

Land East of Cambridge Road, Hardwick, Cambridgeshire: High Level Transport Strategy

March 2019

1. Introduction

- 1.1 This note sets out the high-level transport strategy for development on Land East of Cambridge Road, Hardwick, Cambridgeshire. The strategy will guide the delivery of a sustainable development for which there is efficient, attractive and reliable non-car travel between the site and key destinations, therefore minimising transport impacts associated with congestion. It has been prepared on behalf of Hill Residential Ltd, for their promotion of the land at the Call for Sites stage of the emerging Greater Cambridge Local Plan.
- 1.2 The proposals at this early stage envisage development on two parcels comprising a residential-led mixed use development, with local community uses and associated infrastructure. The main site, of about 27ha, lies at the northern end of the village, east of Cambridge Road and south of St Neots Road. The smaller site, of about 1ha, lies towards the southern end of the village and east of Main Street.

2. Transport Policy Guidance

- 2.1 The National Planning Policy Framework (NPPF), February 2019, sets out the Government's planning policies for England and how these should be applied. It notes that:

Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health (paragraph 103).

- 2.2 It advises that, when assessing sites that may be allocated, or specific applications for development:

- (a) *Appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- (b) *Safe and suitable access to the site can be achieved for all users; and*
- (c) *Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree (paragraph 108).*

- 2.3 NPPF further advises (at paragraph 110) that, for development proposals, priority should be given first to pedestrian and cycle movements, and second – so far as possible – to facilitating access to high-quality public transport.

- 2.4 These national policy aims are reflected in the South Cambridgeshire Local Plan September 2018. Its Policy TI/2 'Planning for Sustainable Travel' notes that:

- 1. *Development must be located and designed to reduce the need to travel, particularly by car, and promote sustainable travel appropriate to its location;*

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2. *Planning permission will only be granted for development likely to give rise to increased travel demands, where the site has (or will attain) sufficient integration and accessibility by walking, cycling or public and community transport, including:*
 - (a) *Provision of safe, direct routes within permeable layouts that facilitate and encourage short distance trips by walking and cycling between home and nearby centres of attraction, and to bus stops or railway stations, to provide real travel choice for some or all of the journey*
 - (b) *Provision of new cycle and walking routes that connect to existing networks, including the wider Rights of Way network, to strengthen connections between villages, Northstowe, Cambridge, market towns, and the wider countryside;*
 - (c) *Protection and improvement of existing cycle and walking routes, including the Rights of Way network, to ensure the effectiveness and amenity of these routes is maintained, including through maintenance, crossings, signposting and waymarking, and, where appropriate, widening and lighting;*
 - (d) *Provision of secure, accessible and convenient cycle parking*
 - (e) *Securing appropriate improvements to public and community transport (including infrastructure requirements) in accordance with the aims of the Cambridgeshire Local Transport Plan and South Cambridgeshire Community Transport Strategy.*
 3. *Developers will be required to demonstrate they will make adequate provision to mitigate the likely impacts (including cumulative impacts) of their proposal including environmental impacts (such as noise and pollution) and impact on amenity and health. This will be achieved through direct improvements and Section 106 contributions and/or the Community Infrastructure Levy (CIL), to address transport infrastructure in the wider area including across the district boundary;*
 4. *Developers of 'larger developments' or where a proposal is likely to have 'significant transport implications' will be required to demonstrate they have maximised opportunities for sustainable travel and will make adequate provision to mitigate the likely impacts through provision of a Transport Assessment and Travel Plan. All other developments will be required to submit a Transport Statement. Where a Transport Assessment / Statement or Travel Plan is required, a Low Emissions Strategy Statement should be integrated;*
 5. *Travel Plans must have measurable outputs, be related to the aims and objectives in the Local Transport Plan and provide monitoring and enforcement arrangements. Planning obligations may be an appropriate means of securing the provision of some or all of a Travel Plan, including the requirement for an annual monitoring and progress report. Submission of area-wide Travel Plans will be considered in appropriate situations. Outline planning applications are required to submit a framework for the preparation of a Travel Plan.*
- 2.5 The key transport policy guidance for new developments from the NPPF and the adopted Local Plan is therefore to reduce the need to travel before then prioritising non-car modes of travel, focussing on accessibility by walking, cycling and public transport. Travel by the private car is at the bottom of the transport-user hierarchy.

