

NORTH EAST CAMBRIDGE

TOWNSCAPE ASSESSMENT

FINAL REPORT
SEPTEMBER 2021





CONTENTS

1.0	REPORT INTRODUCTION	5	4.0	TOWNSCAPE ANALYSIS - LOCAL CONTEXT	38
1.1	About this Report	5	4.1	Major Barriers	38
1.2	Report Structure	5	4.2	Two Distinct Areas	39
2.0	CONTEXT	6	4.3	Surrounding Neighbourhoods	41
2.1	Policy Context	6	5.0	TOWNSCAPE ANALYSIS - NORTH EAST	
2.2	Development Context	10		CAMBRIDGE	48
3.0	WIDER AREA URBAN DESIGN ANALYSIS	12	5.1	Land Parcels with their own Character	48
3.1	Introduction	12	5.2	Corridors	60
3.2	Location and Size	12	5.3	Open Spaces and Landscape Features	63
3.3	History	13	5.4	Landmarks	69
3.4	Land Uses	14	5.5	Main Pedestrian Routes	72
3.5	Centres	16	5.6	Gateways	74
3.6	Road Network	18	5.7	Visual Sensitivity	76
3.7	Public Transport	20	5.8	Vistas and Visual Centrality	78
3.8	Cycling	21	6.0	CONCLUSION	80
3.9	Green and Blue Infrastructure	23	6.1	Access and Connectivity	80
3.10	Topography	26	6.2	Land Uses	80
3.11	Flooding	27	6.3	Townscape Character	81
3.12	Heritage Assets	28			
3.13	Building Heights	30			
3.14	Taller Buildings	32			
3.15	Urban Grain - Block Sizes	34			
3.16	Residential Density - Homes per Hectare	35			
3.17	Residential Density - Homes per Building	36			



Aerial View of NEC and surroundings © GoogleEarth

1.0 REPORT INTRODUCTION

1.1 About this Report

1.1.1 This report is the Townscape Assessment for North East Cambridge Area Action Plan (NEC AAP). The purpose of this report is to provide a baseline townscape analysis of North East Cambridge and its wider context, covering urban structure, uses, building heights, landform, character and urban grain, amongst other factors.

1.1.2 The wider analysis is followed by an in-depth analysis of how the NEC site currently functions. It provides a robust basis for the NEC Townscape Strategy. It is part of a suite of documents that act as evidence base for the Townscape Strategy.

1.2 Report Structure

1.2.1 The report is structured into the following sections:

- **2.0 Context:** Discussion of the policy context and development context within Cambridge.
- **3.0 Wider Area Urban Design Analysis:** Baseline analysis of the urban structure and form of the wider area covering Cambridge city centre and the north of the city.
- **4.0 Townscape Analysis - Local context:** Analysis of the local area surrounding North East Cambridge, which forms it's immediate context.
- **5.0 Townscape Analysis - North East Cambridge:** In-depth analysis of the North East Cambridge site, including analysis of character, open spaces, landmarks and views.
- **6.0 Conclusion**

2.0 CONTEXT

2.1 Policy Context

2.1.1 In the Cambridge Local Plan (2018), the NEC area within the city is 'An Area of Major Change' whilst in the SCDC Local Plan, it is a 'Strategic Site'.

North East Cambridge

2.1.2 North East Cambridge is an identified allocated site in both the adopted South Cambridgeshire and Cambridge City Local Plans. It is located on the outer edge of the Cambridge urban area. The majority of the eastern part of the site lies within Cambridge City Council administrative area while the western part, including Cambridge Science Park, is within South Cambridgeshire District.

2.1.3 The Draft North East Cambridge Area Action Plan (2020) sets out a vision for the transformation of the site into a new mixed use urban district accommodating 8,000 new homes and 20,000 new jobs.

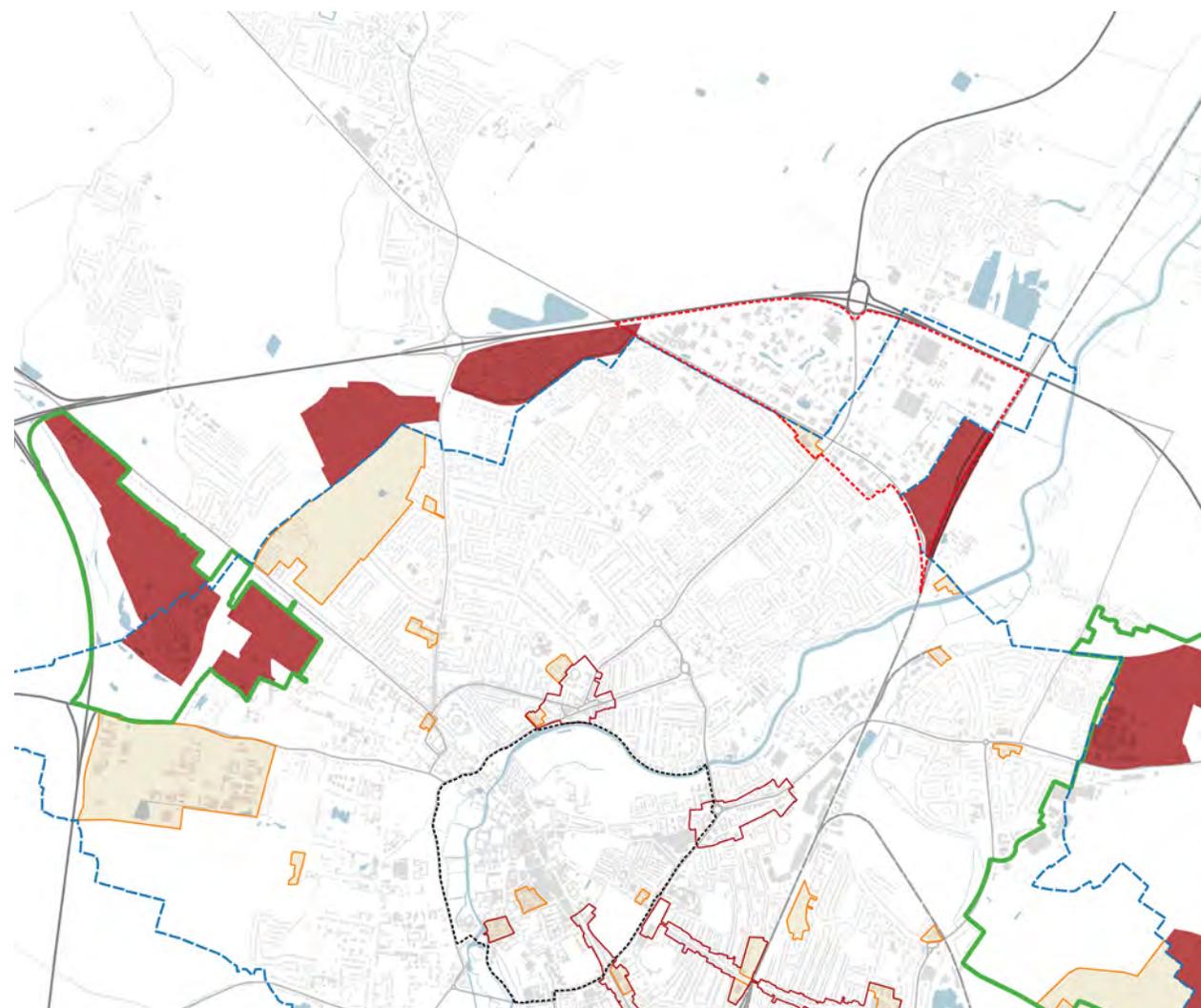


Figure 2.1: Local Plan Policy - Development Areas



2.1.4 A major challenge for the successful development of North East Cambridge is the fragmented land ownership, as the site is split between a number different landowners (Figure 2.2).

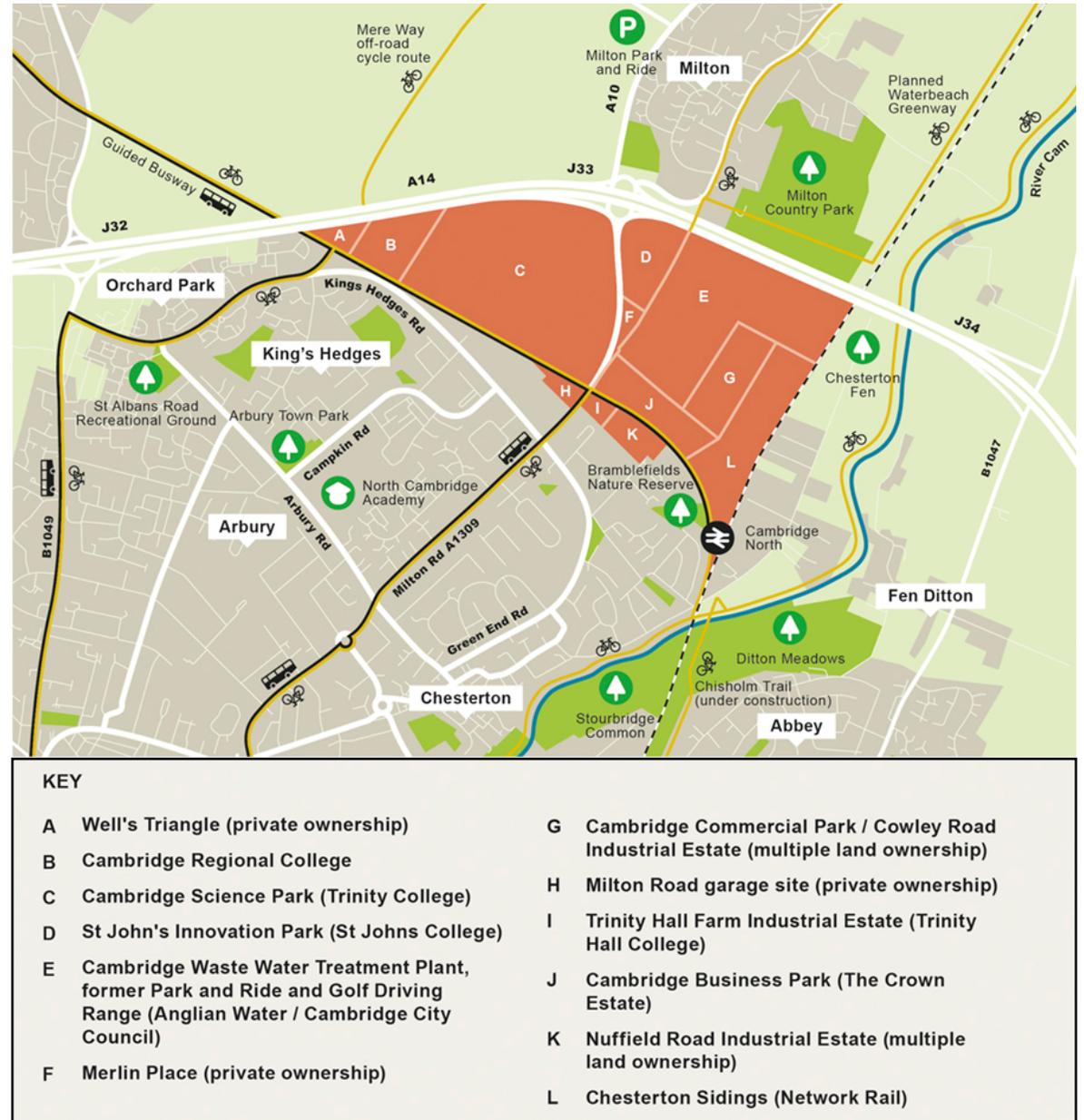


Figure 2.2: Draft NEC Area Action Plan - Land Ownership (Source: Greater Cambridge Shared

Planning, Draft North East Cambridge Area Action Plan)

2.1.5 To accommodate this scale of growth, it is envisioned that NEC will be developed at high density with mid-rise (4-8 storeys) and occasional tall buildings of up to 13 storeys. This would set the area apart from most of outer Cambridge, which is characterised by 2-3 storey buildings, and would see development of an increased scale to more recent developments at Trumpington and Eddington.

2.1.6 The draft building heights plan in the Reg18 AAP (Figure 2.3) has been informed by the Landscape Character and Visual Impact Appraisal.

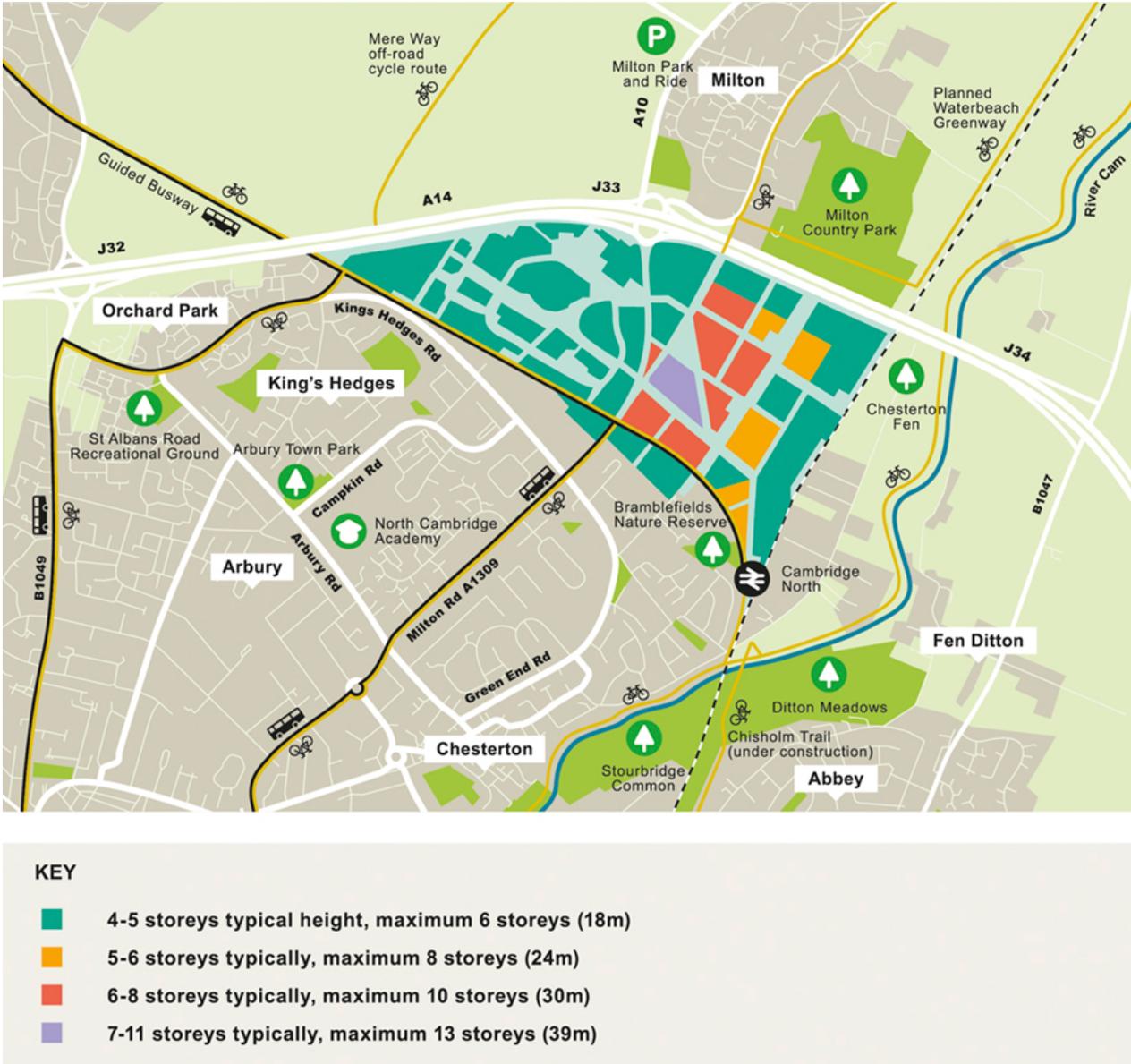


Figure 2.3: Draft NEC Area Action Plan - Building Heights

(Source: Greater Cambridge Shared Planning, Draft North East Cambridge Area Action Plan)

Tall Buildings

2.1.7 The Cambridge Local Plan states that the city has a distinctive skyline characterised by towers, turrets, chimneys and spires, with large trees layering the spaces in between. The Cambridge Local Plan states that tall buildings are defined as, “Any structure that breaks the existing skyline and/or is significantly taller than the surrounding built form.” Within the suburbs, (and therefore within North East Cambridge), a building above 4 storeys or 13 metres, will need address Cambridge Local Plan Policy 60 Tall Buildings and equivalent policy in the South Cambs Local Plan for sites within the South Cambs area.

2.1.8 Policy 60 states that any proposals for tall buildings will need to be assessed against the following criteria:

- Location, setting and context;
- Impact on the historic environment;
- Scale, massing and architectural quality;
- Amenity and microclimate; and
- Public realm.



The spires, towers and trees of the Cambridge skyline

2.2 Development Context

2.2.1 Cambridge city has historically exhibited a strong monocentric structure, with the city centre acting as the main focus of trade, education and activity. However, due to the need for further new homes and employment space, large scale development is being accommodated on the edges of the city, concentrated in four growth areas. These developments are shifting the structure of Cambridge towards a more polycentric (multi-centred) city, as shown in Figure 2.4.

2.2.2 These growth areas are:

- North East Cambridge (concept/planning stage) – 186ha mixed use district creating 8,000 homes and 20,000 jobs;
- North West Cambridge (partially delivered) – 150ha residential-led mixed use plan for 3,000 homes, accommodation for 2,000 students, 100,000 sqm of research and development space, and supporting community facilities;
- West Cambridge (proposed development) - 370,000sqm of academic floor space, commercial and research floor space and ancillary uses;

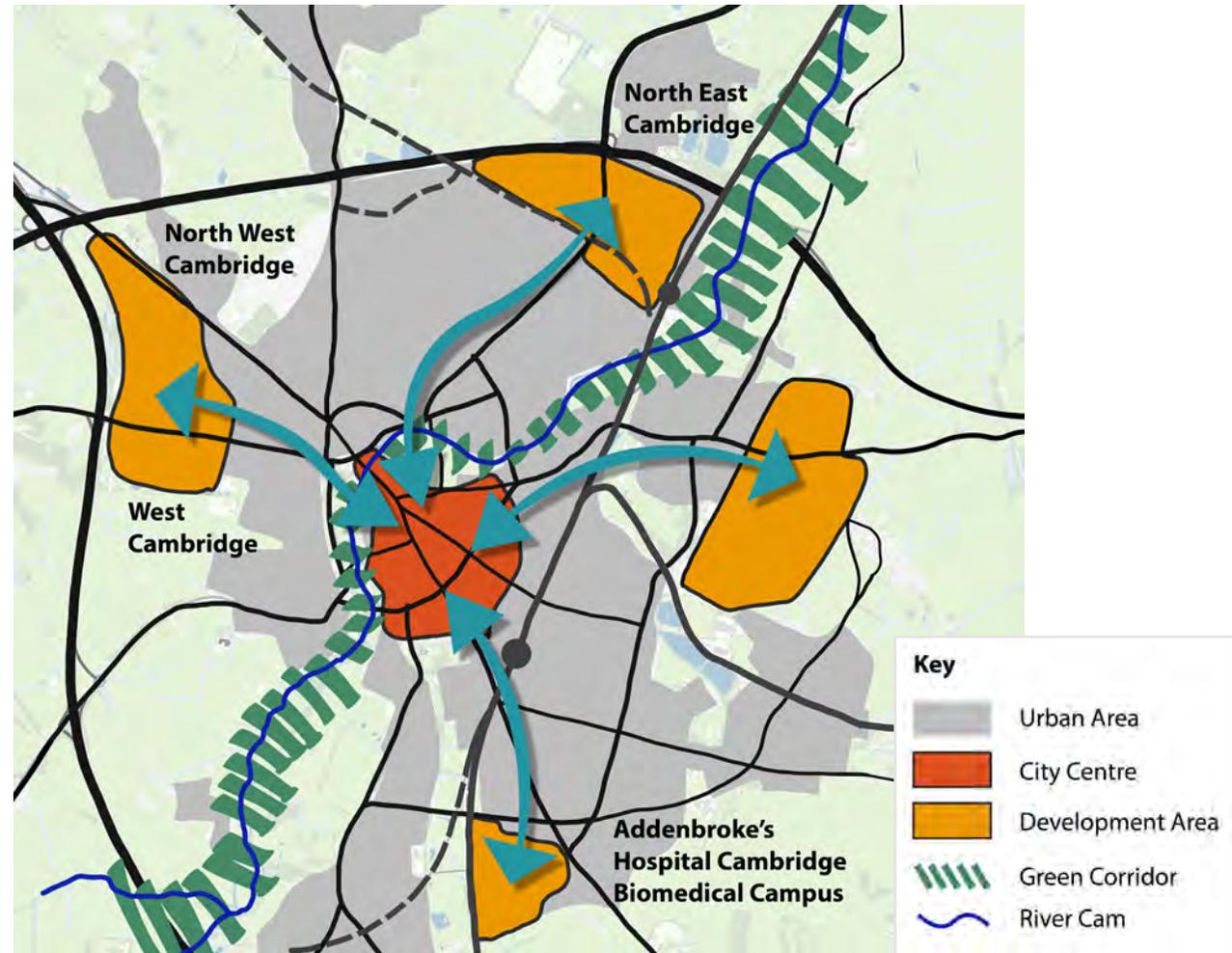


Figure 2.4: Cambridge's Four Growth Areas

- Cambridge East (partially delivered) – 250ha site for redevelopment of Cambridge airport and surrounding land with potential for 10,000 – 12,000 home residential area supported by a district centre.
- Cambridge Biomedical Campus (partially delivered) – 70ha site with masterplan for biomedical campus and extension of Addenbrooke's hospital.



