LAND NORTH of Wilbraham Road

Fulbourn

Vision Document

March 2019

COUNTRYSIDE
Places People Love

jtp

STRUTT & PARKER
BNP PARIBAS GROUP

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wsp

Site location ver_image

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THE TEAM

COUNTRYSIDE

Countryside is a top 10 PLC home builder specialising in place making and urban regeneration, recognised as being at the forefront of the delivery of sustainable new communities.

Countryside's achievements are exemplified by the receipt of more than 340 awards since 2000, holding more Housing Design Awards than any other home builder.

We have significant experience of working alongside South Cambridgeshire District Council, notably in relation to Great Kneighton at Trumpington, which is an award winning scheme and at Bourn Airfield where we are creating a new village.

JTP

JTP is an award-winning international placemaking practice of architects and masterplanners with extensive experience of delivering successful projects for both private and public sectors throughout the UK, Europe, China, Russia and the Middle East.

From our studios in London and Edinburgh we undertake placemaking projects at every scale, from cities and towns, to neighbourhoods, streets and the design of individual buildings; creating new places and breathing life into old ones.

We approach all our projects through a process of understanding, engaging, and creating, which together we call 'Collaborative Placemaking'. We are passionate about placemaking and our unique approach has received high praise, recognised with over 200 design awards over the past twenty years.

JTP was named Building Awards' Architectural Practice of the Year in 2017, BD's Masterplanning and Public Realm Architect of the Year in 2016 and listed in the Sunday Times 100 Best Small Companies to Work For 2018.

NEIL TULLY

Neil Tully Associates are a small team of urban designers, landscape architects and horticulturalists, based in central London and operating throughout the UK and overseas.

The practice is led by Neil who has over 35 years' experience in environmental consultancy and has been responsible for the delivery of significant landmark schemes both in the UK and abroad.

The practice's overriding objective when approaching any commission is to create a sense of local identity and 'Place' which defines and reflects the users' needs and the restraints of engineering and adoptability whilst maintaining high aesthetic standards.

STRUTT & PARKER

Strutt & Parker is a leading provider of commercial, residential and rural consultancy services, employing more than 1,000 people across a network of 58 offices. Strutt & Parker's success is in part a result of the legacy created by founders Edward Strutt and Charles Parker. They instilled a sense of collaboration and dedication that is integral to the way we work today. It has fostered a commitment to ensuring we are at the forefront of the market with unparalleled levels of expertise in all of our teams.

In October 2017, BNP Paribas Real Estate (BNPPRE) and Strutt & Parker merged to form a combined business, offering clients property advice and partnership opportunities across a whole range of real estate activities, placing us as the most balanced real estate advisor in the UK with a combined turnover of £165 million. Our depth of resource has increased to 1,500 people and geographic reach to 67 offices in the UK.

Our service is built around real estate for a changing world and we are committed to innovation and new working practices, digitalisation and being best in class in Europe for quality of client services.

WSP

WSP is a globally recognized engineering consultancy employing 36,000 people.

We have a combined 130 year history with roots in the United States, Canada and the UK. In the UK we have over 7,100 staff in the UK including 2,100 experts taking a lead role on major transport projects for a broad range of public and private clients.

WSP has been established within the UK for over 30-years providing a range of development planning services for the private and public sector. Our team of experts are dedicated to enabling our clients to create viable and deliverable development schemes. In particular our development planning and infrastructure business is experiencing strong growth across the UK due to our wide ranging experience, capabilities, knowledge and integrated approach to delivering development planning services. We provide a full range of development planning services that bring together recognised experts from specialist disciplines to deliver our major projects.

INTRODUCTION

LAND NORTH OF WILBRAHAM ROAD - A GARDEN VILLAGE

A new PLACE not a suburb.

Respecting and enhancing the BEAUTIFUL LOCATION. It is surrounded by distinctive landscape on 3 sides.

DELIVERABLE and VIABLE over the next 5-25 years. Participation from the new and existing community will drive the vision.

HOMES for EVERYONE – a variety of neighbourhoods of different character with beautifully designed homes and open spaces.

A perfect balance of LIVING, WORKING and VISITING, within walkable neighbourhoods.

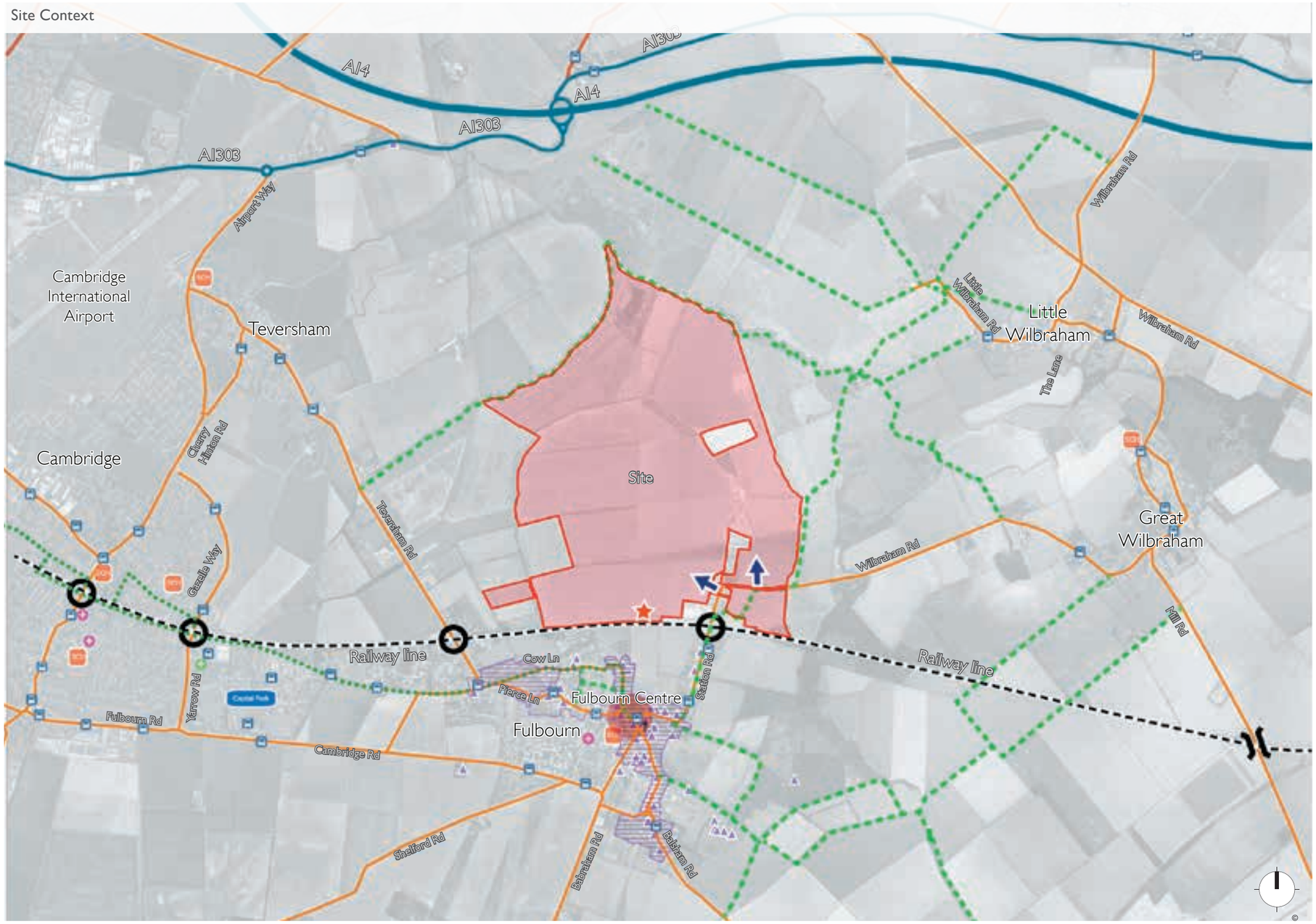
Delivery of SUSTAINABLE transport modes, futureproofed for future trends.

VILLAGE CENTRE - a hub creating leisure and community destinations with a rich mix of uses, designed with and managed by the community.

Employment centres: the INNOVATION QUARTER and BUSINESS PARK.

UNDERSTANDING
SITE CONTEXT

Site Context



SITE CONTEXT

Fulbourn is well located, to the east of Cambridge, with good access to frequent bus services and strong provision for walking and cycling.

There is potential for a new railway station on this site. It is located close to the A14 and A1303.

The Site is located immediately north of the railway line running eastwards from Cambridge.

The Site measures approximately 234 hectares and comprises arable land, hedgerows, drainage ditches, woodland and a pond at the northern section and along the eastern boundary.

The northern boundary of the Site is located adjacent to Wilbraham Fens Site of Special Scientific Interest (SSSI).

The southern boundary abuts the railway line running east from Cambridge. Aerial imagery reveals that the site is approximately 90% arable land.

The wider area is dominated by agricultural land, comprising arable, small watercourses and pockets of deciduous woodland.

UNDERSTANDING
SITE CONTEXT

Wilbraham Fens (SSSI)

Fulbourn High Street character

Landscape character

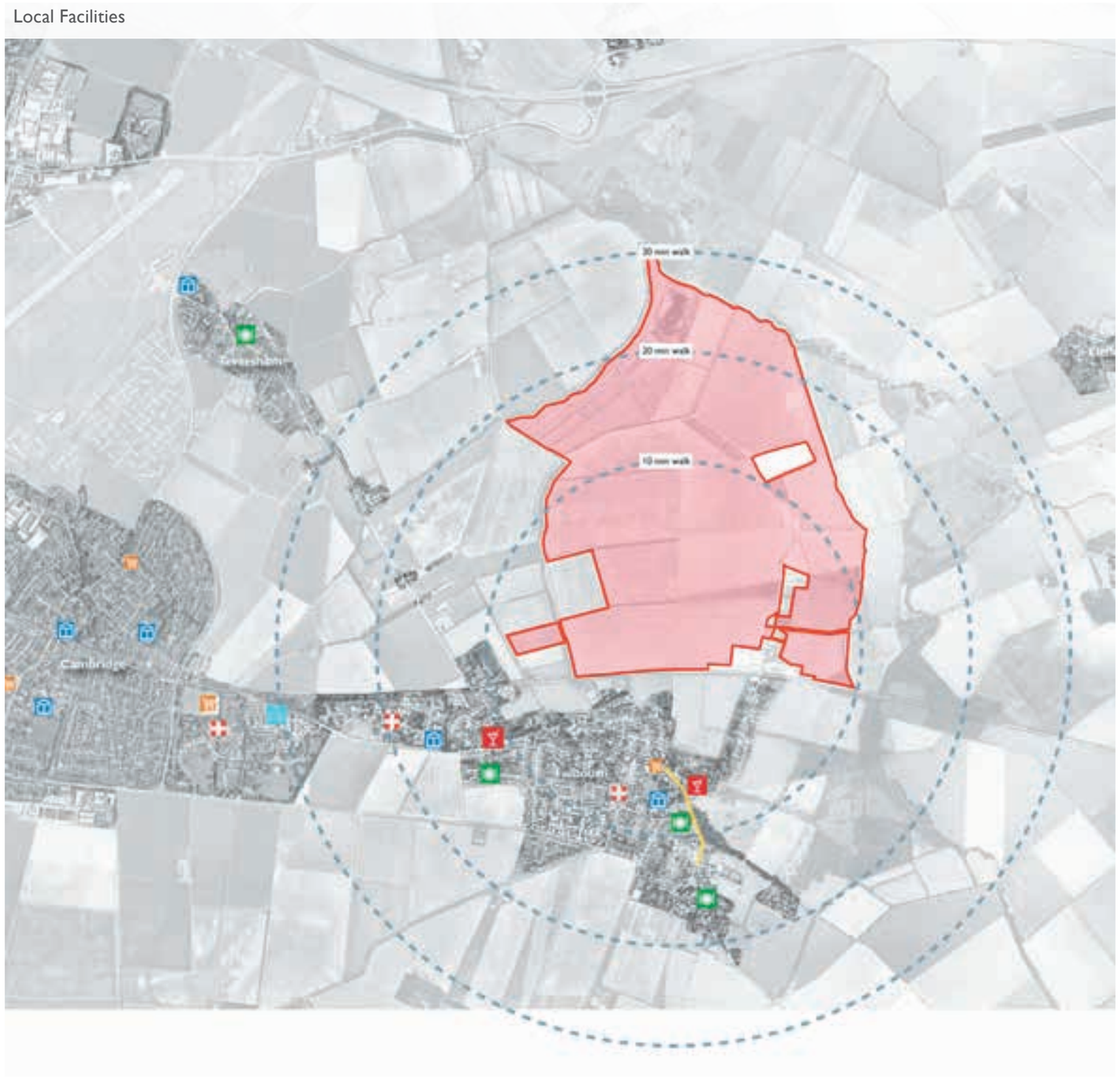
Distance to neighbouring villages

Footpath along Caudle Ditch

Fulbourn High Street character

UNDERSTANDING
PLANNING CONTEXT

Local Facilities



The site is located north of Fulbourn village, beyond the Cambridge to Newmarket railway. It is also located entirely within the Cambridge Green Belt and there is an area to be northern of the site that is designated as a SSSI. These are the main constraints of the site.

Fulbourn is identified in the current South Cambridgeshire Local Plan as a Minor Rural Centre (Policy S/9). These are described as 'having a lower level of services, facilities, and employment than Rural Centres, but a greater level than most other villages in South Cambridgeshire, and often perform a role in terms of providing services and facilities for a small rural hinterland'. The current policy permits 'Residential development and redevelopment up to an indicative maximum scheme size of 30 dwellings…within the development frameworks of Minor Rural Centres'.

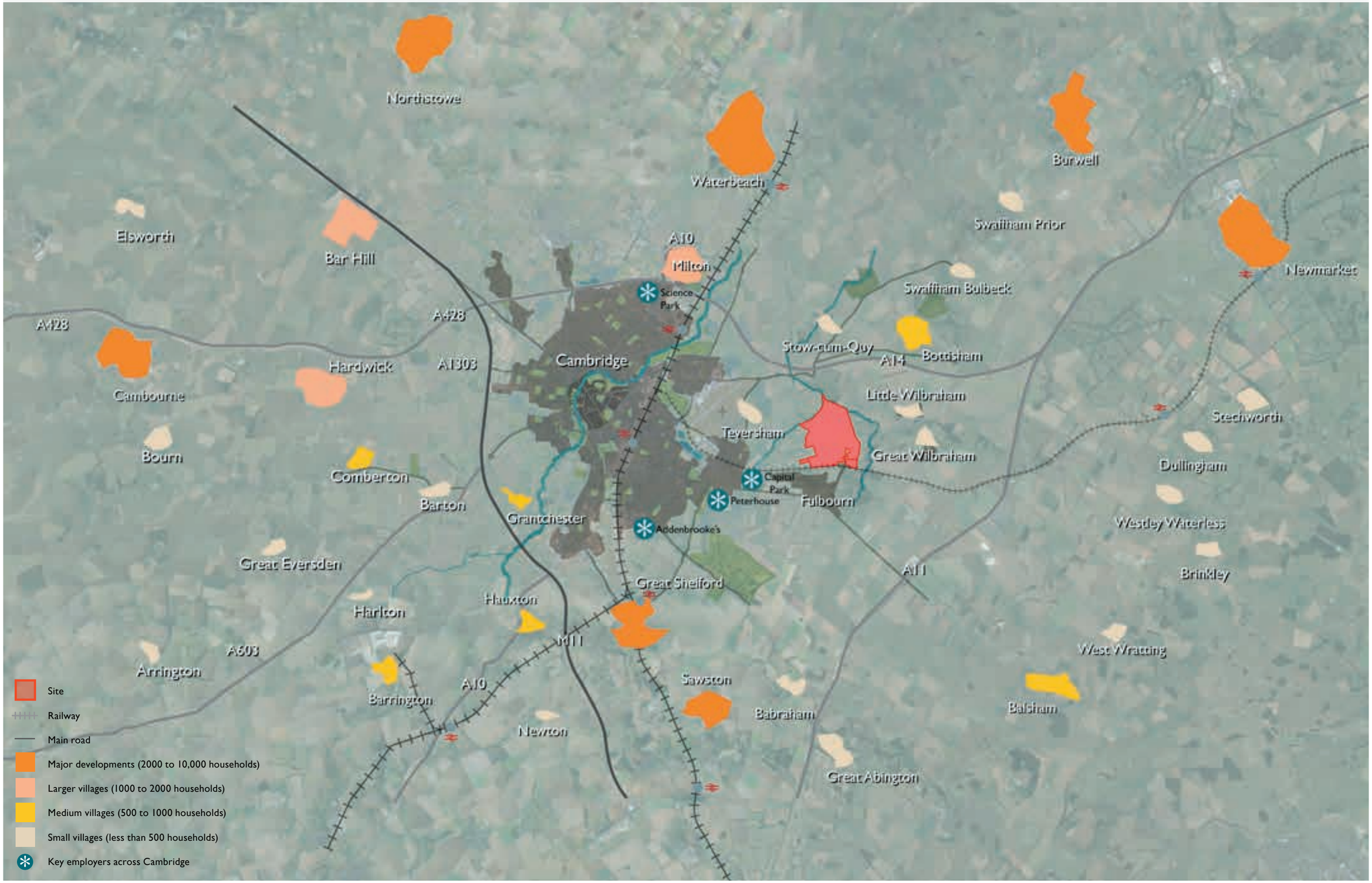
The allocation of this site for a residential-led mixed use scheme would require the Green Belt boundary to be amended. Paragraph 136 of the NPPF states that Green Belt boundaries should only be altered where exceptional circumstances are fully evidenced and justified through the preparation and updating of plans. We believe that the release of this site would unlock significant economic, social and environmental benefits which would outweigh any harm which can be justified through the Local Plan process.

The NPPF sets out the five purposes of Green Belts (para. 135), which seek to a) check the unrestricted sprawl of large built-up areas; b) to prevent neighbouring towns merging into one another; c) to assist in safeguarding the countryside from encroachment; d) to preserve the setting and special character of historic towns; and e) to assist in urban regeneration, by encouraging the recycling of derelict and other urban land'. The NPPF also states that green belt boundaries can be altered in exceptional circumstances where they are fully justified through the preparation or updating of local plan, and where it is concluded necessary to release Green Belt land the impact of doing so should be off-set through compensatory improvements to the environmental quality and accessibility of the remaining Green Belt land.

A significant proportion of the site would be retained as open space thus maintain openness and accessible to the countryside whilst providing a landscaped buffer to the SSSI to the north. This would also prevent the coalescence of Teversham and Fulbourn. The location of the site would also not impact the heritage assets of the surrounding villages as the built area would be contained around a strategic landscape buffer. We believe there are significant compensatory improvement that the allocation of the site could unlock such as the delivery of much need housing close to well established employment parks/ areas with existing public transport links, and the potential reopening of the railway line. This would help to significantly reduce the need to travel into the City Centre by private car and reduce congestion on local roads.

Furthermore, there is increasing evidence (such as that set out in the Cambridge & Peterborough Independent Economic Review) that these exceptional circumstances exist – namely that the recent 'Growth is employment has not been matched by corresponding house-building, or developments infrastructure', and that 'We are rapidly approaching the point where even high-value businesses may decide that being based in Cambridge is no longer attractive. If nothing is done, the damage to society from the continuing drift away of less well-paid workers may become irreparable'.

