

**Northstowe**  
Development Framework Document

August 2012





# Northstowe Development Framework Document

Endorsed by Northstowe Joint Development Control Committee, 20th July 2012

## August 2012

For more information visit  
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GALLAGHER



# Preface

Northstowe is promoted jointly by Gallagher, an experienced master developer and property investment company, and the Government's housing and regeneration body the Homes and Communities Agency (HCA).

The joint promoters have prepared, with the involvement of South Cambridgeshire District Council and Cambridgeshire County Council, a 'phased' approach to delivering the town to provide homes, employment and investment in community facilities and infrastructure at Northstowe.

This phased approach was triggered by the downturn in national and local economic prospects and the Government's Spending Review of October 2010, following which the A14 road improvement scheme was withdrawn. Since then all partners have been trying to find a way to progress the delivery of Northstowe and the investment required. This has been helped by the opening of the Cambridgeshire Guided Busway which provides fast and reliable travel from Huntingdon to Cambridge with key stops alongside the Northstowe site. In addition, the Government gave a commitment to the A14 improvement in the Autumn 2011 Budget Statement.

This Development Framework document refreshes the master plan for Northstowe by making it relevant to today's circumstances. It also defines the rationale and structure for Northstowe's planning and delivery as a comprehensive development and for Phase 1 to come forward as part of an integrated whole whilst providing place making principles and guidance for individual phases of development.

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### **3. Site assets**

Defines how the main assets of the site will be harnessed and considers wider environmental, planning and design issues of relevance to Northstowe and the adjoining settlements of Longstanton and Oakington.

### **4. Structuring elements & design evolution**

Explains the rationale behind the settlement structure with reference to fundamental place making principles and local context.

### **5. Framework master plan**

Illustrates the town's urban structure with reference to morphology, linkages, local character, natural features, land use distribution and phasing.

### **6. Northstowe – A sustainable and locally distinctive settlement**

Explains how Northstowe will deliver a sustainable and vibrant new community and summarises its defining characteristics.

### **7. Delivering Northstowe**

Explains the delivery and phasing strategy for Northstowe.

# Executive Summary

## Refreshed vision for Northstowe

Northstowe will be an exemplar and vibrant 21st century town with a strong local identity. It will combine the best historic characteristics of local settlements with provision for more sustainable patterns of living and lifestyle choices. Northstowe will be built to high environmental standards.

The vision for Northstowe reflects the Cambridgeshire Quality Charter for growth which promotes planned growth of sustainable and vibrant new communities in accordance with four themes:

- Community
- Climate
- Connectivity
- Character

## Development Framework Document

The Development Framework Document (DFD) is one of a suite of documents, which together refresh the master plan for Northstowe by making it relevant to today's circumstances. The DFD defines the rationale and structure for Northstowe's planning and delivery as a comprehensive development and for Phase 1 to come forward as part of an integrated whole whilst providing place making principles and guidance for individual phases of development.

The suite of documents comprise:

- Northstowe – A Vision Refreshed
- Development Framework Document
- Development Framework Document – Statement of Consultation
- Development Framework Document – Sustainability Appraisal
- Development Framework Document Addendum: Exemplar Elements
- Development Framework Document Addendum: Phasing

## Summary of key guiding principles for Northstowe

### Community

i. Self-sufficient community: Retail, community buildings, employment areas, health clinics, sports hub and schooling within 600m walking distance and co-located for ease of access to services.

ii. Active and healthy living: Allotments within walking distance of homes, greenways, community orchards, four sports hubs, trim trails and a comprehensive network of cycle and pedestrian paths will encourage healthy lifestyles.

iii. Community cohesion with the town and local centres at key crossroads and a strong infrastructure with the potential for co-located facilities (seven primary schools, a secondary school, community and sports hubs and support for community development), with opportunity for people to interact and to help integrate the community.

iv. Phasing of the development primarily from north to south to allow for a coordinated and planned approach to construction which minimises the impact on existing communities and new residents of the site and avoids a piecemeal development.

### Climate

i. Towards low carbon with a combination of energy efficient solutions, local food production, green travel, innovative technology and communications systems and waste recycling centre to demonstrate Northstowe as an exemplar in sustainable living. A future addendum to this document will include a list of exemplar elements.

### Connectivity

i. Dedicated busway as a direct link from the Cambridgeshire Guided Busway running through the middle of Northstowe enabling the site to be served by a high quality public transport system linking Huntingdon and Cambridge.

ii. Walking, cycling and buses to be given priority on streets with pedestrians afforded top priority. Pedestrian and cycle connections will be provided between Northstowe and adjoining settlements e.g. Oakington, Longstanton, and improved links further afield, especially to Bar Hill. Commuter cycle routes and local bus routes throughout the site to provide a sustainable transport system, overlooked where possible for security.

iii. Southern access roads to provide vehicular access to the A14 at Bar Hill and Dry Drayton, as well as from the B1050 at the northern end of the site.

### Character

i. Physical environment - linear development reflecting local settlement forms along key routes with an alternating street alignment, and a strong sequence of public spaces to aid legibility. Flexibility for change and innovation over time, inherent within the development form.

ii. The town centre to incorporate a wider market space with a loose grid pattern of traffic calmed streets reflecting other village forms in the area.

iii. Varied building heights and architectural vernacular as a defining feature.