North West Cambridge Masterplan



Addenbrooke's Biomedical Campus Masterplan



Photo of completed section of Eddington in North West Cambridge



East Cambridge "Wing" Masterplan

3.0 WIDER AREA URBAN DESIGN ANALYSIS

3.1 Introduction

3.1.1 This section provides an urban design-focused analysis of the North East Cambridge (NEC) area in its context of the wider city. The topics covered by the analysis are:

- NEC location and size
- Land uses
- Road network
- Public transport network
- Cycling network
- Green and Blue Infrastructure
- Planning policy
- Heritage assets
- Flooding
- Topography
- Building heights
- Tall buildings
- Urban Grain
- Residential density

3.2 Location and Size

3.2.1 The North East Cambridge (NEC) area is located on the edge of the Cambridge built up area, about 2 miles from Cambridge city centre. The NEC area is bordered to the north by the A14, with the village of Milton beyond. To the south of the area are the residential communities of King's Hedges and Chesterton, with the rail line and Fen Ditton village lying to the east of the site.

3.2.2 The NEC area is a significant combination of sites, measuring 182 hectares in total. The scale of the area is comparable to the areas within the Cambridge City Centre boundary, which measures 215 hectares. This puts in perspective the significance of the NEC AAP area and its potential to become a distinct new part of the city.



Figure 3.1: Location of North East Cambridge in relation to Cambridge City Centre

3.3 History

3.3.1 Figure 3.2 is a historic map of Cambridge and its surrounding area to the north in 1886. Of course, Cambridge was well established as a trading town and centre for learning by this time. The original village centre of Milton is also present on the plan.

3.3.2 The current NEC boundary has been superimposed on the plan for reference. At this time the NEC area was rural in nature. However, the main structuring elements of the rail lines (including what is now the Guided Busway route) and the former alignment of Milton Road (now Cowley Road) are present.

3.3.3 The historic centre of Chesterton along the River Cam is shown on the plan. The street layout still survives today in Chesterton High Street. The village of Fen Ditton is clearly present to the east of NEC, and its urban form largely survives to present day.

3.3.4 After WWII, the city expanded rapidly northwards with the development of Chesterton and King's Hedges. In 1971 the University of Cambridge received planning permission for Cambridge Science Park, which grew as an important employment site over the following decades.

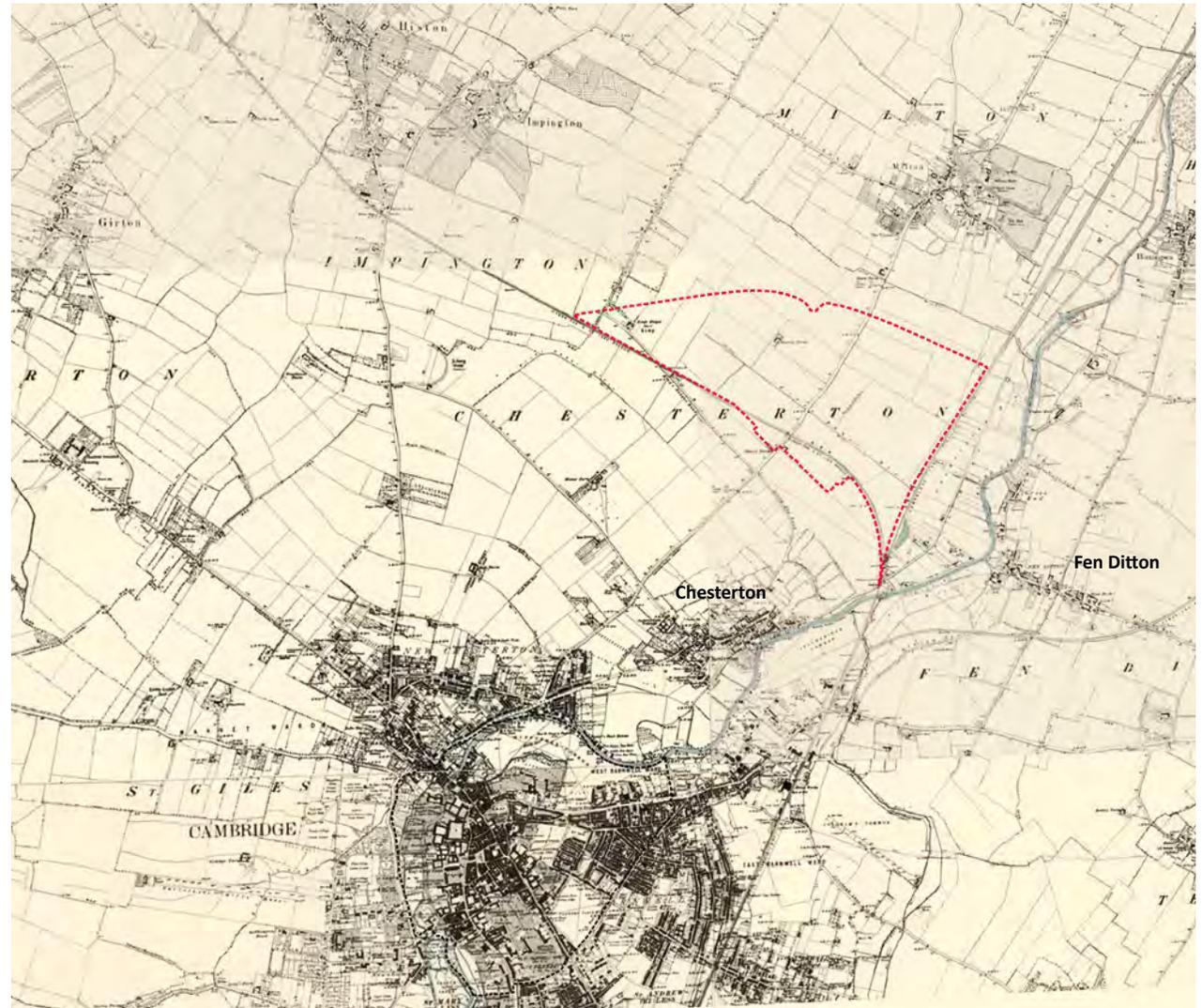


Figure 3.2: Historic map of Cambridge and NEC - 1886

 NEC AAP

3.4 Land Uses

3.4.1 Figure 3.3 shows the predominant use of buildings in Cambridge and surrounding areas in broad categories. Cambridge City Centre is highly mixed, with a focus on retail and education, supported by some offices and homes.

3.4.2 The suburbs to the north of the city centre are predominantly residential. These communities are supported by schools (education) and a small number of local retail uses. Milton, to the north, is largely residential in nature, with a Tesco superstore and some light industrial and office buildings on the southern edge of the village.

3.4.3 The NEC area stands in sharp contrast to the city centre and residential suburbs. It is almost entirely comprised of large floorplate office and industrial uses, which are supported by large areas of surface car parking. Cambridge Regional College, on the north-western edge, is the only education use within the AAP area. On the southern edge of the area are some large footprint retail uses such as car dealers and building supply merchants.

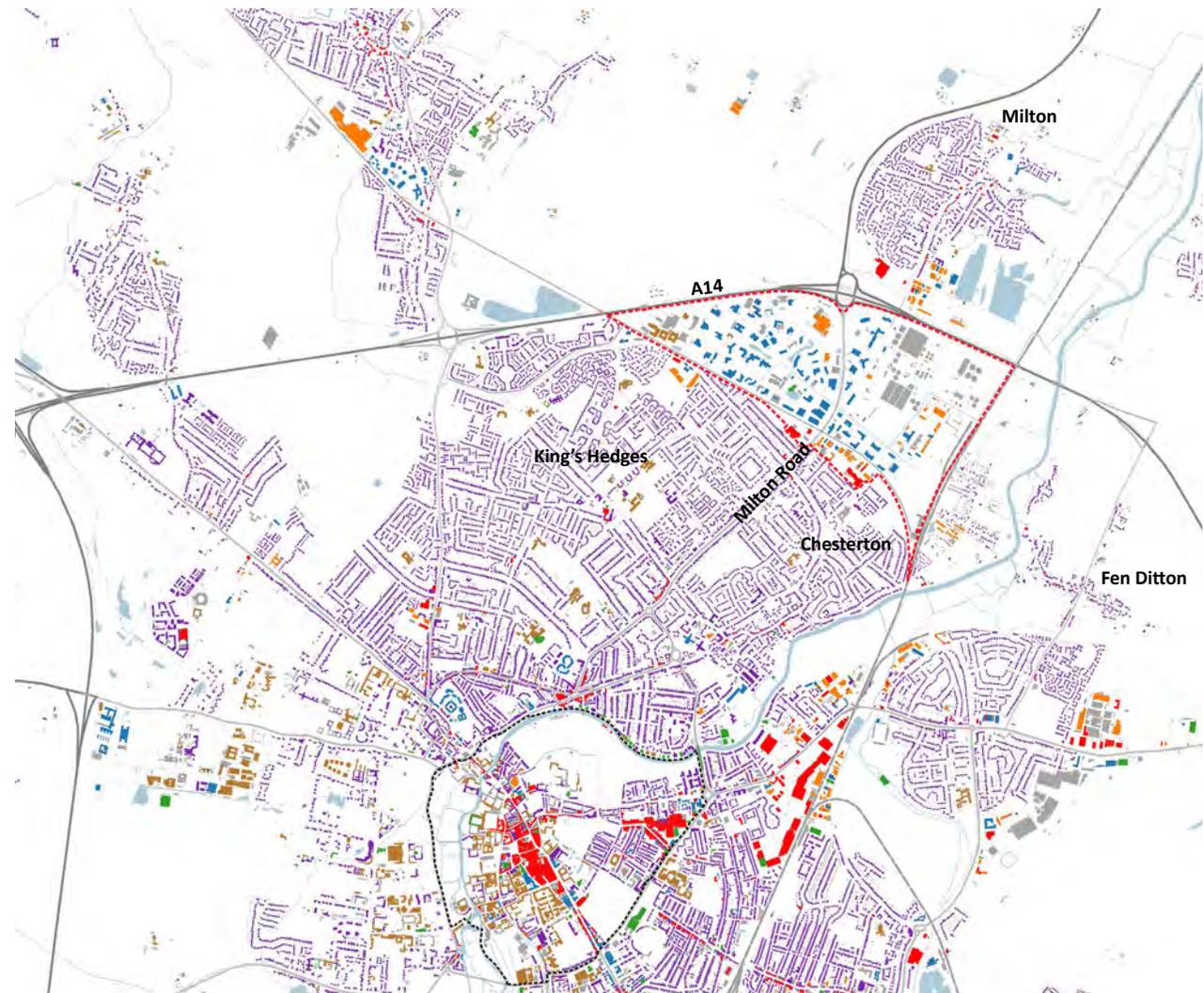


Figure 3.3: Land Uses - Wider Area

Land uses (Buildings)

Other	Industrial	Water
Residential	Leisure	NEC AAP
Office	Education	City Centre
Retail		



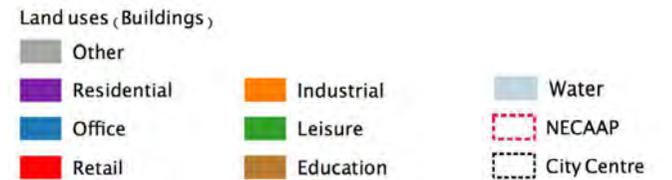
Large floorplate office building in NEC



Historic properties along Chesterton High Street



Figure 3.4: Land Uses - NEC



3.5 Centres

3.5.1 Figure 3.5 presents the hierarchy of centres in the city, which are identified in the Cambridge Local Plan. Within the city centre is the primary shopping area and the dominant centre for the city.

3.5.2 In the north of the city are three district centres; Mitchams Corner, Histon Road and Arbury Court. District centres support their wider areas with convenience supermarkets, pubs, restaurants and other shops and services.

3.5.3 Arbury Road/Milton Road is the only local centre north of the city centre. It supports local residents with a small supermarket, food and drink, and services offer.

3.5.4 Neighbourhood centres provide a more localised and limited service, although they are still of important to local residents. There are two neighbourhood centres just south of NEC; Kings Hedges Road, which comprises mainly a pub, convenience supermarket and post office, and Campkin Road, which is anchored by a small supermarket that faces a public square. Further to the south is the historic Chesterton High Street, which has a more substantial offer.

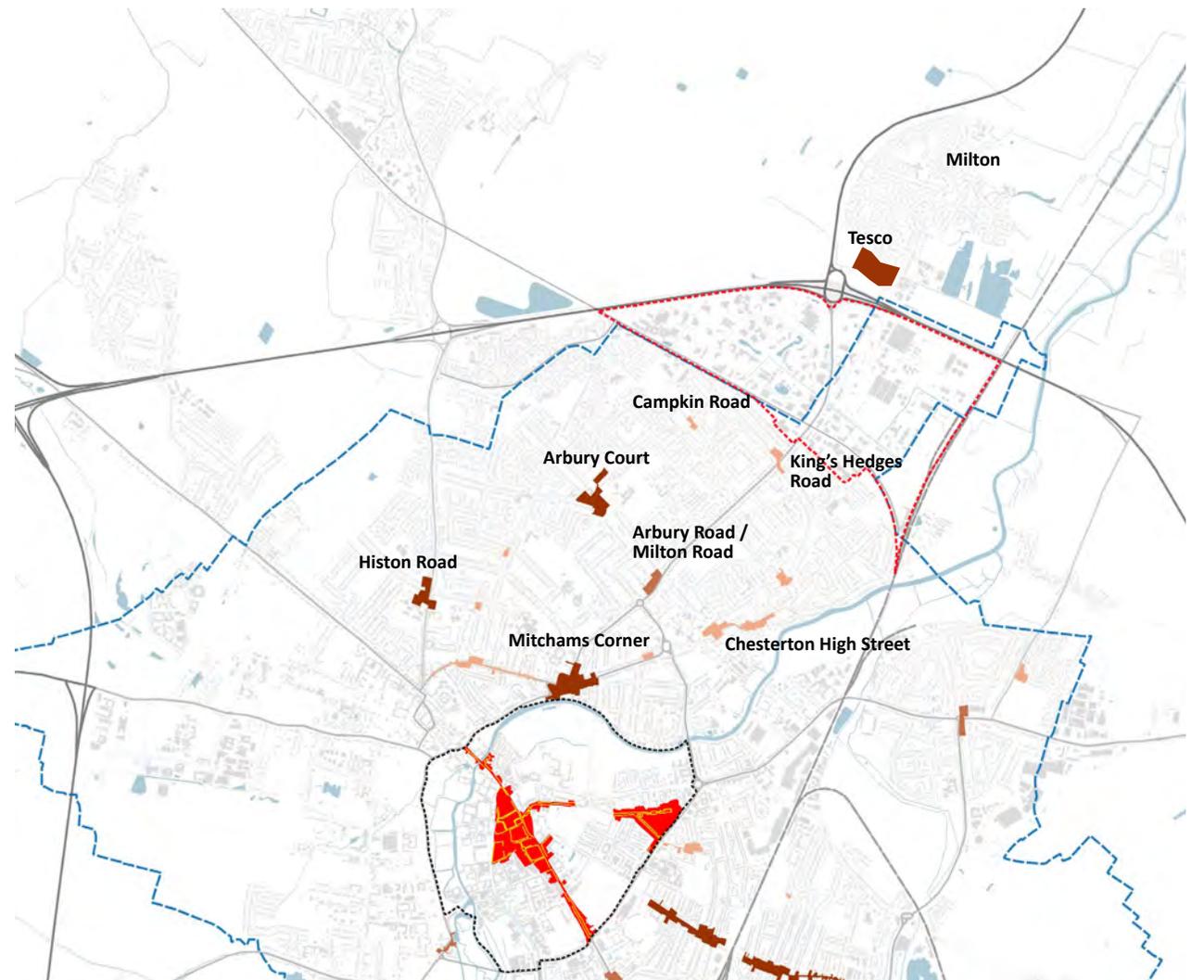


Figure 3.5: Hierarchy of centres - Wider Area



3.5.5 Directly to the north of NEC is Milton Tesco Superstore, which although not a designated centre is an important shopping hub. Milton Village is designated as a Minor Local Centre in the South Cambridgeshire Plan.

3.5.6 There is a clear lack of a district-scale centre in or near North East Cambridge, both to serve NEC and the nearby existing residential areas.



Golden Hind pub at Kings Hedges Road Neighbourhood Centre

3.6 Road Network

3.6.1 Strategic regional roads bypass Cambridge city to the north (A14), south (A11) and west (M11). These strategic roads provide access to London and Stansted Airport to the south, Peterborough to the northwest, Bedford to the west and Felixstowe to the east. The A14 is part of the Euroroutes network of international roads as the E24 from Birmingham to Ipswich and on into Europe as the E30.

3.6.2 The A14 acts as the northern boundary to Cambridge city and the NEC area. Although providing access to the wider regional road network, the A14 does act as a barrier to local north-south movement between NEC and Milton. It also creates a poor local environment in terms of noise and air pollution.

3.6.3 Milton Road is a locally significant movement route that cuts through the centre of NEC. This road provides access to the A14 and A10, and is the main route southwards to the city centre. The A10 is a key route linking Cambridge with Waterbeach (including Waterbeach New Town) and Ely and is anticipated to be upgraded to a dual carriageway in the future (a process separate to the NEC AAP).

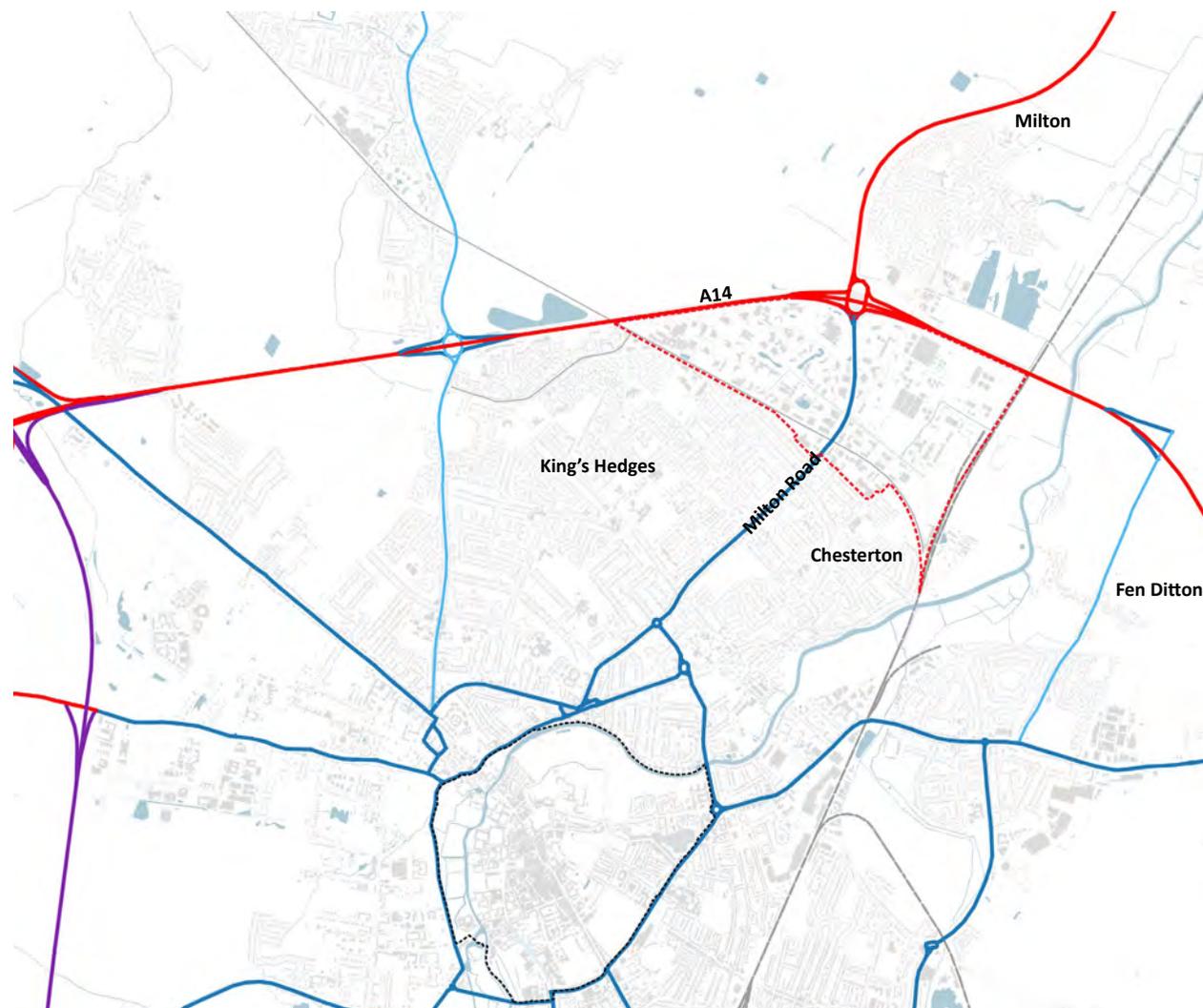


Figure 3.6: Road Network - Wider Area



3.6.4 Milton Road generally suffers from high traffic levels and is a poor environment for pedestrians and cyclists. The road significantly increases in scale as it moves north through the NEC area, from 3 lanes at the southern end (including bus lane) to 6 lanes by the A14 Milton roundabout.

