to undertake the BNG assessment based on this indicative landscape strategy plan.
- 5.2 Where a development entails the removal of habitats with “High” and “Medium” distinctiveness scores, this will result in a proportionally high loss of Biodiversity Units, requiring significant mitigation in order to compensate. Through close early-stage correspondence and collaboration with the client, the conscious decision was made to ensure these habitats were retained and incorporated into the green infrastructure where possible, in line with the Mitigation Hierarchy, forming a basis for post-development green infrastructure provision and delivery of a landscape-lead employment scheme, with a high proportion of green infrastructure.
- 5.3 Through this approach, and retention of habitats and rivers as summarised in Tables 1 and 2, the post-development scheme delivers 300 Habitat Units and 11 River Units, translating into a significant Biodiversity Net Gain of +20% in habitats and +17% in rivers, as shown in Tables 3 and 4.
- 5.4 The proposed river condition target for newly created stretches matches that of the river currently present on Site. It is considered that this is a precautionary initial approach and that that through sensitive design, further enhancement of these sections will be possible.

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Table 3. Site Habitat Creation

UK Hab Habitat	Distinctiveness	Condition	Strategic Significance	Total Area (ha)	Total Habitat Units	Proportion of Post-Development Habitat Area (%)
Urban - Artificial unvegetated, unsealed surface	V. Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	1	0	1
Urban - Built linear features	V. Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	3	0	3
Urban - Developed land; sealed surface	V. Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	50	0	49
Total V. Low Distinctiveness Habitats				55	0	54
Urban - Sustainable urban drainage feature	Low	Poor	Area/compensation not in local strategy/ no local strategy	1	1	1
Grassland - Modified grassland	Low	Poor	Area/compensation not in local strategy/ no local strategy	7	13	7
Sparsely vegetated land - Ruderal/Ephemeral	Low	Moderate	Area/compensation not in local strategy/ no local strategy	0	1	0
Total Low Distinctiveness Habitats				8	15	8

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UK Hab Habitat	Distinctiveness	Condition	Strategic Significance	Total Area (ha)	Total Habitat Units	Proportion of Post-Development Habitat Area (%)
Woodland and forest - Other woodland; mixed	Medium	Moderate	Location ecologically desirable but not in local strategy	10	43	10
Grassland - Other neutral grassland	Medium	Poor	Location ecologically desirable but not in local strategy	0	0	0
Grassland - Other neutral grassland	Medium	Good	Location ecologically desirable but not in local strategy	11	105	11
Heathland and shrub - Mixed scrub	Medium	Good	Location ecologically desirable but not in local strategy	12	107	11
Lakes - Ponds (Non-Priority Habitat)	Medium	Poor	Location ecologically desirable but not in local strategy	2	9	2
Lakes - Ponds (Non-Priority Habitat)	Medium	Moderate	Location ecologically desirable but not in local strategy	0	3	0
Lakes - Ponds (Non-Priority Habitat)	Medium	Good	Location ecologically desirable but not in local strategy	0	3	0
Urban - Urban Tree	Medium	Moderate	Location ecologically desirable but not in local strategy	2	8	2

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UK Hab Habitat	Distinctiveness	Condition	Strategic Significance	Total Area (ha)	Total Habitat Units	Proportion of Post-Development Habitat Area (%)
Total Medium Distinctiveness Habitats				38	276	37
Wetland - Reedbeds	High	Moderate	Location ecologically desirable but not in local strategy	1	9	1
Total High Distinctiveness Habitats				1	9	1
Total V. Low, Low, Medium & High Distinctiveness Habitats				102	300	100

Please note there may be minor discrepancies (rounding errors) between the columns and the totals, however, the numbers duplicate those presented within the matrix calculator. All values have been rounded to 0 decimal places. The above table includes urban trees, which account for 2 ha, this area is in addition to area based habitats, accounting for the discrepancy in the total area compared with the total area in Table 1.

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Table 4. Site River Creation

UK Hab River Type	Distinctiveness	Condition	Strategic Significance	Total Length (km)	Total River Units
Other Rivers and Streams	High	N/A - Other	Low potential/action not identified in any plan	1	2
Total High Distinctiveness River Type				1	2

Please note there may be minor discrepancies (rounding errors) between the columns and the totals, however, the numbers duplicate those presented within the matrix calculator. All values have been rounded to 0 decimal places.

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6 Estimated Biodiversity Net Gain Outcome

- 6.1 Through the retention of medium distinctiveness habitats, where possible, and the creation of significant green infrastructure, based on the above categorisations and inferences about likely target conditions for created habitats, the Site achieves an overall gain of +20% (+51 Habitat Units) and +17% (+2 River Units) as summarised in Table 5.

Table 5. Site BNG Delivery

On-site baseline	<i>Habitat units</i>	250
	<i>Hedgerow units</i>	0
	<i>River units</i>	9
On-site post intervention	<i>Habitat units</i>	300
	<i>Hedgerow units</i>	0
	<i>River units</i>	11
Total net unit change	<i>Habitat units</i>	51
	<i>Hedgerow units</i>	0
	<i>River units</i>	2
Total net % change	<i>Habitat units</i>	20%
	<i>Hedgerow units</i>	0
	<i>River units</i>	17%

LANDSCAPE LED PRINCIPLES

- Retain and reinforce existing mature tree belts and lines of trees to provide the landscape structure for the site and wherever practical the development plots with it.
- Add new landscape areas / corridors with native tree belts and trees to strengthen framework and connections.
- Deliver major biodiversity and landscape zone focussed along the existing watercourse in the south east. Mix of conserved and new mixed habitats to maximise biodiversity net gain and wide park amenity and informal recreation.
- Built development plots to sit within a robust and well connected landscape with easy access for all.