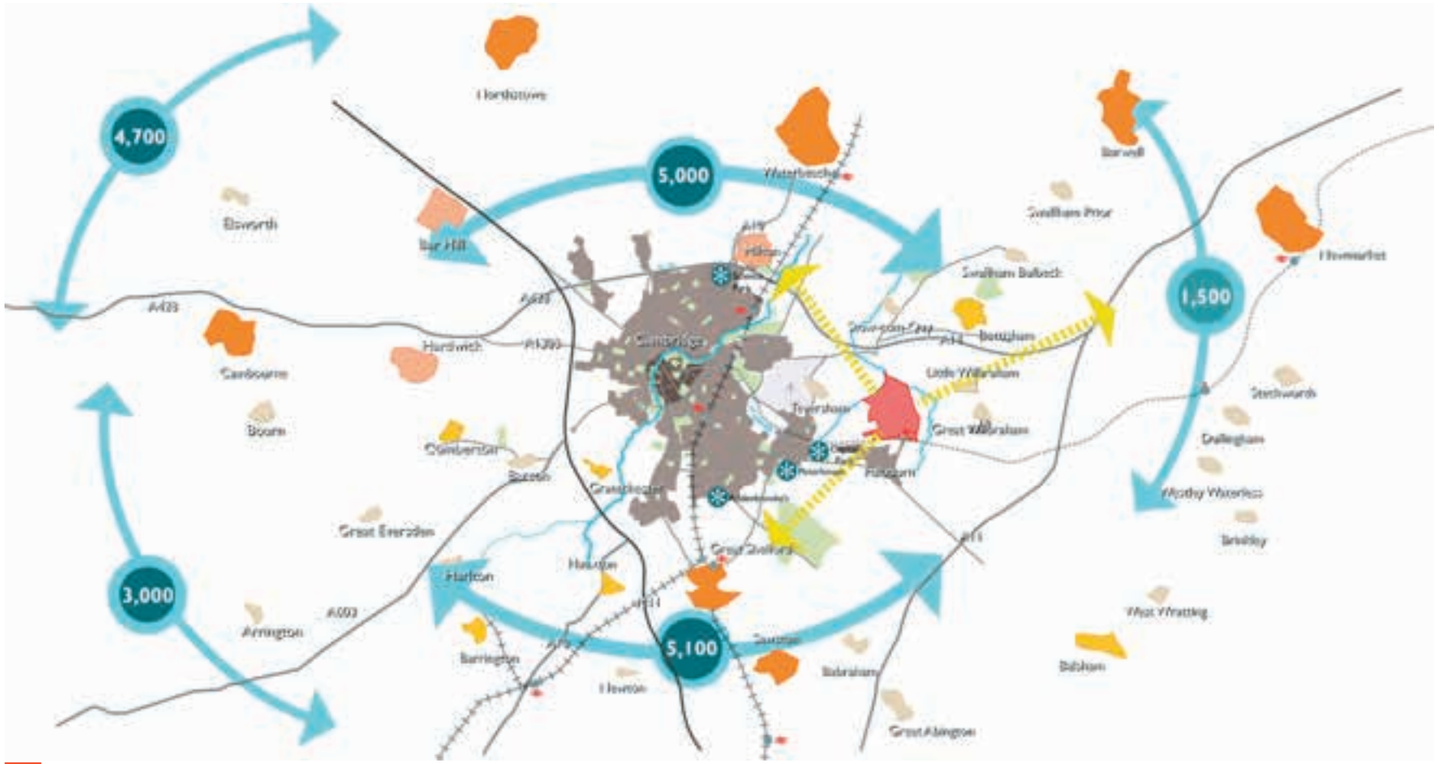
Wider context around Cambridge



UNDERSTANDING
BIGGER PICTURE AND KEY STATISTICS

CONTEXT

There are no planned new settlements to the east of Cambridge, most are located north, south and west. The City of Cambridge and South Cambridgeshire have a vibrant economy and growing population, as highlighted in this diagram:



- Site
- Railway
- Main road
- Key Employment Areas
- Major developments (2000 to 10,000 households)
- Larger villages (1000 to 2000 households)
- Medium villages (500 to 1000 households)
- Small villages (less than 500 households)
- Number of jobs around Cambridge
- Key employers across Cambridge

HIGHER LEVEL QUALIFICATIONS than the national average

EDUCATION

- High level of residents with higher qualifications than the national average

Perception of GENERAL HEALTH VERY GOOD, & HIGHER when compared to national average

SOCIAL FACTORS

- Perception of general health very good, and higher when compared to national average
- Higher rate of home ownership than the national average, relatively affluent area

POPULATION OF 4,673 Average age 42

DEMOGRAPHICS

- 2011 census population of 4,673
- Average age 42
- 80% born in England

UNEMPLOYMENT LOWER than the national average

EMPLOYMENT

- Rate of unemployment is lower than the national average and Cambridgeshire average.
- 20% more higher and intermediate managerial, administrative or professional households than the national average.

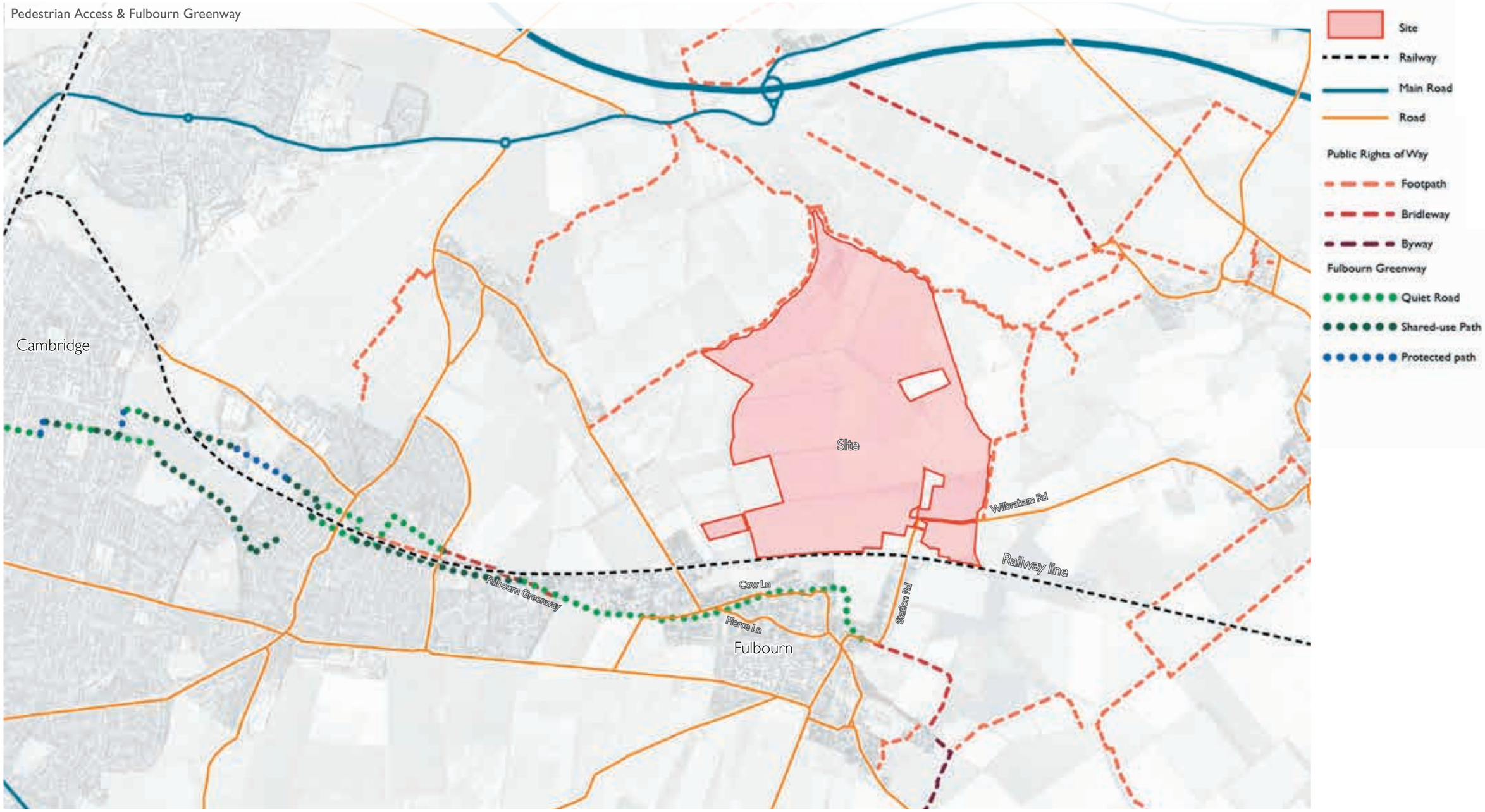
STRONG RAIL, CYCLE AND ON-FOOT PROVISION

TRANSPORT

- Bus travel to Central Cambridge and Newmarket
- Close links to A11 and A14
- Cambridge Autonomous Metro
- Cambridge Station within a 25-minute cycle

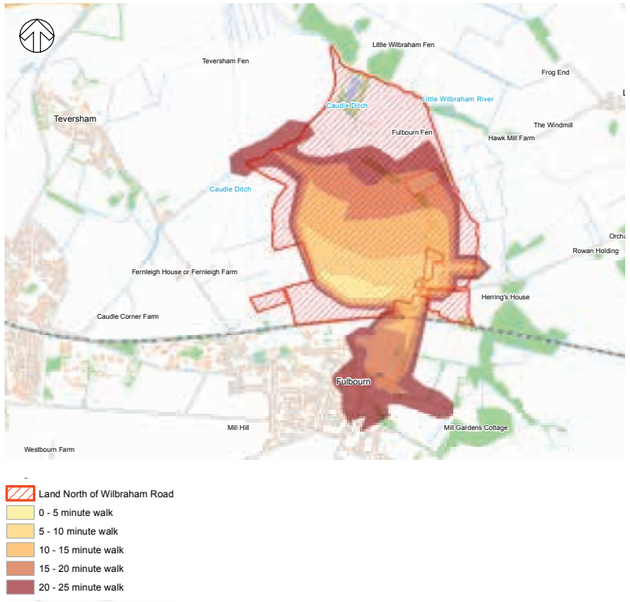
UNDERSTANDING
MOVEMENT & ACCESS

Pedestrian Access & Fulbourn Greenway

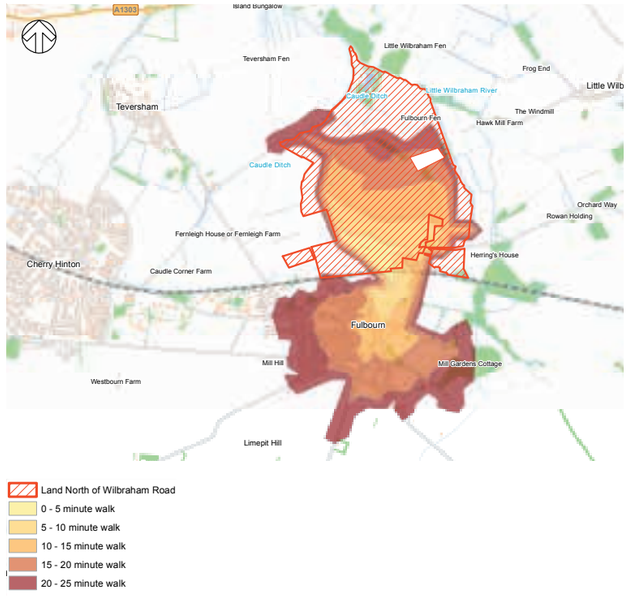


UNDERSTANDING
MOVEMENT & ACCESS

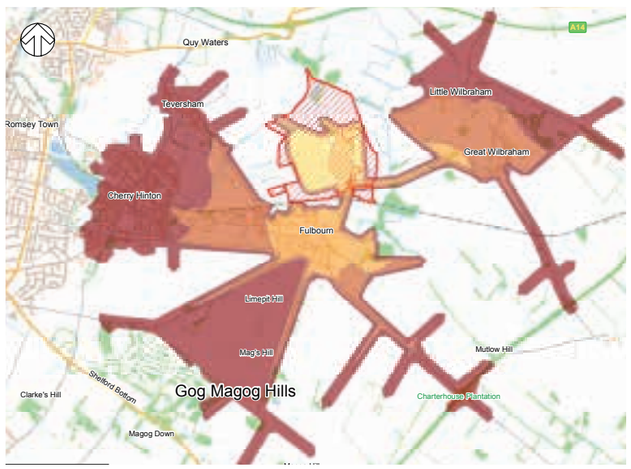
Walking Isochrone - existing condition



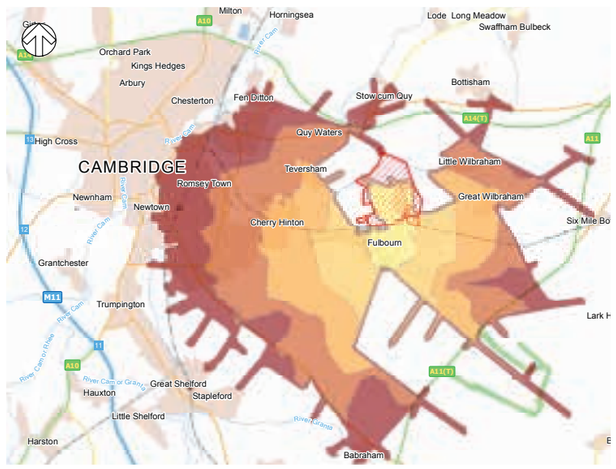
Walking Isochrone - condition with rail link



Cycling Isochrone - existing condition



Cycling Isochrone - condition with rail link



WALKING ACCESSIBILITY

Residents can access existing public rights of way and bus stops that will allow for travel into Central Cambridge, Cherry Hinton and Newmarket. Connections to the existing public rights of way should be sought in order to allow for travel to Teversham, Great Wilbraham and Little Wilbraham. Walking routes are proposed to the possible location of a new Fulbourn Station, which would encourage the use of sustainable modes. Furthermore, a pedestrian and cycle connection over the railway is proposed to the south of the site, which would allow for connection to the existing village centre and for connection between the southern site (Land West of Station Road).
The existing public rights of way network would be enhanced within the vicinity of the site to improve connections to the north towards the proposed Cambridge Autonomous Metro and the proposal to relocate the current Newmarket Park and Ride site to Airport Way.

The proposed route for the Fulbourn Greenway would also allow for safer travel from Fulbourn, into Cambridge, providing future residents with an increased range of travel modes.

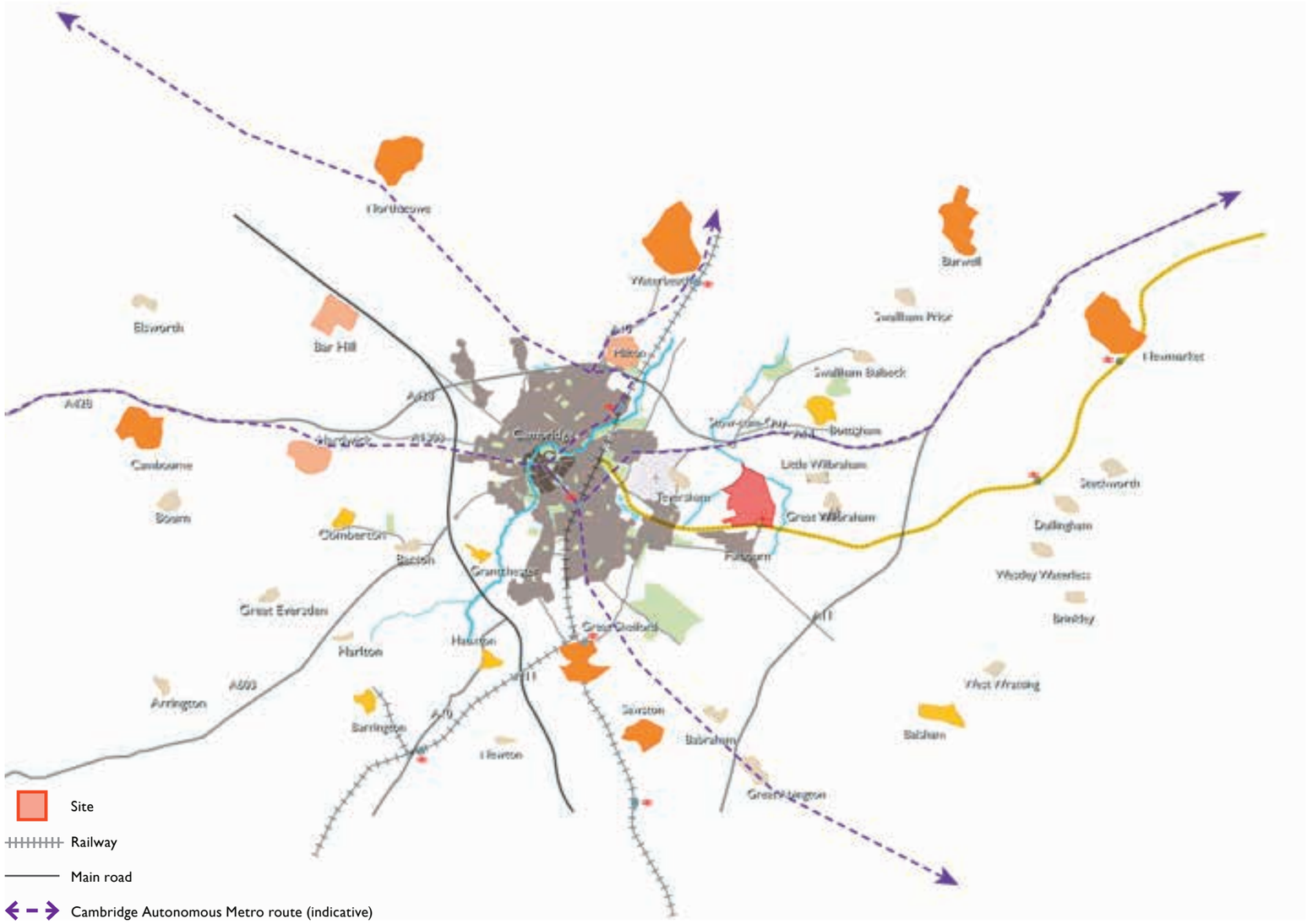
CYCLING ACCESSIBILITY

Cycling isochrones have shown that the proposed development is very accessible by cycling, with residents being able to access Cambridge, Cherry Hinton, Bottisham and Wilbraham, within a 25-minute cycle. The addition of the Fulbourn Greenway, including sections of protected paths, quiet roads and shared-use paths, will allow for safer and faster travel from Fulbourn into Cambridge.

Capital Park Cambridge and Peterhouse Technology Park are both within a reasonable cycling distance from the site, accessed from Cambridge Road and Fulbourn Road.

UNDERSTANDING
MOVEMENT & ACCESS

Cambridge Autonomous Metro route (indicative) and railway line to Newmarket



BUS ACCESSIBILITY

The existing Citi 1 and Citi 3 bus routes would be the preferred choice to allow for a bus service through the proposed development, due to their half-hourly frequently and weekend provision. The proposed route will loop through the site to ensure that all residents are no more than 400m from a bus stop. This service could be supplemented with semi-autonomous shuttles within the site, to further enhance non-car accessibility.

RAIL ACCESSIBILITY

In terms of future transport provisions, Fulbourn and Cherry Hinton have been earmarked as possible locations for new railway stations on the Cambridge to Newmarket line. This improvement would allow for sustainable travel into Central Cambridge and Newmarket, as well as onward travel to London and other destinations. The rail improvements are included in bids for the Greater Cambridge City Deal, than would also favour double tracking the line between Newmarket and Cambridge to allow for increased frequencies and longer carriages.