3.6.5 Greater Cambridge Partnership has begun work on improving Milton Road between Westbrook Drive and the Guided Busway at the NEC boundary. This will include the provision of high quality bike lanes, bus lanes and street trees. It will greatly improve the pedestrian and cyclist experience south of NEC along Milton Road.



Milton Road at Cambridge Science Park



A14 Road, as viewed from Jane Coston Bridge



Milton Road narrows to two lanes south of NEC



Cowley Road at the entrance to St John's Innovation Park

3.7 Public Transport

3.7.1 The city has two rail stations, Cambridge station to the east of the city centre and Cambridge North Station, within the NEC AAP area. Cambridge North Station greatly improves accessibility for the NEC AAP area, linking it to London, Stansted Airport and Norwich.

3.7.2 Bus route 9 and the Milton Park and Ride bus service along Milton Road connects the NEC AAP area to the city centre. The bus route is located centrally to the NEC site, which means a large proportion of the site could in theory be within walking distance of the bus stop on Milton Road. Bus routes 1 and 2 connect the NEC AAP area to the city centre through King's Hedges and Chesterton respectively, with route 2 also serving Cambridge North Station.

3.7.3 The Guided Busway is a bus service that runs on a separated route between Cambridge North rail station and St Ives, with three stops on the southern edge of NEC. Route A links the Science Park and Cambridge Regional College to the city centre and St Ives. Route B connects Cambridge North station to Cambridge city centre and rail station. There are also plans for a new route to link NEC to Waterbeach New Town.

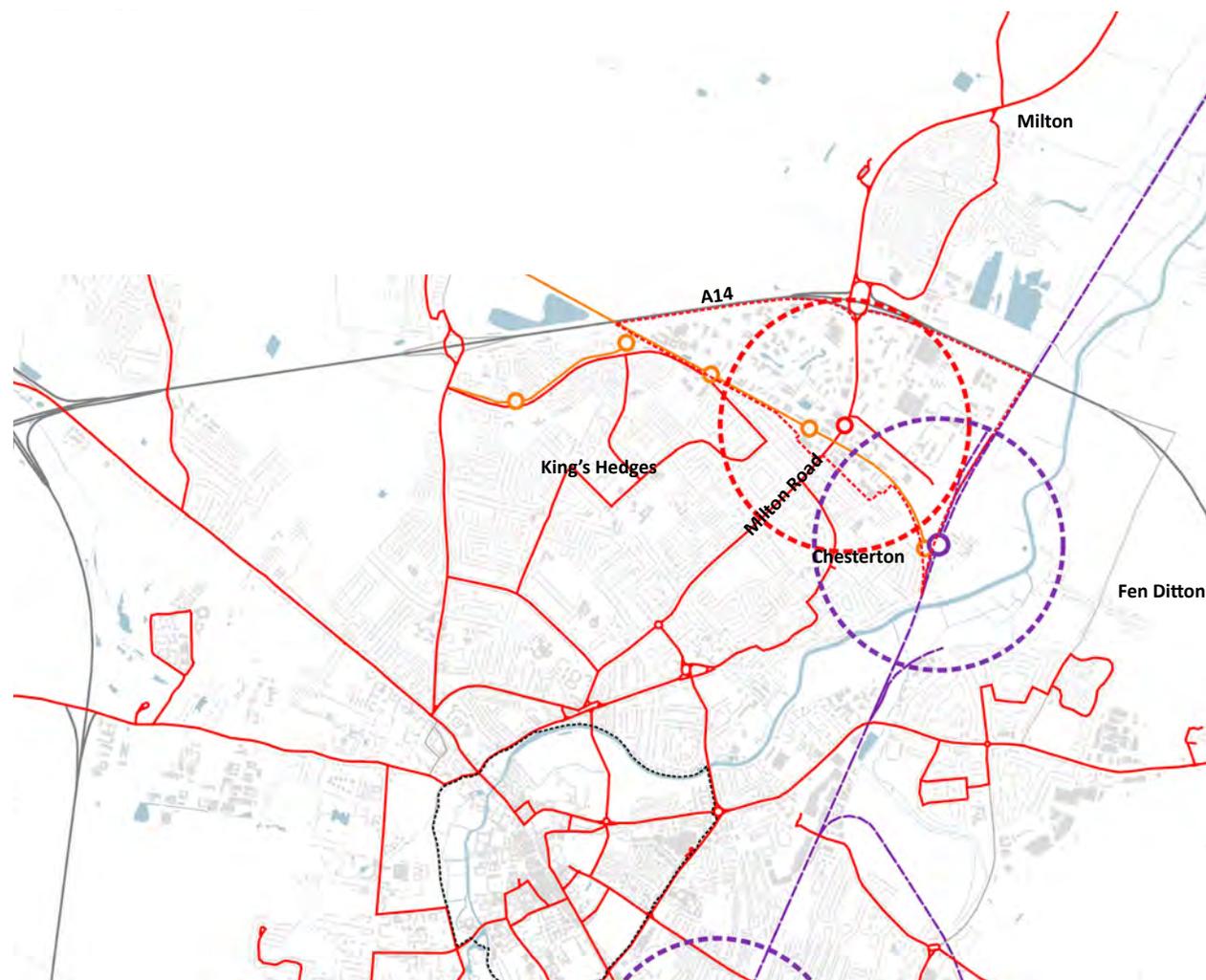


Figure 3.7: Public Transport Network - Wider Area

3.7.4 The Cambridgeshire and Peterborough Combined Authority were developing plans for the Cambridgeshire Autonomous Metro (CAM) which would have connected NEC to the City Centre and beyond via tunnels at Cambridge

North Station. The status of this project is unknown at this point in time. Separately, the GCP are continuing to develop the Waterbeach New Town to Cambridge Public Transport corridor which is anticipated to connect into NEC.

3.8 Cycling

3.8.1 Cambridge is a cycling city and has a comprehensive network of cycling routes. NEC benefits from cycle access along the Guided Busway route, Milton Road and Jane Coston Bridge across the A14 between NEC and Milton. A cycle route along the River Cam also offers an attractive leisure route. However, the presence of a cycle lane does not mean that a road is attractive or safe for cycling. This is particularly true for Milton Road, which can be intimidating to cyclists. Whilst plans are being developed by the Greater Cambridge Partnership to create dedicated segregated cycle facilities along this route, it does not extend up into the AAP area, therefore the journey for those cycling to the station going north on Milton Road will continue to be hostile. The underpass underneath the busway to the station offers a poor environment for cyclist and pedestrian passing along the east side of Milton Road.

3.8.2 Due to the moderate distance involved, cycling will be an important mode of transport in better connecting the NEC area to the city centre. However, the presence of high volumes of traffic on Milton Road (the most direct route)

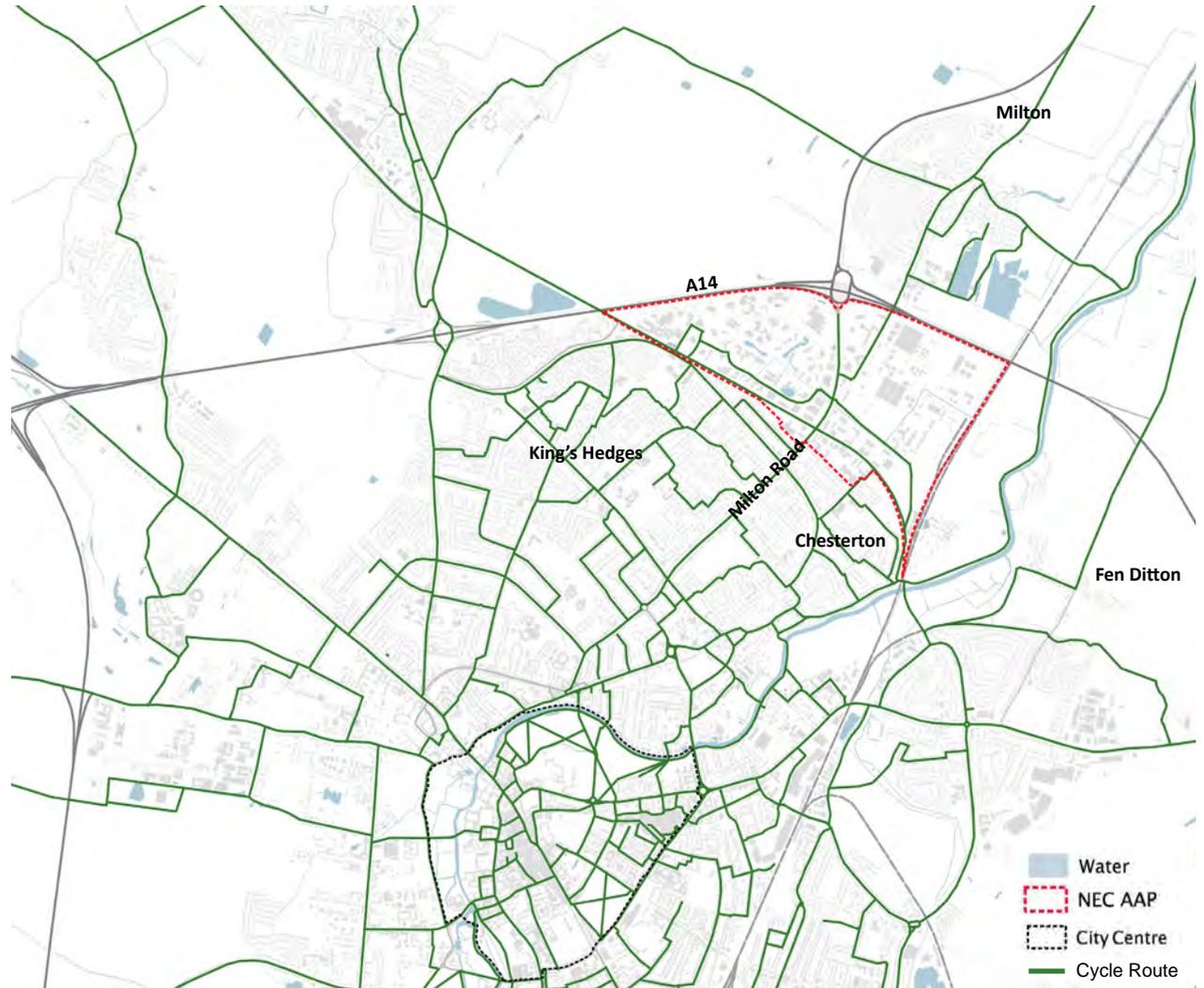


Figure 3.8: Cycling Network - Wider Area

means that people may be discouraged from cycling this route. Taking a longer but quieter route through Chesterton residential streets and along the River

Cam could still be done in approximately 15-20 minutes (Source: Google Maps route planner).

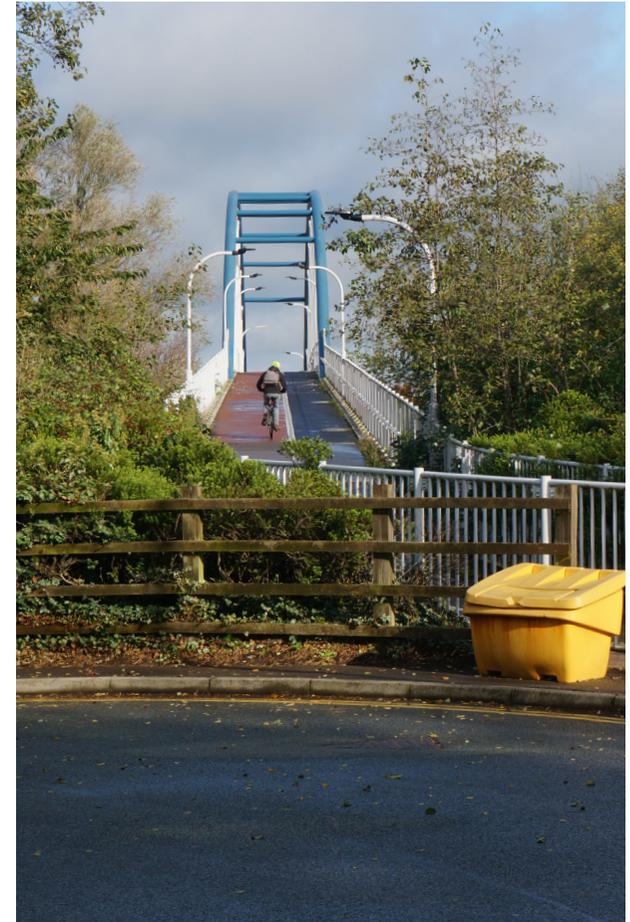
3.8.3 The Chisholm Trail is currently under construction, which will provide a largely traffic-free walking and cycling route linking Cambridge North and Cambridge stations. The Waterbeach Greenway is also planned, providing a cycling route northward from NEC.



Underpass for pedestrians and cyclists under the Guided Busway, alongside Milton Road



Cycle Parking and wayfinding for cyclists andwalkers at Cambridge North Station



Jane Coston Bridge

3.9 Green and Blue Infrastructure

3.9.1 The structure of Cambridge has been defined by its network of green spaces that bring the rural character into the centre and which are complemented by the more formal landscapes of the Colleges and public open spaces within the City. The residential communities of Chesterton and King’s Hedges contain various protected open spaces, including allotments, parks and playing fields.

3.9.2 A string of historic open spaces follow the River Cam, with Stourbridge Common and Ditton Meadows being two significant spaces in the north of the city, which are also designated as Priority Habitats. To the east of the city is Coldhams’ Common, an important Local Nature Reserve. Stourbridge and Coldham’s Common are both in the public domain while Ditton Meadows is privately owned, with permitted access rights for the public. Bordering NEC to the south is Bramblefields, an important Local Nature Reserve. The hedges along Cowley Road within the NEC AAP area are designated as a wildlife site.



Figure 3.9: Green and Blue Infrastructure - Wider Area



3.9.3 Milton Country Park, to the north of the NEC AAP area, is an important leisure destination and protected habitat.

3.9.4 Within NEC there are few protected open spaces. Two areas of former railway land near Cambridge North Station are identified in the National Forest Inventory, which aims to map woodlands above 0.5 hectares. Although this does not provide any formal protection to the land, it does signify that these sites likely contribute to local biodiversity. Woodland in the southern one of the two sides has now been cut down by Network Rail.

3.9.5 On the northern edge of NEC is a forested buffer between the A14 and Water Treatment Works, which is identified by Natural England as a Priority Habitat. Priority Habitats are protected from harm under Policy 70 of the Cambridge Local Plan. Within the Science Park are some formal landscaped open spaces with ponds. Within Cambridge Science Park are some formal green open spaces with artificial ponds, which although not protected, are important elements of the site.



Figure 3.10: Green and Blue Infrastructure - NEC



3.9.6 The First Public Drain is an awarded watercourse so has some inherent protections and byelaws which govern its use. It serves as the surface (and storm overflow) drain for a vast proportion of northern Cambridge from as far as Orchard park to most of Arbury and King's Hedges. It is flanked by vegetation and acts as a locally important habitat, as well as being of historical importance.



Lake and wooded area at Milton Country Park



Densely vegetated First Public Drain

3.10 Topography

3.10.1 The presence of the River Cam means that the city centre and NEC sit at the bottom of a bowl-like valley, at between 0 and 10m in elevation. The land gently rises to the west and south-east, which provide viewing points over the city's skyline. The low elevation of NEC means that it is currently not particularly prominent in the landscape, which has implications for the wider visibility of new development here. Directly to the north-west of NEC is a landfill site, which has the appearance of local hill. However, currently there is no public access to the site and so it does not currently offer a viewing point southwards over the city.

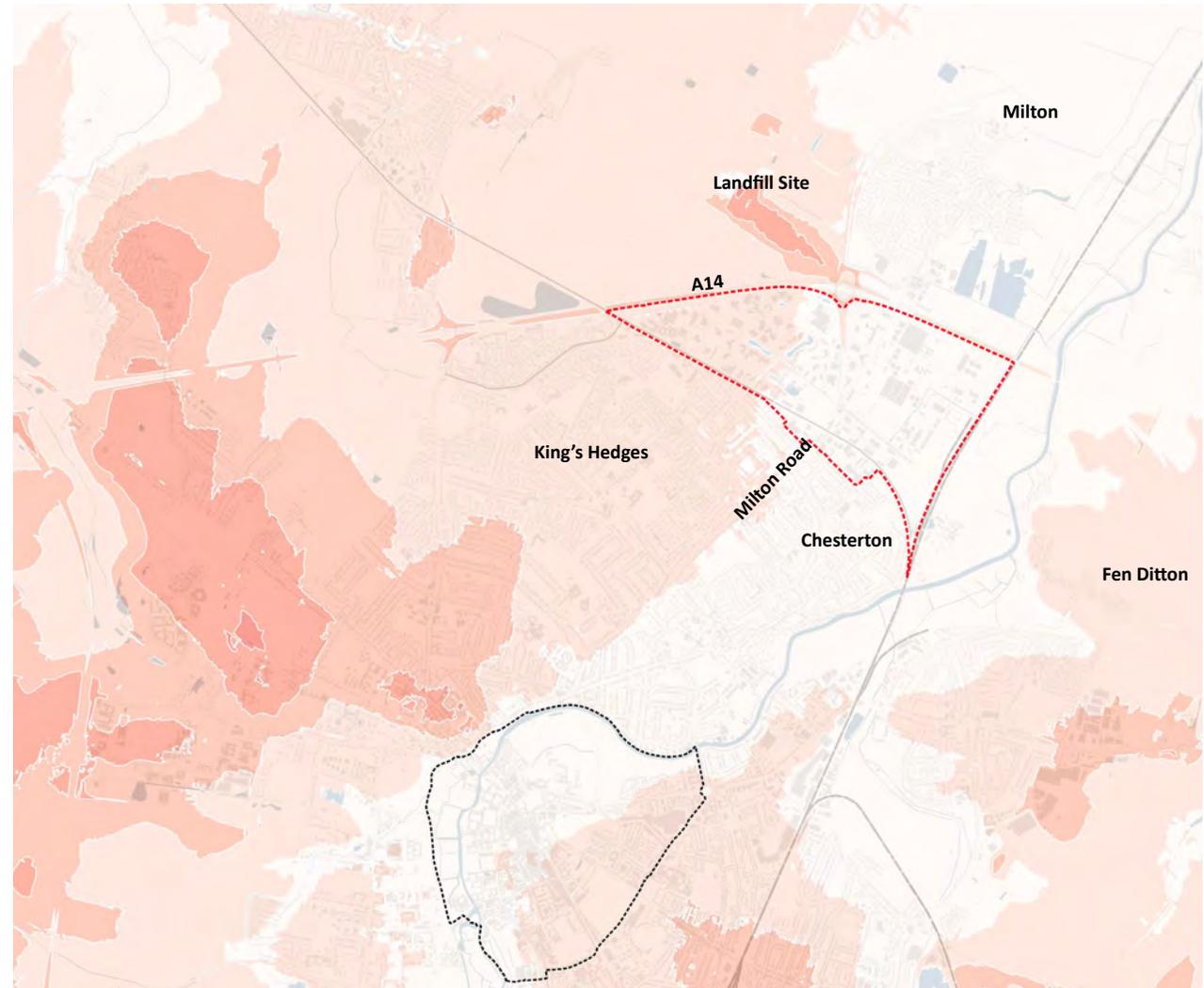


Figure 3.11: Topography
- Wider Area



3.11 Flooding

3.11.1 The banks of the River Cam are within Flood Zone 3, meaning the land would be expected to be affected by fluvial flooding more often than once in one hundred years (“1 in 100 year flood”). Most of the city is not at high risk of fluvial flooding, including NEC. However, due to a high water table and potential risks associated with infiltration rates, surface flooding poses more of a risk to NEC than river flooding.