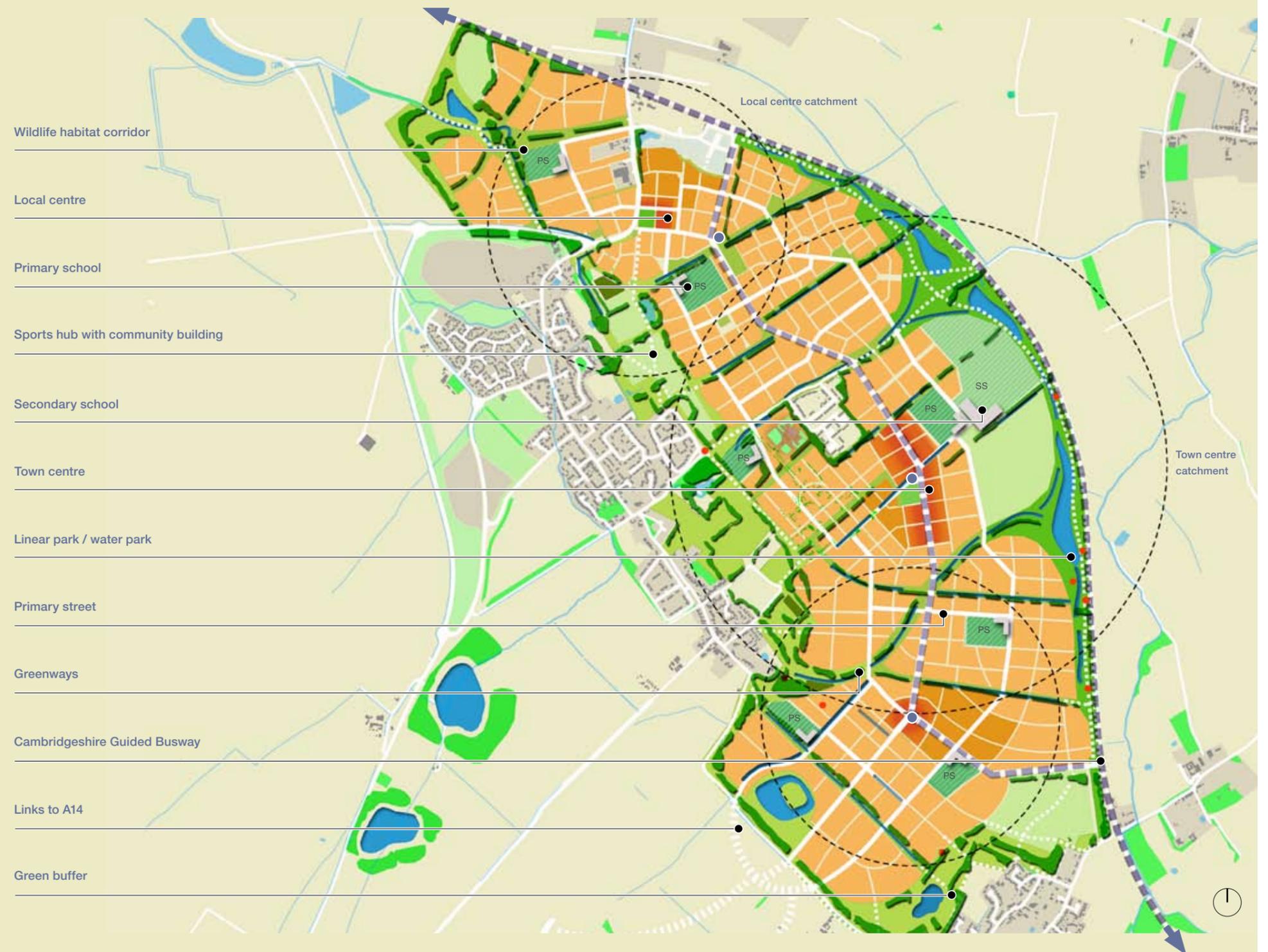
iv. A strong landscape structure with a hierarchy of interconnected green public spaces and parks, often linked via strong linear axis, based upon the grain of the land and incorporating existing site assets and features.

v. Nature conservation in wildlife corridors, a network of lakes, ponds and ditches, meadows and scrub, retained landscape features, green links and linear parks to create a mosaic of habitats and green space utilising and emphasising water features, becoming a haven for wildlife and providing opportunities for natural play and informal access.