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3. Transport Objectives for Land East of Cambridge Road, Hardwick

- 3.1 The brief review of transport planning guidance indicates that the transport strategy for Land East of Cambridge Road, Hardwick will need to focus on the following objectives:
- (a) Reduce the need to travel, particularly by private car; then
 - (b) Prioritise walking and cycling for local trips within the site and with surrounding areas over use of the private car, using high-quality walking and cycling connections to provide integration and connectivity with the existing built-up area of Hardwick, and linking through to Cambridge and Cambourne;
 - (c) In parallel, maximise public transport use through high-quality links with key destinations, including the City Centre and other key employment areas.
- 3.2 This strategy is partly in recognition of highway network capacity constraints during peak periods in the Cambridge area and associated concerns regarding air quality in the city. But it is also to address all residents' needs to access key services, employment areas and facilities by a choice of travel modes, along with promoting healthy lifestyles and sustainable, vibrant communities, and to encourage a permeable development which promotes walking and cycling trips on routes that are safe, logical, convenient and attractive.
- 3.3 The transport context for delivering the strategy is discussed below.

4. Transport Context for Land East of Cambridge Road, Hardwick

Site Location and Existing Travel Characteristics

- 4.1 The centre of the main site is located about 4.5 miles west of Cambridge City Centre, and 3.5 miles east of Cambourne. It has an extensive frontage with Cambridge Road and St Neots Road, although there is currently no access into the site from these roads.
- 4.2 There are a number of important local facilities in Hardwick, including a primary school, local shop and post office, village recreation ground, church and public house. These meet many of the day-to-day needs of existing local residents, reducing the need to travel outside the village.
- 4.3 The 2011 Census journey to work data on existing residents near the site indicates that about 80% travel to work by private car (this includes residents whose main mode of travel is train, as these would be likely to drive to the nearest railway station). About 7% travel by bus, 4% cycle and 2% walk. These mode shares are characteristic of the site's rural location. The main employment destination is Cambridge, with about 44% of local residents working in the city. South Cambridgeshire is the other main employment destination, with 36% of residents working in the district. This includes Cambourne, at only 3% of local residents at the time of the 2011 Census. This proportion is likely to have grown since 2011, as employment opportunities in Cambourne have increased.
- 4.4 Most of Cambridge City Centre is within 5 miles from the main site, and the University's key employment location at West Cambridge and the North West Cambridge ("Eddington") development are only about 3 miles from the main site. The Cambridge Biomedical Campus and the North East Fringe (including the Cambridge Science Park, Cambridge Business Park and St John's Innovation Centre) are within 6 miles of the site. These key employment locations are shown on Figure 1.

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- 4.5 Cambourne provides a number of employment opportunities, along with other local facilities such as secondary schools and shops, including a supermarket. Between Cambourne and Hardwick, a planning application has recently been submitted for a new village of some 3,500 dwellings on Bourn Airfield, as indicated on Figure 1. Plans for the Bourn Airfield site include ‘Bourn Quarter’ in the north-eastern corner of the airfield site, for which there are employment proposals of up to 350,000sqft floorspace.