3.11.2 For more detailed analysis, see the Cambridge Northern Fringe East Area Flood Risk Assessment (2019).

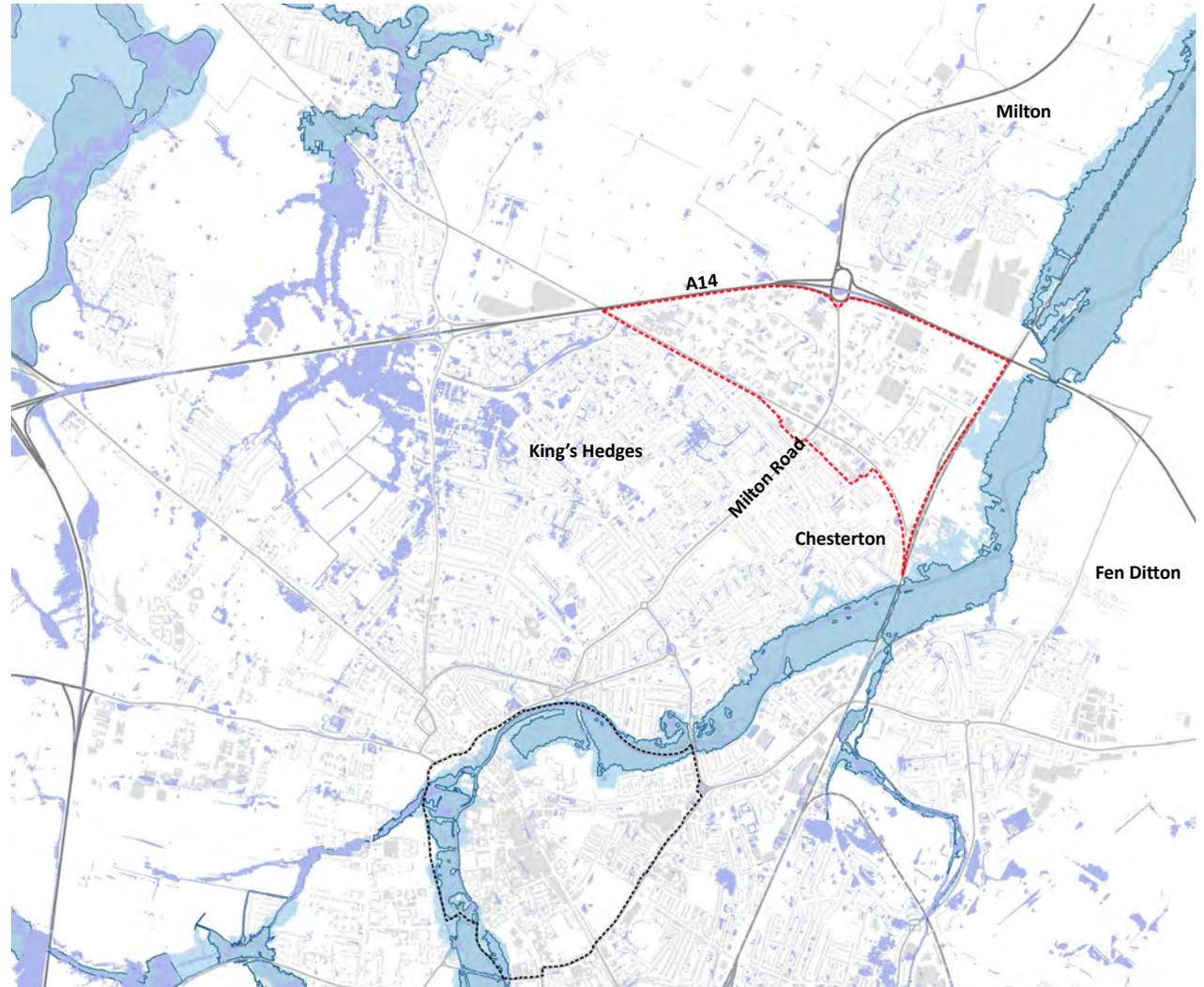


Figure 3.12: Flood Zones - Wider Area



3.12 Heritage Assets

3.12.1 Cambridge city centre is a well-known and valued historic place, which is reflected in the concentration of listed buildings, conservation areas and registered parks and gardens within it. These assets are particularly concentrated within the city centre and to the east and west, as well as along the banks of the River Cam to the north-east. The northern suburbs offer very little historic urban form, with the Grade II St George's Church being the only listed building nearby to NEC. There is also the Golden Hind pub just south of the NEC boundary, along Milton Road, which is designated as a Building of Local Interest. Within the NEC area a few unlisted Victorian buildings within the Water Treatment Works are noted.

3.12.2 Milton has a historic centre, with some modest listed buildings and a conservation area designation covering the core. To the east of NEC is Fen Ditton, a historic, fine-grain village and conservation area, with a high street lined with listed buildings. Conservation area designations cover the open spaces on the southern/eastern bank of the River Cam, to the east and south of NEC. These areas have an open and rural character.

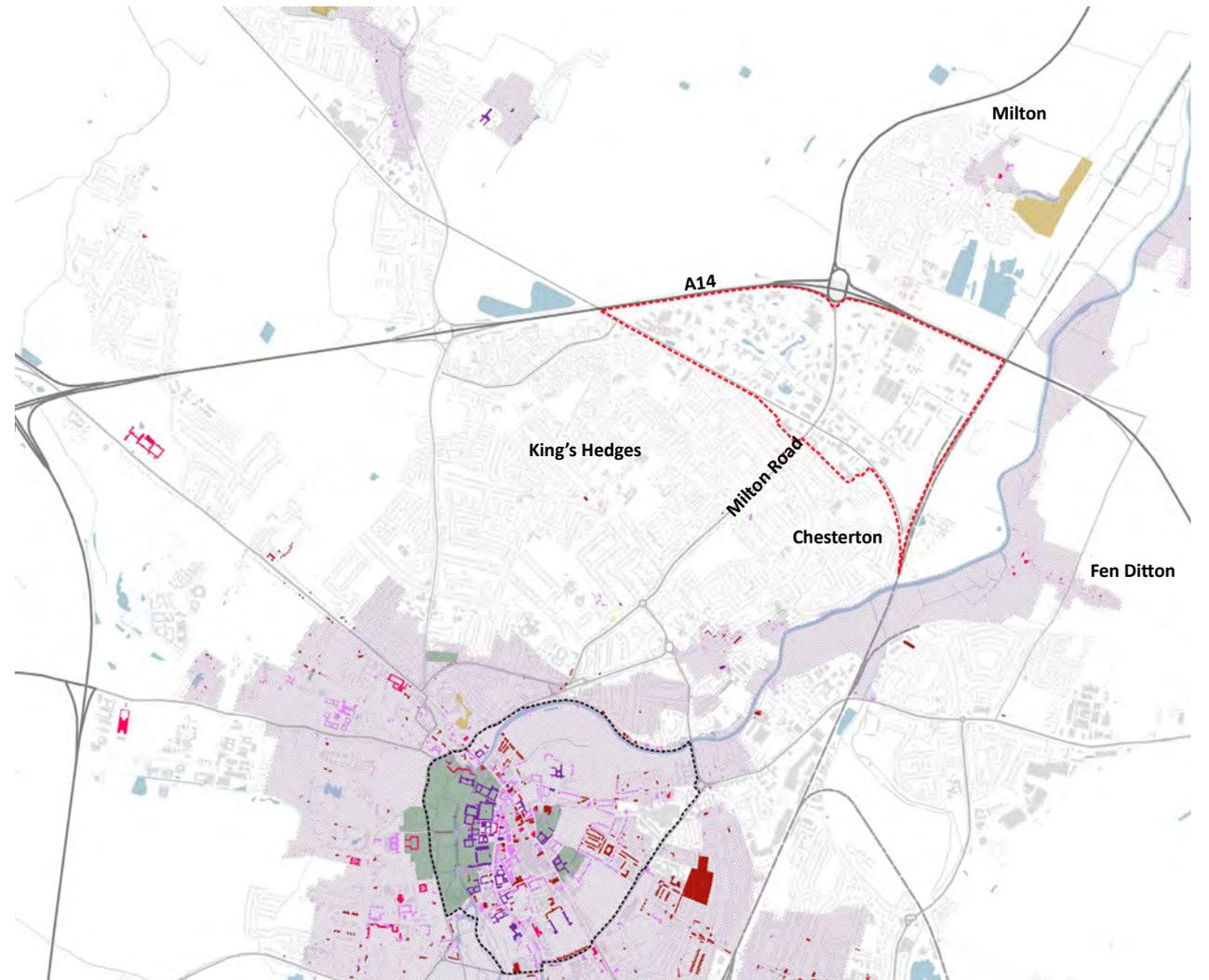
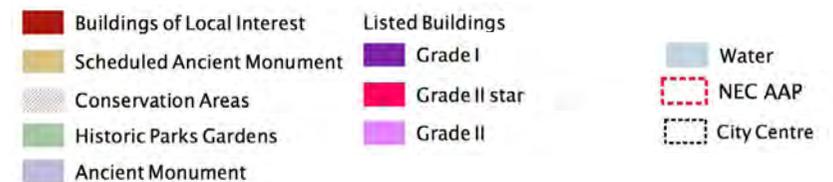


Figure 3.13: Heritage Assets - Wider Area





Church of St Mary - Grade II*



Fen Ditton Conservation Area

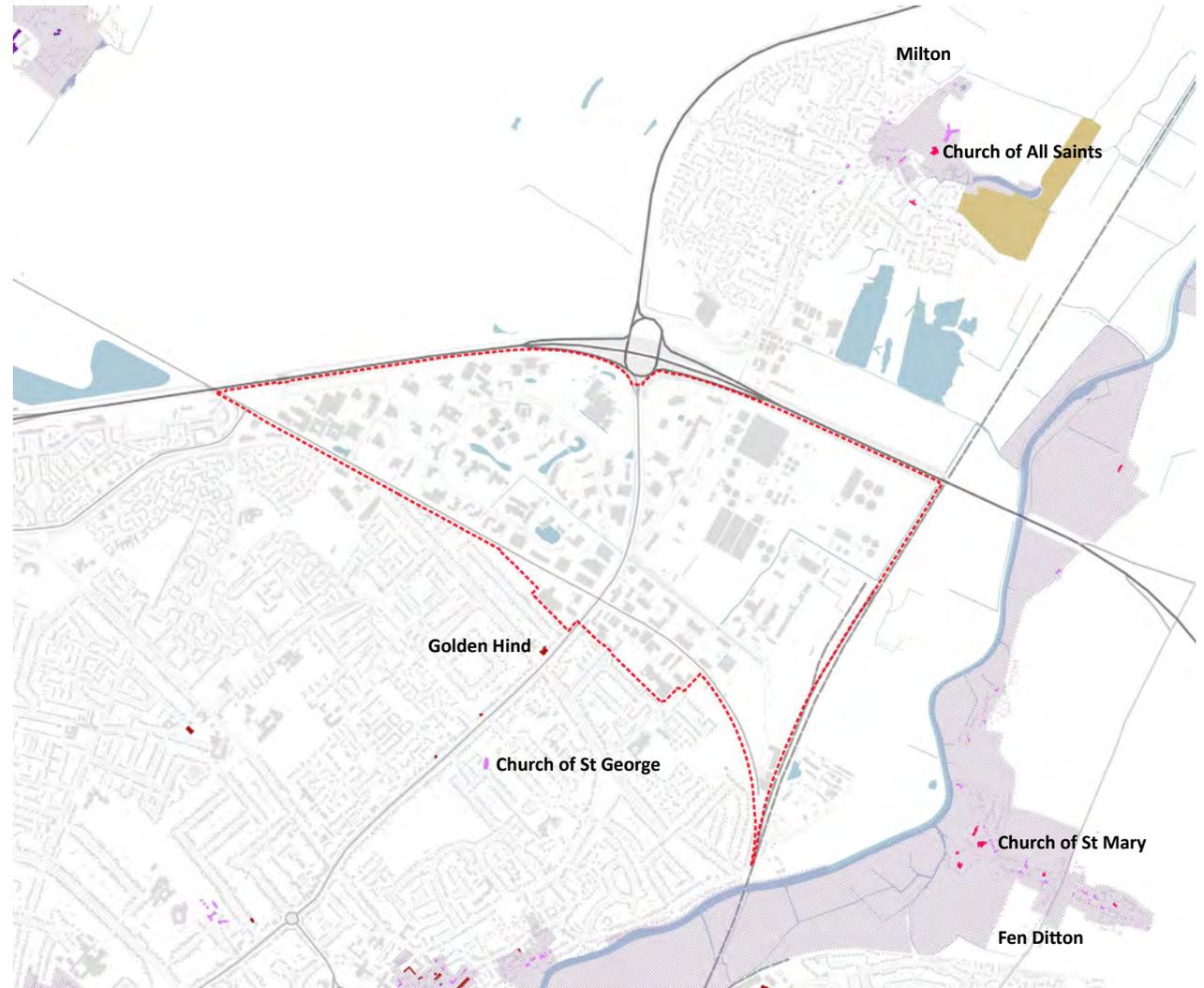


Figure 3.14: Heritage Assets - NEC



3.13 Building Heights

3.13.1 Figure 3.15 presents the building heights across Cambridge. Building heights are presented in metres above ground, based on the best available Lidar data. The number of storeys is provided alongside the metre range based on a standard 3m residential floor to floor height. This is included for the benefit of the reader as using metres alone is difficult to visualise. In reality, the number of storeys each building has may differ depending on the floor to ceiling heights or the presence of tall elements such as spires.

3.13.2 Building heights in the city centre generally range between 4-7 storeys, with a number of buildings reaching above 8 storeys (or equivalent). This creates the skyline of spires that Cambridge is known for. The general height of the residential suburbs in the north of the city and Milton is 2 storeys, with occasional buildings of 3 and 4 storeys.

3.13.3 Within Cambridge Science Park, the general height rises to 4-6 storeys, reflecting the different character of the office buildings here, compared with the residential context.

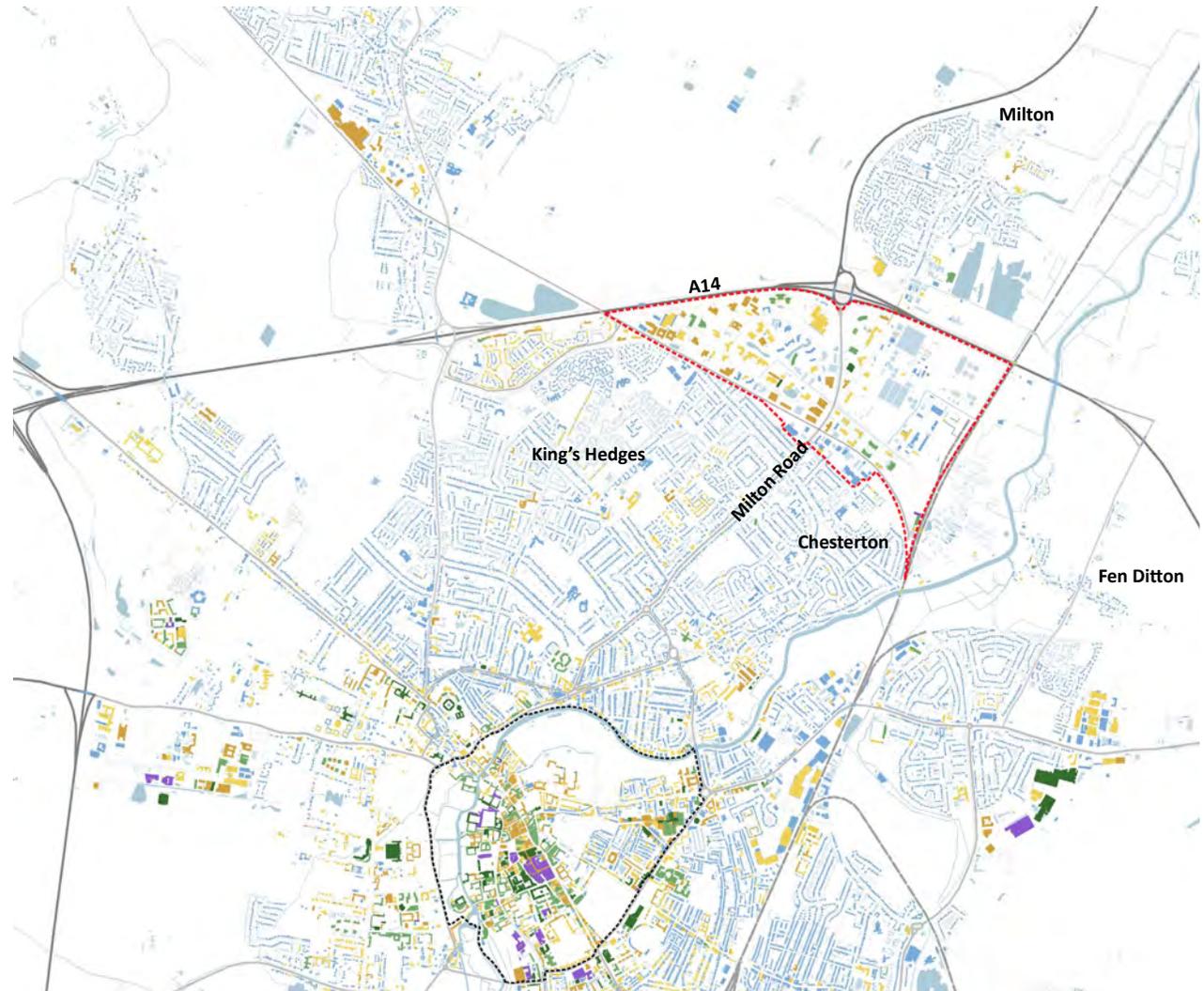


Figure 3.15: Building Heights - Wider Area





In Cambridge Science Park buildings are typically the equivalent of 3-4 storeys residential storeys in height



2 storey homes typical of Chesterton

3.13.4 The eastern half of NEC is generally lower than Cambridge Science Park, with offices and industrial premises equivalent to 1-4 storeys in height. Higher buildings are concentrated along Milton Road (5-6 storeys).



Figure 3.16: Building Heights - NEC



3.14 Taller Buildings

3.14.1 In the context of Cambridge, buildings of 6 storeys (19m) and above stand out markedly against the wider context height of 2 storeys. They are not all necessarily defined as Tall Buildings, as this is relevant to their local context. However, for the purpose of this analysis, it is useful to identify where heights above 6 storeys are concentrated, which is illustrated in Figure 3.17. The city centre displays the greatest concentration of these taller buildings, particularly within the University of Cambridge campus on the western side of the city centre. On the outskirts of the city, there are occasional and exceptional taller buildings such as those at Cambridge Airport and Addenbrooke's Hospital. There are a number of 6 storeys buildings within NEC, particularly the contemporary office buildings along Milton Road and within the Science Park.

3.14.2 The tallest buildings in Cambridge are those above 8 storeys (25m), identified in Figure 3.17 as circles, while spires and towers are shown as stars. The tallest structure in Cambridge is Addenbrooke's chimney, which is in the south of the city (not shown in Figure 3.17).

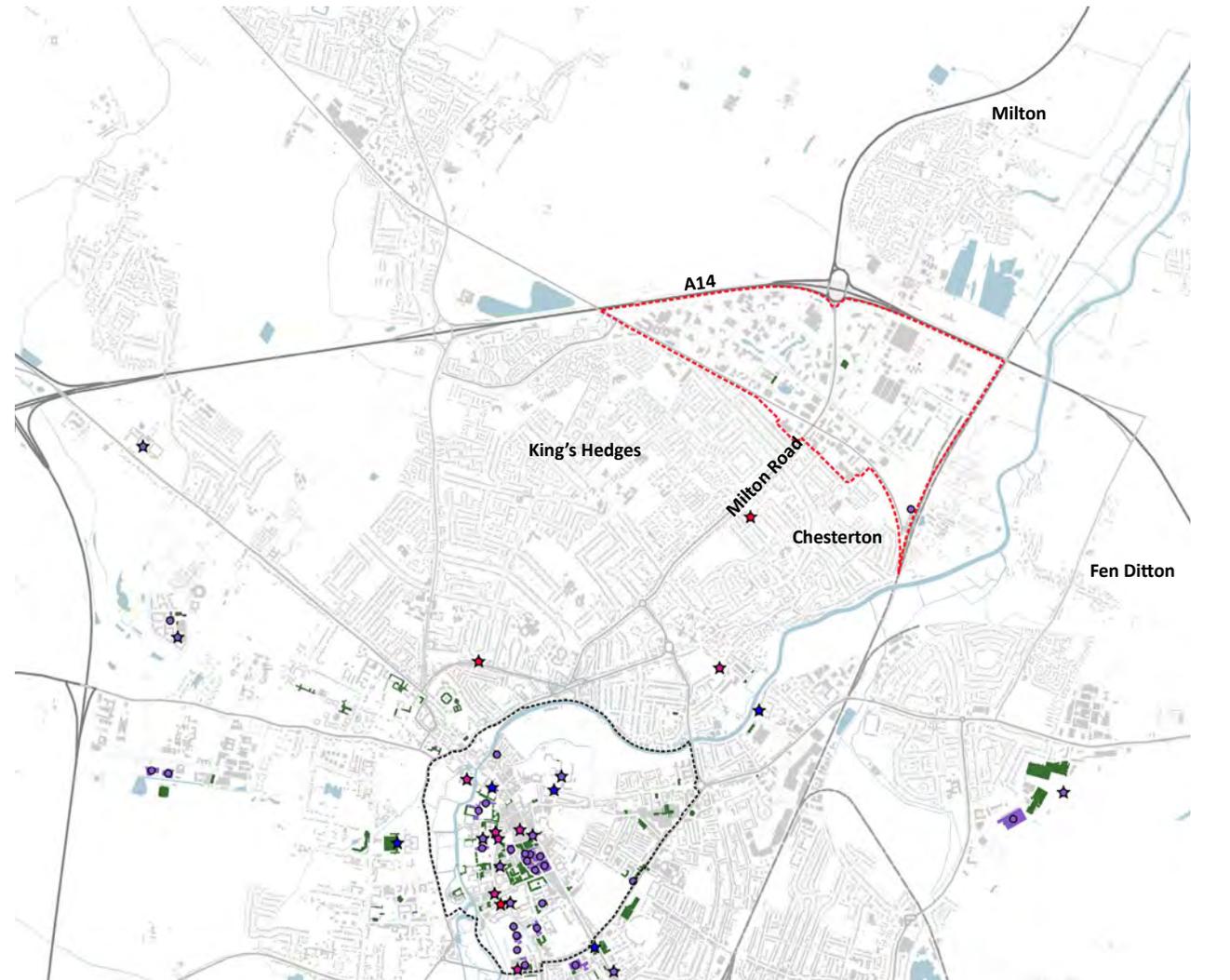


Figure 3.17: Tall buildings - Wider Area



3.14.3 Clearly, there is a cluster of taller buildings within the city centre. In the north of the city, St George’s Church acts as the lone tall landmark of this height. In general, the tallest buildings in Cambridge are spires and decorative towers with slender proportions that rise out of more substantial buildings. Most of these are historic buildings, which have a long history as skyline elements and are therefore closely associated with the city’s image and identity.