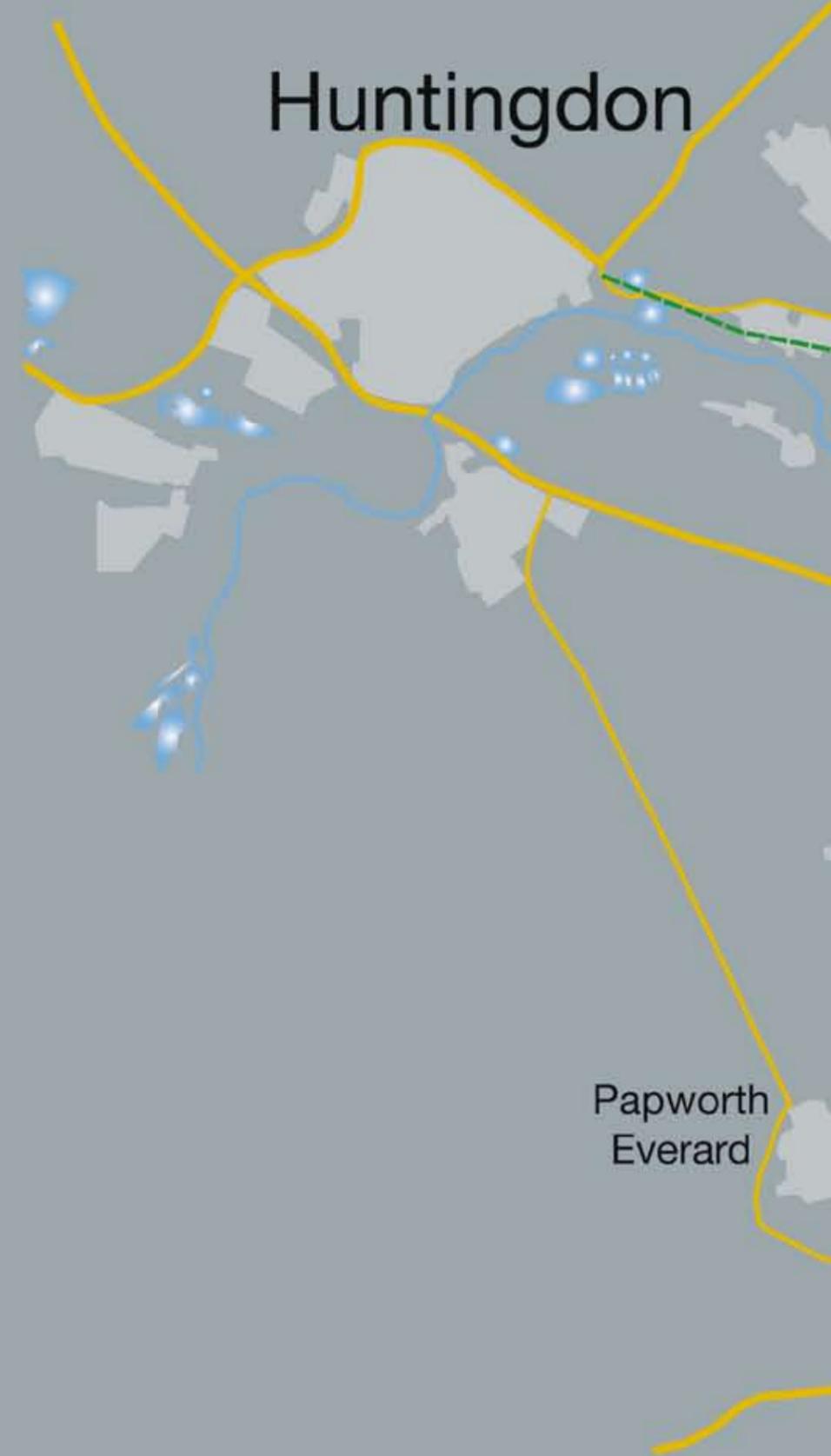
## Framework master plan

Land Use	Area (ha)
Public Open Space	135 ha
Sports Hubs	36 ha – 41.1 ha subject to synthetic pitch provision
Education	27.4 ha as illustrated on the DFD master plan. Additional provision may be needed up to 30.9 ha depending on the ultimate population of Northstowe
Burial Grounds	3.9 ha in total for central municipal facility and a woodland burial site
Allotments & Community Orchards	4 ha
Combined Emergency Services	0.66 ha
Faith, Voluntary & Community Services	Number of sites throughout town & local centres
Other Community Uses (Museum, Library, Health Centres)	Number of sites throughout town & local centres

-  Residential development areas
-  Employment
-  Movement network of primary and secondary streets
-  Dedicated busway
-  Town centre & local centres
-  Schools / education buildings
-  Secondary school site
-  Primary school sites
-  Sports hubs
-  Existing settlements
-  Green infrastructure, existing and proposed key vegetation, greenways, green buffer & linear park
-  Strategic footpath / cycle links to neighbourhoods
-  Attenuation ponds (additional ponds north of the A14)
-  Potentially retained buildings in old barracks area
-  Existing trees within former barracks area
-  Allotments
-  Listed pillboxes
-  Bus stops on dedicated busway



# Northstowe and its neighbouring settlements



St Ives

Great River Ouse

Over

A10

Willingham

Cottenham

River Cam

Longstanton

Northstowe

A14

Oakington

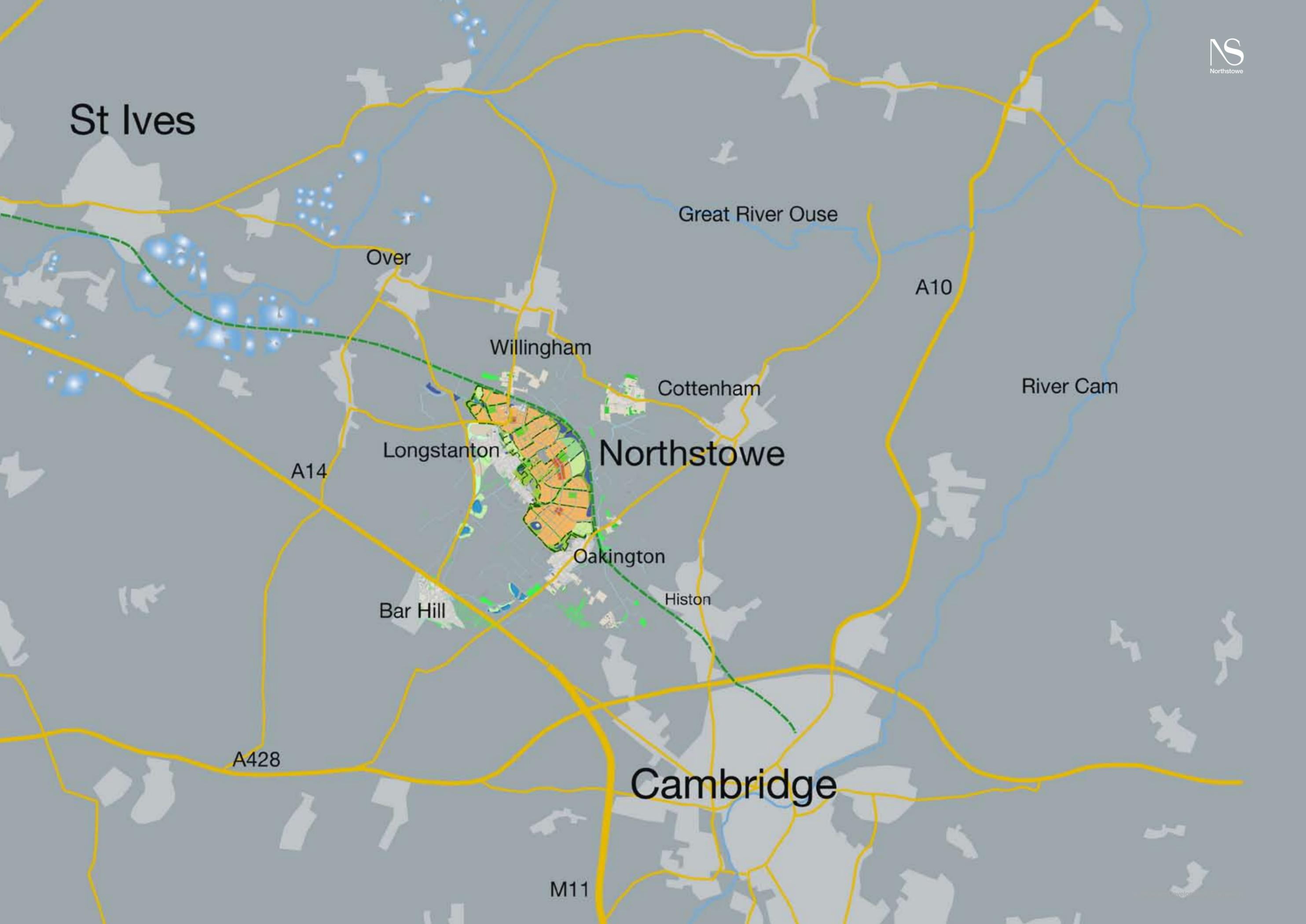
Bar Hill

Histon

A428

Cambridge

M11



# Refreshed vision for Northstowe

Northstowe will be an exemplar and vibrant 21st century town with a strong local identity. It will combine the best historic characteristics of local settlements with provision for more sustainable patterns of living and lifestyle choices. Northstowe will be built to high environmental standards.