Walking and Cycling Infrastructure

- 4.6 The site in the context of walking and cycling infrastructure is shown on Figure 2, including Public Rights Of Way in the vicinity of the site. There is a bridleway between Hardwick and Coton, and a public footpath to Cottenham. St Neots Road to the north of the village has on-road advisory cycle lanes, which connect with an off-road cycle route at the eastern boundary of Hardwick, about 0.5 miles from the junction with Cambridge Road. This off-road cycle route is part of the Cambridge Cycle Route network, and connects with the signed primary cycle network in Cambridge, providing onward connections with the city centre, the Cambridge Biomedical Campus and North East Cambridge (this part of the cycle network is being delivered by the Darwin Green development which is currently under construction).
- 4.7 The Department for Transport’s Local Transport Note 2/08 ‘Cycle Infrastructure Design’ advises that, for commuter journeys, cycling distances up to 5 miles are not uncommon. The key employment locations of the city centre and West Cambridge are therefore within a reasonable cycling distance of the site, which offers the potential for the cycling mode share for residents of the development to be appreciably higher than recorded in the 2011 Census.
- 4.8 Hardwick’s cycling accessibility will be significantly enhanced through transport improvements being promoted by the Greater Cambridge Partnership (GCP). These include a new shared footway / cycleway running alongside the proposed Cambridge Autonomous Metro (CAM), a rapid mass transit system for the Cambridge area. The GCP are currently consulting on the Cambridge City Centre – Cambourne section of the CAM as part of the “Cambourne – Cambridge Better Public Transport” project. This would run along St Neots Road either on- or off-road, along the northern boundary of the main site as shown on Figure 2. It would then continue into Cambridge via an off-road route passing the West Cambridge employment site before connecting with the primary cycle network at Grange Road in Cambridge. This would be the first phase of a wider CAM network for Cambridge, which is discussed later in this note.
- 4.9 The walkway / cycleway along the CAM network would also provide a high-quality connection with Cambourne to the west of Hardwick via the proposed Bourn Airfield development, as shown on Figure 2. Cambourne provides a number of local employment opportunities and facilities that would meet many of the day-to-day needs of local residents, as will the proposed Bourn Airfield development including its Bourn Quarter employment zone. The proposed CAM cycleway will make these easily accessible from the Land East of Cambridge Road, Hardwick by walking and cycling.
- 4.10 Other transport improvements are planned as shown on Figure 2 which will further enhance the walking and cycling accessibility of Land East of Cambridge Road, Hardwick, including:
- Walking and cycling infrastructure improvements along Madingley Road between the M11 junction and Northampton Street, such as widening of existing cycleways, priority measures at junctions, and new crossings. Detailed work on these improvements is being prepared by the GCP, and will provide improved options to access the city centre by cycling;
 - A potential new Park and Cycle site near the M11 Junction 12. This is subject to a detailed business case being prepared by the GCP as part of their West of Cambridge Transport Package (further details later in this note). It would mean that Hardwick residents could drive to the new Park and Cycle site, and then continue their journey into Cambridge by cycle; and

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- Local cycle improvements in Hardwick, such as new cycle parking provision at existing bus stops on St Neots Road being delivered as part of the Hill Residential development on land at Wallis Farm to the south of the village. This will mean that residents towards the south of the village, including the smaller proposed site on Land East of Cambridge Road, Hardwick, would be able to cycle along Main Street and Cambridge Road, park their cycles safely and securely at the bus stop and then interchange with buses to Cambridge / Cambourne.

Public Transport Services and Infrastructure

- 4.11 The sites in the context of public transport services and infrastructure is shown on Figure 3. This shows that the main site in particular has good access by public transport. The Citi 4 bus service calls at stops on St Neots Road up to every 20 minutes. Operated by Stagecoach, it provides connections between Cambourne, Hardwick, the Madingley Road Park and Ride site and the city centre, with a journey time to the city centre from Hardwick of about 25 – 30 minutes during peak periods, and to the West Cambridge site of about 15 minutes.
- 4.12 This public transport accessibility will be significantly enhanced through the GCP's CAM rapid mass transit system for the Cambridge area. It will provide a step-change in public transport for the Cambridge area, with high-quality public transport connections linking key employment locations with housing growth sites. The CAM proposals include a new Park and Ride site at either Scotland Farm immediately north of Hardwick or the Waterworks site, near Madingley Mulch, as indicated on Figure 3. This would be a relocated Park and Ride facility from the existing site on Madingley Road.
- 4.13 The first phase of the CAM network would run along the St Neots Road corridor at surface level immediately north of the main site, linking Cambourne, Bourn Airfield and Hardwick with Cambridge. The GCP has agreed an off-road alignment of this first phase between Madingley Mulch and the city centre as indicated on Figure 3. The section between Madingley Mulch and Cambourne is currently being consulted on as part of the Cambourne to Cambridge Better Public Transport project, with two on-road route options and one off-road route option. All options would run along the northern boundary of the main site, with a stop in the vicinity of the Cambridge Road junction immediately northwest of the main site. This will mean Land East of Cambridge Road, Hardwick would have excellent public transport accessibility with the first phase of the CAM network in place. Later phases of the CAM network will include routes within the city centre that run in tunnels, and provide high-quality public transport connections with the Northern Fringe East, Cambridge station and the Cambridge Biomedical Campus.
- 4.14 Delivery of the Cambourne to Cambridge phase of the CAM is proposed for delivery by 2024, which would be before the development of Land East of Cambridge Road, Hardwick.
- 4.15 The Cambourne to Cambridge CAM network is part of a wider package of transport improvements being prepared by the GCP, called the West of Cambridge Transport Package. This includes a potential new Park and Ride site immediately north west of the M11 Junction 11 to replace the existing Trumpington Park and Ride site, along with bus priority measures at Junction 11.
- 4.16 An aim of the West of Cambridge Package is to provide a high quality-public transport connection between Cambourne and the Cambridge Biomedical Campus via the M11 between Junctions 13 and 11. The GCP are discussing options for appropriate improvements to this section of the M11 with Highways England, who themselves are investigating the potential to upgrade this section of the M11 to a Smart Motorway, i.e. using the hard shoulder as a permanent running lane.
- 4.17 This West of Cambridge Package is a longer-term project but nevertheless will assist with the public transport accessibility of the Land East of Cambridge Road, Hardwick to the key employment location of the Cambridge Biomedical Campus.