3.14.4 Taller buildings are also present in Eddington and at Cambridge Airport (aircraft hangers).



Figure 3.18: Tall buildings - NEC



3.15 Urban Grain - Block Sizes

3.15.1 Figure 3.19 presents the urban blocks of the city with an analysis of their size ("grain"). Fine grain blocks are the most permeable whereas large grain blocks tend to be big, inward-looking sites with few entrances or opportunities for movement through.

3.15.2 This analysis shows that the city centre is generally fine to medium grain, which is expected from a historic environment. The newer residential suburbs to the north are generally coarse grain. This is due to the presence of internally-focused estates and housing layouts that feature cul-de-sacs. This creates a large block structure that limits permeability and movement options. Even areas like Chesterton that feature more traditional blocks street-based blocks with housing facing out onto public streets tend to have large block sizes.

3.15.3 NEC is also generally coarse grain, a reflection of the character of the office and industrial parks located here.

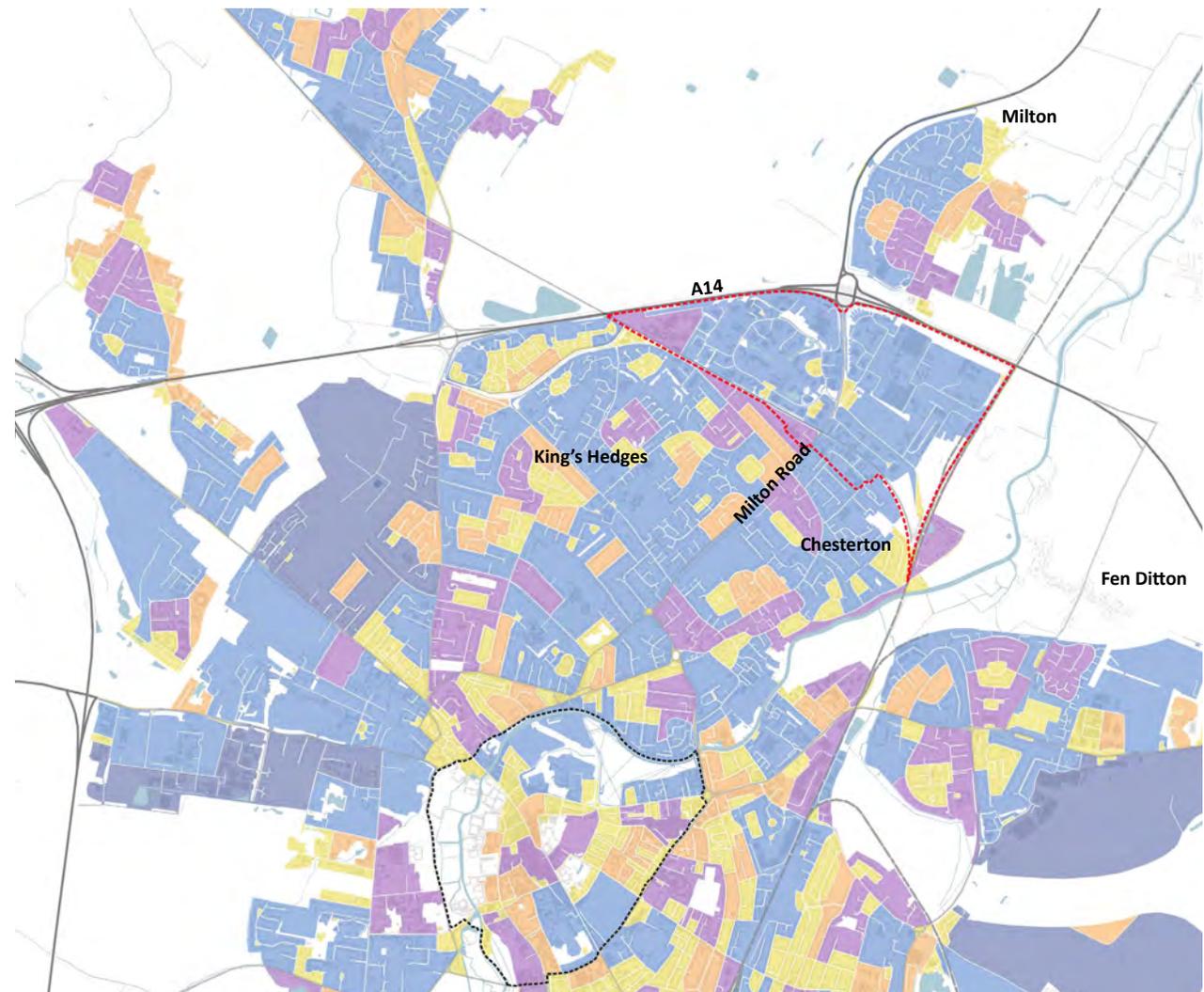


Figure 3.19: Urban Grain - Wider Area



3.16 Residential Density - Homes per Hectare

3.16.1 Cambridge can be described as a generally low density city, with most of city housing less than 40 homes per hectare. The city centre and the west of the city have the lowest density of housing (1-20 homes/ha).

3.16.2 An exception to this is the emerging community at Eddington, which proposes a range of densities from 30dph on the site boundaries up to 150dph in the local centre, delivered through a mix of housing and apartments as well as student accommodation. King's Hedges and Orchard Park display a general density of a 40-60 homes per hectare, which could be considered a medium density. The Romsey area around Mill Road is c. 90dph and is an example of late 1800/early 1900s urban growth

3.16.3 Chesterton, which is comprised largely of suburban-style houses displays a lower density of 20-40 homes/ha. NEC contains virtually no homes.

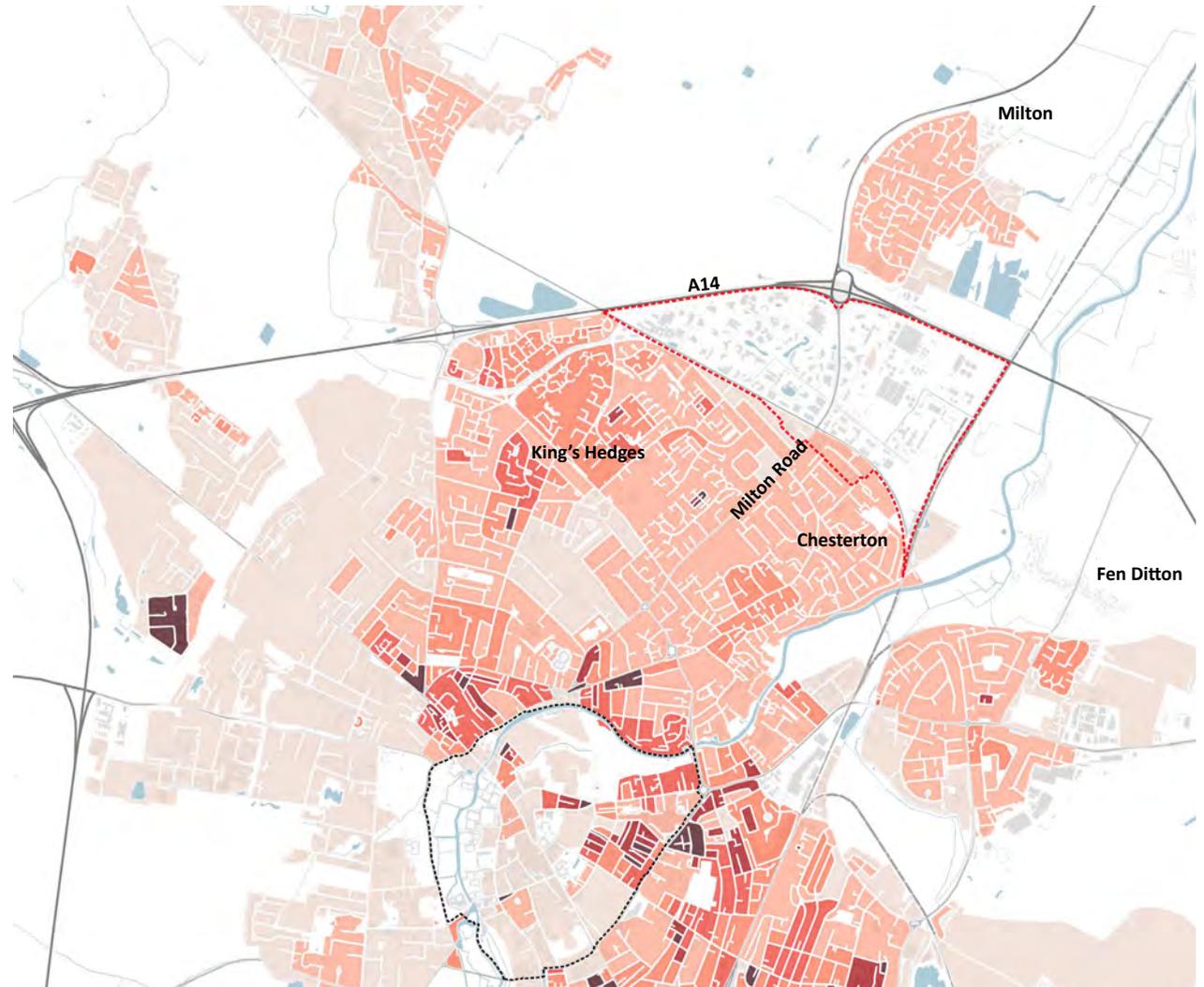
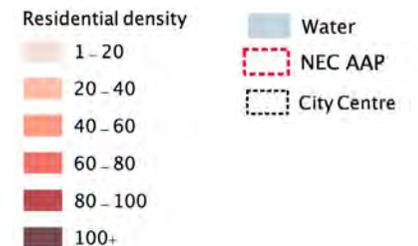


Figure 3.20: Residential Density (Homes/Ha) - Wider Area



3.17 Residential Density - Homes per Building

3.17.1 Figure 3.21 illustrates how many homes (residential units) are in each building in the city. Buildings that appear in blue are single-occupancy houses. This is the most predominant category in the city, especially in areas such as Chesterton and Milton. Buildings shown as green contain two residential units, which typically indicates homes that has been sub-divided to create two flats or particular typologies such as duplexes. These are relatively rare in Cambridge and can be found peppered throughout the city.

3.17.2 Within the city centre are a number of apartment and mixed use buildings with 11-20 residential units. In the north of the city occasional higher density building forms (above 21 homes per building) are generally contemporary apartment developments such as within Orchard Park. Cambridge has very few examples of very high density (greater than 100 units per building) residential buildings, specifically within the CB1 area around the main railway station (outside of the extent of Figure 3.21).

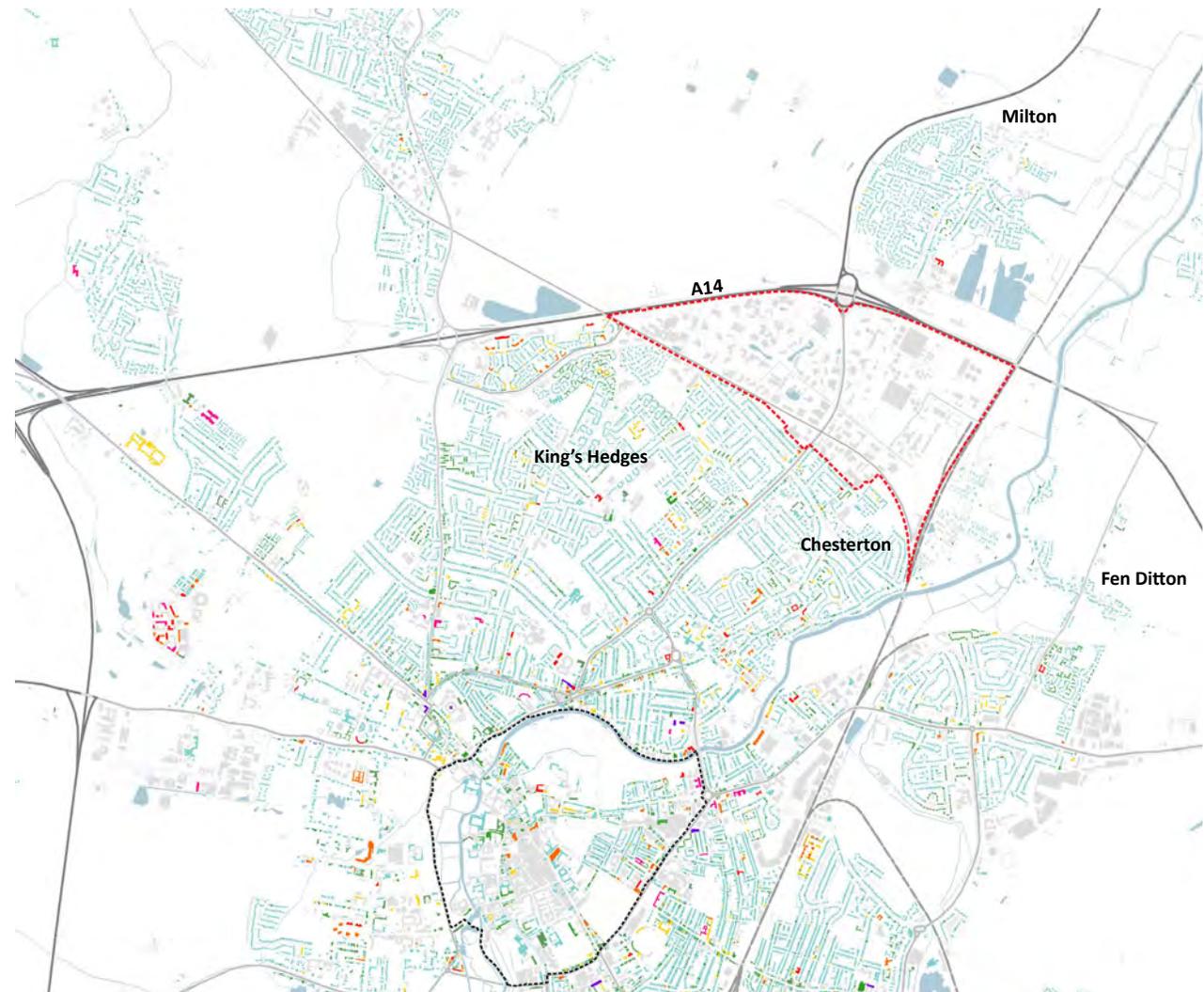
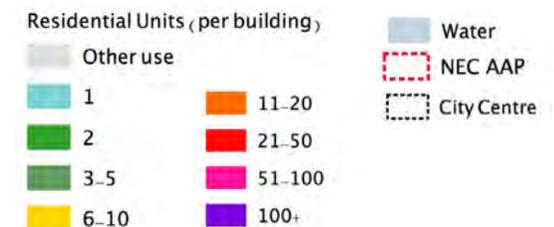


Figure 3.21: Residential Density (Units/buildings) - Wider Area



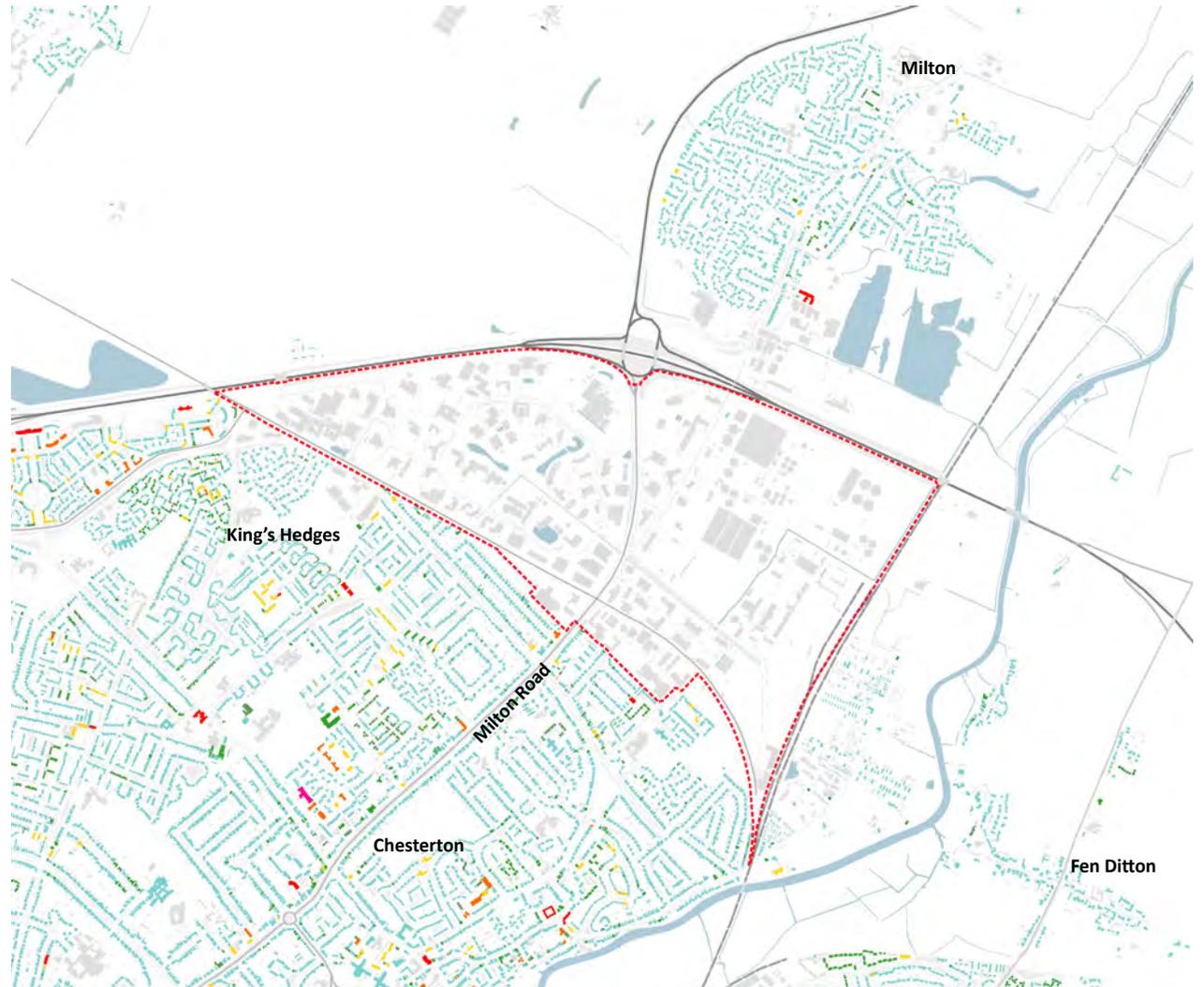
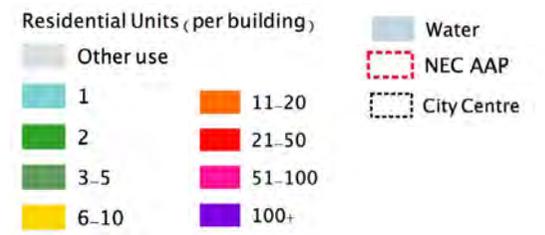


Figure 3.22: Residential Density (Units/buildings) - NEC



4.0 TOWNSCAPE ANALYSIS - LOCAL CONTEXT

4.1 Major Barriers

4.1.1 Figure 4.1 presents the barriers and entrances to the NEC site. NEC is essentially bound on all sides:

- Along the northern edge by the A14, which prevents pedestrian movement across except via the Jane Coston bridge over the A14 and the underpass at Mere Way. The roundabout connecting A14 to Milton Road provides access for vehicles and bicycles but not pedestrians;
- Along the eastern edge by the rail line, which can be crossed by a level crossing at Fen Road to the south of NEC; and
- Along the southern edge by the Guided Busway route, which is a former rail line. There are very few opportunities for north-south movement across the busway.

4.1.2 Due to the presence of these barriers, there are only four principal pedestrian and cycling entrances into the eastern and western sites of NEC, which creates the impression of inward-looking campus-style developments that characterises the current uses on site. Milton Road is the main entrance point, with a single entrance to the Science Park

and 3 entrances to the eastern site from Milton Road. Cambridge Science Park can also be accessed by crossing the Guided Busway from King's Hedges Road as well as the road entrance opposite Cambridge Regional College.

4.1.3 Cambridge North Station and the south-eastern side of NEC are accessible by foot and bicycle via a minor residential street that links with Fen Road, resulting in an indirect and unceremonious access point. Finally, access is provided to NEC from Milton via Jane Coston Bridge over the A14.