INDICATIVE LANDSCAPE STRATEGY PLAN

Appendix 5 Flood Risk, Foul Water Drainage and Surface Water Drainage: Update to Flood Risk Technical Appraisal (to 13.12.21 Rep Appendix 4i and 7.10.22 Letter), prepared by MJM April 2023

Date: 21/04/2023

Ref: 7437/CRS/ Update 02

Proposed Site Allocation at J25 Bar Hill, Cambridge – Update to Flood Risk technical appraisal

This update should be read in conjunction with the following:

- i. MJM original report dated 01/11/2021, appended to Lichfield's representation (dated 13th December 2021) to the Greater Cambridge Local Plan Preferred Options (Regulation 18) at Appendix 4i and has been expanded to include foul and surface water drainage.
- ii. MJM update report 01 dated 07/10/2022

Flood Risk

Since 07/10/2022 further detailed hydraulic modelling of Oakington Brook has been undertaken to assess the flood risk to the site taking into account flows into the Brook from the new A14 and A1307.

The modelling also takes into account various further comments made by the Environment Agency to WS Atkins who are preparing a similar hydraulic model as part of their involvement on the A14 works.

It is understood that the Atkins model has still not been signed off by the EA and there appears to be no sense of urgency to do so.

Our further modelling confirms as before that the flood risk and out of bank flow on the site is minimal. In any case the majority of the flooding and out of bank flow occurs on land to the north of the Brook that is not within our site curtilage.

Further discussions have been held with the EA and fees agreed for the EA to review our model to inform and assist the LDL promotion of the site for a major employment park allocation.

Therefore the conclusions and evidence presented in our previous reports dated 01/11/2021 and 07/10/22 remain valid and unchanged, namely that the site should be assessed as **Green** rather than **Amber** with regards to Flood Risk.

Foul Water Drainage

There remain no existing public foul sewers in the vicinity of the site.

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Engagement with Anglian Water is ongoing to procure a new adopted pumping station in the north west corner of the site and rising mains to the Uttons Drove treatment works.

A formal agreement will be entered into in due course between Anglian Water and LDL.

The pumping station will service the site via a network of gravity sewers and pumped rising mains within the site.

Surface Water Drainage

Discussions have been held with both the Environment Agency and Cambridge County Council ,who are the Lead Local Flood Authority for the area.

The main (72ha) part of the site east of the bridleway in the west of the site discharges naturally into Oakington Brook in the eastern part of the site.

The brook enters the site on the southern boundary with the A14 and A1307 and flows north east to leave the site on the northern boundary and onwards towards Oakington.

The brook also takes water from the new A14 and A1307

The surface water drainage system for this part of the site could incorporate a substantial network of lagoons, swales and reed beds mainly concentrated around and linked to Oakington Brook and on individual development plots , to provide surface water storage, flood relief and habitat enhancement.

Oakington Brook flows into the Cottenham Lode (both of which are classed as main river and therefore the responsibility of the EA) which in turn discharges into the River Great Ouse.

In an e-mail dated 29/09/2020 the EA stated *"Also just to make you aware that given the location of the site, we would be interested in how development here could potentially deliver flood risk benefit for the areas immediately downstream"*.

The local drainage in the area downstream around Oakington and beyond is the responsibility of the Old West Internal Drainage Board which in turn is part of the Ely Drainage Boards (EDB).

Contact has recently been made with the EDB who have advised that in times of high flow the Cottenham Lode becomes overloaded resulting in out of bank flows which then impact the Old West IDB network.

Information regarding our proposed development allocation has been sent to the EDB and the EA and the possibility raised that some flood relief storage could be provided on our site that would take water from Oakington Brook during high flows. We have requested information on the severity and frequency of the problems arising from Cottenham Lode.

The water would be stored on our site and then released back into Oakington Brook when flows have subsided. This flood water relief storage has the potential to offer significant benefit to the areas downstream.

The EDB have indicated verbally that in principle they would support such a proposal. A formal response is awaited from the EDB and further discussions will be held as required.

As mentioned above there is a natural "watershed" on the site along the route of the existing bridleway and avenue of mature trees toward the west of the site running from north-east to southwest towards the A14.

The 28ha area of site to the west of the watershed drains naturally towards the west into Longstanton Brook which runs adjacent to the western boundary of the site and then north into the catchment of the Swavesey Internal Drainage Board. The brook also takes water from the new A14 and A1307. This area of the site currently drains overland into Longstanton Brook with no attenuation or restriction.

The Swavesey catchment is prone to flooding when the Webbs Hole sluice into the River Ouse is locked during periods of high water levels in the river

Detailed discussions have continued with Swavesey IDB and their consultants Stantec and formal proposals submitted to provide a substantial volume of surface water attenuation on our site in the form of open ponds and swales and also below ground tanks, if required, all with controlled outlets to prevent discharge when the Webbs Hole sluice is locked.

This will provide some relief and enhanced protection from flood risk in the Swavesey catchment where none currently exists on our site.

Our proposal has been technically agreed in principle with Stantec and awaits final confirmation from the IDB. It is understood that Stantec have issued a technical note to the IDB regarding this proposal and we await their formal response.

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