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- 4.18 Hardwick's public transport accessibility could be further enhanced by proposals for East West Rail, in particular options for the section of East West Rail between Cambridge and Bedford. A public consultation has recently been undertaken on this, with five route corridors identified between the East Coast Mainline and Cambridge station. Two route options include a new railway station at Cambourne and the route into Cambridge running to the south of Hardwick, as indicated on Figure 3. The remaining options would have a new station at Bassingbourn to the south instead.

5. Transport Strategy for Land East of Cambridge Road, Hardwick

Reduce the Need to Travel

- 5.1 Land East of Cambridge Road, Hardwick will include a range local services and facilities, which are being promoted so that future residents of the development can meet many of their day-to-day needs within the site, therefore reducing the need to travel further afield into Cambridge and Cambourne. This will reduce the development's impacts on transport infrastructure and services in the Cambridge area.
- 5.2 Achieving this strategy objective will be partly a function of the facilities and services provided within the site, and therefore how the masterplan is designed. Distances to local services and facilities within the site will be relatively short, maximising the opportunities for access to these day-to-day activities to be made on foot and cycle. The site will include a comprehensive network of foot and cycle paths to provide safe, logical, convenient and attractive links to the facilities and services. Many streets within the development will have pedestrian and cycle priority. The design principles in the Department for Transport's Manual for Streets will be applied, which notes that well-designed streets have a crucial role to play in the delivery of sustainable communities. The objective is to help create a high-quality development, creating the feeling of a sense of 'place' in which people experience 'streets' and not 'roads' within the development.
- 5.3 An important element of the design of the development will be to enable easy permeability and connectivity with the existing built-up area of Hardwick, so that the site becomes integrated with the village. This will be achieved through changes to Cambridge Road and Main Street as appropriate, including new footways / cycleways and crossing opportunities. Opportunities will therefore be available for residents of the development to access existing facilities within Hardwick on foot or cycle.
- 5.4 Likewise, an important aspect of reducing the need to travel and creating a strong community is that the development's services and facilities would be available to existing Hardwick residents, easily accessible on foot or cycle. The Land East of Cambridge Road, Hardwick therefore provides the opportunity to reduce the need to travel for existing residents of the village.
- 5.5 The site's location itself provides a good foundation for encouraging sustainable transport modes of travel and reducing the need to travel by car. It has good access with Cambridge city centre and key employment areas, the non-car accessibility of which will be significantly enhanced through the package of transport improvements already planned for Cambridge and described above.

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- 5.6 Reliance on travel by private car by Land East of Cambridge Road, Hardwick residents will therefore be minimised because, supported by the promotion of walking, cycling and public transport described below, they will have good access to existing local services and facilities for employment, shopping, leisure, education and other activities by sustainable modes of transport. This meets one of the key objectives of the transport strategy for Land East of Cambridge Road, Hardwick, that of reducing the need to travel.