Figure 4.1: NEC barriers and principal pedestrian and cycling entrances



The A14 road creates a barrier on the northern edge of NEC



The Guided Busway acts as a barrier on the southern edge of NEC

4.2 Two Distinct Areas

4.2.1 The presence of Milton Road, which cuts through the centre of NEC creates a barrier to comfortable and safe pedestrian and cyclist movement in an east-west direction. Therefore NEC is really comprised of two distinct sites, Cambridge Science Park/Cambridge Regional Academy to the west, and the eastern site, which contains the waste water treatment works (WWTW), office and industrial uses.

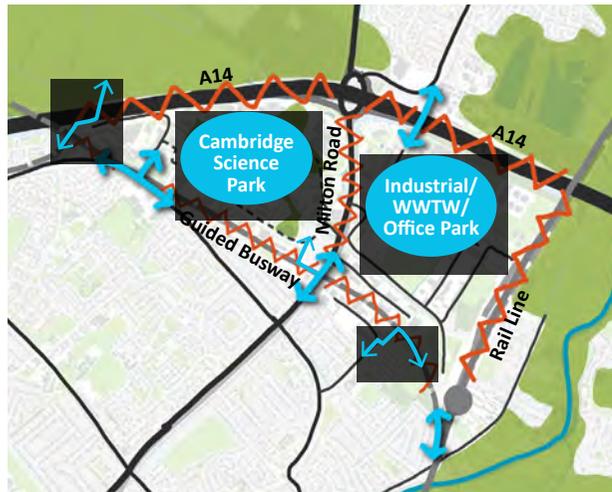


Figure 4.2: Two distinct areas within NEC

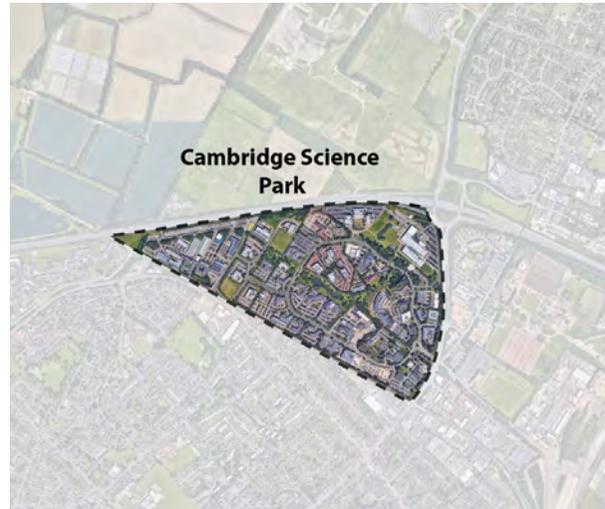


Figure 4.3: Cambridge Science Park - aerial view © GoogleEarth



Photo of Cambridge Science Park



Figure 4.4: Cambridge Science Park - oblique aerial view © GoogleEarth



Figure 4.5: Industrial / WWTW / Office Park / Station - aerial view © GoogleEarth



Photo of Cambridge North Station and New Hotel Building



Figure 4.6 Industrial / WWTW / Office Park / Station - oblique aerial view © GoogleEarth

4.3 Surrounding Neighbourhoods

4.3.1 North East Cambridge is surrounded by six distinct neighbourhoods, which are shown in Figure 4.7. These are each discussed on the following pages.



Figure 4.7: Neighbourhoods surrounding NEC

King's Hedges

4.3.2 King's Hedges is a residential neighbourhood bound by King's Hedges Road, Milton Road and Arbury Road. The area developed in the 20th century and comprises a mixture of post-war estates, experimental suburban housing design (such as Radburn-style layouts) and cul-de-sacs. Due to this patchwork of development, the neighbourhood generally has a low quality of character and coherence. The internally-oriented housing layouts creates an illegible urban form that is difficult to navigate and can feel unwelcoming.

4.3.3 There are two large public open green spaces in King's Hedges, Nun's Way Recreation Ground and King's Hedges Recreation Ground, which are well maintained and used by local residents. Other open spaces include Arbury Town Park and a number of incidental public open spaces throughout the neighbourhood. The playing fields at North Cambridge Academy are a significant open space, with a level of community use outside of school hours.

4.3.4 The neighbourhood is supported by a district centre at Arbury Court and two local centres, which provide small supermarkets, pubs and services.



Figure 4.8: King's Hedges - oblique aerial view © GoogleEarth



Figure 4.9: King's Hedges - aerial view © GoogleEarth



Photo of King's Hedges

Chesterton

4.3.5 Chesterton is a suburban residential neighbourhood that grew in the 20th century from a historic High Street near the River Cam. East Chesterton ward is bound by the River Cam, Milton Road, the Guided Busway and Elizabeth Way (see Figure 4.11). Chesterton displays a mixture of housing typologies but is dominated by semi-detached homes in street-based layouts. There are also small examples of suburban terraced housing and contemporary developments that take cues from the older suburban housing. In general, Chesterton displays a coherent character and has a legible urban structure.

4.3.6 In the north of Chesterton is the attractive Bramblefields public open space and nature reserve, and a large allotment behind the Discovery Way housing development. An important local hub is the Brown's Field Youth and Community Centre off Green End Road. The area is supported by neighbourhood centres at Chesterton High Street and Green End Road. Chesterton has direct cycle and pedestrian access to Cambridge North Station. However, access is via a single convoluted route on the residential Moss Bank street. This lack of a direct, easy and legible route means that few residents are within a comfortable walk to the station.



Figure 4.10: East Chesterton ward - oblique aerial view © GoogleEarth



Figure 4.11: East Chesterton ward - aerial view © GoogleEarth



Photo of Green End Road, Chesterton

Orchard Park

4.3.7 Orchard Park is a contemporary housing development and neighbourhood. The main development was completed in 2010, although some parts are still being developed. It is bound to the north by the A14 and to the south by King's Hedges Road. The neighbourhood is a departure from the character of the nearby King's Hedges and is of a higher density, comprising of both apartments and houses. Homes are arranged in compact perimeter blocks, defining streets and open spaces.

4.3.8 At the centre of the development is a circular open space on Circus Drive, the main axis that leads to a local centre on the northern edge. The mixed use centre has a convenience supermarket, a restaurant, a hotel and other local services with apartments above. On the western end is a primary school and sports ground.

4.3.9 Orchard Park is bound in by two major roads to the north and south meaning that it is isolated from the surrounding area, and is mainly accessible by private vehicles, despite its walkable internal form and access to the Guided Busway.



Figure 4.12: Orchard Park - aerial view © GoogleEarth



Photo of Orchard Park



Figure 4.13: Orchard Park - oblique aerial view © GoogleEarth

Fen Road

4.3.10 Fen Road is located across the rail line to the east of North East Cambridge. It is a distinct area within the context of NEC. The main use along the road are a series of large Traveller's Housing / mobile homes sites. There is also a small industrial estate with low-rise industrial sheds. To the north of these uses is Chesterton Fen, an open meadow along the River Cam.

4.3.11 Between the River Cam and the A14, Fen Road is the only way of crossing the rail line. This is via a level crossing that where the barriers are down for long periods during the day. To the north, Fen Road results in a dead end as it meets the A14 and there is no opportunity to cross the River Cam in this area. These factors mean that the Fen Road area is highly isolated from the surrounding city.

4.3.12 When complete, the Chisholm Trail will enhance walking and cycling connectivity across the River Cam with a new cycle and pedestrian bridge adjacent to the currently existing railway bridge seen in Figure 4.15. There is currently no convenient walking or cycling access over the river in this area.



Figure 4.14: Fen Road - aerial view © GoogleEarth



Photo of Fen Road



Figure 4.15: Fen Road - oblique aerial view © GoogleEarth

Fen Ditton

4.3.13 Fen Ditton is a well-preserved historic village to the east of the River Cam, with traditional, small scale, detached buildings with gardens lining the High Street and Church Street. The focal point of the village is St Mary's Church, and the village has some local services such as pubs and a primary school. Fen Ditton has a close relationship with the River Cam and direct access to Ditton Meadows to the south-west. Fen Ditton is largely separate from North East Cambridge. The village links back to Cambridge city to the south via Ditton Lane.

4.3.14 Fen Ditton is covered by a large Conservation area, which extends to the river's edge and encompasses all of Ditton Meadows.



Figure 4.16: Fen Ditton - aerial view © GoogleEarth Photo of Fen Ditton



Figure 4.17: Fen Ditton - oblique aerial view © GoogleEarth

Milton

4.3.15 Milton is a settlement that expanded in the 20th century from a historic village core, within which a few historic buildings survive, such as Milton Hall and All Saints Church. Milton is bound by the A14 to the south and the A10, which curves around the west and north of the village. This means that access to the village is dominated by private vehicle, although the Jane Coston Bridge provides a cycling and walking route between Milton and NEC.

4.3.16 Much of Milton is characterised by 1980s suburban housing in cul-de-sac layouts, although there are a few post war semi-detached housing areas. On the south-eastern edge of the village is Milton Country Park, a large public open space featuring forested trails and lakes, as well as an industrial estate and a Tesco Superstore.



Figure 4.18: Milton - aerial view © GoogleEarth



Photo of Milton



Figure 4.19: Milton - oblique aerial view © GoogleEarth

5.0 TOWNSCAPE ANALYSIS - NORTH EAST CAMBRIDGE

5.1 Land Parcels with their own Character

5.1.1 North East Cambridge is large and complex, comprising 11 distinct land parcels with their own character. These are shown in Figure 5.1, are listed below and described on the following pages:

1. Cambridge Science Park
2. Cambridge Regional College
3. Car Dealerships
4. St John's Innovation Park
5. Orwell House / Merlin Place
6. Cambridge Business Park
7. Waste Water Treatment Works
8. Cambridge Commercial Park / Cowley Road Industrial Estate
9. Chesterton Railhead Aggregate site
10. Cambridge North Station
11. Trinity Hall Farm Industrial Estate / Nuffield Road Industrial Estate



Figure 5.1: NEC Land parcels with their own character location map



1. Cambridge Science Park

5.1.2 This is a large office campus featuring standalone office and R&D buildings in a heavily landscaped setting. Started in the 1970s, the area is largely designed for the private car and is dominated by surface car parking. On the eastern edge, the main entrance from Milton Road leads to a circular distribution road (Cambridge Science Park Road). To the west the Science Park can be accessed from King's Hedges Road. It is an inward-looking, privately managed space that does not interface with the surrounding neighbourhoods or character areas.

5.1.3 Older office developments are 2-3 storeys, usually situated on their own large plot surrounded by car parking. Recent office development has taken a more compact approach with 3-4 storeys and undercroft and other structured parking solutions.

5.1.4 At the centre of the site is an attractive landscaped open space with artificial ponds. Although the Science Park is generally a good environment for workers, the urban form is inefficient and difficult to navigate. According to the Draft North East Cambridge Area Action Plan, there are a number of unused car parking spaces within Cambridge Science Park. This represents an opportunity to intensify development on site and create a more pedestrian-focused environment.

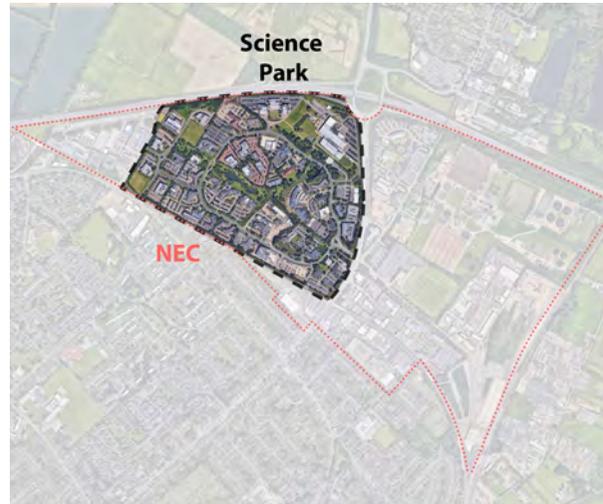


Figure 5.2: Cambridge Science Park - aerial view © GoogleEarth



Cambridge Science Park - Photo



Figure 5.3: Cambridge Science Park - aerial view © GoogleEarth

2. Cambridge Regional College

5.1.5 This is a low-rise educational campus wedged between the A14, Cambridge Science Park and the Busway. It comprises a series of 1-2 storeys buildings, some of which are connected by an internal spine. Its main entrance is on King's Hedges Road, articulated by a landscape space with a water feature and intense tree cover. While these elements are attractive, accessing the college is confusing as one must cross both King's Hedges Road and the Guided Busway. The large and intimidating junction creates an unpleasant environment for those walking and cycling. It is very much a drive-to location which is attested to by large quantities of surface car parking in-between buildings and towards the A14.

5.1.6 At the rear (north) of the site is an underpass that leads under the A14 to a small traveller's housing site. This underpass will form part of the Mere Way cycling improvements project linking up to Waterbeach New Town.

5.1.7 Due to its layout and use, the College acts as an inward-facing campus with no permeability across the site. The surroundings of the site are car dominated with large roads. Pedestrian connectivity with King's Hedges neighbourhood and the Cambridge Science Park is not legible and lacks animation and supervision.

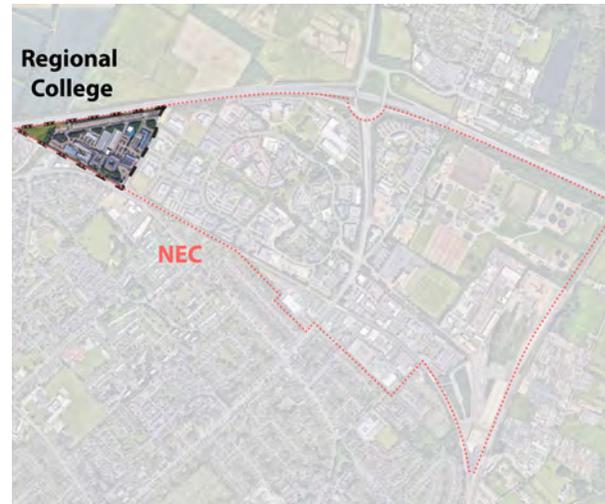


Figure 5.4: Cambridge Regional College - aerial view © GoogleEarth



Cambridge Regional College - Photo



Figure 5.5: Cambridge Regional College - aerial view © GoogleEarth

3. Car Dealerships

5.1.8 This small triangular site sandwiched between the Busway and residential Lovell Road is home to three car dealerships with large “big box” style retail buildings and associated car parking/ outdoor display area. The site fronts onto Milton Road but does not provide a sense of enclosure as the buildings are located away from the Milton Road frontage.

5.1.9 The site breaks the continuity of urban development as one moves along Milton Road into the NEC area. However, it does hold some prominence in the local area due to its important frontage on Milton road and the fact that it is a corner site.



Figure 5.6: Car Dealerships - aerial view © GoogleEarth



Car Dealerships - Photo



Figure 5.7: Car Dealerships - aerial view © GoogleEarth

4. St John's Innovation Park

5.1.10 This is a large triangular office and R&D park bound on two sides by the A14 and Milton road. It is accessed via Cowley Road. On site are mainly 2-3 storey large floorplate office buildings (and up to 4-5 storeys) set within surface car parking and a landscaped open space at the centre.

5.1.11 It is a traditional suburban office park that has been designed for access by private vehicles. There are two internal roads with minimal pedestrian footways. The western and northern edges of the site are buffered with trees to provide some separation from traffic on the main arterial roads. The southern end of the Park features a new 4-5 storey flagship office building (Maurice Wilkes Building) that provides prominence to the site on Milton Road.

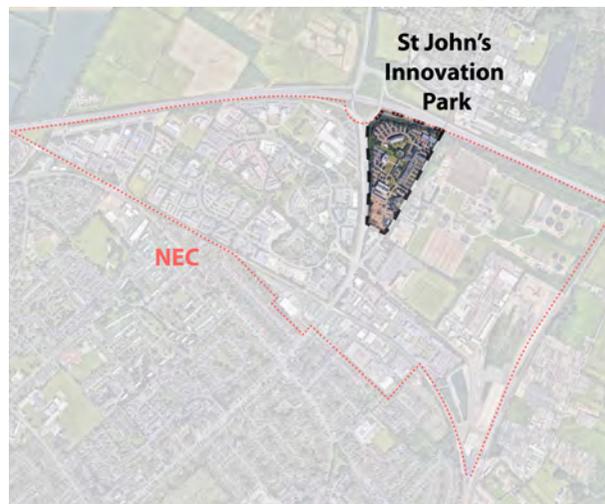


Figure 5.8: St John's Innovation Park - aerial view © GoogleEarth



St John's Innovation Park - Maurice Wilkes Building Photo



Figure 5.9: St John's Innovation Park - aerial view (prior to the building of Maurice Wilkes Building at the southern corner) © GoogleEarth

5. Orwell House/Merlin Place

5.1.12 Two small sites surrounded by road infrastructure containing standalone office/business suite buildings with associated car parking. The western site is Merlin Place office, which turns its back on Milton Road and is accessed via Cowley Road. Across Cowley Road to the east is Orwell House, an aging office building that houses a number of businesses. Neither building addresses the street space well, being set back behind car parking and a landscaped buffer.



Figure 5.10: Orwell House/Merlin Place - aerial view © GoogleEarth

Merlin Place - Photo

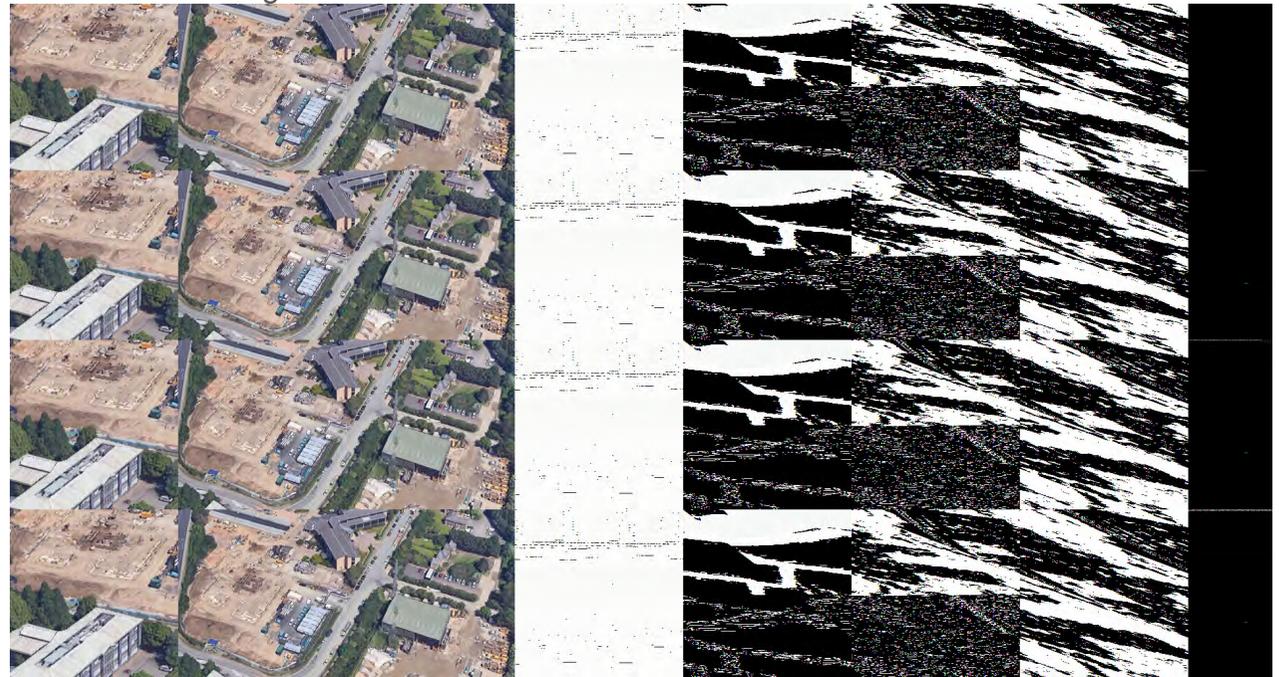


Figure 5.11: Orwell House/Merlin Place - aerial view © GoogleEarth

6. Cambridge Business Park

5.1.13 Cambridge Business Park is a large office park with 2-3 storey office buildings with associated surface car parking. The site is enclosed on three sides by the Busway to the south, a separated cycle/walk way and the first Public Drain to the north, and a vacant site to the east. The only entrance by car to the Park is via Milton Road. There are two secured entrances (accessible by staff) for pedestrians and cyclists along the north-eastern boundary with the cycleway.

5.1.14 The Park itself is an inward-looking campus, which is highly functional in nature, containing no meaningful public open space. The presence of footways and street trees on Cowley Park, which forms the main spine through the Business Park, and the simple, legible urban structure means that internal pedestrian movement is relatively easy and safe. However, the site is relatively disconnected from Cambridge North Station, which discourages the use of the station by employees.