Further discussion would need to be held with Network Rail to discuss the type and nature of the station provision and the site could bring forward a passing loop to enable increased frequency on the line.

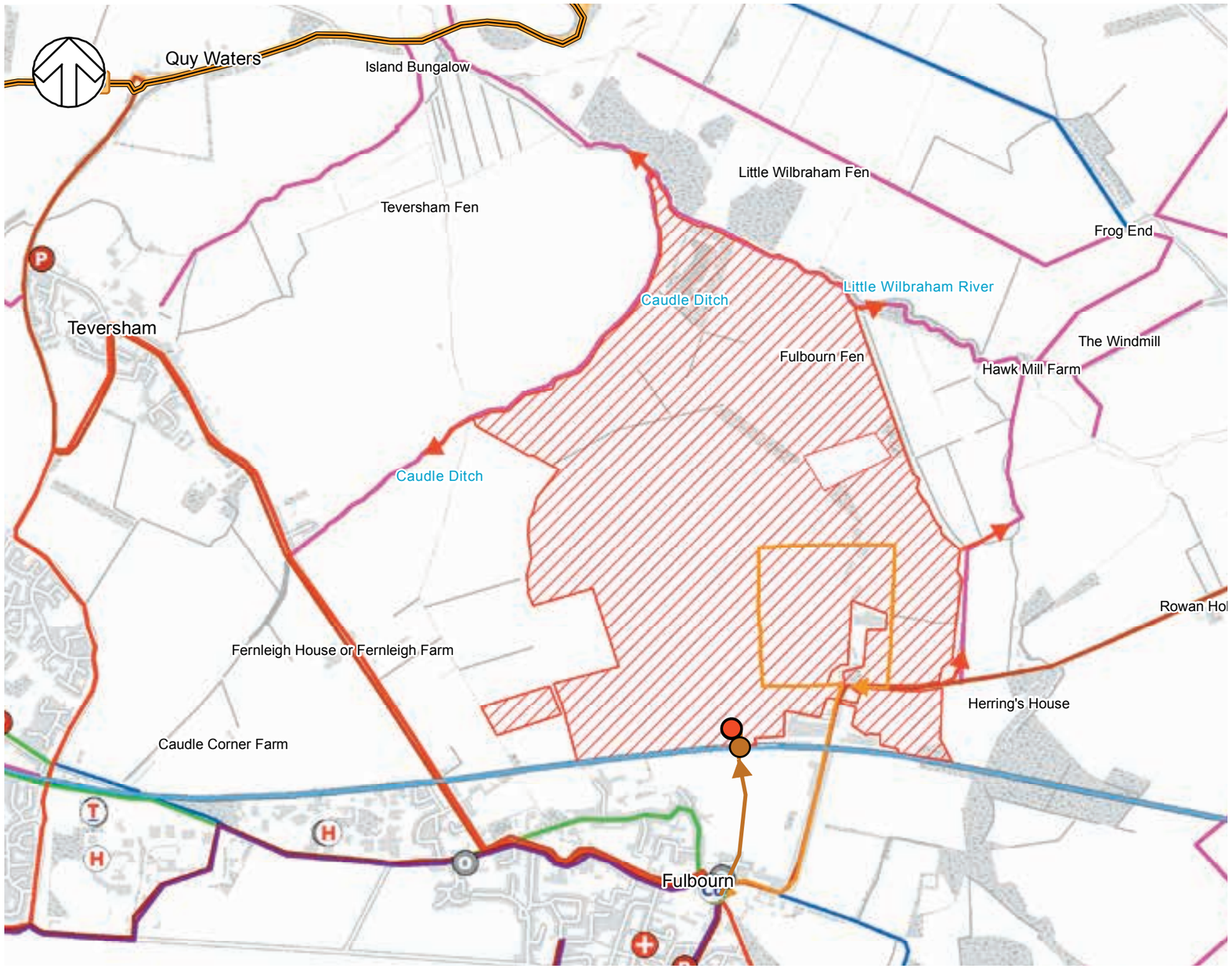
Extrapolated Census Data has shown that the largest modal share for Fulbourn is by driving a car or van, however, with a new station and enhancements to the existing public rights of way network, opportunities would be provided for both existing and new residents to travel more sustainably.

Cycle and rail travel could support a modal change away from personal vehicle use.

VEHICLE ACCESSIBILITY

Vehicular access to the site will be gained from Station Road and Wilbraham to the south, which will provide access into the centre of Fulbourn. From Cambridge Road, Central Cambridge can be accessed to the west and from Balsham Road to the south-east, the A11 can be accessed. Vehicle access is proposed from the main southern entrance from Wilbraham Road, with internal access across the site.

Movement Opportunities



PROPOSED CAM METRO ACCESSIBILITY

Furthermore, through connections to the existing public rights of way to the north of the site, residents could access the proposed Cambridge Autonomous Metro (CAM) that is proposed to route along the Newmarket Road from Cambridge. This would allow for a more connected transport network and access to locations further afield, as well as the centre of Cambridge.

CONCLUSION

Against this background, development of up to 2,200 dwellings on the site is deliverable in transport terms (ref: para 108 of the NPPF):

- The opportunities for sustainable travel can be appropriately taken up, with associated improvements to the PRoW network and local bus services;
- Safe and acceptable access can be provided for all users – the existing site access can be improved to provide a suitable access for the new homes;
- The impact on the transport network (in terms of capacity and congestion), and on highway safety, will be reviewed with detailed capacity testing – the additional traffic generated by the development, will be addressed by appropriate highways mitigation schemes and/or contributions to schemes that will resolve existing issues.

UNDERSTANDING
LANDSCAPE APPRAISAL

Formed of a series of expansive agricultural fields, with a crowned topography which slopes gently from around 15.0 m AOD at the centre to around 10m AOD at the northern, eastern and western boundaries, the main part of the site is devoid of significant landscape features.
However, at these boundaries the landscape is clearly defined by waterways, greened walkways and ditches, including New Cut to the east, Little Wilbraham River to the north and the Caudle Ditch and associated greenway to the north west. To the west the site is bounded by Fen Drove Way. A fishing pond and associated mature vegetation is located in the north west corner, and isolated stands of trees are also to be found. The site also includes Queens Farm, and light industrial units and sheds with associated hard standing and car parking.

Assessment of views of the site obtainable from the surrounding paths and designated Public Rights of Way indicates that whilst the site is readily visible from the pedestrian routes and to some extent Teversham Road and Wilbraham Road, it is generally well screened from the wider landscape, with the visual envelope defined by woodland to the east and north, and mature residential landscape and the railway line to the west and south.

The 2002 Cambridge Green Belt Study confirms that there are no key views of Cambridge from the site and that most of the site area is not within the "Peripheral areas with particular qualities to be safeguarded"

The following views illustrate the visibility of the site from the Prow and accessible footpaths around the site.

VIEWS 3-7 are from the east looking west and south as the path progresses westwards around the north of the site. From the east, the Queens Farm and associated warehousing / industrial units with mature intervening vegetation form an inconsistent visual barrier to the main site areas beyond. The containment is further enhanced by the existing woodland blocks within the site, and which are proposed for retention within the outline proposals. Whilst development will inevitably result in significant effects on views into and out from the site, the proposals have been carefully considered to maintain wide buffer landscapes and to minimize any negative effects, both in the short term as advanced planting regimes establish, and also in the longer term when the woodland belts and associated Landscape features have reached maturity.

View 3

View 4

View 5

View 6

VIEWS 8-12 are typical of those available from the west (walking along Caudle Ditch), looking east and on approaching the Little Wilbraham River, views southwards.

Views across the site from the west are more open than those from the east, and the full extents of the expansive field systems are apparent, viewed over the gappy hedgerows that border the pathway here. To the north, the landscape surrounding the fishing pond, and looking northwards, the edge of Little Wilbraham Fen is characteristic of the fenland landscape, with attractive features that will be retained and enhanced by the development proposals. The overhead power lines and wind turbines feature in views and have an urbanising effect on the otherwise rural scenery. Similarly, in views across the site the sheds and warehousing around Queens Farm are visible in part, moderated by existing vegetation. The large S&B Herba Foods unit is also dominant in the distance and clearly signals the urban edge of Fulbourn to the east.

Views of Fulbourn to the south are mostly screened by vegetation associated with the railway,, or significant (previously parkland) mature trees and hedgerows around the northern edge of the village which includes a significant percentage of evergreen varieties which provide year round cover.

CONCLUSION

The outline proposals could provide significant benefits in creating a strong landscape structure with interconnected green corridors. These would have the potential to be combined with other green ways to aid in the linking of Cambridge centre with the wider landscape.

The addition of naturalistic water bodies, sustainable swale systems. wildflower meadows, and wildlife friendly amenity spaces will lift the ecological potential of the site whilst providing attractive spaces for leisure and recreation.

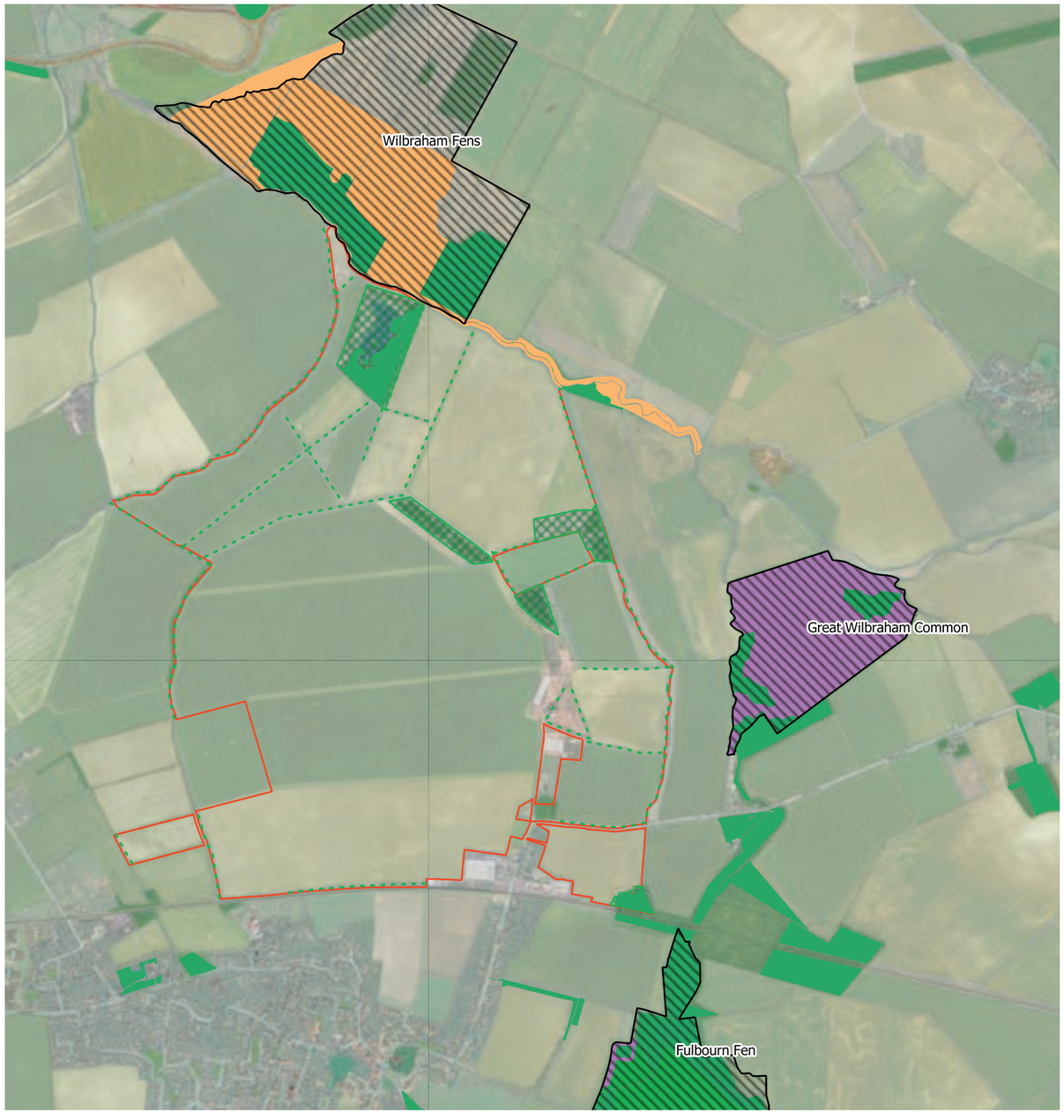
View 10

View 20

View 11

View 23

UNDERSTANDING
ECOLOGY



This report identifies potential ecological constraints and opportunities at an early stage that may arise from development of Land North of Wilbraham Road, Fulbourn. A Review of the site layout and current plans has been undertaken to highlight areas where there is the potential for ecological enhancement including delivery of biodiversity net-gain. The report is a desk based assessment limited to freely available mapping resources.

The northern boundary of the Site is located directly adjacent to Wilbraham Fens Site of Special Scientific Interest (SSSI). The wider area was dominated by agricultural land, comprising arable, small watercourses and pockets of deciduous woodland. Habitat will be retained and enhanced as part of the development as well as a scheme to create new waterbodies, plant new trees, shrubs and hedgerows.

Habitat of Principle Importance (HPI) under the Natural Environment and Rural Communities Act (2006) comprising of lowland mixed deciduous woodland and hedgerows were identified within the site and the hedgerows also may be Important under the Hedgerow Regulations (1997).
The scheme has the potential to impact on protected / notable species that may be utilising the habitat present within or adjacent to the Site.

No Natura 2000 (Habitats Directive) sites fell within a 5km search buffer of the Site. A search for national statutory designated sites within a 2km search buffer returned four Site of Special Scientific Interest (SSSI). No statutory designated sites fell within or directly connected to the Site.

There are opportunities to recreate high value habitats in line with the designated features of the nearby SSSIs within the proposed development such as grassland and fenland type habitat. The current plans proposed to extend the existing Wilbraham Fens SSSI approximately 60ha southwards into the northern area of the site. A Habitat Management Plan (HMP) will be designed to ensure that any newly created habitat will achieve maximum biodiversity value. Newly created habitats will provide mitigation areas for protected species found to be using the Site.

It is recommended than a Preliminary Ecological Appraisal (PEA) be undertaken to provide a detailed assessment of the habitats within the Site and the potential for the Site to support protected / notable species.

UNDERSTANDING
ECOLOGY

Flora along Caudle Ditch

Egrets in Fulbourn Fens

Wilbraham Fens (SSSI)

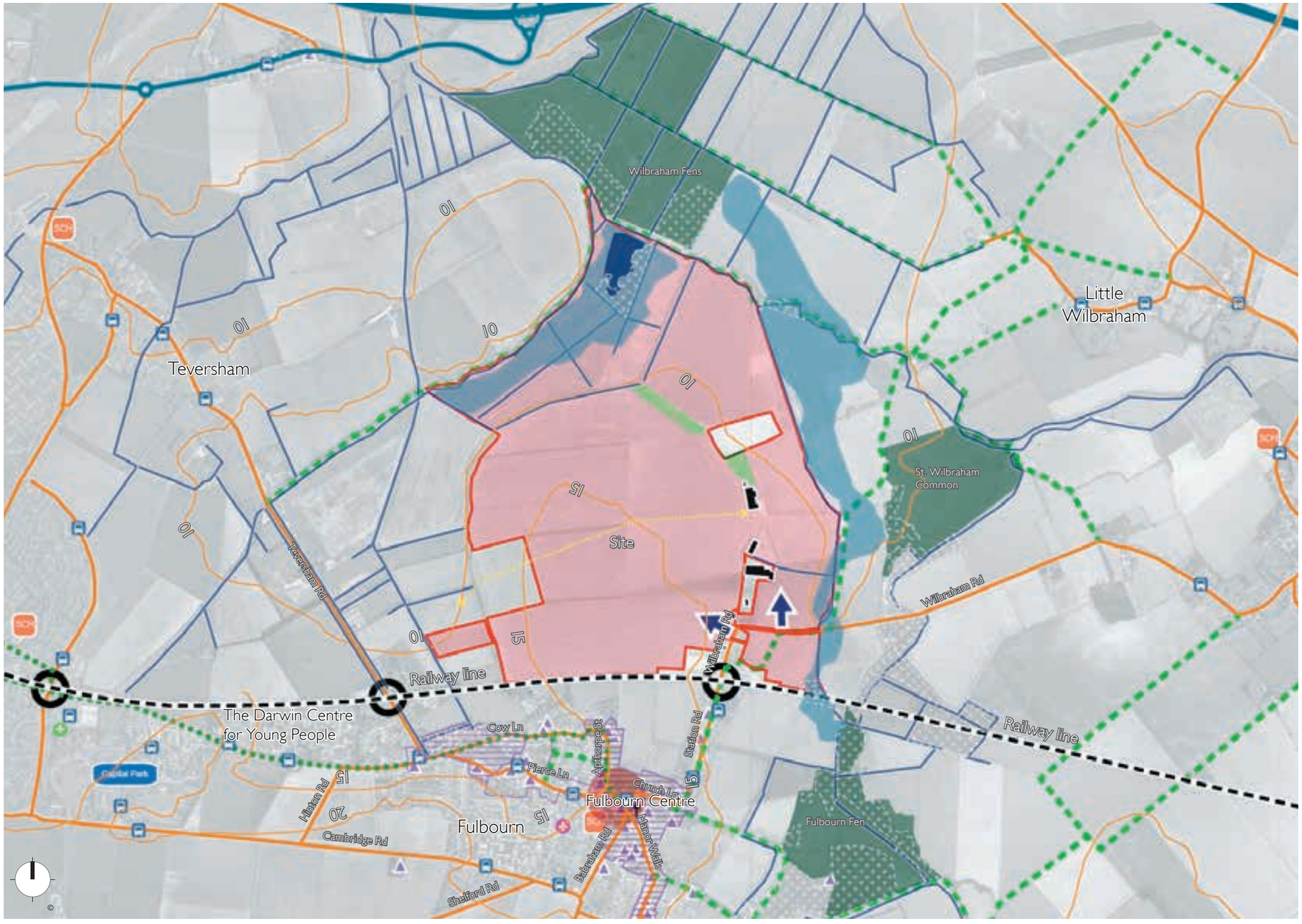
Wilbraham Fens (SSSI)