Prioritising Walking and Cycling for Local Trips

- 5.7 The main site will have excellent access to the GCP's CAM network and its adjacent shared footway / cycleway. This will provide excellent non-car access between the site, West Cambridge and Cambridge city centre, along with further local facilities, services and employment opportunities in Cambourne and those proposed at Bourn Airfield.
- 5.8 The development will provide high-quality walking and cycling connections to this CAM cycleway, with logical, safe and convenient routes through the main site, so that the CAM is easily accessible for residents of the development.
- 5.9 The main site has an extensive frontage along its northern boundary with the indicative route of the CAM, so easy connections should be available. Furthermore, the main site would be designed so that it has walking and cycling routes through it to assist with the accessibility of the smaller site with the CAM network, as well as the rest of the southern part of Hardwick.
- 5.10 As noted above, logical connections will be provided with the existing built-up area of Hardwick, to achieve good connectivity and therefore assist with the integration of the Land East of Cambridge Road, Hardwick with the rest of the village, including the existing primary school, local shop and post office.
- 5.11 Walking and cycling will be encouraged as part of a Travel Plan that will be prepared for the development. A Travel Plan Co-ordinator will promote the Travel Plan, and provide a Personalised Travel Planning (PTP) offer to residents to identify how walking and cycling can easily meet their travel needs whilst also assisting with healthy and active lifestyles.
- 5.12 Walking and cycling is not just about achieving sustainable travel from A to B. They are important recreational activities in themselves, providing valuable opportunities for healthy and active lifestyles and improving well-being. The development will therefore provide high quality access to the Public Rights Of Way around the site, so that residents will be able to access and enjoy the surrounding countryside on foot and cycle.
- 5.13 Through the promotion of walking and cycling, and the accessibility of the high-quality walking and cycling infrastructure linking Hardwick with key destinations, the development will achieve the key objective of prioritising walking and cycling for local trips both within the site and with the surrounding areas.