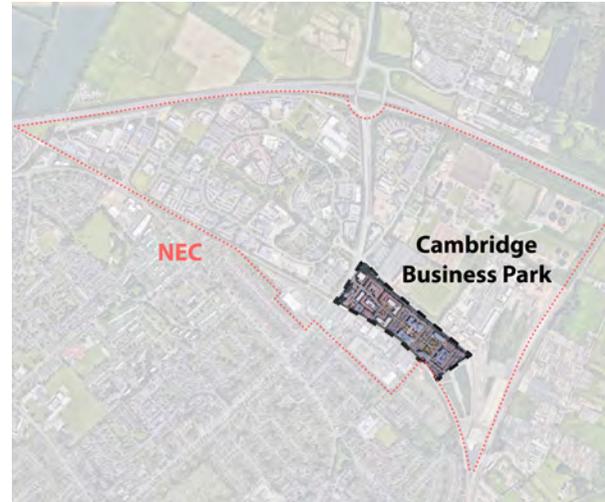


Figure 5.12: Cambridge Business Park - aerial view © GoogleEarth



Cambridge Business Park entrance - Photo



Figure 5.13: Cambridge Business Park - aerial view © GoogleEarth

7. Waste Water Treatment Works

5.1.15 The Waste Water Treatment Plant is the largest individual site in NEC after Cambridge Science Park. It is currently part of the city's essential infrastructure and is not accessible to the public. A high voltage, above ground electricity line runs through the site. It is bound to the north by a dense mature tree belt and the A14 and to the east by the rail line. The southern end of the site has a golf driving range and a city council depot. The main entrance for staff is from Cowley Road on the western edge, where there are some office/operational buildings and car parking.

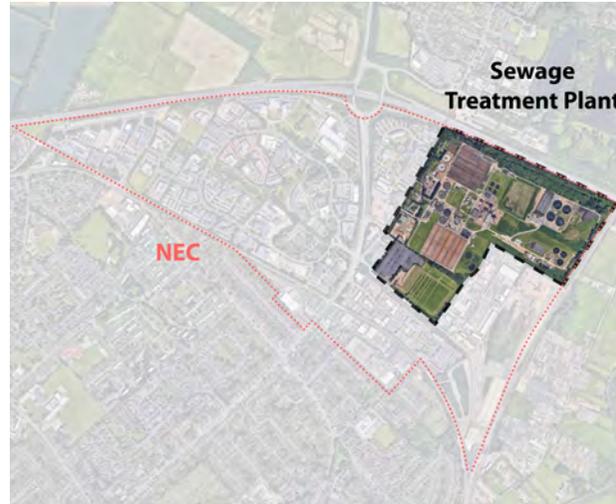


Figure 5.14: Waste Water Treatment Plant - aerial view © GoogleEarth



Figure 5.15: Waste Water Treatment Plant - aerial view © GoogleEarth

8. Cambridge Commercial Park / Cowley Road Industrial Estate

5.1.16 Cambridge Commercial Park contains a mixture of builder's merchants, a bus depot and other light industrial/retail uses. The site is accessible via Cowley Road and is wrapped by the Waste Water Treatment Works to the north and west, separated by the First Public Drain, and Milton Avenue and Chesterton Sidings to the east. The Park layout is structured by two parallel north-south oriented internal routes with individual sites set back behind fences and defensive planting. It is generally a functional environment with little to no landscaping to buffer it from surrounding areas and soften the environment.



Figure 5.16: Cambridge Commercial Park / Cowley Road Industrial Estate - aerial view © GoogleEarth



Figure 5.17: Cambridge Commercial Park / Cowley Road Industrial Estate - aerial view © GoogleEarth

9. Chesterton Railhead Aggregate Site

5.1.17 This is a strategic heavy industrial site for the storage and processing of aggregates, situated next to the rail line on the eastern edge of NEC. The site benefits from direct access to the rail line for freight transport. The site is highly isolated and hidden from public view. It is also a safeguarded site in the Minerals and Waste Local Plan.



Figure 5.18: Chesterton Railhead Aggregate Site - aerial view © GoogleEarth



Figure 5.19: Chesterton Railhead Aggregate Site - aerial view © GoogleEarth

10. Cambridge North Station

5.1.18 Cambridge North Station is a contemporary railway station that opened in 2017 and connects with Cambridge Station and London to the south, and northwards to Norwich and Ely. The station building faces onto a new public square and is co-located with a 5-7 storey hotel, which is currently under construction. The station has extensive cycle parking and interchanges with the Cambridge Guided Busway, connecting east to Cambridge Science Park and St Ives.

5.1.19 Despite being a key gateway to North East Cambridge, the location of the station is somewhat isolated, being accessible from the north via Cowley Road and from the Chesterton residential area via an indirect route from the south. Once the Chisholm Trail is complete, access to the station from the south will be greatly enhanced.

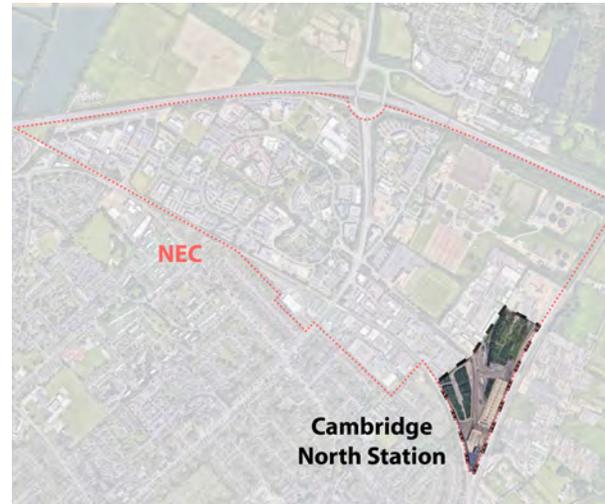


Figure 5.20: Cambridge North Station - aerial view © GoogleEarth



Cambridge North Station - Photo



Figure 5.21: Cambridge North Station - aerial view (prior to hotel development) © GoogleEarth

11. Trinity Hall Farm Industrial Estate / Nuffield Road Industrial Estate

5.1.20 This light industrial site is located south of the Busway and is separated from the main NEC area. It is accessible through the residential Green End Road and Nuffield Road, and is bordered by suburban housing to the south. Access to the area is convoluted and illegible, generating heavy traffic through the Chesterton neighbourhood. Within the site are office/light industrial premises and builders merchants. The uses and scale of buildings here are generally at odds with the surrounding residential context.

5.1.21 Trinity Hall Farm Industrial Estate bounds onto Milton Road but lacks a vehicle entrance from this road, turns its back to Milton Road and is adjacent to the existing Milton Road subway.



Figure 5.22: Trinity Hall Farm Industrial Estate / Nuffield Road Industrial Estate © GoogleEarth



Trinity Hall Farm Industrial Estate - Photo



Figure 5.23: Trinity Hall Farm Industrial Estate / Nuffield Road Industrial Estate - aerial view © GoogleEarth

5.2 Corridors

5.2.1 Milton Road and Cambridgeshire Guided Busway are the two principal corridors that define NEC. These are shown in Figure 5.25, listed below and discussed in detail on the following pages.

1. Milton Road dual carriage way motorway access (50mph)
2. Milton Road city access single carriage way (30mph)
3. Guided Busway Corridor - West
4. Guided Busway Corridor - East

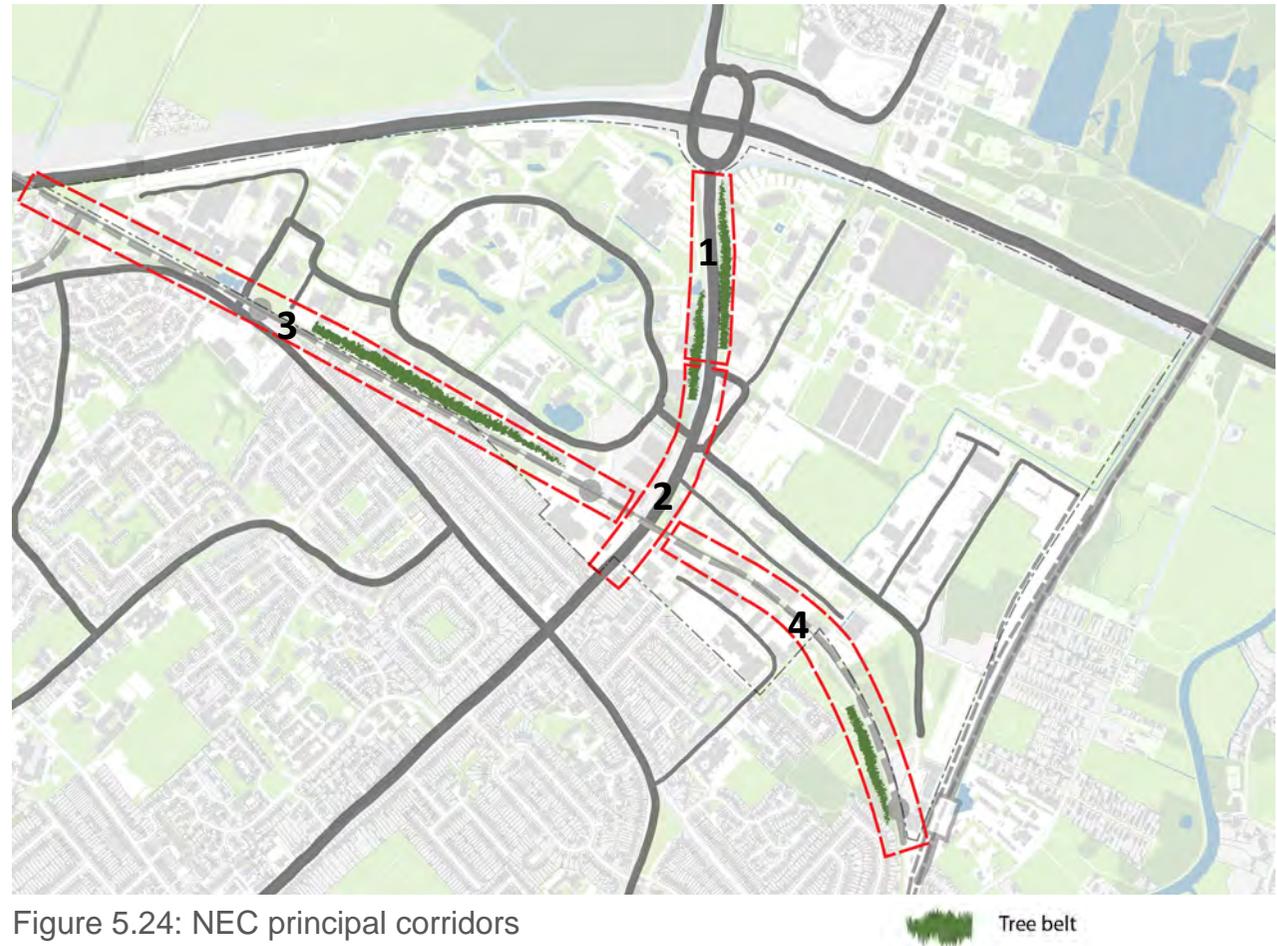


Figure 5.24: NEC principal corridors



1. Milton Road dual carriageway motorway access (50mph)

5.2.3 This part of Milton Road is a dual carriageway with a speed limit of 50mph. It provides access to the A14 and is designed for efficient movement of motor vehicles. There is a pedestrian path on the eastern side of the road but there are no opportunities to cross north of the junction with Cowley Road. It is therefore a hostile environment for pedestrians and inaccessible for cyclists. A tree belt lines each side of the road here, providing some visual separation from the offices in St John's Innovation Park and Cambridge Science Park.



2. Milton Road city access single carriageway (30mph)

5.2.4 At the southern end of NEC, Milton Road narrows to a single carriageway with a speed limit of 30mph. At this point it becomes safer for pedestrians relative to the northern section. However, it is still heavily traffic-dominated and in general is a harsh environment for pedestrians and cyclists. In order to cross the Busway, pedestrians on the eastern side of Milton Road must go through an underpass, which is unattractive and may feel unsafe. This junction also presents problems for cyclists as those using the cycle route along the Busway must dismount and cross at the pedestrian crossing to continue their journey.



3. Guided Busway Corridor - West

5.2.2 The Guided Busway and cycle route forms the southern boundary to the Science Park and North East Cambridge area. This western stretch of the Busway, from Milton Road to Cambridge Regional College, is bordered by mature trees and dense foliage on each side. Coupled with the grass surface on the Busway route, this creates an attractive green and natural corridor, albeit with very few connections across to either the King's Hedges Neighbourhood or Cambridge Science Park. Whilst the route is convenient for cyclists, its limited permeability and lack of surveillance from development affects its comfort and perceived safety for pedestrians.



4. Guided Busway Corridor - East

5.2.5 The eastern section of the Guided Busway connects Cambridge North Station to Milton Road and westwards to the Science Park and St Ives. This is a segregated bus route on a former rail line, with a dedicated cycle lane running alongside it. The Busway is flanked by vegetation and trees on both sides. However, in contrast to the western section, the road surface is a hard surface rather than grass and is less attractive. It is bound to the north by Cambridge Business Park and to the south by Nuffield Road Industrial Estate. There are no opportunities to cross the Busway along this section, which makes it feel isolated and not attractive to pedestrians.

5.2.6 At the western end, the intersection of the bus way with Milton Road, pedestrian and cycling access across the road and into the NEC area is poor, due to the presence of the underpass and a convoluted arrangement of routes.

5.3 Open Spaces and Landscape Features

5.3.1 Within North East Cambridge and its immediate surroundings are a number of natural features and open spaces that are important to its character. These are shown in Figure 5.25, listed below and discussed in detail on the following pages.

1. Cambridge Science Park Landscaped Open Space
2. Cambridge Regional College Entrance Pond and Buffer Space
3. First Public Drain, wooded walk and cycle route, parallel to Cowley Road
4. Cowley Road leading to Jane Coston Bridge and mature hedgerow
5. Cambridge Golf Driving Range
6. Nuffield Road Allotments
7. First Public Drain, edge of Sewage Treatment Plant
8. Tree belt along A14
9. Milton Country Park
10. Public Square outside Cambridge North Station
11. Chesterton Fen
12. Artificial hill created from landfill site
13. Bramblefields Local Nature Reserve

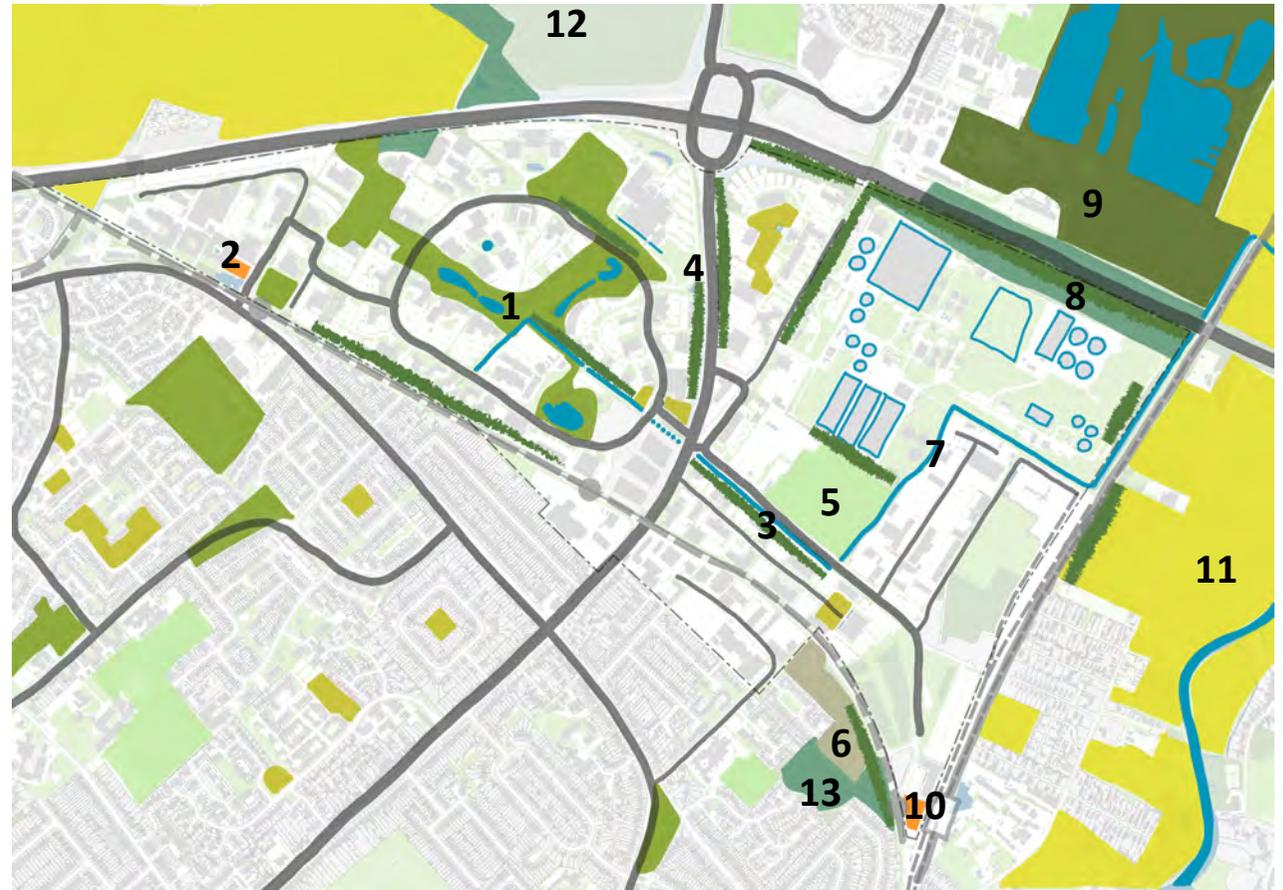


Figure 5.25: NEC open spaces and landscape features





1. Cambridge Science Park Landscaped Open Space

5.3.2 A well designed meandering parkland that forms the centre of Cambridge Science Park with trees, artificial lakes and walking paths. This is a high quality space that offers good amenity for staff in Cambridge Science Park. One negative aspect is that the space is slightly hidden away, being at the rear of the office buildings. The existence of the parkland is not immediately apparent when entering the Science Park or moving along the main roads within the site. Two other large green spaces exist in the north of the site, which connect to the central space by walking paths. These spaces are much more open in nature.



2. Cambridge Regional College Entrance Space

5.3.3 The entrance to Cambridge Regional College is on King's Hedges Road and the Busway. Here is where the college presents its "face" to the city and does so with an attractive landscaped entrance space. The pedestrian path leads diagonally across a large pond to the college's front entrance. The southern edge of the campus is heavily landscaped with mature trees and hedges, which provides a good sense of enclosure to the public space.



3. First Public Drain, wooded walk and cycle route, parallel to Cowley Road

5.3.4 The First Public Drain is an historic, awarded watercourse that runs from Cambridge Science Park (where it is largely hidden) eastwards along Cowley Road, and then northwards through the Waste Water Treatment Works. In the mid section where the drain runs to the south of Cowley Road, it is accompanied by a separate walking and cycling route. The public drain is heavily vegetated, creating an attractive natural setting. The cycling and walking route is flanked on both sides by vegetation and trees, and runs for approximately 1km between the rail station and Milton Road. It is an attractive route but the lack of frontages and permeability could make it feel unsafe and isolated, especially in the evening.



4. Cowley Road leading to Jane Coston Bridge

5.3.5 This north-south section of Cowley Road leads from Milton Road up to Jane Coston Bridge, which allows movement across the A14 for cyclists and pedestrians. This route is bordered by a mature hedgerow that is covered by a Tree Protection Order (TPO) and is designated as a City Wildlife Site, which protects it as an important habitat. Cowley Road is a single carriageway with a separated cycle path and pedestrian path on the eastern side. The road is enclosed well by vegetation but the lack of building frontage and overlooking may make it feel unsafe outside of office hours. It is the only walking connection of Cambridge with Milton and appears to be well used by both by cyclists and pedestrians.



5. Cambridge Golf Driving Range

5.3.6 A golf driving range is located centrally within the eastern part of NEC, with access from Cowley Road. It is a large privately owned and managed green space. Due to the nature of the use there is no public access to the green.



6. Nuffield Road Allotments

5.3.7 The allotments are located against the southern edge of North East Cambridge within the Chesterton residential area. They are an important resource for the local community and the site is designated as a Protected Open Space. The site is surrounded by mature trees, which creates an attractive enclosure to the space as well as visual shielding. The allotments are bound by the busway to the north and the Bramblefields Local Nature Reserve to the east.



7. First Public Drain, edge of Waste Water Treatment Works

5.3.8 The First Public Drain is an historic, awarded watercourse that forms the eastern edge of the Waste Water Treatment Works in NEC. It is currently inaccessible to the public and is highly vegetated. It is understood that the drain plays an important role for local biodiversity. The drain collects surface water drainage for a large area of northern Cambridge as well as storm water drainage at times of flood from combination drains.



8. Tree belt along A14

5.3.9 This belt of mature trees to the south of the A14 provides an important buffer between North East Cambridge and the noisy, polluting regional road. It is currently inaccessible to the public and is listed on the Priority Habitat Inventory, signifying its importance for wildlife. There is a ditch running through the tree belt, which serves a drainage function for the carriageway.



9. Milton Country Park

5.3.10 Milton Country Park is a large public green space located north of the A14 in Milton. It contains forested walks between two large artificial lakes, Todd's Pit and Dickerson's Pit. The park is accessible by car from North East Cambridge via the Milton Interchange and Cambridge Road. Alternatively, cyclists and pedestrians can use Jane Coston Bridge to cross the A14 from NEC and access the park. It is the most significant dedicated public park north of Cambridge city centre.