CONCLUSION

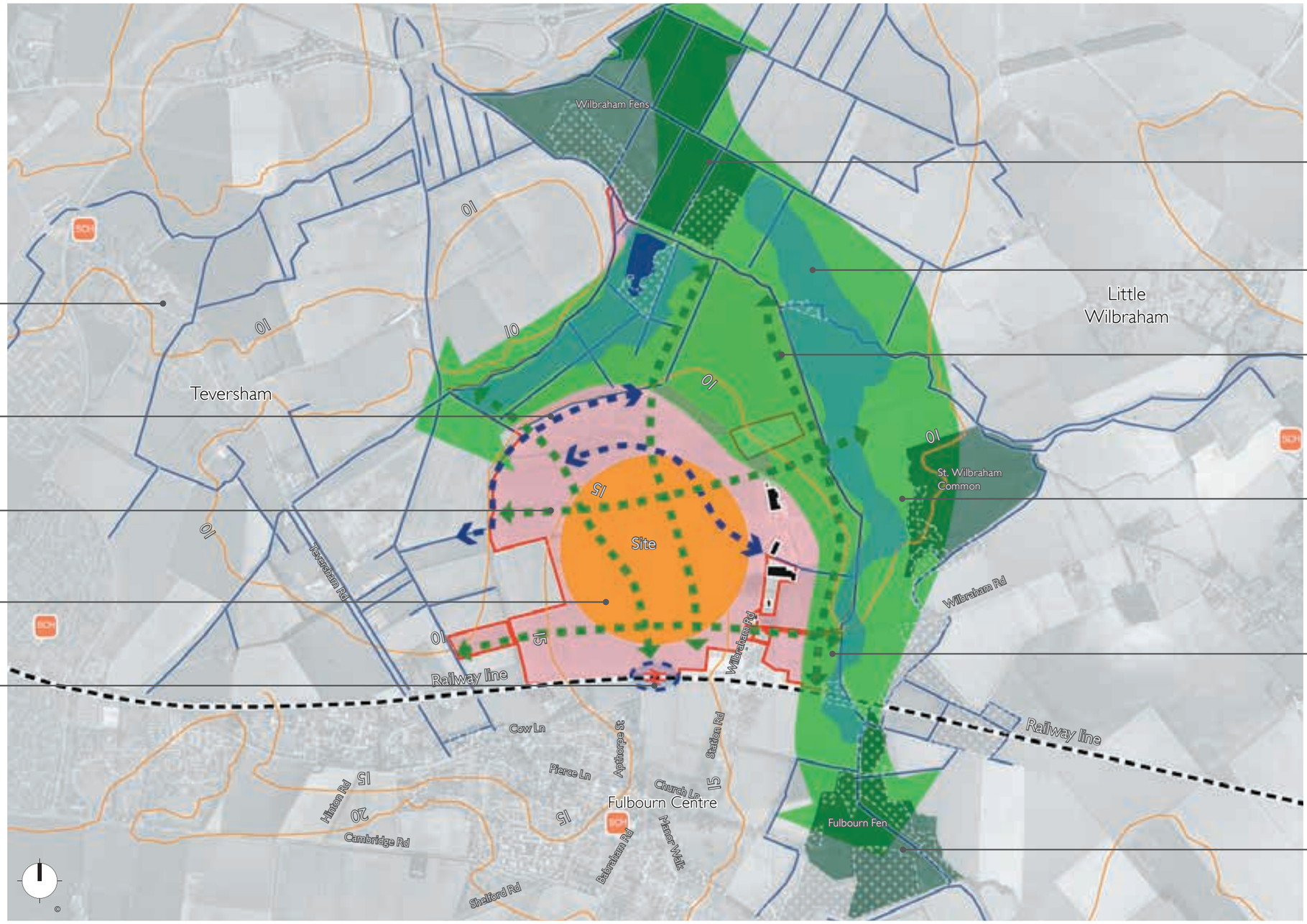
Due to the dominance of the site by arable land, a habitat considered of low biodiversity value, there is the potential to achieve biodiversity net-gain within the existing site boundary, particularly through the expansion of Wilbraham Fens SSSI. An improved network of hedgerows, woodland and drains will have a positive impact on habitat connectivity across the site and nearby SSSIs. The retention and enhancement of existing habitats of value, alongside a HMP for the creation of new habitat such as scrub / wildflower mosaic, tree planting and the creation of a new waterbody will be in line with the NPPF and the South Cambridgeshire Local Plan.

There is scope to include green infrastructure as part of the residential development and include artificial wildlife features such as integrated bird / bat boxes within the new builds. The plans for an increase in habitat across the site, including the expansion of the SSSI will likely have a biodiversity benefit of at least county level, which will have a positive impact on protected / notable species within the local area.

UNDERSTANDING
CONSTRAINTS AND CHALLENGES



OPPORTUNITIES AND ASSETS



Maintain physical separation from Teversham

opportunity to bring waterways into the site

Improve East west connections between Cambridge and Fens

A new place in its own right

Opportunity to reserve land for a new railway station

Protect and enhance the fenland

Stay out of the flood zone

Opportunity to improve north-south links from village centre to Fen land

Landscape buffer around existing mature trees, opportunity to celebrate existing site character

Improve north south permeability for Fulbourn

Ecological links southwards to Fulbourn Fen

UNDERSTANDING
KEY MESSAGES

CONNECTIONS

Opportunity for new east-west connections, linking Cambridge to the Fens, and north-south connections, linking Fulbourn to the Fens.

2200 HOMES WITH STRONG LINKS TO NATURE, HEALTH AND WELLBEING

Opportunity to create a new Garden Village community in its own right to the north of the railway line. A place that is connected to nature and enables preservation of areas of ecologically rich landscape.

WIDE VARIETY OF HOMES AND TENURES

Opportunity to provide a broad mix of new home typologies and tenures to respond to local housing need and demands for affordable provision.

EDUCATION (PROVISION OF PRIMARY & POSSIBLE SECONDARY SCHOOL)

Opportunity to create a new Garden Village with the critical mass to deliver new schools and other educational uses. Strong connections to nature could foster a unique education offer.

POTENTIAL FOR THE SITE TO ACCOMMODATE A NEW STATION

Land can be reserved along the site's southern boundary with the railway line, allowing for the future delivery of a new railway station for Fulbourn.

UNDERSTANDING
KEY MESSAGES

LARGE AREAS OF LANDSCAPE

Generous areas of ecological landscape, amenity and open green space can be included in proposals coming forward to improve the ecological value of the existing riparian and Fenland.

ECOLOGICAL IMPROVEMENTS AND SAFEGUARDING LAND

Development provides opportunity to secure funding to support the preservation and enhancement of areas of ecologically rich landscape and the provision of new corridors.

MIXED USE VILLAGE CENTRE

Opportunity to provide a new mixed-use centre to support the new place and existing residents, with a unique offer that would complement, and not detract from, Fulbourn's existing village centre.

EMPLOYMENT AREAS AND OPPORTUNITIES

Opportunity to bolster the local economy with new businesses and employment offers around the existing industry adjacent to the site.

COUNTRY PARK - LINKING THE FENS

Opportunity to link Wilbraham Fen, a 62.5 hectare SSSI, to Fulbourn Fen, a 31 hectare Wildlife Trusts Nature Reserve. Establishing an ecological country park to link the two fens and improve ecological connections.

DESIGN PRINCIPLES

1. RAILWAY CROSSING

- Pedestrian connection to existing village centre
- Pedestrian / cycle connection over railway line
- Link to northern site and fens for Fulbourn
- Potential railway station link

2. PERMEABILITY

- East-west permeability between Cambridge and the Fens
- North-south permeability between Fulbourn and the Fens
- Green corridors for ecology, slow movement and recreation

3. FAST TO SLOW MOVEMENT

- Hierarchy of fast, medium and slow movement
- Promoting modal shift to sustainable modes of transport
- Potential for fast rail links
- Bus circuit through the central hub
- Cycle loop around the site
- Autonomous shuttle loop around the site
- Slow movement pedestrian and cycle routes along the green corridors

DESIGN PRINCIPLES

4. THREE HUBS

- Local centre and village green at potential railway station hub
- School sites to the west with playing fields and allotments
- Business uses to the east around existing industry

5. BOLSTER & BUFFER

- Extend blue connections through the site
- Sustainable drainage along green buffers
- Bolster the ring of woodland and landscape around the core of the site

6. PROTECT & ENHANCE

- Protect and enhance the existing fen landscape with ecological value

THE VISION
ILLUSTRATIVE MASTERPLAN

PROPOSED USES

- Up to 2200 new homes
- 234 ha site redline area
- 120 ha developable area
- 115 ha country park / preserved fen land
- Open green space: green corridors, playing fields, allotments, SUDs and swales
- Space for primary and secondary school sites
- Mixed use local centre
- New employment space
- Reserved land for future railway station

1. Fulbourn Village Centre
2. Potenital new route between site and village centre
3. Potential pedestrian / cycle bridge over railway line
4. Site for potential future railway station
5. New Village Green and local centre with mixed uses
6. New businesses / employment areas adjacent to existing industry
7. East-west green corridors
8. Medium to high density residential parcels
9. Medium to low density residential parcels
10. Low density residential parcels
11. Secondary School site
12. Primary School site
13. Playing fields / sports pitches
14. Allotments
15. North-south green corridors
16. Central neighbourhood park
17. Secondary neighbourhood parks with attenuation ponds
18. Development sits within core site area, defined by existing hedgerows, woodland and water channel
19. Fulbourn Fen
20. Existing lakes and mature woodland to the northern edge of site

Wilbraham Fens

Little Wilbraham

St. Wilbraham Common

Teversham Rd

Wilbraham Rd

Railway line

Railway line

Cow Ln

Pierce Ln

Apthorpe St

High St

Church Ln

Manor Walk

Hinton Rd

Cambridge Rd

Shelford Rd

Fulbourn

Fulbourn Fen

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APPENDICES

APPENDIX
MOVEMENT STRATEGY

1. INTRODUCTION

WSP has been appointed by Countryside Properties to provide transport advice for the project of 'Land at Fulbourn'. The site has been chosen due to Fulbourn's good access to frequent bus services and strong provision for walking and cycling, including the close links to the A14 and A1303.

The potential development site comprises of 234 ha and lies approximately 1km north of the centre of the village of Fulbourn, and is bounded by agricultural land to the north, east and west and by the Newmarket to Cambridge Railway Line to the south.

The location of the site is enclosed in Figure 1.

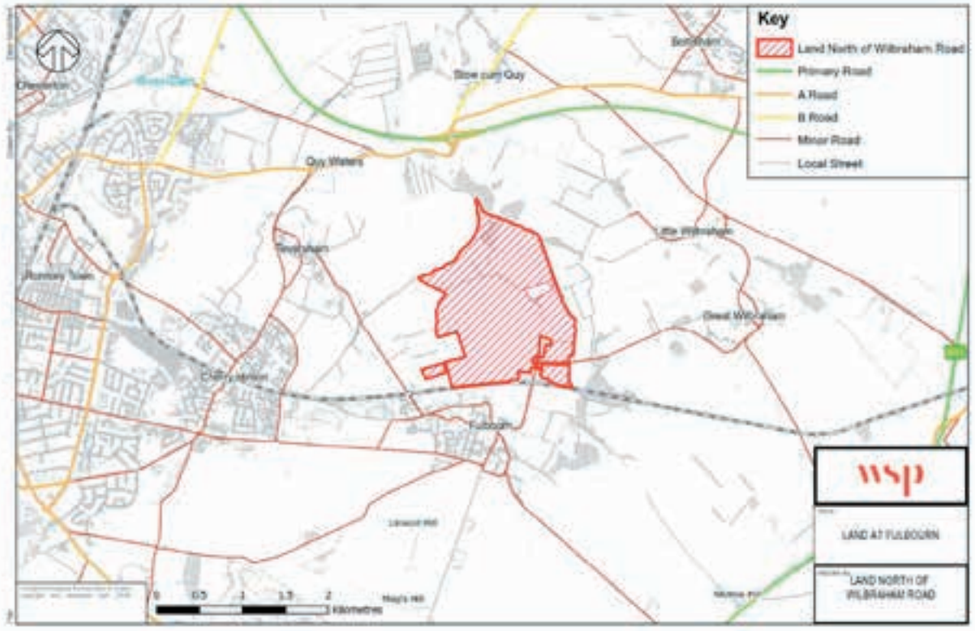


Figure 1 – Land North of Wilbraham Road – Site Location

2. CALL FOR SITES

South Cambridgeshire District Council are starting to prepare a new joint Local Plan with Cambridge City Council, as set out in the adopted Greater Cambridge Local Development Scheme. At this stage in the development of the plan they want to know about potential development sites or broad locations for development in Greater Cambridge, and as such they are currently undertaking a 'Call for Sites' consultation, which is a key component of the Strategic Housing and Economic Land Availability Assessment to information policies in the new Local Plan for housing, employment and other uses.

3. BACKGROUND INFORMATION

The following section provides a review of the existing conditions surrounding the potential development site, including local travel to work patterns and local transport infrastructure.

LOCAL AMENITIES

The site is located to a number of nearby amenities, including retail stores, medical centres and education facilities (Figure 2).

Figure 2 – Local Amenities

EXISTING TRAVEL PATTERNS

The comparative travel patterns of future residents at the potential development site can best be approximated based on travel patterns of existing residents within the surrounding area. The 2011 Census Journey to Work data for the surrounding area contains journey to work information on these local residents, and has been analysed using the Mid-Layer Super Output Area (MSOA) for South Cambridgeshire 011 covering the study area.

Table 1 below summarises the journey to work mode split (main mode) for MSOA South Cambridgeshire 011 which covers the study area. The resident population not in employment and those working from home have been excluded from the results as they do not make a journey to work on the surrounding highway network.

Table 1 – 2011 Census Journey to Work by Mode Resident Population

Method of Travel to Work	Total	Percentage
Underground, metro, light rail or tram	13	0%
Train	109	2%
Bus, minibus or coach	390	9%
Taxi	11	0%
Motorcycle, scooter or moped	50	1%
Driving a car or van	2,633	60%
Passenger in a car or van	247	6%
Bicycle	652	15%
On foot	263	6%
Other method of travel to work	19	0%

Source: 2011 Census Data (March 2019)

Table 1 shows that the car / van driver is the main mode of travel to work for residents that travel to MSOA South Cambridgeshire 011 with a mode share of 60%, and that 6% of residents that travel to work as passengers in a car / van. In addition, sustainable modes have a combined mode share of 30%, 6% of residents walking, 15% of residents cycling and 9% of residents using public transport (which includes the bus and train, so there is potential for an uptake in sustainable modes for travel for future residents of the potential development site. The resident population not in employment and those working from home have been excluded from the results as they do not make a journey to work on the surrounding highway network.

Table 2 below summarises the distance travelled to work for the MSOA South Cambridgeshire 011 which covers the study area.

Table 2 – 2011 Census Distance Travelled to Work Resident Population

Distance Travelled to Work	Total	Percentage
Less than 2km	596	14%
2km to less than 5km	2,179	52%
5km to less than 10km	453	11%
10km to less than 20km	248	6%
20km to less than 30km	90	2%
30km to less than 40km	82	2%
40km to less than 60km	87	2%
60km and over	201	5%
Other	260	6%

Source: 2011 Census Data (March 2019)

The results from the Census show that the majority of residents (33%) travel between 2km to less than 5km to work. This distance can easily be travelled by bicycle, so modal shift should be encouraged to persuade residents to travel more sustainably. In total, 43% of residents travel no more than 5km to work, so increased access to safe walking and cycling routes, combined with more frequently bus services, could allow for a reduction in personal vehicle use.

Using the data collection during the 2011 Census, an online site – DataShine Commute (Figure 3) has visually displayed the locations that residents from within the South Cambridgeshire 011 MSOA travel to. The map shows the areas that residents travel from Fulbourn to work (red lines) and the areas that people travel from in order to work in Fulbourn (blue lines). It Can be seen that a large proportion of residents'

travel into Cherry Hinton, Cambridge, Bottisham and Milton, in particular sites like that of the University of Cambridge and the Addenbrooks Hospital Campus are seen to attract a number of residents.

Figure 3 – Locations of workplace destinations from Fulbourn. Source: DataShine Commute

LOCAL TRANSPORT INFRASTRUCTURE

WALKING AND CYCLING

Given that access to the local footway / cycleway network was provided from the proposed development site, it will be possible to achieve direct access to the local pedestrian and cycling infrastructure. It should be noted that the village the local streets are generally level, paved and lit, with adjacent footway / cycleway infrastructure which provide positive conditions for walking and cycling.

A walking accessibility plot showing a 25-minute walking catchment of the potential development site is enclosed in Figure 4, which shows the village centre could be access within a 25-minute walking and a cycling isochrone of the potential accessibility of the site within a 25-minute of cycling journey is included in Figure 5.

It should be noted that the isochrones do not follow the red line boundary entirely, as the proposed road network and Public Rights of Way have been used to guide a walking and cycling route across the site.

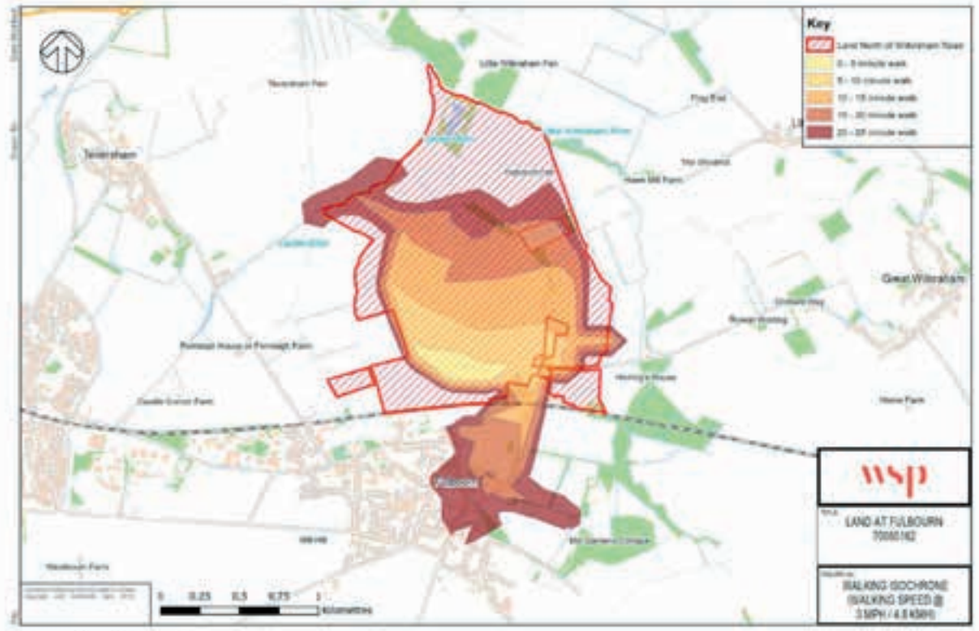


Figure 4 – Walking Isochrone

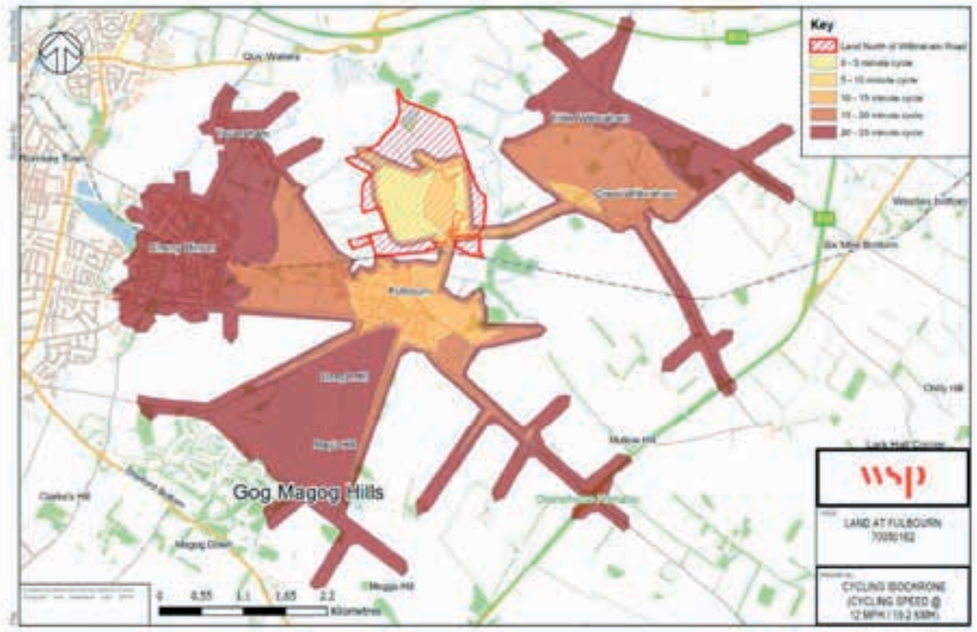


Figure 5 – Cycling Isochrone

Residents can access existing public rights of way and bus stops that will allow for travel into Central Cambridge, Cherry Hinton and Newmarket. Connections to the existing public rights of way should be sought in order to allow for travel to Teversham, Great Wilbraham and Little Wilbraham. Walking routes are proposed to the possible location of a new Fulbourn Station, which would encourage the use of sustainable modes. Furthermore, a pedestrian and cycle connection over the railway is proposed to the south of the site, which would allow for connection to the existing village centre and for connection between the southern site (Land West of Station Road).