Maximising The Use of Public Transport to Key Destinations

- 5.14 Phase 1 of the CAM network – the Cambourne to Cambridge Better Public Transport project – and the West of Cambridge Package being promoted by the GCP will enable excellent public transport connectivity between the site and the key employment locations at West Cambridge, the city centre and the Cambridge Biomedical Campus. This is likely to be complete prior to development at Land East of Cambridge Road, Hardwick. In the short term before the CAM network is developed, the Citi 4 service provides good connectivity for Hardwick with Cambridge and Cambourne.

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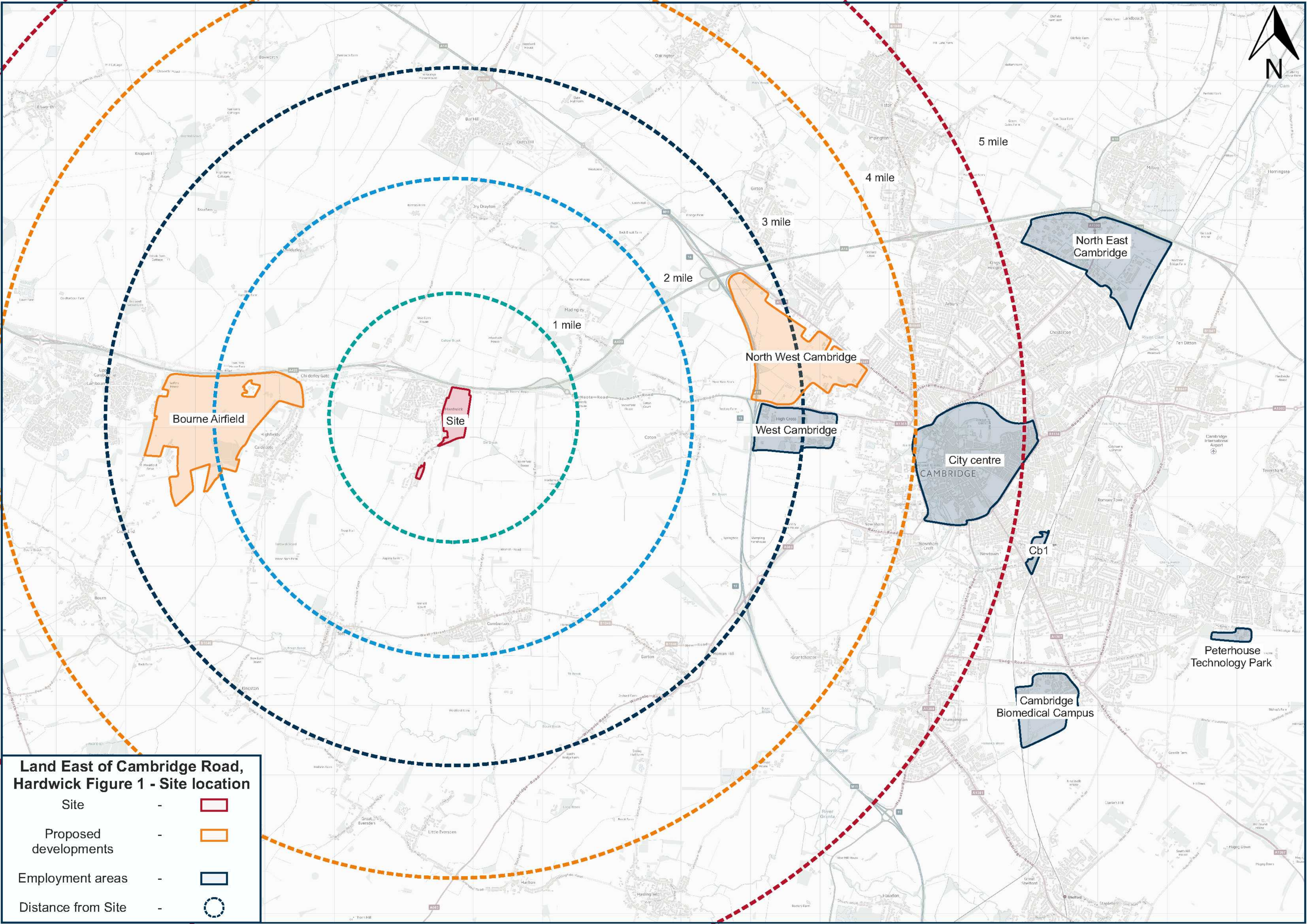
- 5.15 To maximise the use of public transport to access key destinations, the strategy for the development will therefore include proactive and sustained encouragement to residents to use the CAM network, with the potential for one month's free travel when they first move to the site. This would be part of the Travel Plan for the development, including a Travel Plan Co-ordinator on-site to assist with residents' travel needs. This would be part of a PTP service that would be available to residents.
- 5.16 In the medium term, the CAM network would provide a high-quality public transport connection to the North East Fringe, another key employment site, as indicated on Figure 3, and Land East of Cambridge Road, Hardwick could assist with the delivery of this. Should some development of Land East of Cambridge Road, Hardwick come forward prior to this CAM connection, Land East of Cambridge Road, Hardwick could assist with the introduction of high-quality conventional bus connections between Cambourne, Bourn Airfield and the North East Fringe via the North West Cambridge site.
- 5.17 With the completion of the CAM route between Cambourne and Cambridge, planned for delivery by 2024, Hardwick residents would have a genuinely competitive alternative to the private car which is rapid, reliable and, for the most part, segregated from cars, and which will provide excellent public transport accessibility with the key employment locations in the Cambridge area as shown on Figure 3. The CAM would therefore facilitate two of the three main objectives for the development, i.e. encouraging public transport and promoting walking and cycling (via the CAM's adjacent cycleway).