The vision for Northstowe reflects the Cambridgeshire Quality Charter for growth which promotes planned growth of sustainable and vibrant new communities in accordance with four themes:

Community

Climate

Connectivity

Character



Sustainable living  
Community spirit  
Employment and business  
Life long learning



Towards low carbon  
Green space  
Food production



Walkable facilities  
Connected streets  
Cambridgeshire Guided Bus



Water  
Local identity  
Play and recreation  
Public art

# A sustainable and locally distinctive new community

## Key features that help create a sustainable community include

### 1. Transport

A spur off the Cambridgeshire Guided Busway running through the middle of Northstowe providing a dedicated busway. Commuter cycle routes and local bus routes provide a truly sustainable transport system

### 2. Self-sufficient community

Retail, community buildings, employment areas, health clinics, sports hub and schooling all on the doorstep

### 3. Active and healthy living

Allotments within each neighbourhood, greenways, community orchards, four sports hubs, trim trails and a comprehensive network of cycle and pedestrian paths all afford residents the opportunity to live a healthy life

### 4. Community cohesion

Town and neighbourhood centres, seven primary schools, a secondary school, community and sports hubs and support for community development will pull the community together

### 5. Nature conservation

Wildlife corridors, a network of lakes, ponds and ditches, meadows and scrub, retained landscape feature, green links and linear parks will become a haven for wildlife and provide opportunities for natural play

### 6. Towards low carbon

A combination of energy efficient development solutions, local food production, green travel, innovative technology and communications systems and waste recycling centre will make Northstowe an exemplar in sustainable living

## Local settlement characteristics reflected in Northstowe

- The town has a linear development form along a central main route. A tight urban form in the centre becomes deformed on the development edge. Building heights and densities are greatest along this central core and at the three centres
- The principal 'high street' through the centre of the settlement has a number of bends, often at key nodal locations or the intersections of routes and/or greenways
- The town centre will be the civic, social, commercial and cultural heart of the settlement. The town centre is recognised by a simple widening of the street along with key civic spaces including the town park and market square. The opportunity for landmark civic buildings of a grander scale should be a defining feature. Residents will also live in or close to the town centre ensuring a safe and active place day and night
- Water and linear drainage features permeate the urban form, defining the grain of the town and defining much of its unique character
- A clear hierarchy of interconnected green spaces ranging from formal sports hubs to naturalistic linear parks provide a green framework in which neighbourhoods will be sited. Family friendly streets will benefit from views out across greenways or the wider predominately flat countryside
- A range of architectural styles is appropriate and will help provide a legible and attractive place. Civic buildings will be visible on approaching the town and along its main routes.

CGB stop

Water Park

Local centre

Landscape buffer around Rampton Drift

Town Park

Town centre / high street

Green link / cycle network

Dedicated busway

Greenways / linear drainage features

Local centre

Wildlife corridor

- Residential (higher densities along dedicated busway and at town and local centres)
- Employment
- Education buildings
- Town / local centre
- Ⓐ Allotments / community orchard
- Dedicated busway

Block model showing indicative building zones



# 1. Introduction

Sets out the purpose of this document and background to Northstowe new town.





Illustrative sketch of eastern development edge

## The Development Framework document has been prepared to help progress delivery of market and affordable housing, jobs, community and recreational facilities and commercial development within a sustainable new community at Northstowe.

Northstowe will be brought forward in phases due to the current economic circumstances and the 'framework' level master plan for the whole of Northstowe (as set out in this document) will guide the preparation of phased planning applications.

The Framework master plan complements and supports the planning policies of the Northstowe Area Action Plan (NAAP) which was adopted by South Cambridgeshire District Council in July 2007. However given the passage of time since the NAAP was adopted this Development Framework document has taken into account more recent and emerging changes in national and local planning policy and the impact of economic events to ensure that the master plan is future proofed and remains relevant.

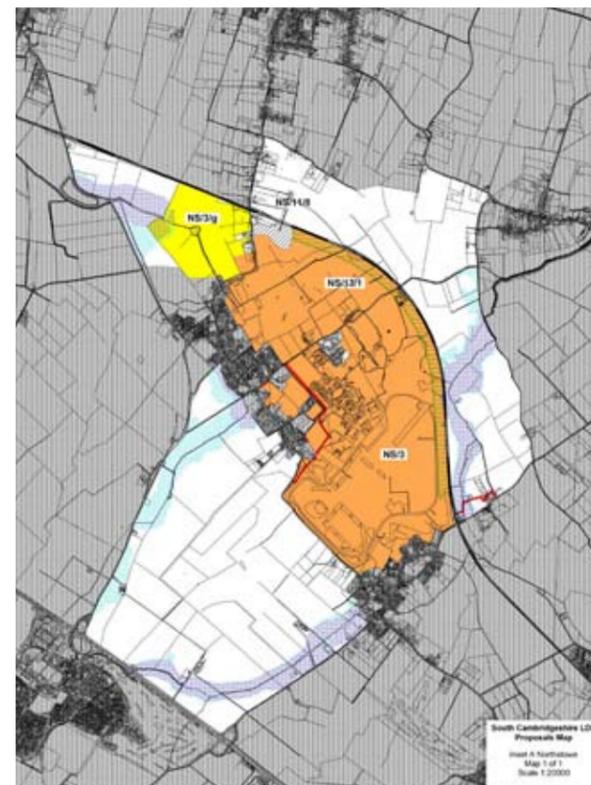
The Development Framework addresses principal considerations and themes that influence the strategic level of design and layout of Northstowe. It presents a clearer vision for the new town and strengthens key principles. Importantly, it is intended to provide a framework for future phases rather than a prescriptive layout, and should have the flexibility to be refined and improved as part of the ongoing design process.

- Area covered by other maps 
- Conservation Area (Policy CH/5) 
- Environment Agency Flood Zone – Medium risk 2007 (Policy NE/11) 
- Environment Agency Flood Zone – High risk 2007 (Policy NE/11) 
- Landscape Buffer (Policy NS/13/1) 
- Longer Term Strategic Reserve for Residential Development and related Local Services (Policy NS/3/g) 
- Major Development Site (Policy NS/3) 
- Protected Transport Route (Policy TP/3) 
- Park & Ride (Policy NS/11/8) 

### Master plan review

A master plan for Northstowe was prepared to accompany the outline planning application submitted in December 2007, prior to the national and local economic downturn. The master plan has been reviewed and refreshed through a range of means, including:

- A review of responses received from the 2007 submission by statutory organisations and members of the public
- Through workshops and meetings involving county, district and parish council elected members and officers during 2011
- The framework master plan and a consultation draft of the Development Framework document was subject to public consultation from 6th October to 28th October 2011. This was undertaken alongside consultation on a draft Phase 1 proposal. A Sustainability Appraisal accompanied the Development Framework and this was also available during consultation



South Cambridgeshire LDF Proposals map. Source NAAP 2007

A separate statement of consultation has been prepared which contains information about the October 2011 public consultation exercise, the comments received and how the framework master plan has been altered in response to those comments.