The existing public rights of way network would be enhanced within the vicinity of the site to improve connections to the north towards the proposed Cambridge Autonomous Metro and the proposal to relocate the current Newmarket Park and Ride site to Airport Way.

Cycling isochrones have shown that the proposed development is very accessible by cycling, with residents being able to access Cherry Hinton, Teversham and Wilbraham, within a 25-minute cycle. The addition of the Fulbourn Greenway, including sections of protected paths, quiet roads and shared-use paths, will allow for safer and faster travel from Fulbourn into Cambridge.
Capital Park Cambridge and Peterhouse Technology Park are both within a reasonable cycling distance from the site, accessed from Cambridge Road and Fulbourn Road.

FULBOURN GREENWAY

The Fulbourn Greenway is a proposed route to enable cyclists, walkers and equestrians to travel sustainably from Fulbourn, into Cambridge (Figure 6). A public consultation on the proposed route is now underway and a decision of the project is expected in mid-2019.
The route will begin along Cow Lane and Hinton Road, with speed limits reduced to 20mph and signage increased to provide awareness to motorists. The route will travel through Cherry Hinton and onto Cambridge, ending at Devonshire Road. The public consultation will allow for the various option of the route to be discussed, details of the options can be found in Appendix A.

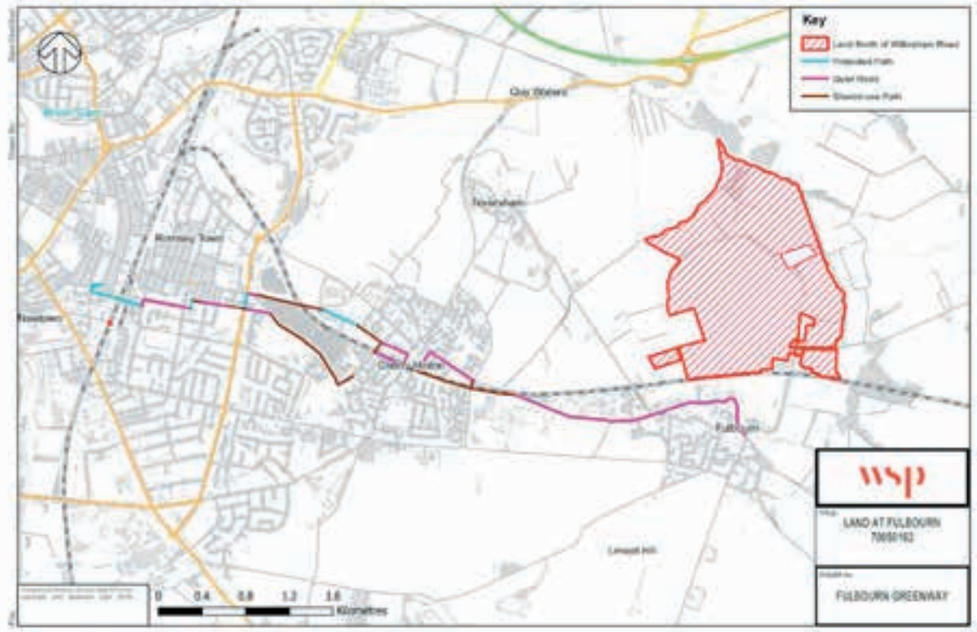


Figure 6 – Fulbourn Greenway

PUBLIC TRANSPORT – BUS ACCESSIBILITY

The nearest bus stops are located to the south of the proposed development on Station Road, approximately 300m away. These bus stops provide access to bus service 18 which allows for travel into Newmarket. Bus stops located a further 1km away at the Six Bells Public House, allow for travel into Central Cambridge from the Citi 1 & 3 services and 16A.

Table 3 below summarises the details of the bus services that operate from the bus stops on the Six Bells Public House.

Table 3 – Existing Bus Services operating from the Six Bells Public House, Fulbourn

Route Number	Operator	Direction of Travel		Nearest Bus Stop	First Bus	Last Bus	Frequency
1	Stagecoach in Cambridge	Fulbourn – Cherry Hinton – Addenbrokes – City Centre - Arbury	Monday – Friday	*Fulbourn Six Bells*	06:02	23:45	30 mins – 1 hour
			Saturday		06:02	01:45	
			Sunday		08:37	23:45	
		Arbury – City Centre – Addenbrokes – Cherry Hinton - Fulbourn	Monday - Friday		07:02	00:45	
			Saturday		07:02	02:45	
			Sunday		10:07	00:45	
3		Fison Road – Whitehill Estate – City Centre – Rail Station – Cherry Hinton - Fulbourn	Monday – Friday		07:32	19:45	Hourly
			Saturday		07:32	19:45	
		Fulbourn – Cherry Hinton	Monday – Friday		06:32	18:32	
		– Rail Station – City Centre – Whitehill Estate – Fison Road	Saturday		06:32	18:32	
16A		The Thurlows – West Wickham – Cambridge	Monday – Friday	*Fulbourn Windmill Hill*	07:49		1 per day
			Saturday		11:10		
		Cambridge – West Wickham – The Thurlows	Monday – Friday	*Fulbourn Six Bells*	17:42		
			Saturday	*Fulbourn Windmill Hill*	18:00		
18	A2B Bus & Coach Ltd	Newmarket – Fulbourn – Teversham – Newmarket Road P&R	Tuesday and Thursday	*Fulbourn Six Bells*	09:40	13:45	2 per day
		Newmarket Road P&R – Teversham – Fulbourn - Newmarket			10:15	14:20	

As can be seen in Table 3 there is a frequent bus service available from the closest bus stops located outside the Six Bells Public House, and as they are within an acceptable walking distance of the potential development site they are likely to be used by future residents of the potential development site. It should be noted that the most frequent service that future residents are likely to use are the Citi 1 and Citi 3 services, due to Fulbourn's location to the east of Cambridge and the half-hourly frequency from the Six Bells Public House with both the services.

PUBLIC TRANSPORT – RAIL ACCESSIBILITY

The nearest railway station is Cambridge, to the west of the development site. The railway station can easily be reached by private car, and although it is not within a reasonable walking distance of the potential development site, Cambridge Station is within an acceptable cycling distance (25 minutes)

Trains services from Cambridge Station are summarised in Table 4 below.

Table 4 – Rail Services from Cambridge Railway Station

Destination	First Train	Last Train	Average Frequency	Average Journey Time
London Kings Cross	04:54	23:54	Every 20 minutes	1 hour 20 mins
London Liverpool Street	04:48	23:54	Every 20 minutes	1 hour 20 mins
Cambridge North	00:13	23:52	Every 20 minutes	4 minutes
Stansted Airport	04:44	22:51	20 minutes – 1 hour	30 minutes
Kings Lynn	00:08	23:38	30 minutes – 1 hour	50 minutes
Ipswich	06:42	22:55	Hourly	1 hour 20 mins
Brighton	04:54	23:54	30 minutes – 1 hour	2 hours 30 mins
Birmingham New Street	05:15	23:54	30 minutes – 1 hour	2 hours 50 mins
Ely	00:08	23:38	30 minutes	20 minutes
Norwich	06:02	22:55	30 minutes – 1 hour	1 hour 30 mins

Source: National Rail Enquiries (March 2019)

As can be seen from Table 4, there are good services from Cambridge Station, with frequent services to a number of locations.

Figure 7 below shows the routes taken by the four bus services through Fulbourn.

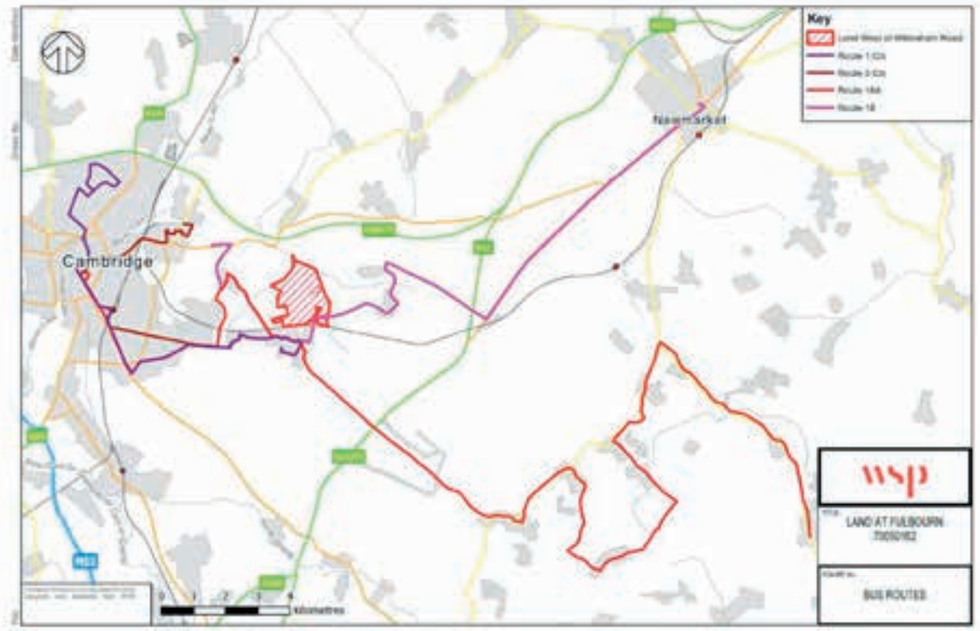


Figure 7 – Bus Services Through Fulbourn

LOCAL HIGHWAY NETWORK

Vehicular access to the site will be gained from Station Road and Wilbraham to the south, which will provide access into the centre of Fulbourn. From Cambridge Road, Central Cambridge can be accessed to the west and from Balsham Road to the south-east, the A11 can be accessed.

POTENTIAL DEVELOPMENT SITE

It is intended that the potential development site to the north of Wilbraham Road will be for residential dwelling (C3) land use with associated infrastructure, including an appropriate vehicular access from Station Road and Wilbraham Road. At this stage the number of dwellings on the site is yet to be determined, although it will seek to be allocated for up to 2,200 residential dwellings.

POTENTIAL DEVELOPMENT SITE ACCESS

Vehicular, pedestrian and cycle access to the potential allocation will be gained directly from the south via Station Road and Wilbraham Road.

4. FUTURE RAIL IMPROVEMENTS

GREATER CAMBRIDGE CITY DEAL

Fulbourn is located on the Newmarket to Cambridge line, with capacity issues identified for those travelling by trains, double tracking is proposed along the route. This would enable a minimum of two passenger trains per hour to operate along the line without constraint. It is estimated by Railfuture that the project could cost an estimated £60 million, including the line and platform works at Newmarket. However, it is thought that the much of the funding could come from Tranche 2 of the Greater Cambridge City Deal funding, or from the Cambridgeshire Mayor's Office.

There is also a call to electrify the Newmarket to Cambridge route, as well as all those in the Peterborough, Ely, Cambridge and Ipswich corridor. 2 or 3 trains should travel from Cambridge to Newmarket every hour and adequate Park and Ride facilities should be ensured at Newmarket and Kennet.

A new station to the south of Cambridge, 'Cambridge South' is under construction (Figure 8), with an expected completion date of 2025. The new railway station would allow for residents in Addenbrookes at workers in Trumpington to have better access to rail services.

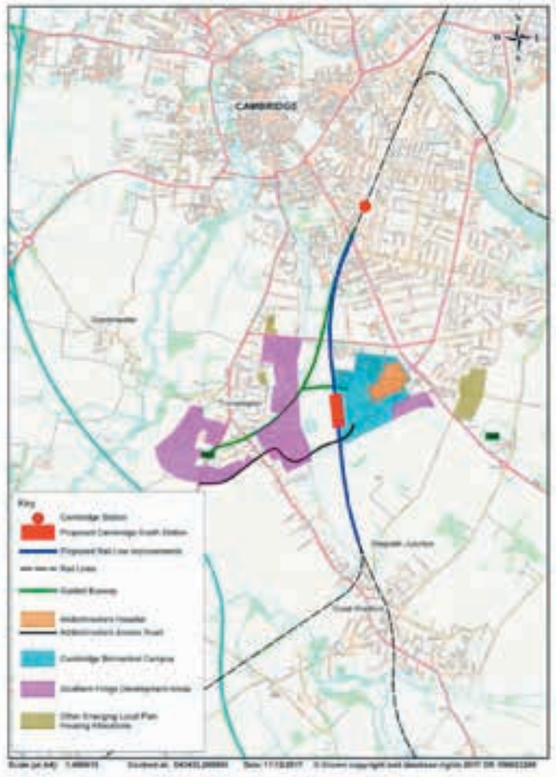


Figure 8 – Cambridge South Railway Station

CAMBRIDGE AUTONOMOUS METRO

The Cambridgeshire & Peterborough Combined Authority has commissioned a feasibility study into an autonomous metro system, with routes that would cover 88 miles, connecting to keys areas in and around Cambridge (Figure 9) as soon as 2021.

Figure 9 – Cambridgeshire Autonomous Metro

5. NEXT STEPS

In promoting the potential development site to the north of Wilbraham Road, we will seek to deliver a sustainable form of development which reduces the need to travel and minimises the impact of the development upon the local highway network.

The potential scale of the development will necessitate a Transport Assessment which will demonstrate that the proposed development would not have an adverse impact on the local highway network.

It is likely that construction could begin as soon as 2024, with an expected completion date of 2034.

Cambridgeshire County Council will be consulted in relation to the local highway network, and mitigation measures will be considered where concerns are highlighted in relation to the proposed site accesses, and the impact of the development on the local highway network and where mitigation is reasonably related to the impact of the proposed development.

Discussions will need to be held with Network rail in due course in respect of the re-provision of a railway station at Fulbourn, which the site can assist in bringing forward.

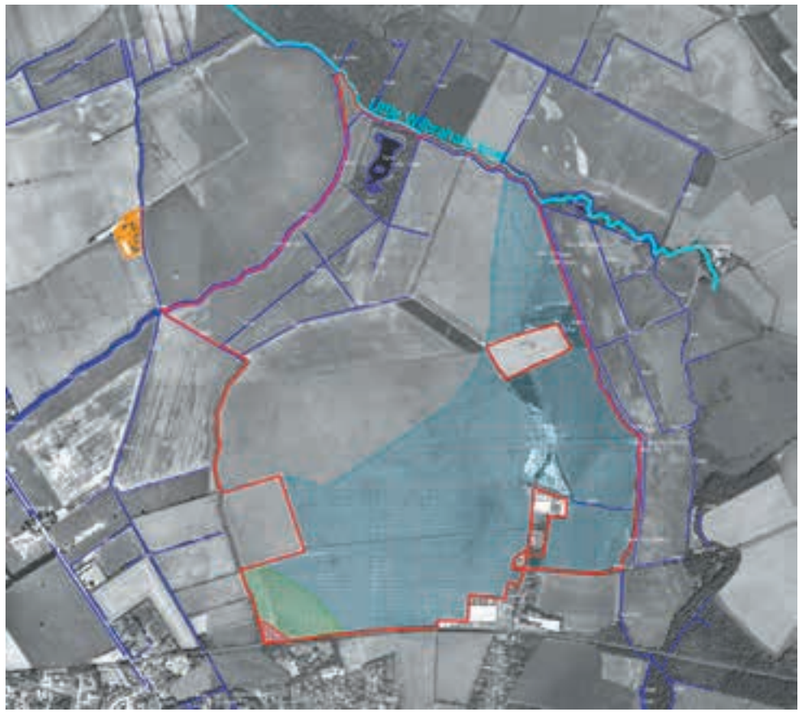
CONCLUSION

Against this background, development of circa 2,200 dwellings on the site is deliverable in transport terms (ref: para 108 of the NPPF):

- The opportunities for sustainable travel can be appropriately taken up, with associated improvements to the PRoW network, local bus services and the re-provision of the railway station that can be delivered in conjunction with the development – it is a sustainable location for new housing;
- Safe and acceptable access can be provided for all users – the existing site access can be improved to provide a suitable access for the new homes and facilities with the opportunity to provide a pedestrian and cycle link over the railway line; and
- The impact on the transport network (in terms of capacity and congestion), and on highway safety, will be reviewed with detailed capacity testing – the additional traffic generated by the development, will be addressed by appropriate highways mitigation schemes and/or contributions to schemes that will resolve existing issues.

APPENDIX

FLOODING AND DRAINAGE



Existing water Environment

Land North of Wilbraham Road

Red Line Boundary

Woterbodies

Statutory Main River

Onsite water Bodies

Groundwater

Source Protection Zones

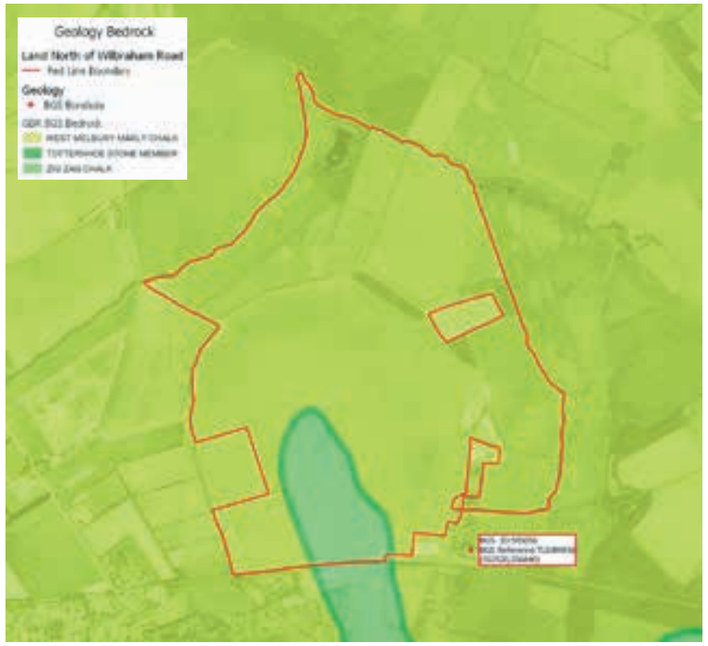
Zone I

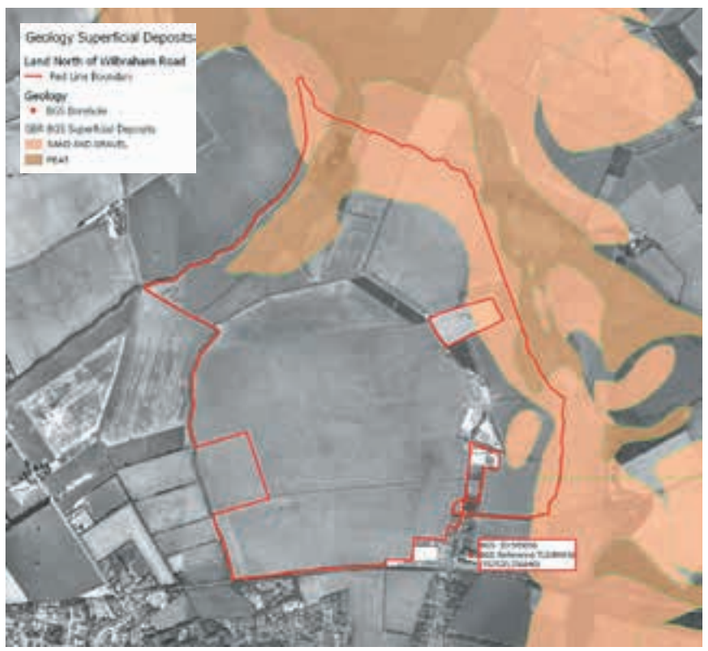
Zone II

Zone III

Existing Foul Water Structures

Foul Puming Station





EXISTING HYDROLOGY

The nearest Environment Agency (EA) designated Main River is located along the northern site boundary and is called the Little Wilbraham River. This watercourse flows northwest towards the A1303.