Vehicular Access Strategy

- 5.18 The sites have extensive frontage with St Neots Road / Cambridge Road / Main Street, from which vehicular access could be taken. Given the site's frontage with Cambridge Road, the development also has the opportunity to address local concerns that on-street parking on Cambridge Road in the vicinity of the primary school and the shop, i.e. north of Limes Road, effectively limits Cambridge Road to single lane running at this location, with northbound vehicles required to travel on the southbound lane. There is the potential to redesign the road layout at this location so that two vehicles can pass each other whilst still maintaining the parking for the local shop. Alternatively, there is potential to explore the possibility of a new street through the main site between Cambridge Road and St Neots Road, which could reduce the level of vehicular traffic on Cambridge Road in the vicinity of the primary school and shop. This may also assist with achieving the permeability and connectivity of the main site with the existing village.

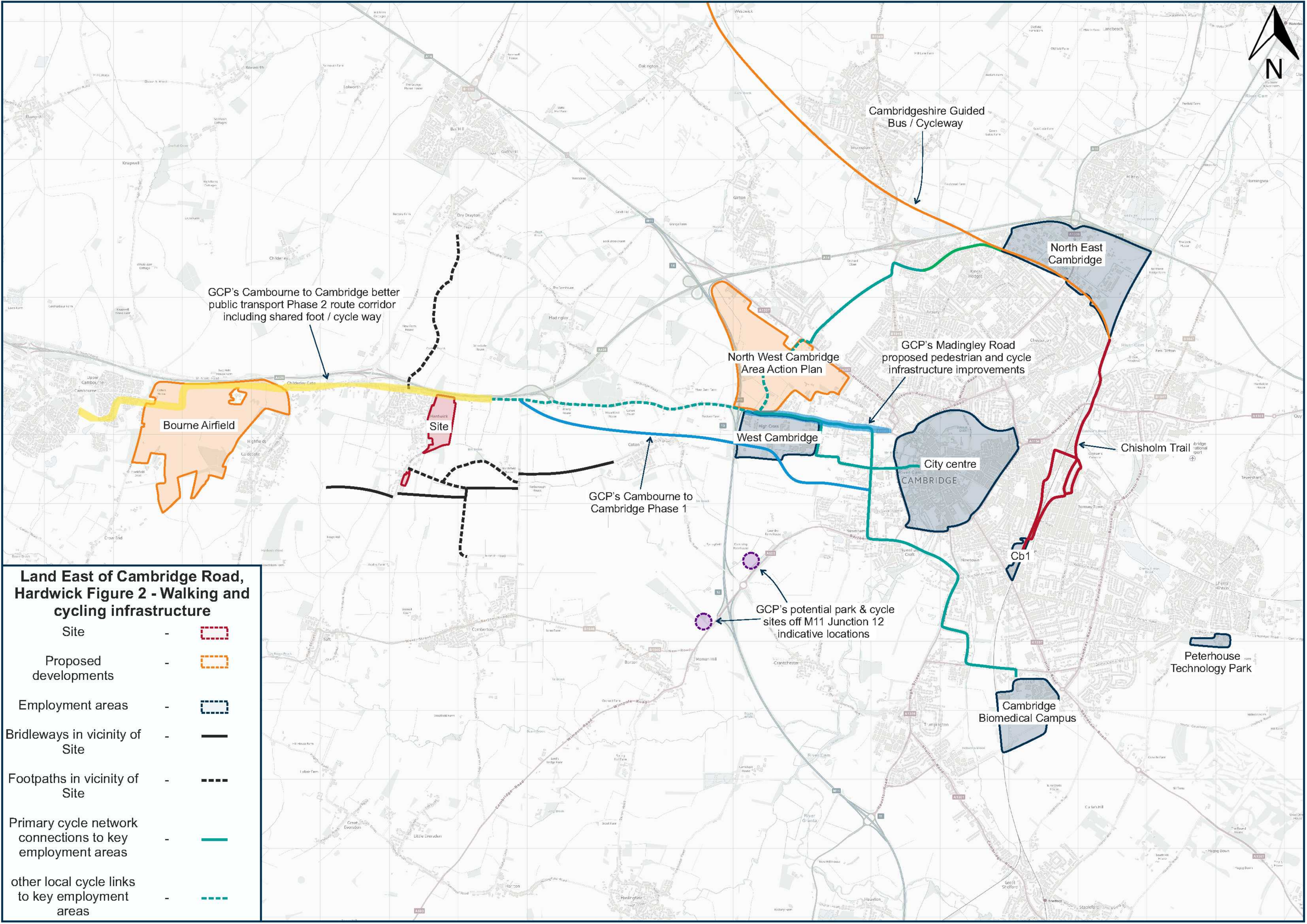
6. Summary

- 6.1 This high-level transport strategy aims to deliver a development in which residents have excellent access by walking, cycling and public transport with key destinations in Hardwick and the surrounding area. It guides the delivery of a sustainable development that is integrated with existing walking, cycling and public transport networks, so that the development has excellent connectivity with surrounding areas by these modes, as well as permeability through the site.
- 6.2 Along with the proposed mix of uses and the Travel Plan, the strategy therefore aims to deliver a vibrant and healthy community at Land East of Cambridge Road, Hardwick with a choice of travel modes, and in which reliance on travel by private car is minimised.



**Land East of Cambridge Road,
Hardwick Figure 1 - Site location**

- Site - 
- Proposed developments - 
- Employment areas - 
- Distance from Site - 



GCP's Camboorne to Cambridge better public transport Phase 2 route corridor including shared foot / cycle way

Cambridgeshire Guided Bus / Cycleway

North West Cambridge Area Action Plan

GCP's Madingley Road proposed pedestrian and cycle infrastructure improvements

North East Cambridge

Bourn Airfield

Hardwick Site

West Cambridge

City centre
CAMBRIDGE

Chisholm Trail

GCP's Camboorne to Cambridge Phase 1







Cb1

GCP's potential park & cycle sites off M11 Junction 12 indicative locations

Peterhouse Technology Park

Cambridge Biomedical Campus

Land East of Cambridge Road, Hardwick Figure 2 - Walking and cycling infrastructure

- Site - 
- Proposed developments - 
- Employment areas - 
- Bridleways in vicinity of Site - 
- Footpaths in vicinity of Site - 
- Primary cycle network connections to key employment areas - 
- other local cycle links to key employment areas - 