The Framework master plan includes the 'strategic reserve land' as defined in the NAAP. This has the advantage of providing a comprehensive approach to the planning of the strategic reserve land, ensuring it is integrated with and connected to the first phase of development. The revised Framework master plan also enhances the sustainability credentials of Phase 1 by giving improved access to secondary education, town centre and other strategic community and commercial facilities by moving these uses to a more central location adjacent to Phase 1.



2007 Master Plan

### Northstowe Area Action Plan (NAAP)

The NAAP was formally adopted by South Cambridgeshire District Council (SCDC) in July 2007 and is the principal planning policy framework guiding the delivery of Northstowe.

The Development Framework provides robust support for implementing the planning policies of the NAAP, demonstrating in particular how a first phase can be delivered in a manner that is compatible with the overall principles for comprehensive development of the town.

This document supports policy NS/2 by presenting a requisite site-wide master plan for Northstowe. Other key policies include NS/4 (provision of green separation between the village frameworks of Longstanton and Oakington) and NS/5 (town centre to be located close to the geographical centre of the town and on the dedicated busway).

The Framework master plan is compliant with the policies in the NAAP, except in a very few circumstances where current economic conditions and the review of the master plan principles have led to a revised solution. For instance, with regard to policy NS/7 which seeks the delivery of 4,800 dwellings by 2016, this timescale will not now be achieved due to the delay in the commencement of the development from that anticipated in 2007.

### Conclusion

The spatial planning and urban design principles of the Development Framework are founded on the vision, development principles and policies of the Northstowe Area Action Plan. In undertaking a comprehensive master plan review and preparing the Development Framework, account has been taken of more recent and emerging changes in national and local planning policy and of current and likely future economic circumstances.

As a consequence, the proposal for Northstowe has been strengthened and brought up-to-date to ensure a viable scheme creating a sustainable community. The new town is to be built to high standards of design and layout within a framework of green infrastructure comprising formal and informal open space and wildlife habitat corridors, as set out in the remainder of this document.

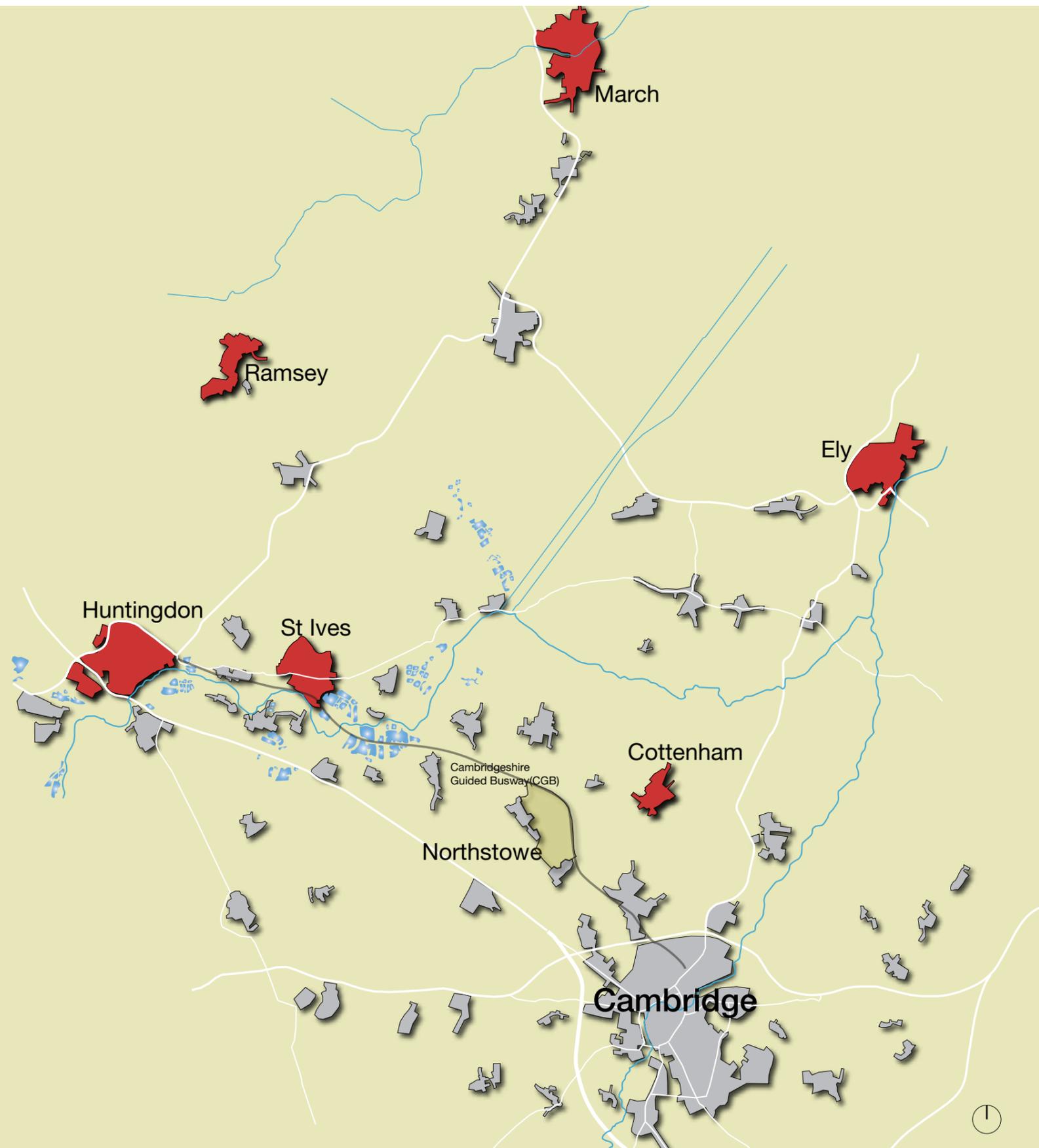
## 2. Contextual analysis

Gives a contextual study of Cambridgeshire settlements within proximity of Northstowe that have been influential in determining key aspects of the town's character, layout and structure, thereby helping to achieve a locally appropriate and relevant new settlement.