The Site is surrounded by a number of ordinary watercourses, notably by the New Cut on the eastern boundary and the Caudle Ditch on the northwest boundary. A number of other smaller field drains are located within the site, predominantly in the western and northwestern areas. All of these watercourses tend to flow north, feeding into the Little Wilbraham River on the northern site boundary.

A large pond (approx. 1.4 hectares) is present in the northern corner of the site with embankments along its northern and western edges.

Based upon the existing site topography, it is anticipated that surface water that falls onto the site is either intercepted and infiltrated or flows into the watercourses that form up the north, west, and east site boundaries.

No sewers are known to flow within the site boundary.

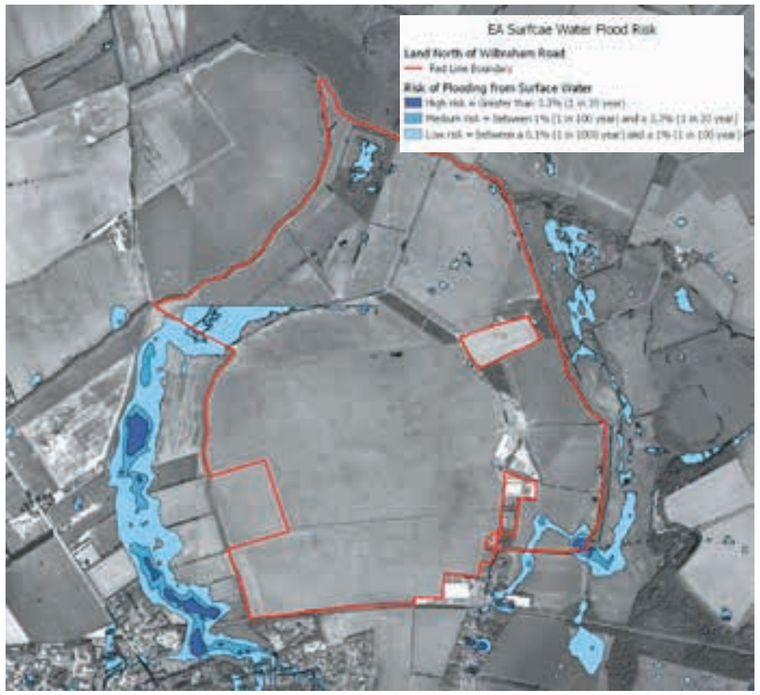
EXISTING GEOLOGY

The British Geological Survey (BGS) Online Geology of Britain Viewer indicates that the site is underlain predominantly by West Melbury Marly Chalk Formation (Chalk) with some Zag Chalk Formation (Chalk) and Totternhoe Stone Member (Chalk) in the south of the site. No superficial deposits have been recorded throughout much of the site with some River Terrace Deposits, 1 (Sand and Gravel) in the areas immediately surrounding the watercourses at the northern and eastern site boundaries.

This geology is confirmed by BGS Borehole TL55NW36 located in the southeast of the site which shows the presence of chalks down to depths of 27.4m below ground level (mBGL).

Groundwater was struck in BGS Borehole TL55NW36 at a depth of 6.2mBGL.

FLOODING AND DRAINAGE



FLUVIAL FLOOD RISK

The Environment Agency's Flood Map for Planning indicates that the site is located predominantly within Flood Zone 1 (land having a less than 1 in 1000 annual probability of river or sea flooding) with areas of Flood Zone 2 (land having 1 in 100 to 1 in 1000 annual probability) and 3 (land having a higher than 1 in 100 annual probability) located in the northwest of the site and along the eastern site boundary. The overall risk is considered to be low as no development is to be located within Flood Zone 2 or 3.

GROUNDWATER FLOOD RISK

BGS Borehole TL55NW36 indicates a groundwater level at a depth of 6.2mBGL. This borehole is located near a watercourse at a relatively spot within the site.

SURFACE WATER FLOOD RISK

The Environment Agency's Risk of Flooding from Surface Water Map indicates that the site is predominantly at a very low risk of surface water flooding with some areas of low to high risk located along the western site boundary. The overall risk to the site is considered to be low as no development is planned to be located within low to high risk areas.

RISK OF FLOODING FROM OTHER SOURCES

No sewers are located within the site therefore the flood risk is negligible.

Environment Agency Reservoir Flood Mapping shows no threat from flooding from reservoir failure to the site area. There are no canals within the vicinity of the site and so the flood risk is considered to be negligible. Some culverts have been identified beneath the railway line and Wilbraham Road to the south of the site, however these are at levels below any proposed development, thus they are unlikely to pose a significant of risk of flooding to the site should they become blocked.

HISTORICAL FLOODING

Correspondence received from the LLFA shows one incident on record from 2014 which occurred in area around the level crossing on Station Road. This flooding appears to have been contained to the highway.

APPENDIX

FLOODING AND DRAINAGE

FLOOD RISK MANAGEMENT MEASURES

Development is proposed to only take place within EA Flood Zone 1 (FZ1) – residential development is considered acceptable within FZ1 as per Table 3 of the Flood Risk and Coastal Change Chapter of the Planning Practise Guidance.

Site levels are to be engineered to provide positive drainage, prevent ponding, and channel flows away from residential dwellings and commercial areas during exceedance events. Ground levels will not be raised within FZ2 and FZ3.

Site access and egress will be via Wilbraham Lane which is located within FZ1. No compensatory storage will be required as development is to be located within FZ1.

SuDS Technique	Feasible?	Reason
Green Roofs	✗ / ✓	Possible for school/local centre/commercial units, but less suitable for residential roof pitches.
Basins/Ponds	✓	Basins will be utilised in this strategy to attenuate water and will provide treatment prior to discharge via infiltration.
Swales/Ditches	✓	Swales may be used to convey and/or attenuate surface water prior to discharge via infiltration.
Infiltration Techniques	✓	Based on the geology of the site and infiltration rates found at nearby sites it has been assumed discharge via infiltration is viable. Infiltration basins are proposed to be utilised as the primary means of surface water discharge.
Permeable Surfaces	✓	Permeable surfacing is proposed in communal and parking areas, this is to provide an element of upstream storage and pre-treatment.
Rainwater Harvesting	✓	Rainwater harvesting is recommended and water butts may be incorporated within the development to provide a small element of harvesting.
Tanked Systems	✗ / ✓	Cellular storage tank systems have not been considered in the production of the drainage strategy, but could be used to attenuate water prior to discharge via infiltration is necessary.

APPENDIX

FLOODING AND DRAINAGE

All SuDS features are to be designed in accordance with CIRIA document C753 "The SuDS Manual". Strategic swales, permeable paving, and other conveyance features will collect and direct flows towards infiltration basins. Swale features are to be typically a dry swale with a connecting underdrain to allow crossing of the swale and continuity of the flows. The swales can provide not only conveyance between development and the attenuation features but also a degree of attenuation, thus reducing the basin volume requirements. permeable paving, if viable they may discharge directly via infiltration or would discharge to the proposed drainage network. Detention basins may be dry or wet features depending on the landscaping and requirements for amenity space.


INFILTRATION BASIN 2
APPROX. CONTRIBUTING IMPERMEABLE AREA: 16.49ha
STORAGE VOLUME REQUIRED: 17,500m³
BASIN DEPTH: 2.0m + 0.3m FREEBOARD
ASSUMED INFILTRATION RATE: 0.021m/hr
INFILTRATION BASIN 3
APPROX. CONTRIBUTING IMPERMEABLE AREA: 12.17ha
STORAGE VOLUME REQUIRED: 12,850m³
BASIN DEPTH: 2.0m + 0.3m FREEBOARD
ASSUMED INFILTRATION RATE: 0.021m/hr
INFILTRATION BASIN 4
APPROX. CONTRIBUTING IMPERMEABLE AREA: 12.80ha
STORAGE VOLUME REQUIRED: 13,550m³
BASIN DEPTH: 2.0m + 0.3m FREEBOARD
ASSUMED INFILTRATION RATE: 0.021m/hr
St Wilbraham Common
INFILTRATION BASIN 5
APPROX. CONTRIBUTING IMPERMEABLE AREA:
STORAGE VOLUME REQUIRED: 11,600m³
BASIN DEPTH: 2.0m + 0.3m FREEBOARD
ASSUMED INFILTRATION RATE: 0.021m/hr
Wilbraham Rd
INFILTRATION BASIN 6
APPROX. CONTRIBUTING IMPERMEABLE AREA: 6.44ha
STORAGE VOLUME REQUIRED: 6,950m³
BASIN DEPTH: 2.0m + 0.3m FREEBOARD
ASSUMED INFILTRATION RATE: 0.021m/hr
Railway Line
INFILTRATION BASIN 1
APPROX. CONTRIBUTING IMPERMEABLE AREA: 9.77ha
STORAGE VOLUME REQUIRED: 10,300m³
BASIN DEPTH: 2.0m + 0.3m FREEBOARD
ASSUMED INFILTRATION RATE: 0.021m/hr

APPENDIX

FLOODING AND DRAINAGE

DRAINAGE STRATEGY

Based upon the site geology as indicated by BGS mapping and borehole logs, it is anticipated that surface water discharge via infiltration is viable. An assumed infiltration rate has been used which has been taken from the nearby Ida Darwin Hospital Site (approx. 400m southwest) which falls within the same soil strata (Planning Application Ref: S/0670/17/OL). On site infiltration testing is to be undertaken prior to detailed design.

Should infiltration be found to not be viable on site, the site may discharge surface water to one of the surrounding watercourses is still viable.

The scheme will utilise the topography and natural site boundary conditions. No significant re-profiling of the site is proposed and hence the resultant flood flow pathways will replicate the existing and direct flows to the proposed onsite attenuation storages. Surface water runoff will be attenuated on-site for events up to and including the critical 1 in 100 year storm rainfall event plus a 40% allowance for climate change.

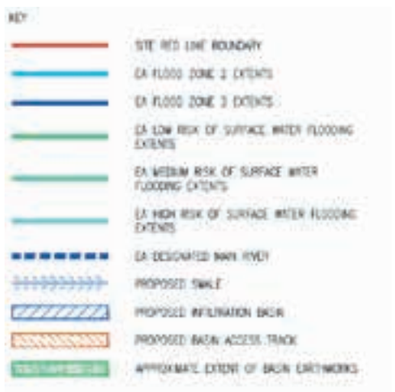
Due to the site falling predominantly within Groundwater Source Protection Zone 3 (SPZ3) and partially within SPZ2, three levels of surface water pre-treatment are proposed prior to discharge via infiltration. These will take the forms the basins themselves, sediment forebays, and one or more of either permeable paving, swales, filter strips, bioretention etc located strategically throughout the site.

The development has been split into 6 catchments which each drain via a mixture of strategically located SuDS devices prior to storage and discharge via an infiltration basin. The surface water strategy has assumed that the proposed development areas are 66% impermeable which includes a 10% allowance for urban creep in the residential areas.

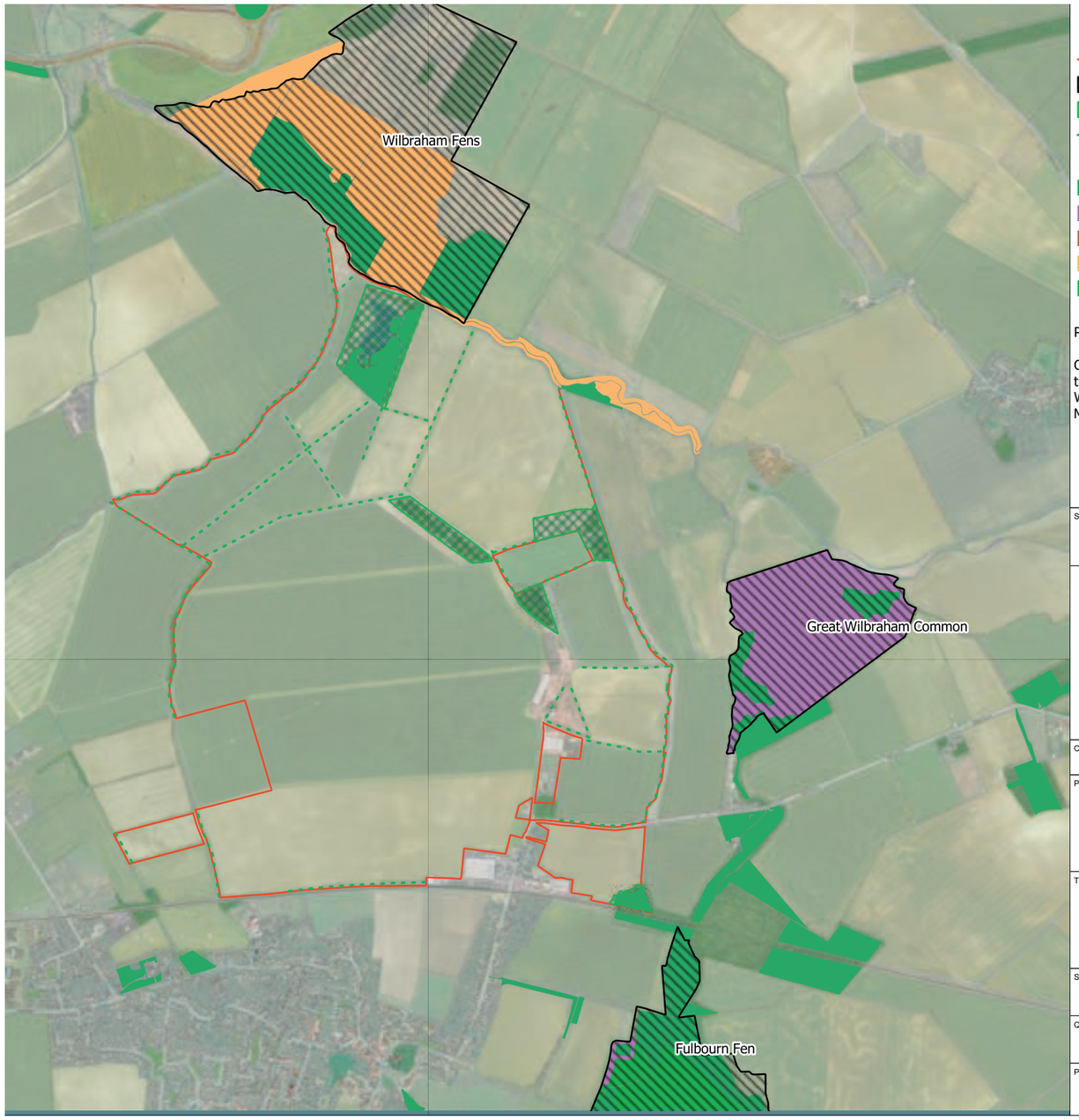
Outline Micro Drainage modelling has indicated the required volume of attention needed within each basin. The basins as shown in the adjacent figure have been sized to incorporate the approximate extent of earthworks required to integrate the basins into the site topography, including a 3.0m access track for maintenance areas and a 300mm freeboard.

The proposed piped drainage system should be designed such that there is no surcharging in the 1 in 2 year probability event, and no flooding in the 1 in 30 year probability event as per the latest Sewers for Adoption criteria.

Management procedures will be developed in accordance with the guidance contained in CIRIA C753 "The SuDS Manual" and CIRIA C625 "Model agreements for sustainable water management systems"



APPENDIX
ECOLOGY



Legend:

- Site Boundary
- Site of Special Scientific Interest (SSSI)
- Habitats preferable to retain
- Linear habitats preferable to retain

Habitat of Principal Importance (HPI)

- Deciduous woodland
- Good quality semi-improved grassland
- Lowland calcareous grassland
- Lowland fens
- Lowland meadows

Plan is based on desktop survey only.

Oppurtunities are highlighted in the report and the call for sites brochure (Land North of Wilbraham Road, Call for Sites, Fulbourn, March 2019, jtp).

STATUS:	Confidential
	WSP, 62-64 Hills Road Cambridge, CB2 1LA Tel: +44 (0) 12235 58050 www.wsp.com
CLIENT:	COUNTRYSIDE
PROJECT:	Land North of Wilbraham Road, Fulbourn
TITLE:	Ecological Constraints Plan

SCALE @A3: 1:1,243,350	CHECKED: HS	APPROVED: HB
QGIS FILE: V.1	DRAWN: 14/3/19	DATE: 14/03/19
PROJECT No: 70050162	DRAWING No: 70050162_EC_02	REV: 0.1

BACKGROUND TO COMISSION

WSP were commissioned by Countryside to undertake a desk based assessment using freely available mapping resources of a potential development site in Fulbourn, Cambridgeshire. The land parcel shown on Figure 1 is located to the north of Wilbraham Road and is referred to as 'the Site' within this report. The objectives of the assessment were to identify any potential ecological constraints in relation to the proposed development and highlight any areas within the Site with potential for ecological enhancement, including biodiversity net-gain.

Although this report will provide introductory information to the scheme regarding the likely ecological constraints, it is limited to desk study and online resources and therefore a site visit and survey will be required to establish the baseline and develop an assessment at an appropriate time. This report includes information regarding statutory designated sites (not non-statutory sites).

PROPOSED DEVELOPMENT

The proposed scheme involves the development of approximately 1700-2200 homes within the southern and central areas of the Site with all woodland habitat to be retained and enhanced as part of the development. The development will include expansion of the wetland habitat associated within the SSSI across approximately 60ha of land at the northern part of the Site. Further details of how this area can be enhanced for biodiversity is included within the Assessment and Recommendations section. Within the development footprint a series of interconnecting hedgerows and ditches will be created connecting with the northern wildlife area. A series of new public footpaths will be created to provide new access routes to other nearby SSSIs including Great Wilbraham Common and Fulbourn Fen. The proposed development will aim to achieve biodiversity net-gain post development.
Any increase in biodiversity will be in line with the National Planning Policy Framework (NPPF) and the South Cambridgeshire Local Plan (adopted 2018), Policy NH/4: Biodiversity, which states:
New development must aim to maintain, enhance, restore or add to biodiversity. Opportunities should be taken to achieve positive gain through the form and design of development. Measures may include creating, enhancing and managing wildlife habitat and networks, and natural landscape. The built environment should be viewed as an opportunity to fully integrate biodiversity within new development through innovation. Priority for habitat creation should be given to sites which assist in the achievements of targets of the Cambridgeshire Green Infrastructure Strategy.