10. Public Square outside Cambridge North Station

5.3.11 A new public square has recently been completed outside of Cambridge North Station, acting as an attractive entrance to the station. It is well designed but is currently lacking in activity and use due to the relatively limited number of passengers using the station and lack of supporting uses and activity in the area at present.



11. Chesterton Fen

5.3.13 Chesterton Fen is a natural grassland/meadow between the River Cam and the rail line. It lies largely within Flood Zone 3, meaning it is likely to flood more often than once in 100 years. It is accessible by the River Cam towpath and Fen Road. In general, it is an isolated, underused open space, playing more of a functional rather than recreational role. It is difficult to reach from North East Cambridge and currently does not offer any singular attraction but plays an important role in flood mitigation and is an important flood meadow habitat.



12. Artificial hill created from landfill site

5.3.12 To the north of Cambridge Science Park and the A14 are agricultural fields that rise to a small but significant local hill of approximately 15m. This hill has formed due to its use as a landfill site. The site is not publicly accessible but would likely offer views over NEC and towards the city centre. Milton Park and Ride is situated just north of the site



13. Bramblefields Local Nature Reserve

5.3.14 Adjoining NEC to the south is Bramblefields, a small Local Nature Reserve with a mixture of grasslands, scrub and a pond. It is a habitat for numerous bird and amphibian species. It is accessible via Discovery Way, Laxton Way and Long Reach Road.

5.4 Landmarks

5.4.1 North East Cambridge and its immediate surroundings contains 6 existing landmarks. These are shown in Figure 5.26 and listed below:

1. Jane Coston Bridge;
2. Napp Building;
3. Maurice Wilkes Building;
4. 1-21 Cambridge Science Park;
5. The Golden Hind public house (outside of NEC area); and
6. Hotel at Cambridge North Station.

5.4.2 Each of these landmarks are discussed in more detail on the following pages.



Figure 5.26: NEC landmarks

Landmarks

- | | |
|---------------------------------------------------------------------------------------|--------------------------------|
|  | 1. Jane Coston Bridge |
| | 2. Napp Building |
| | 3. Maurice Wilkes Building |
| | 4. 1-21 Cambridge Science Park |
| | 5. The Golden Hind |
| | 6. Novotel Hotel Building |



1. Jane Coston Bridge

5.4.3 Jane Coston Bridge is an arched pedestrian and cycling bridge that connects North East Cambridge across the A14 to Milton. The attractive structure acts as a landmark for NEC for those driving on the A14. It is also visible along Cowley Road as one moves northwards and signifies the crossing of the A14. From Milton, the bridge is also visible from Cambridge Road and plays a landmark function to signify the crossing.



2. Napp Building

5.4.4 The Napp Building is a highly contemporary laboratory building on the north-eastern end of Cambridge Science Park. The building is characterised by a simple but elegant form, with glass panels and narrow white columns running along the sides. The 1983 competition winning design by Canadian Architect Arthur Erickson is a substantial building, and due to its striking design (sometimes locally called the 'toaster' or 'toast rack') is a distinctive landmark. The upper section of the building is visible from the A14/Milton Interchange, signifying the exit for Cambridge Science Park and NEC.



3. Maurice Wilkes Building

5.4.5 This is a contemporary office building located on the southern end of St John's Innovation Park, facing onto the prominent junction of Milton Road and Cowley Road. It features a prominent sail design above the main entrance and acts as a landmark for the Innovation Park due to its visibility along Milton Road.



4. 1-21 Cambridge Science Park

5.4.8 This is a contemporary office building on a prominent corner at the entrance to Cambridge Science Park. It is highly visible along Milton Road and acts as a gateway to Cambridge Science Park.



5. Golden Hind Public House

5.4.6 The Golden Hind Public House is an attractive mock Tudor pub built in the 1930s featuring imposing gables and chimney stacks. It is a designated as a Building of Local Interest and faces onto the busy Milton Road, marking the junction with King's Hedges Road.



6. Hotel at Cambridge North Station

5.4.7 At the time of writing there is a 5-7 storey hotel development nearing completion at Cambridge North Rail Station. It is a contemporary design with a taller element that is visible along Cowley Road and from the southern approach to the station. It also encloses and provides a focus on the public square.

5.5 Main Pedestrian Routes

5.5.1 The main pedestrian routes within and around NEC are:

1. Guided Busway
2. Segregated cycling and walking route along First Public Drain
3. Walking paths within Cambridge Science Park
4. Cowley Road and Jane Coston Bridge
5. Route from King's Hedges to Busway/ Science Park
6. Underpass from Cambridge Regional College to Mere Way
7. Southern Approach to Cambridge North Station

5.5.2 These are discussed in more detail below.

1. Guided Busway

5.5.3 The pedestrian and cycling route along the Busway provides a segregated and direct east-west movement route. However, it does not provide much opportunity for crossing the route and entering the NEC area, and as such is a barrier. The current junction with Milton Road is problematic. Instead of a direct



Figure 5.27: NEC main pedestrian routes

and easy route across Milton Road, cyclists and pedestrians must cross in front of the guided bus (without the aid of a signalled crossing) and then wait at a pedestrian crossing in order to cross Milton Road. In order to turn northwards to

enter Cambridge Business Park or Cowley Road, a pedestrian or cyclist must first turn left (southwards) to reach the entrance to the underpass and then turn back north and cross under the Busway. This is illegible and frustrating for users.

2. Segregated cycling and walking route along First Public Drain

5.5.4 Parallel to Cowley Road, separated by the First Public Drain, is a segregated walking and cycling route that connects Cambridge North Station to Milton Road. It is a high quality route in a green setting. However, with a length of approximately 1km and with no opportunities to cross or exit the route, it is also a barrier to north-south movement between sites. There is also concern about the lack of surveillance on the route in the evening.

3. Walking paths within Cambridge Science Park

5.5.5 At the centre of the Science Park is a well designed landscaped open space. This park features walkways that allow movement directly through the centre of the site. It also allows walkers to connect south to the Guided Busway. Although the quality of the walking route and landscaped setting is high, it is not a natural route for someone to take due to the fact that Milton Road and the entrance to the Science Park is designed for use by cars. There is no clear and legible route from the main entrance to the site to the landscaped open space. Furthermore the space is part of the Science Park and not a public space, and there will be associated limitations to its use for the general public.

4. Cowley road and Jane Coston Bridge

5.5.6 Cowley Road is a quiet single carriageway road with a separated cycling and walking path on the eastern side. This leads north from Milton Road to Jane Coston Bridge, a cycling and walking bridge that connects NEC to Milton. The junction of Milton Road and Cowley Road is highly engineered and complex. It is a hostile environment for pedestrians and dangerous for those that are too impatient to wait for the green light at pedestrian crossings. Moving south along Milton Road from Cowley Road requires the use of an underpass, which is unpleasant and unattractive for pedestrians.

5. Route from King's Hedges to Busway/Science Park

5.5.7 There is an existing connection from the residential neighbourhood of King's Hedges up to the Guided Busway and into Cambridge Science Park. It involves crossing Nun's Way Recreational Ground from Cameron Road and joining with Kirkwood Road. Kirkwood Road passes through an industrial estate before meeting King's Hedges road, the Busway and an entrance to the Science Park. It is a slightly convoluted route but one that could be improved to enhance permeability between King's Hedges and NEC.

6. Underpass from Cambridge Regional College to Mere Way

5.5.8 At the rear of the Cambridge Regional College site is an underpass below the A14 that allows access to a traveller's housing site and a rural walking route called Mere Way, a historically significant Byway. It is a poor connection that is hidden away behind the college and is unattractive.

7. Southern Approach to Cambridge North Station

5.5.9 Access to Cambridge North Station from Chesterton is via an illegible route from Fen Road, through the narrow Moss Bank, and onto a new street that connects up to the station. It is currently difficult to navigate and is a major impediment to local residents making use of the rail station.

5.6 Gateways

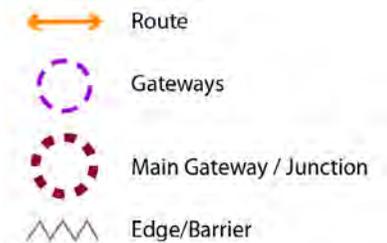
5.6.1 Due to the large block sizes and insular nature of many sites within NEC, there are relatively few gateways into the area. The main gateways are:

1. Jane Coston Bridge
2. Southern entrance into area on Milton Road
3. Kings Hedges Road entrance to College and Science Park
4. Entrance into NEC at Cambridge North Station
5. Milton Road junction with Cowley Road
6. Mere Way underpass

5.6.2 These are discussed in more detail on the following page.



Figure 5.28: NEC Gateways



1. Jane Coston Bridge

5.6.3 This pedestrian and cycle bridge is the only connection for non-vehicle users to enter NEC from Milton to the north.

2. Southern entrance into area on Milton Road

5.6.4 At this point the character of Milton Road transitions between the wide dual carriageway to the north and the more urban single carriageway layout to the south. Here is the junction of the Busway with Milton Road and an underpass for pedestrians and cyclists. This is generally a negative environment for walkers and cyclists.

3. Kings Hedges Road entrance to College and Science Park

5.6.5 This gateway is the interface between the King's Hedges residential area, Cambridge Regional College, the Busway and Cambridge Science Park. However, there is no designated crossing of King's Hedges road at Kirkwood Road.

4. Entrance into NEC at Cambridge North Station

5.6.6 Cambridge North Station is at the south-eastern edge of NEC and is an important Gateway for those arriving by train. The public square provides a welcoming space outside the station. However, the local area is in need of more investment as the station currently seems isolated. The presence of the station also creates an entrance into NEC from Chesterton to the south. Although, as previously stated, this route has the potential to be improved.

5. Milton Road junction with Cowley Road

5.6.7 This is a major junction providing access to the Science Park and eastern half of NEC. It is a highly engineered junction and a difficult environment to navigate for pedestrians.

6. Mere Way underpass

5.6.8 This is an unsupervised and unattractive route under the A14. It provides connectivity with the area to the north of the A14 and could have potential to be a 'gateway to the countryside' for leisure walks if its environment, connectivity and legibility could be improved.



Jane Coston Bridge



Milton Road junction with Cowley Road

5.7 Visual Sensitivity

5.7.1 The landscape immediately around North East Cambridge is generally flat, meaning there are limited opportunities for direct views across the area. There are two main places with potential for views into North East Cambridge:

1. Large/taller development in NEC may be visible in the long views from Fen Ditton and Ditton Meadows to the east.
2. The elevated land to the north of the A14 is an artificial hill formed from landfill. There is potential for long views over NEC towards the city centre. However, this site is currently not accessible to the public.

5.7.2 The NEC Landscape Character Visual Impact Appraisal (2020) indicates that the sensitive areas of landscape, townscape and visual amenity lie to the northeast, east and southeast of the site and can be summarised as follows:

- The River Cam corridor with its network of recreational routes and green infrastructure;
- The Commons of Ditton Meadows and Stourbridge Common that are important to the green network and provide

important areas of open space enclosed by built form;

- The open, rural fenlands to the north of the A14 and east of Fen Ditton that form the setting to northeast Cambridge;
- The horizontal emphasis of the skyline in views towards the Site from the northeast;
- The fact that Cambridge is largely ‘hidden’ from view behind vegetation and landform in views from the north and east;
- The influence of the A14 corridor on perceptual and aesthetic qualities of landscape and views and its influence on movement through the landscape; and
- The absence of notable historic skyline features in views towards the site.

5.7.3 The study identifies six viewing locations from which the landscape impact of development in NEC can be assessed. These are shown in Figure 5.29 on page 77.

5.7.4 The baseline work for the Strategic Heritage Impact Assessment for Cambridge (2021) undertaken alongside the Townscape Analysis and

Townscape Strategy, and the Heritage Impact Appraisal (2021) of the Townscape Strategy have identified the following relevant heritage sensitivities in and around the NEC area:

- Fen Ditton Conservation Area
- Baits Bite Lock Conservation Area
- Riverside & Stourbridge Common Conservation Area
- Castle Mound Scheduled Monument & Listed Building
- Ely Cathedral
- Registered Parks and Gardens of Madingley Hall, American Military Cemetery and Anglesey Abbey
- Grade II Listed Church of St George, Chesterton
- Locally Listed Golden Hind

5.7.5 Proposed taller and mid-rise buildings within the NEC area can have an adverse impact on views onto and from above heritage assets and may affect their setting. The heritage baseline work provides a number of recommended design parameters for development in the NEC, which development should follow.

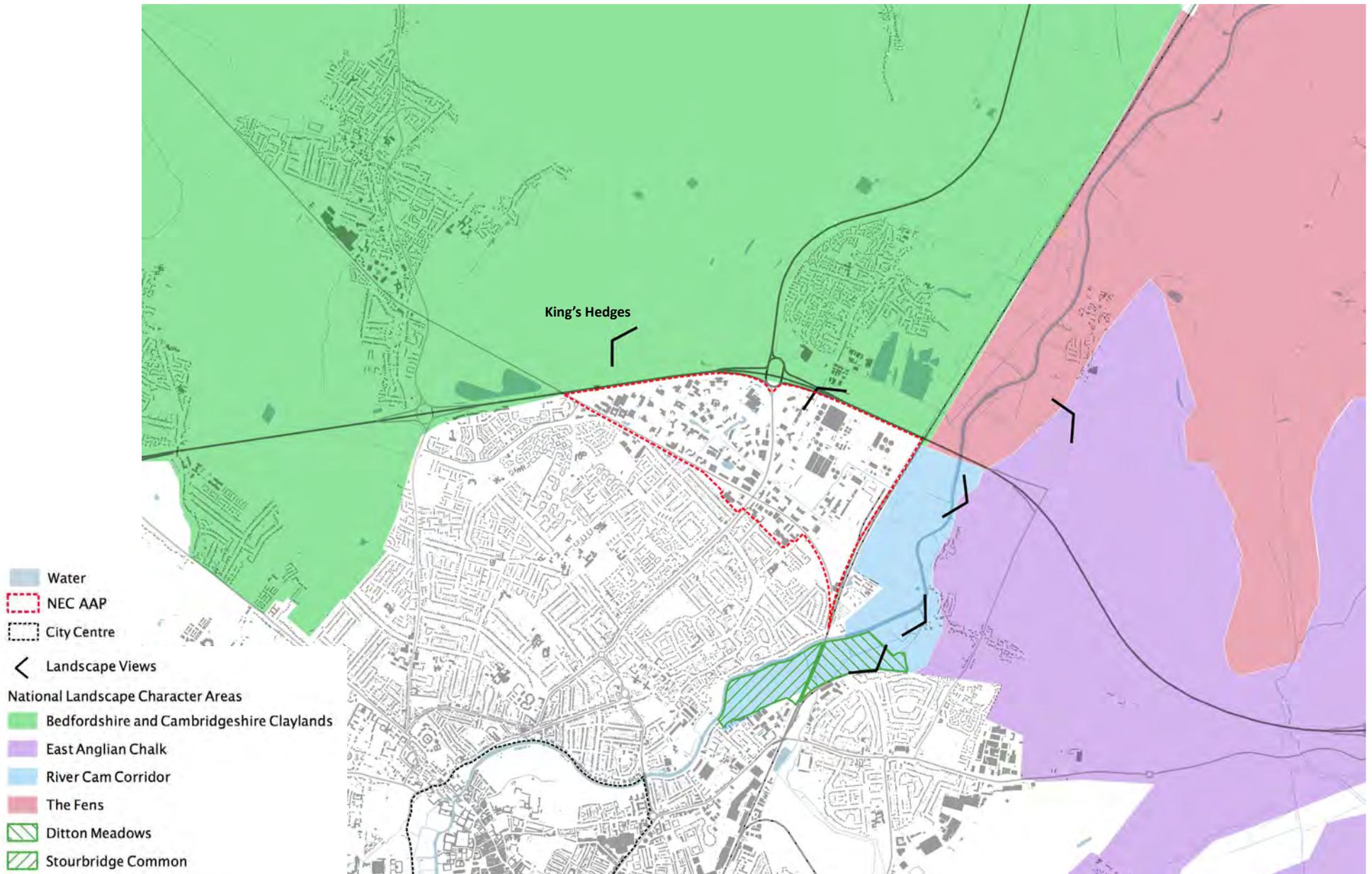


Figure 5.29: Sensitive landscape areas and landscape views (adapted from NEC Landscape Character Visual Impact Appraisal, 2020)

5.8 Vistas and Visual Centrality

5.8.1 This section illustrates the main vistas within North East Cambridge. The geometry of existing linear routes give rise to visual prominence of some areas within the NEC above others. Where a number of vistas meet together at one point, it can be called “visual centrality”. These locations are ideal for landmarks as they are already natural points of convergence.

5.8.2 There are three points within NEC where views down streets converge, creating visual centrality. These are:

1. East of Milton Road and Cowley Road;
2. Cowley Road and Milton Avenue; and
3. Kings Hedges Road & guided busway.

5.8.3 Local streets in the surrounding area provide long vistas into NEC, which could be used to enhance legibility. These are:

4. Kings Hedges Road looking east;
5. St Kilda Avenue and Garry Drive looking north;
6. Green Park looking north (residential street);
7. Nuffield Road looking north; and



Figure 5.30: NEC vistas and visual centrality

- > Converging Vista
-> Long Vista
- Visual focus

8. A10 southbound approaching NEC (although the raised topography of the A14 roundabout limits views into NEC).



East-west view along First Public Drain

6.0 CONCLUSION

6.8.1 This report provides a thorough context and townscape assessment of North East Cambridge and its surroundings. The main findings of this analysis, which have informed the development of the Townscape Strategy, are discussed on the following pages.

6.1 Access and Connectivity

6.1.1 The NEC is generally well connected by all transport modes to city and regional destinations, benefitting from Cambridge North Station, the guided busway and local bus services. However, locally the area is surrounded by major barriers and generally poorly accessible by walking or cycling from surrounding neighbourhoods. Milton Road bisects the area and segregates the eastern and western halves of the NEC. Development parcels are inward looking, there are few public routes connecting across the NEC and there is a distinct lack of permeability.

6.1.2 Development should aim to overcome external and internal barriers to walking and cycling, connect well with surrounding areas, and provide a high level of permeability and good connectivity across sub-areas. Public transport routes should be planned so as to provide accessible services for all areas.

6.2 Land Uses

6.2.1 The area is predominantly in commercial use, comprising office and industrial development, and the waste water treatment works. There is currently no local centre in the area to serve current employees and visitors. Cambridge North Station provides a hotel and a small convenience offer, but it is isolated and peripheral to the main NEC area. Cambridge Regional College is an important education destination in the west of the area.

6.2.2 Increasing the mix of uses and introducing significant numbers of new homes to the area are necessary to create the foundation of a sustainable urban district. Services and facilities should be concentrated in a district centre that is centrally located to NEC to serve the entirety of the district. Given the size of the area there will be the need for small local centres to provide convenience use and facilities within easy walking distance for residents and employees.

6.3 Townscape Character

6.3.1 The surroundings of the NEC are varied and comprise of a number of suburban neighbourhoods with a mix of characters, and open lands, including the Fen landscape along the River Cam and the historic village of Fen Ditton to the east. Development in NEC will need to respond sensitively to its neighbouring lower rise context and the sensitive historic and landscape contexts, especially to the east and north east of the area.

6.3.2 The townscape within the NEC area is diverse and fragmented. Only Cambridge Science Park provides a sense of identity and character with its campus style development, central green space and artificial lakes. Otherwise NEC area is characterised by a patchwork of inward looking development parcels accessed from principal roads, each with their own approach to site layout and built form. Development mainly comprises standalone buildings, typically set back from the street, often accompanied by surface car parking or industrial yard spaces and separated by landscaped margins.

6.3.3 Apart from Cambridge North Station and the adjoining hotel, the area does not comprise an urban character with street based development form and offers little in terms of townscape qualities. As such, development in the NEC area has an opportunity to establish its own distinct sense of place through imaginative design and development. Development of different sites should ensure that they integrate across site boundaries with each other and that overall they deliver a coordinated approach to place making.

6.3.4 The townscape assessment has identified a number of landscape elements that provide structure and character to the area. These include the First Public Drain, the artificial lakes and green centre in Cambridge Science Park and mature wooded margins along edges and corridors. It is important that landscape and water features, and mature planting is retained, integrated with development and remains part of the green and blue structure and character of this area.

6.3.5 There are a few existing buildings and structures in and around the area that act as landmarks and help with wayfinding and orientation. These include Jane Coston Bridge, the Napp Building, the hotel at Cambridge North Station and the Maurice Wilkes Building. The townscape assessment also identified a number of gateways and areas of visual centrality at the confluence of different routes that naturally are more visually exposed and prominent.

6.3.6 Development should explore how existing landmark features can be integrated into the urban fabric and how the overall legibility of the NEC area can be enhanced by delivering distinctive places with carefully placed contextual landmarks, especially in places of visual centrality.

6.3.7 This townscape assessment forms part of a suite of documents that provide the evidence base for the Townscape Strategy and the Area Action Plan for NEC. It should be read in conjunction with the Landscape Character and Visual Impact Appraisal and the Heritage Impact Appraisal.