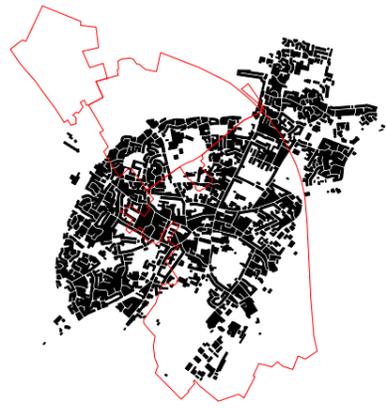


The analysis looks at settlements to the north of Cambridge that are in and around the Fens. A variety of settlements have been studied and common features or trends have been identified, helping to inform evolving design concepts.



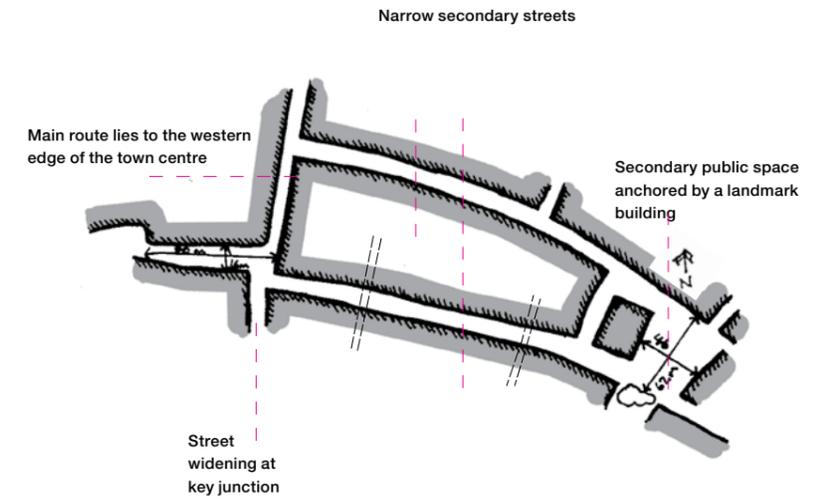


Ely



Ely in contrast with the Northstowe site

- The town has a linear development form along a central main route. A series of secondary routes in the town centre create a deformed grid
- Within the town centre, there is a mix of commercial and residential land uses
- Light industrial and office employment is located close to the station towards the south of the town
- There is a limited amount of uses other than residential elsewhere in the town
- The building density increases within the town centre and the approaches to it

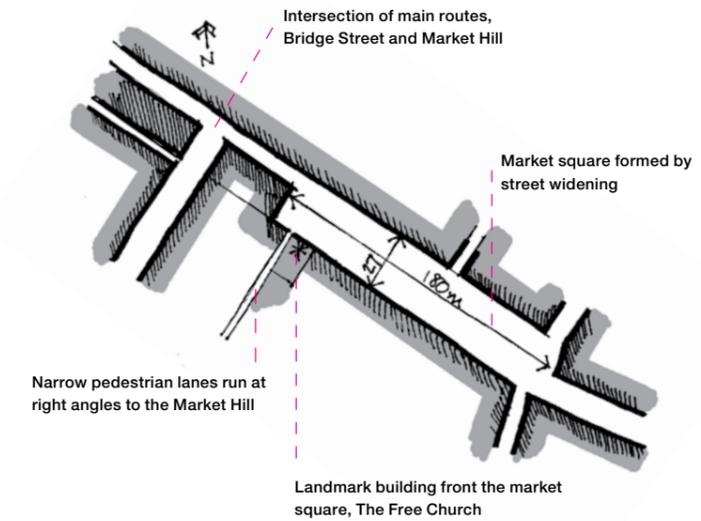


St Ives



St Ives in contrast with the Northstowe site

- The historic route sits parallel to the river with a sharp kink to the north at the eastern edge of the town centre
- The main street widens at the town centre core
- The modern east to west route through the town is heavily engineered and straight
- The greatest mix of uses is focused within the town centre
- Light industrial and office employment is located to the north east of the town
- The town centre has a very tight and dense urban form

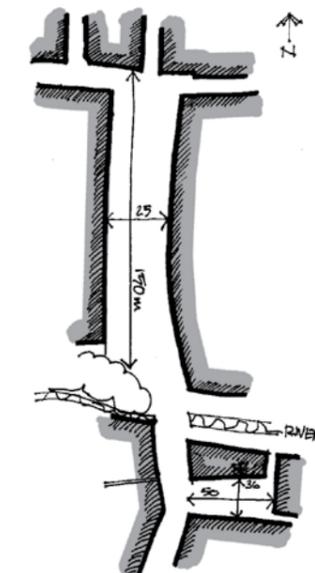


March



March in contrast with the Northstowe site

- Two main routes meet in the town centre merging and kinking southwards forming one route out of the town towards Cambridge
- The main streets widen to form the town centre 'market square'
- A series of narrow secondary routes run at right angles to the main routes in the town centre
- The river is a key feature running through the centre of the town
- The greatest mix of uses is focused within the town centre
- There is little variation in density across the town
- Residential dwellings front the river close to the town centre





- Strong linear park along the town's western urban fringe
- Even distribution of town parks and sports provision
- Few connecting green spaces within the core of the town
- Large 'rural' park within the heart of the town used for grazing within close proximity to the main high street
- Strong connection between the town centre and the river with small scale public spaces along its length



- Linear park on a north-west to south-east axis allows access from residential areas to the historic town centre
- Even distribution of smaller urban parks and green spaces
- Few areas of open space connected to the town centre
- Strong connection between the town centre and the river but few areas of public open space allow access to its banks



- Two linear 'rural' parks and a number of small public open spaces along the length of the river within the heart of the town
- Away from the river, typical urban parks with few landscape features provide sports provision but little amenity value
- Even distribution of smaller urban parks and green spaces
- Few areas of open space along the road network