APPENDIX
ECOLOGY

HABITATS

The Site was dominated by flat arable land, fragmented by hedgerows and / or ditches. Agricultural buildings were located within the central western area of the Site and are expected to be retained. The Little Wilbraham River runs 1km along the northern boundary, which separates the Site from Wilbraham Fen SSSI. Using the mapping tool Multi Agency Geographic Information for the Countryside (MAGIC) two areas of Lowland Mixed Deciduous Woodland were identified within the Site boundary. This habitat type is a Habitat of Principle Importance (HPI). HPI are listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 as recognition for their conservation importance. The HPI woodland located at the south-eastern corner of the Site extends north and southwards to adjoin Great Wilbraham Common SSSI and Fulbourn Fen SSSI. Little Wilbraham River was surrounded by the HPI: Lowland Fens. Features of interest within the Site have been highlighted on Figure 1 as being preferable to retain.

It is noted that the amount of HPI mapped on MAGIC is under recorded however it provides a useful indication of the types of habitat present in the area. Three sections of woodland identified through aerial imagery were located within the centre of the Site and on the eastern boundary. This woodland may meet the criteria for Lowland Mixed Deciduous Woodland however this will not be determined until the Site is surveyed and assessed. It is likely that the hedgerows on Site are HPIs and may also be Important under the Hedgerow Regulations (1997).

SPECIES

The scheme has the potential to impact on protected / notable species that may be utilising the habitat present within or adjacent to the Site.

Bats may roost within the nearby residential buildings / trees and may use the hedgerows, pond, Little Wilbraham River and adjacent railway line for foraging / commuting behaviour. A search was undertaken on MAGIC for granted European Protected Species Mitigation Licence (EPSML) applications within 3km of the Site. A granted EPSML application (Ref: 2014-667-EPS-MIT) for brown long-eared Plecotus auritus, common pipistrelle Pipistrellus pipistrellus, soprano pipistrelle Pipistrellus pygmaeus and Natterer's bat Myotis nattereri, was located approximately 1.6km to the east of the Site. These species are typical of the area and may use the Site for foraging or commuting during the bat active season (April – October).

A search for waterbodies within 250m of the Site boundary was undertaken. Two waterbodies were located within the Site and may be suitable to support breeding great crested newts Triturus cristatus. Two additional waterbodies were located on the opposing side of the Little Wilbraham River, although this watercourse would likely act a natural barrier to dispersal. Additionally the hedgerows and field margins may support widespread reptile species. Reptiles are often associated with railway lines due to their hibernacula suitability and in the Fulbourn case, a south facing embankment.

Further habitat assessment and potentially protected species surveys will be required to help develop an assessment.

DESIGNATED SITES

No Natura 2000 (Habitats Directive) sites fell within a 5km search buffer of the Site. A search for national statutory designated sites within a 2km search buffer was undertaken. Although no statutory designated sites fell within or directly connected to the Site, four Sites of Special Scientific Interest (SSSI) were located within 2km:

Fulbourn Fen SSSI – 27.34ha – 0.1km south-east

The site holds species-rich neutral grassland on calcareous loam and peat, together with remnants of 'fen' woodland. There habitat are now rare in lowland England were only small fragments are known to persist. Areas of secondary woodland have also developed on the drier areas of contribute to the overall habitat variety of the site and its value to bird and invertebrate life.

Great Wilbraham Common SSSI – 23.51ha – 0.1km east

The site supports neutral grassland communities of the calcareous loam grassland type. This is a type that is now rare in Britain. Only fragments are known to persist, chiefly as small areas of common land. This site is one of the largest remaining species-rich grasslands in Cambridgeshire.

Wilbraham Fens SSSI – 61.99ha – adjacent to northern boundary

The site is a large area of fen and neutral grassland with associated scrub and open water communities. Similar fens are now rare in Britain and now occur only in a few scattered inland localities, mainly in East Anglia.

Fleam Dyke SSSI – 11.77ha – 1.4km south-east

The site hold chalk scrub and species-rich chalk grassland communities which are of a very limited distribution in south, central and eastern England and especially rare in Cambridgeshire.

With the increase in residential units and improved public footpaths to the SSSIs, there will likely be an increase in visitor pressure to these sites. Additionally, improvements to drainage and the expansion of Wilbraham Fens SSSI will require further assessment to ensure a non-significant impact to statutory designated sites.

ASSESSMENT AND RECOMMENDATIONS

The following recommendations are in line with the landscaping plans for Land North of Wilbraham Road – Call for Sites, Fulbourn (jtp, 2019). The majority of the development footprint will be located within arable fields which are of low ecological value and their loss is not considered significant. The features of highest ecological value within the Site; the hedgerows, woodland and ponds, will be retained and enhanced as part of the development. All new hedgerow and woodland planting will include shrubs and tree species which are native and of local provenance. A variety of high value habitats such as species rich grassland and fen habitats were the features of the nearby SSSIs. There are opportunities to recreate high value habitats such as these within the proposed development. Habitat connectivity will be significantly improved through the expansion of Wilbraham Fens SSSI by an additional 60ha and a new series of interconnecting hedgerows and drainage ditches through the Site. There is an opportunity to create wildflower grassland / scrub mosaic habitat on the fringes of the Site that will use a seed mix typical of the area. A Habitat Management Plan (HMP) will be designed to ensure that any newly created habitat will achieve maximum biodiversity value. Newly created habitats will provide mitigation areas for protected species found to be using the Site. A scheme to install artificial habitat features within the Site will also be designed to include bird / bat boxes. This scheme would be in line with the South Cambridgeshire Local Plan for integrating biodiversity within the Site.

It is recommended than a Preliminary Ecological Appraisal (PEA) be undertaken at this stage to provide a detailed assessment of the habitat within the Site and the potential to support protected / notable species. As part of the PEA, the Cambridgeshire and Peterborough Environmental Record Centre (CPERC) would be contacted to obtain a detailed record search for species and non-statutory designated sites within a 2km buffer around the Site. The PEA will assess the Site and the zone of influence to develop a baseline to help further inform mitigation and enhancement opportunities.

APPENDIX

LANDSCAPE APPRAISAL & KEY VIEWS

NATIONAL CHARACTER

The site lies within the National Character Area profile: 87: East Anglian Chalk, (Natural England: 14 February 2014), key characteristics of which are:

- The underlying and solid geology is dominated by Upper Cretaceous Chalk, a narrow continuation of the chalk ridge that runs south-west–north-east across southern England, continuing in the Chilterns and along the eastern edge of The Wash. The chalk bedrock has given the NCA its nutrient-poor and shallow soils.
- Distinctive chalk rivers, the River Rhee and River Granta, flow in gentle river valleys in a diagonally north-west direction across the NCA.
- The chalk aquifer is abstracted for water to supply Cambridge and its surroundings and also supports flows of springs and chalk streams; features associated with a history of modification include watercress beds, culverts and habitat enhancements.
- The rolling downland, mostly in arable production, has sparse tree cover but distinctive beech belts along long, straight roads. Certain high points have small beech copses or 'hanger', which are prominent and characteristic features in the open landscape. In the east there are pine belts.
- Remnant chalk grassland, including road verges, supports chalkland flora and vestigial populations of invertebrates, such as great pignut and the chalkhill blue butterfly.
- Archaeological features include Neolithic long barrows and bronze-age tumuli lining the route of the prehistoric Icknield Way; iron-age hill forts, including that at Wandlebury; impressive Roman burial monuments and cemeteries such as the Bartlow Hills; a distinctive communication network linking the rural Roman landscape to settlements and small towns, such as Great Chesterford; the four parallel Cambridgeshire dykes that cross the Chalk: the Anglo-Saxon linear earthworks of Devil's Dyke, Fleam Dyke, Heydon/Bran Ditch and Brent Ditch; ridge-and-furrow cultivation remains of the open field systems of the earlier medieval period; and large numbers of later moated enclosures, park lands created, sheepwalks, arterial routes and nucleated villages that emphasise the land use change of this period.
- Brick and 'clunch' (building chalk) under thatched roofs were the traditional building materials, with some earlier survival of timber frame. Isolated farmhouses built of grey or yellowish brick have a bleached appearance.
- Settlement is focused in small towns and in villages. There are a number of expanding commuter villages located generally within valleys. Letchworth is a nationally significant designed garden city.
- In and around the wider area of Newmarket, stud farms impose a distinctive geometric, enclosed and manicured pattern to the landscape.
- The NCA is traversed by the Icknield Way, an ancient route that is now a public right of way. Roads and lanes strike across the downs perpendicularly and follow historical tracks that originally brought livestock to their summer grazing. Today major roads and railways are prominent landscape characteristics of the NCA.

View 3

View 4

View 5

View 6

LANDSCAPE APPRAISAL & KEY VIEWS

REGIONAL CHARACTER TYPE

The site lies within the 2B. Eastern Fen Edge landscape type described in "CAMBRIDGE GREEN BELT STUDY A Vision of the Future for Cambridge in its Green Belt Setting: FINAL REPORT", (Landscape Design Associates, September 2002):

2. Fen Edge
This is a transitional landscape type, situated between the Fens and the higher land beyond. It is relatively low lying, but not as low as the fens. It still appears generally flat, and contains a variety of land uses, including arable and pastoral agriculture, roads and settlement. The Fen Edge has traditionally been an important location for settlement, as it is above the Fen floodplain, and has easy access to both the wetland resources of the Fens and the higher land which is suitable for agriculture. The land to the north-west, north and east of Cambridge can be described as Fen Edge, although the building of the A14 has severed the link between the city and the Fen Edge landscape to the north. The Fen edge villages were traditionally wealthy and contain several fine medieval churches. Building materials traditionally used in the fen edge villages include gault brick, render, and thatch. Only the wealthiest buildings were constructed of stone. The Fen Edge landscape type is found in two areas:

- 2A. Western Fen Edge
- 2B. Eastern Fen Edge

2B. Eastern Fen Edge
The Eastern Fen Edge is a transitional landscape between the Fenlands and the Chalklands. One of the key characteristics of this landscape character area is the pockets of Fen and Chalk landscapes around and within it, which contribute to the transition and bring different influences.

The Eastern Fen Edge is open in character, and is generally arable farmland, divided by hawthorn hedges. Views are generally long, and often include the surrounding landscape character areas. In the northern part of the area, variety in the landscape is achieved through designed landscapes at Anglesey Abbey and Bottisham Hall.

There is a gradual transition between the farmland of the Eastern Fen Edge and the chalk hills to the east and south. From this higher land there are distant views to Cambridge, with the city set in a green landscape. There are immediate views to the edge of Cambridge from the western part of the landscape character area. The airport dominates many of these views.

Settlement in the Eastern Fen Edge includes scattered farms and a number of small villages separated by farmland. The villages are located on relatively high ground and their church towers are prominent in the landscape. Of these villages, only Fulbourn has expanded with significant areas of modern housing.

View 7

View 9

View 8

APPENDIX
LANDSCAPE APPRAISAL & KEY VIEWS

LOCAL CHARACTER TYPE

The 2002 Cambridge Green Belt Report goes on to describe the character of the landscape east of Cambridge in finer detail, noting "where appropriate breaking the larger character areas into smaller, local areas of distinctive character. It uses similar methods described in section 4.6, applying them at a more detailed scale. At this scale boundaries of local character areas often follow visible elements in the landscape such as watercourses or field boundaries".

The village site lies within Fulbourn Eastern Fen Edge character type, whilst the main site straddles this and the Little Wilbraham Fen and abuts the Teversham Eastern Fen Edge

Fulbourn Eastern Fen Edge
Fulbourn Eastern Fen Edge is an area of flat or gently rolling arable farmland mostly lying between 10 and 20 metres AOD. Chalk is the bedrock around the villages of Fulbourn, Great Wilbraham and Little Wilbraham, with a substantial area of terrace deposits and smaller areas of peat on lower ground between these villages.
Fulbourn Eastern Fen Edge is situated between higher chalk hills to the south, Little Wilbraham Fen to the north west and further Fen Edge landscape to the north east. Landform is gently rolling with some low-lying flat areas. The landscape provides a rural setting for the small, densely treed villages of Great Wilbraham and Little Wilbraham, and the east side of the larger village of Fulbourn. These villages are set on rolling and slightly elevated ground.
This area contains a larger coverage of trees and woods than other Fen Edge landscapes described above, mostly associated with the grounds of old halls. Some of these include specimen trees in parkland settings. These provide a high degree of enclosure close to villages, with the landscape becoming more open towards Little Wilbraham Fen and the chalk hills. Localised enclosure is also provided by hedges and scrub, and buildings associated with villages.
Fields are variable in size, being smaller closer to villages and woodlands, and larger towards Little Wilbraham Fen and the chalk hills.
Little Wilbraham is a small linear village, separated into two halves by an area of open fields, with a strong rural character. It is situated at approximately 15 metres AOD above Little Wilbraham Fen. It contains a church, a rectory and farmhouses and cottages. The few remaining early cottages are timber framed and plastered with plain tiled or thatched roofs. A common (mainly 19th century) building material is gault brick with plain tiles. There are also a number of more modern buildings including some small post-war housing estates, bungalows, and semi-detached and detached houses. There are views from the village out into open countryside. A Conservation Area covers most old properties. There are one grade II* and 13 grade II buildings (South Cambridgeshire District Council February 1999).

View 10

View 11

View 12

View 13

LANDSCAPE APPRAISAL & KEY VIEWS

Great Wilbraham is larger than Little Wilbraham, but is still a small village. It is a pleasant village with similar traditional housing styles to Little Wilbraham, including timber framed and plastered with plain tiled or thatched roofs, and gault brick. The church dates from the 12th century and is made of flint bounded by flint walls. Old houses are intermixed with some new dwellings, including small post-war estates, bungalows and semi-detached houses. Great Wilbraham has a large village green bounded by old houses. There are views from close to the edge of the village out into open countryside. Part of Great Wilbraham is covered by a Conservation Area and the village contains three grade II* and 34 grade II listed buildings (South Cambridgeshire District Council February 1999).

Fulbourn is located four miles to the east of Cambridge. It is a large village with a linear, largely intact historic core focussed on High Street, Manor Walk and Home End. The village contains some attractive historic buildings including Fulbourn Manor and the 13th century St Vigor's Church faced with flint. Along the original street there are three village greens at street junctions and a number of 14th century medieval farmhouses and other cottages and farmhouses of the 16th and 17th century interspersed with newer properties. These are timber framed, plastered, with thatched or plain tiled roofs. Linear development comprising detached and semi-detached housing continued during the 19th and early part of the 20th century along the approach roads, resulting in a broad range of building forms and age. The area between Cambridge Road and Cow Lane has been infilled with post war housing estates of a variety of building types including system built concrete flats, terraces and red brick detached and semi-detached housing. Newer low density housing estates (1980's – 1990's) are found on the edge of the village. Fulbourn School is an old Cambridge red brick building. Some areas of Fulbourn are quite well treed with grass verges and rural in character. The Local Plan records that Fulbourn contains two grade II* and 53 grade II buildings but that this number is not finite (South Cambridgeshire District Council February 1999).

The windmill on Cambridge Road just outside Fulbourn and Fulbourn Hospital, a good example of Victorian hospital architecture in a parkland setting, are landmarks. The church tower is not high enough to be seen from the surrounding landscape.

There is some small scale industrial and storage development on the northern side of the village close to the railway line. This, and especially the Fielding Industrial Estate by the approach route from Great Wilbraham, is a significant detracting feature at the gateway to the village.

Little Wilbraham Fen

View 14

View 15

View 16

View 17

APPENDIX

LANDSCAPE APPRAISAL & KEY VIEWS

The local landscape character area Little Wilbraham Fen covers the same area of land as Little Wilbraham Fen described in the broader scale assessment of the whole Green Belt in section 4.6. The description is expanded below.

Little Wilbraham Fen is a small pocket of low-lying fen (mostly between 5 and 10 metres AOD) within the Eastern Fen Edge. Substantial areas of peat and terrace deposits cover much of this land, with areas of chalk towards the perimeter of the area. A regimented pattern of flat arable fields and areas of wetland vegetation are divided by a network of straight droveways and drainage ditches, and the more sinuous path of Quy Water and Little Wilbraham River. Watercourses are often open, or sometimes lined with vegetation including hawthorn scrub or large willow trees. The willow trees are prominent features on the skyline. The Fen is generally quite open, with some enclosure provided by the tree and scrub vegetation, and the sloping landform outside the character area.

In addition to Little Wilbraham Fen the character area includes two other named fens – Teversham Fen and Fulbourn Fen. It contains one SSSI (Wilbraham Fens), which is made up of a large area of fen and neutral grassland with associated scrub and open water communities, with dense stands of common reed Phragmites australis. Settlement within Little Wilbraham Fen is limited to isolated farms.

The Harcamlow Way long distance footpath passes through the Little Wilbraham Fen. Other footpaths and a bridleway provide further access to this area. There are no surfaced roads within the area.

Teversham Eastern Fen Edge

Teversham Eastern Fen Edge is an area of flat or gently rolling arable farmland mostly lying between 10 and 15 metres AOD. Underlying geology is mainly chalk, with a small area of terrace deposits to the north.
Teversham Eastern Fen Edge is situated on the edge of Cambridge and Cambridge Airport to the west, higher chalk hills to the south, Little Wilbraham Fen to the east, and Fen Ditton Fen Edge to the north. The open landscape provides a rural setting for the small, densely treed village of Teversham, and the abrupt eastern and northern edges of the city at Cherry Hinton.

Fields are generally large with boundaries defined by open drains or gappy

View 18

View 19

View 21

View 22

and often overgrown hawthorn hedges with few trees. There are a number of smaller fields around the edge of Teversham, with more trees, providing a soft green edge to the some sides of the village.

The land west of Teversham is strongly influenced by the proximity of the open airport site and the large dominating hangar buildings on the edge of the city. There are clear views of Cambridge from this land, with the tops of buildings and structures, including Addenbrooke's Hospital, Carter Bridge, and the Roman Catholic Church, rising above the densely treed city.

Teversham is a small village with a small and fragmented historic core, and areas of post war suburban housing. It is situated about 4.5 kilometres from the city centre, and 0.6 kilometres from the edge of the city at Cherry Hinton. The flint and stone church dates from the 13th century. It is set amongst mature trees, on the main road through the village on its west side, and within a rural setting on its south east side (see Photograph 7, Appendix A). The church and a village green lying south east of the church provide a visual focus to the village. Other early buildings date from the 17th century and are timber framed and plastered with plain tile or thatched roofs. Gault brick was used to construct some buildings in the 19th century.

Older houses are focussed around the church, but are also scattered amongst 20th century houses along Church Road and High Street. Post war housing developments have enlarged the village to the south east. These comprise a mixture of styles and materials that are not characteristic of the historical building style, including small developments of orange brick bungalows, grey rendered semi-detached houses with brown concrete roof tiles, and white painted brick council houses.

Individual large older houses and farms lie outside the main built up area of the village.

The village contains a Conservation Area (see drawing number 1641LP/11), one grade II* and six grade II listed buildings (South Cambridgeshire District Council February 1999).

View 20

View 24

View 23

View 25

APPENDIX

LANDSCAPE APPRAISAL & KEY VIEWS

Formed of a series of expansive agricultural fields, with a crowned topography which slopes gently from around 15.0 m AOD at the centre to around 10m AOD at the northern, eastern and western boundaries, the main part of the site is devoid of significant landscape features. However, at these boundaries the landscape is clearly defined by waterways, greened walkways and ditches, including New Cut to the east, Little Wilbraham River to the north and the Caudle Ditch and associated greenway to the north west. To the west the site is bounded by Fen Drove Way. A fishing pond and associated mature vegetation is located in the north west corner, and isolated stands of trees are also to be found. The site also includes Queens Farm, and light industrial units and sheds with associated hard standing and car parking.