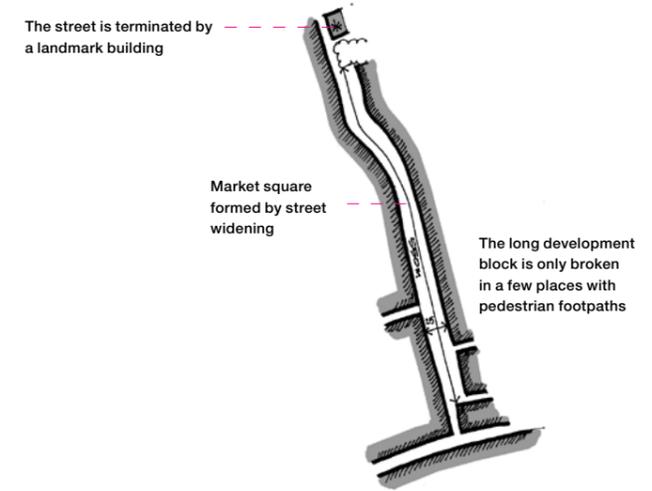


## Ramsey

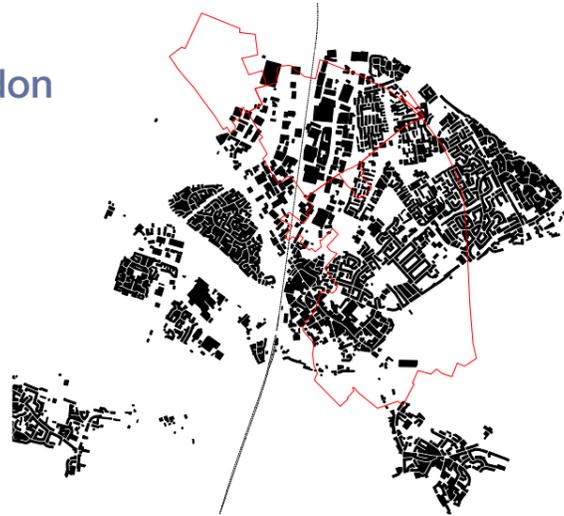


Ramsey in contrast with the Northstowe site

- The main route runs north to south through the town
- A second route from the north west widens to form the town high street
- The high street is located on the alignment of a large fen drain that is very prominent to the north of the town
- The town centre and the approaches towards it support a range of uses
- A small light industrial park is located to the north of the town
- The town centre has the highest densities

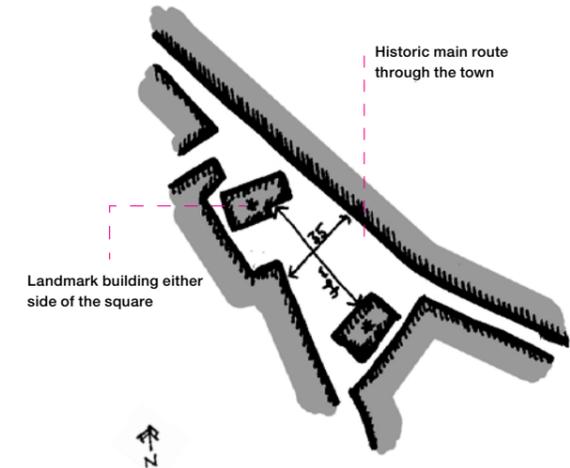


## Huntingdon



Huntingdon in contrast with the Northstowe site

- The historic main route runs on a north west alignment through the centre of the town.
- There is now a ring road around the town centre
- A mix of uses is concentrated along the town centre high street
- A large area of light industrial employment and retail straddles either side of the railway line
- Densities across the town are relatively low
- The majority of the town is bounded by the ring road

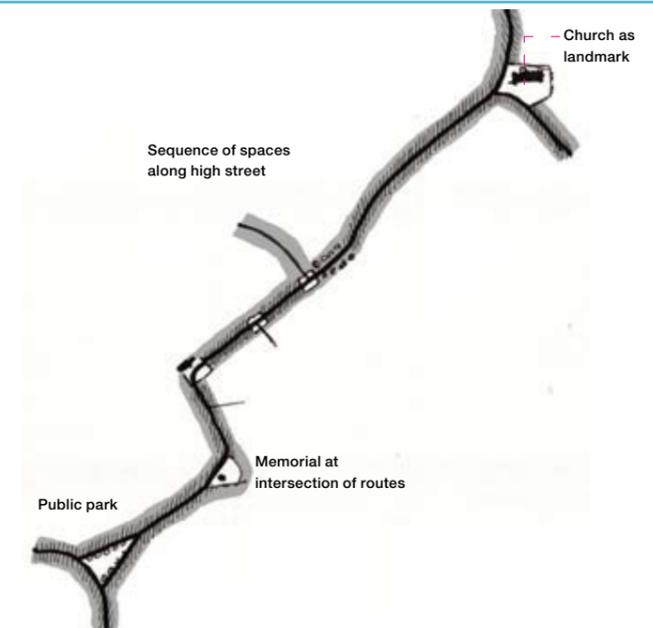


## Cottenham



Cottenham in contrast with the Northstowe site

- The village has developed along the main through route creating a strong linear form
- The southern entrance to the town is marked by a tree lined green adjacent to the main route
- The village is almost entirely residential with a few retail units located along the main route
- Densities are evenly spread across the village





- There are few areas of public open space
- Typical urban parks provide sports provision but little amenity value



- There is a strong network of linear parks
- There is a mix of informal parks, squares and formal sports provision
- Linear parks radiate outwards from the town centre
- Strong connection between the town centre and the river with a large linear park located along the river banks