Assessment of views of the site obtainable from the surrounding paths and designated Public Rights of Way indicates that whilst the site is readily visible from the pedestrian routes and to some extent Teversham Road and Wilbraham Road, it is generally well screened from the wider landscape, with the visual envelope defined by woodland to the east and north, and mature residential landscape and the railway line to the west and south.

The 2002 Cambridge Green Belt Study confirms that there are no key views of Cambridge from the site and that most of the site area is not within the "Peripheral areas with particular qualities to be safeguarded"

VIEWS 3-8 illustrate the visibility of the site from the Prow and accessible footpaths around the site.

VIEWS 3-7 are from the east looking west and south as the path progresses westwards around the north of the site. From the east, the Queens Farm and associated warehousing / industrial units with mature intervening vegetation form an inconsistent visual barrier to the main site areas beyond. The containment is further enhanced by the existing woodland blocks within the site, and which are proposed for retention within the outline proposals. Whilst development will inevitably result in significant effects on views into and out from the site, the proposals have been carefully considered to maintain wide buffer landscapes and to minimize any negative effects, both in the short term as advanced planting regimes establish, and also in the longer term when the woodland belts and associated Landscape features have reached maturity.

VIEWS 8-25 are typical of those available from the west (walking along Caudle Ditch), looking east and on approaching the Little Wilbraham River, southwards.

Views across the site are more open than those from the east, and the full extents of the expansive field systems are apparent, viewed over the gappy hedgerows that border the pathway here. To the north, the landscape surrounding the fishing pond and looking northwards, the edge of Little Wilbraham Fen is characteristic of the fenland landscape, with attractive features that will be retained and enhanced by the development proposals. The overhead power lines and wind turbines feature in views and have an urbanising effect on the otherwise rural scenery. Similarly, in views across the site the sheds and warehousing around Queens Farm are visible in part, moderated by existing vegetation. The large S&B Herba Foods unit is also dominant in the distance and clearly signals the urban edge of Fulbourn to the east.

Views of Fulbourn to the south are mostly screened by vegetation associated with the railway,, or mature trees and hedgerows around the northern edge of the village which includes a significant percentage of evergreen varieties which provide year round cover.

View 4

View 11

APPENDIX
LANDSCAPE MITIGATION

Natural England provides the following guidance in respect of landscape opportunities within the East Anglian Chalklands:

- Protect the character and integrity of the rural landscape by conserving its mosaic of cultural heritage and natural assets, semi-natural habitats and historic buildings and archaeological features.
- Identify and conserve views to and from key viewpoints and landmarks by careful design and vegetation management, minimising the visual impact and effects of development, woodland planting and scrub encroachment.
- Conserve and enhance the land use pattern, valued farmland species and productivity of the landscape by securing sustainable forestry and agricultural activity. This includes conservation of small farm woodlands, historic hedgerows, farmland birds and arable weeds.
- Plan and manage private and public spaces for recreation such as golf courses and restored chalk pits, so that their design and their features contribute positively to landscape character. Seek the conservation, restoration and creation of natural and cultural features in these landscapes.
- Secure sustainable development which also reflects traditional local building styles and materials. Where landscape character and features are degraded by development, identify opportunities to redevelop areas and infrastructure. Encourage the widespread use of red brick and other local building materials and styles through the use of design guidance and strict planning control. Create strong visions in the urban fringe as it is developed, as this will contribute positively to the sense of place.
- Seek to reduce threats to natural and historic features by conserving or restoring their setting, addressing the problem of fragmentation particularly associated with chalk grassland. Work at a landscape scale which reflects the ecosystem approach, ecological network approach and historic character.
- Conserve, enhance and create new public access infrastructure, access links and accessible natural and cultural features, especially near settlements, in order to enhance the transitional areas between urban landscape and countryside.
- Undertake appropriate visitor management to ensure sustainable visitor pressure at all sites but particularly focus upon 'honey pot' sites and those sites near new development. Identify and promote alternative greenspaces and entry points to reduce visitor pressure.
- Plan for the regeneration and replanting of existing, predominately small, hill-top beech plantations. Make sure that the resilience of woodland to climate change impact is understood and acted upon; particularly the valued beech woodland which is vulnerable. Consider new species compositions and secure woodland across a variety of aspects.

The South Cambridgeshire District Council "District Design Guide SPD" Adopted March 2010 includes a series of Design Principles to be adopted in the Chalklands area:

- Maintain the distinctive, settlement pattern of the area and its local context.
- Ensure any extensions to springline villages are located along the bottom of steeper slopes and along lanes.
- Ensure any extensions to river valley villages are located along the line of the river, or at right angles to it, depending on the direction of the main transport route.
- Maintain the linear, or rectilinear form of the settlements.
- Ensure density and pattern of new developments reflect that of existing villages and hamlets. Avoid backland and cul-de-sac developments where possible.
- Ensure buildings are arranged in continuous frontages within village cores and are arranged in loose knit patterns facing the street on more peripheral sites.
- Ensure new developments are integrated with sufficient space for garden and street tree planting where applicable.
- Enhance village gateways and, where appropriate, consider provision of avenue planting on village approaches.
- Take opportunities to create new village greens and/or wildlife areas within new developments.
- Ensure new developments reflect the form, scale and proportions of the existing vernacular buildings of the area and pick up on the traditional building styles, materials, colours and textures of the locality.
- Enclose boundaries facing the street in village cores by low, or high, flint walls with brick detailing, simple decorative railings, picket fencing or hedging.
- Retain hedges along roads.
- Enclose boundaries facing the street on village peripheries with hedge and tree planting.
- Avoid the use of standardised and intrusive urban materials, street furniture, lighting and signage as part of traffic calming measures wherever appropriate.
- Ensure new agricultural buildings, such as large storage sheds, are sited and designed to reduce their apparent mass, minimising their impact on the wider landscape by the appropriate use of texture, colour and planting.

The outline proposals follow these broad brush recommendations, (as far as possible at the scale presented), and by way of their enhanced landscape setting, provide significant benefits in creating a strong landscape structure with interconnected green corridors. These would have the potential to be combined with other green ways to aid in the linking of Cambridge centre with the wider landscape.

The addition of naturalistic water bodies, sustainable swale systems. wildflower meadows, and wildlife friendly amenity spaces will lift the ecological potential of the site whilst providing attractive spaces for leisure and recreation.

OUR SUCCESS
AWARDS

Our unique approach to placemaking has received high praise .JTP is the only architectural practice in the UK to have won eight Building for Life Awards, the national standard for well-designed homes and neighbourhoods.

In the last twenty years, our work has achieved recognition at international, European and national levels and we have been the recipient of more than 200 awards. These include:

Bow River Village WhatHouse? Awards 2018 Best Starter Home Scheme (Bronze) • Wimbledon Hill Park Housebuilder Awards 2018 Best Refurbishment Project • Wawne View WhatHouse? Awards 2018 Best House (Silver) • 20/20 Visions Urban Design Awards Book Award – shortlisted • Southall Waterside Brownfield Briefing Awards Best Urban Regeneration Project – Winner • Southall Waterside Brownfield Briefing Awards Brownfield Project of the Year - Winner • Wimbledon Hill Park British Homes Awards Development Transformation of the Year – Shortlisted • Fitzroy Gate British Homes Awards Best Garden/Landscaping Design • Imber Riverside Surrey Property Awards Best New Homes Development – Shortlisted • Bow River Village National Housing Awards 2019 Best Large Development - Winner • St Clement's Civic Voice Design Awards Housing Award - Winner • Southall Waterside Planning & Placemaking Awards 2018 Excellence in Placemaking at High Densities - Winner • Southall Waterside Planning & Placemaking Awards 2018 Best Use of Brownfield Land in Placemaking - Winner • Alconbury Weald Best Use of Brownfield Land in Placemaking - Highly commended • Fitzroy Gate Evening Standard New Homes Awards 2018 Best Family Home (over £1.5m) - Winner • Wimbledon Hill Park Evening Standard New Homes Awards 2018 Best Apartment (over 100) – Winner • JTP AJ100 Awards 2018 Employer of the Year – Shortlisted • JTP Sunday Times 100 Best Small Companies to Work For 2018 • JTP Best Companies Three Star Status Accreditation • JTP Building Awards Architectural Practice of the Year 2017 • Battersea Power Station: Phase 2 Winner Best Regeneration Planning Awards 2017 • Southall Waterside Highly Commended Best Use of Brownfield Land Placemaking Planning Awards 2017 • Kew Bridge Highly Commended Best Housing Scheme (fewer than 500 homes) Planning Awards 2017 • JTP The AJ100 (Architects' Journal) Practice of the Year Shortlisted 2017 • JTP Best Companies Two Star Status Accreditation • JTP BD Awards - Masterplanning & Public Realm Architect of the Year Award 2017- Shortlisted • A Home for All Seasons, Sunday Times British Homes Award for Resilient Home of the Future • Park Street & Lombard Close, Nottingham, Local Authority Building Control (Labc) East Midlands Region Winners 2016, Best Social Or Affordable New Housing Development • JTP The AJ100 (Architects' Journal) Practice of the Year Shortlisted • Bow River Village, First Time Buyer Readers' Awards 2016, Best Large Development • JTP BD Awards - Masterplanning & Public Realm Architect of the Year Award 2016 • Wimbledon Hill Park London Sunday Times British Homes Awards Development of the Year – Scheme of up to 25 homes • Changzhi Island, China Successful Design Awards - Award for Social Innovation • JTP Best Companies Two Star Status Accreditation • The Oaks, Prague AJ120 Awards - Architectural Collaboration of the Year - Shortlisted • St Clements Hospital, Bow Placemaking Awards - Community-led Placemaking – Highly Commended • Water Colour Placemaking Awards - Best Housing Scheme – Highly Commended • St Clements Hospital, Bow National Housing Awards - Overall Winner, Urban Design Group Award • The Hamptons Evening Standard New Homes Awards - Best New Large Development • JTP Best Companies One Star Status (Accreditation) • Graylingwell Park, Chichester Royal Town Planning Institute Planning Awards (South East) Community Engagement Award • Kip Village, Inverkip What House? Awards Best Development - Gold • Water Colour, Surrey Building for Life Silver Standard • The Hamptons What House? Awards Best Development - Bronze, What House? Awards Best Exterior Design - Silver • Graylingwell Park Sustainable Housing Awards -Sustainable Larger Social Housing Project of the Year, The Housebuilder Awards - Best Low or Carbon Zero Initiative • JTPs' London Studio City of London Sustainable City Awards Sustainable Building of the Year, The AJ100 (Architects' Journal) Sustainable Practice of the Year Shortlisted, Retrofit Awards - Commercial Building Category, Highly Commended, Green Business Awards, Giant Green Business Awards, Islington Council Sustainable Transport (Medium/Large Business), Sustainability and Innovation Award, CoreNet Global UK Chapter Awards • Water Colour What House? Awards Best Brownfield Development Silver Award • Royal Clarence Yard, Gosport RTPI Regional Award Heritage Category Commended • Scarborough Renaissance International Association for Public Participation's (IAP2) Core Values Awards Project of the Year • JTP Best Companies One Star Status (accreditation), The AJ100 (Architects' Journal) Practice of the Year Shortlisted • Scarborough Renaissance European Enterprise Awards Grand Jury Prize, Enterprising Britain Award Winner • Royal Clarence Yard The International Green Apple Awards for the Built Environment and Architectural Heritage Gold Award • Gunwharf Quays, Portsmouth Building for Life Silver Standard Award • Royal Clarence Yard RICS South East Awards Regeneration Category Runner up • Water Colour The Evening Standard New Homes Awards Best New Family Home (4 bed) Burchfield, Best New Family Home (3 bed) Sommer , Best New Starter Home (2 bed) Keller • Manse Road, Dirleton, East Lothian Homes for Scotland Quality Awards Rural Small Project Award • Briery Meadow (Rowanlea House Type) East Lothian Scottish Home Awards Business Stream House of the Year • Briery Meadow Homes for Scotland Quality Awards Rural Large Project Award • Water Colour The Daily Telegraph Your New Home Awards Waterside Category: Highly Commended, What House? Award (Property Week/Builder Magazine Group) Joint Gold Winner for Best Brownfield Development • Urridaholt, Gardabaer, Iceland BSA/Build Boston Citation for Urban Design, International LivCom Award for Built Projects Silver Award • Putney Wharf The Waterways Renaissance Awards Winner of the Design and Construction Category • The Manor, Lower Earley Building for Life Silver Standard Award • Hoebridge Works Evening Standard Home of the Year • Briery Meadow (Rowanlea House Type) What House? Award (Property Week/Builder Magazine Group) Silver winner for Best House • The Belvedere, Cambridge The Daily Mail 4 Star Award for Best Development (Regionally), The Daily Mail 5 Star Award for Best Apartment (Regionally), The Daily Mail Award for Best UK Apartment • The Village at Caterham Building Awards Major Housing Project of the Year • The Hamptons What House? Award Silver Winner for Best Exterior Design • Nordica, London What House? Award Bronze Winner for Best Brownfield Development • Hoebridge Works What House? Award Gold Winner for Best Starter Home • Cassio Metro What House? Award Silver Winner for Best Brownfield Development • The Village at Caterham Building for Life Gold Standard Award • Putney Wharf Building for Life Silver Standard Award • French Quarter Housing Design Awards Exhibition of Excellence • Royal Clarence Yard Regeneration Awards (Property Week/Builder Magazine Group) Best Housing-led Regeneration Project • Queen Elizabeth Park, Guildford Building for Life Gold Standard Award, Your New Home Awards Best Development for Family Living • Putney Wharf Planning for London Awards (Mayor's Office) Best Planning Built Project Contributing to London's Future • Peter Scott Centre The Waterways Renaissance Awards BURA and The Waterways Trust Heritage and Conservation Award Winner • Makins Court The National HomeBuilder Design Awards Commendation for Best Retirement Development • Lawfords Wharf, London The National HomeBuilder Design Awards Commendation for Best Small Housing Development • JTP Architect of the Year Awards Runner up • Charter Quay, Kingston Upon Thames Building for Life Gold Standard Award • Gunwharf Quays The National HomeBuilder Design Awards Best Mixed-use Development Commendation for Best Use of a Brownfield Site • The Village at Caterham The Deputy Prime Minister's Award for Sustainable Communities Finalist • Queen Elizabeth Park The Evening Standard Awards 2003 Best Three Bedroom House & Best Home of the Year • Makins Court, Winchester Alresford Society Rosebowl Winner • Kew Riverside Bentley International Property Awards Best UK Development Best Architecture (5 star rating) • Kew Riverside What House? Award Gold Winner for Best Development • Charter Quay The Waterways Renaissance Awards Commendation for Riverside Regeneration Project, The National HomeBuilder Design Awards Best Mixed-Use Development • The Village at Caterham The European Urban and Regional Planning Awards 2002 Conversion (Joint Winner) • Charter Quay Association of Town Centre Management Annual Awards Best Town Centre Mixed-use Development • The Village at Caterham BURA Community Award Caterham Barracks Community Trust • The Village at Caterham The RTPI National Awards for Planning Achievement Award for Planning for the Whole Community • Peter Scott Centre RICS Award for Regeneration, Silver Unicorn Award from the British Guild of Travel Writers for UK Best New Tourist Attraction, Tourism for Tomorrow Global Winner for Sustainable Tourism • Freiman Frankfurter Allgemeine Zeitung Award for Planning Innovation • Berlinerplatz, Essen, Germany Robert Jung Prize • Barnes Waterside What House? Award Best Luxury Housing Development

OUR SUCCESS
THE CREDENTIALS

JTP realises that it is important to practise what you preach. To this end we have taken steps to create a sustainable and enjoyable working environment; minimise our carbon footprint in our premises and how we work; embed quality and design excellence throughout our projects, and implement measures that stimulate and engage our members of staff.

Our Mission is to radically improve the sustainability of the built environment, by transforming the way it is planned, designed, constructed, maintained and operated.

We continue to ensure that our accreditations, memberships, awards and affiliations reflect the importance we place on our people, our clients, and our collaborators in the delivery of great places.

JTP Royal Institute of British Architects Chartered Practice Registration Number 2249624P

JTP Royal Incorporation of Architects in Scotland Chartered Practice Services Number 2363

JTP won Building Awards' Architectural Practice of the Year in 2017.

The Building Awards recognise and celebrate the very best of UK building industry.

JTP was awarded Masterplanning and Public Realm Architect of the Year Awards 2016.

The awards reward the practices responsible for the best overall body of work in 13 different categories.

JTP was awarded Employer of the Year at the 2012 AJ100 Awards.

The award recognises staff satisfaction, workplace culture, benefits and staff turnover.

JTP is a member of the New London for Architecture. The organisation is a focus for the debate and discussion of issues facing architecture, planning, development and construction in the capital.

JTP has achieved Best Companies Three Star "Extraordinary" Accreditation status for 2018, recognising the highest standard of workplace engagement and representing organisations that truly excel, focusing on employee engagement as an integral component of a business's success and growth.

JTP was named in the Sunday Times 100 Best Small Companies to Work For 2018, placed at number 73 in our inaugural entry to the prestigious list. The top 100 employers are determined by employee feedback collected via an anonymous survey, against eight factors of workplace engagement and satisfaction.

JTP has achieved a Top Five place in the Building Good Employer Guide for 2017 and 2016. We are delighted to be recognised for the hard work we put into making our studios stimulating and enjoyable places to work, and for the innovative programs we put in place to reward our talented team.

JTP is a supporter in kind of The Academy of Urbanism which brings together a group of thinkers and practitioners involved in the social, cultural, economic, political and physical development of our villages, towns and cities.

JTP is a Practice member of the Urban Design Group (UDG), a charity open to all who care about the quality of life in our cities, towns and villages and believe that raising standards of urban design is central to its improvement.

JTP is an Associate of Civic Voice, the national charity for the civic movement in England. They make places more attractive, enjoyable and distinctive, and promote civic pride.

JTP is a member of the Good Homes Alliance, a group of housing developers, building professionals and other industry supporters whose aim is to transform the UK housing sector to ensure it creates and maintains Good Homes for all.

JTP is a Carbon Smart Silver certified company. This is awarded for taking an intelligent and practical approach to reducing our carbon footprint and improving our environmental performance in various ways.

JTP is associated with BREEAM, one of the world's leading and most respected building assessment schemes that can be applied across all stages of a building's life cycle.

JTP is an Associate of the National Community Land Trust Network, which helps to provide homes that are genuinely affordable to rent or buy and remain affordable for future generations.

JTP London and Edinburgh Studios are accredited by the Contractors Health & Safety Assessment Scheme (CHAS) having demonstrated compliance as a Designer under the CDM Regulations.

JTP is also accredited under the SMAS WorkSafe Assessment Scheme. Both schemes are members of the Safety Schemes in Procurement (SSIP) forum.

JTP (London Studio) is a member of the First Mile Mixed recycling scheme. We operate a full recycling programme in our practice.

JTP (Edinburgh Studio) use Changeworks Recycling for all our recycling and carbon monitoring needs in Edinburgh.

JTP is a member of the UK Green Building Council, whose mission is to radically improve the sustainability of the built environment, by transforming the way it is planned, designed, constructed, maintained and operated.

JTP is a member of the Green Register of Construction Professionals. Joining a list of practitioners working towards addressing key issues relating to sustainability in the built environment.

JTP is committed to the continued investment in time and technology to improve quality, efficiency and accuracy of our work and in turn deliver exceptional solutions to our clients. We have in place a Quality Management System and hold ISO9001 certification.

JTP seeks to minimise the impact of our project and studio activities on the environment. We have in place an Environmental Management System and hold ISO14001 certification.

jtp

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