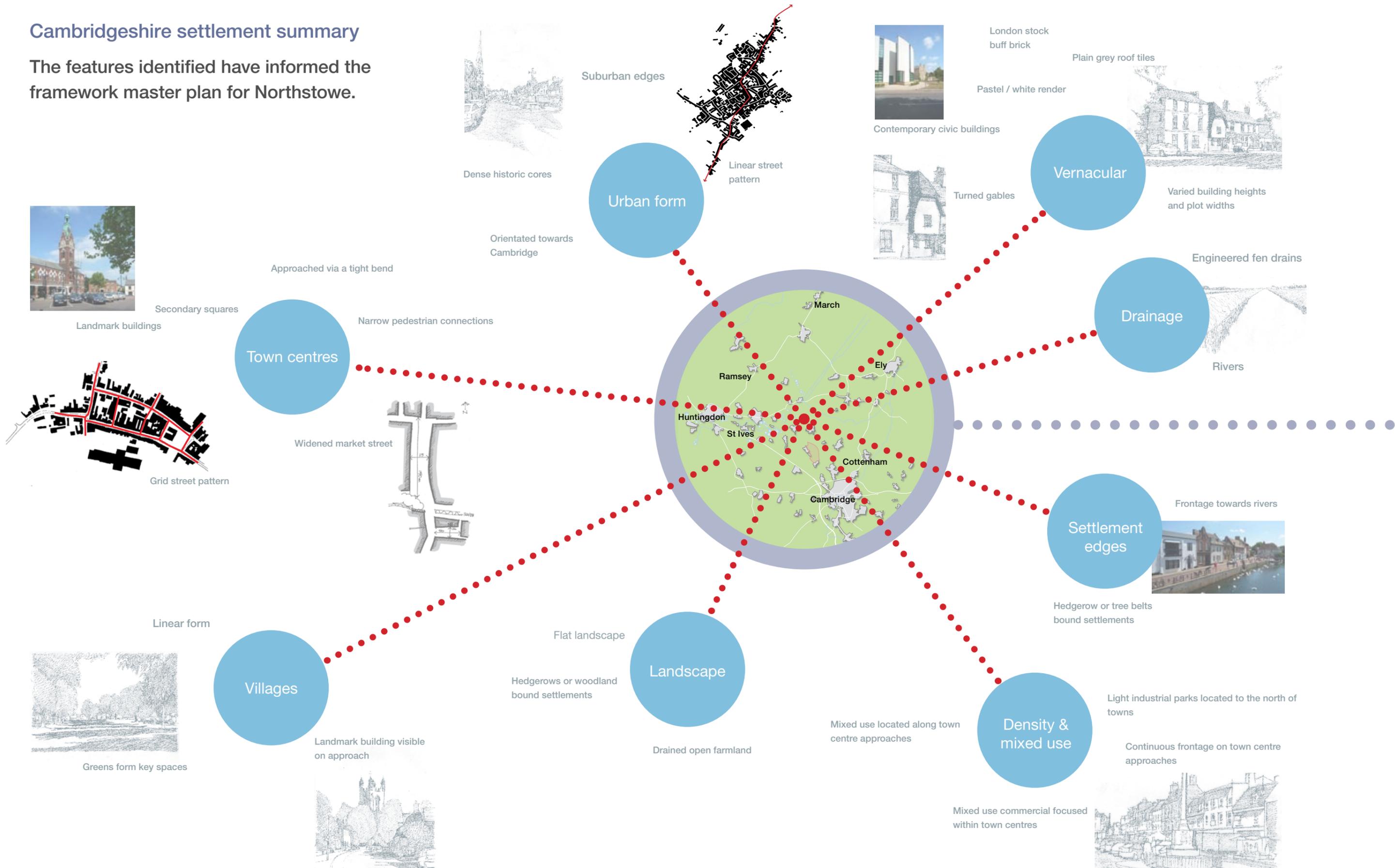


- Linear distribution of small formal open spaces along the primary route through the centre of the village
- Larger parks providing sports pitches are located at the periphery of the village



### Cambridgeshire settlement summary

The features identified have informed the framework master plan for Northstowe.



## Key findings

### Linear development form

Most settlements in the study area have developed a linear form following a key route, or routes through the town. This route normally has the town centre on or adjacent to it, has a high level of continuous frontage and a mix of uses along it.

### Alternating street alignment

The main routes through the study towns are rarely straight, there are normally significant bends, with the general alignment focused towards Cambridge.

### Town centre street widening

The town centre 'market space' of several of the study settlements is recognisable by a simple widening of the street allowing a space for activities such as markets entertainment or parking.

### Town centre grid pattern

Several settlements exhibit a loose grid pattern of streets within their town centres, with many of the narrow side streets now only accessible by pedestrians and cyclists. Ely provides the clearest example of this.

### Varied building heights and architectural vernacular

There is a great mix of architectural styles, building heights and densities. This mix is particularly concentrated in the town centres. Contemporary architecture of high quality is common place.

### Fen edge drainage

Water and drainage are a key defining feature of the landscape and play an important role in the setting of many Cambridgeshire towns and villages. It defines often the 'grain' of the landscape.

### Inter connected green spaces

A series of green spaces, formal, recreational and children's play areas are interconnected along strong linear axis. Formal parks close to town centres are contrasted with more naturalistic linear parks on the edge.

Cambridgeshire  
settlement  
summary



## 3. Site assets

Defines how the main assets of the site will be harnessed and considers wider environmental, planning and design issues of relevance to Northstowe and the adjoining settlements of Longstanton and Oakington.



The site of Northstowe has a unique set of assets that have influenced the layout of the town.

#### The 'grain' of the land, topography and drainage

Landscape and ecological features, footpaths, ditches and field patterns dissect the site and provide distinct lines for the urban grain to follow. Existing drainage patterns within and adjacent to the site directly affect the location and layout of open spaces.

#### Historic connections and archaeological remains

Footpaths, historic linkages and connections within and around the site provide reference to the past communities and historic settlements.

#### High speed transport corridor

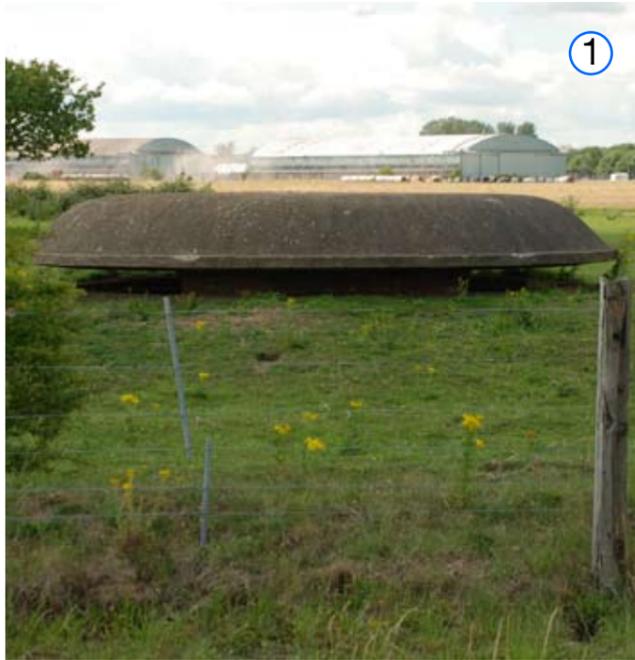
The CGB provides 'green' travel to Cambridge and Huntingdon for Northstowe residents and those working in and visiting the town.

Illustrations opposite:

- ① Listed pillbox within former airfield area
- ② Cambridgeshire guided busway
- ③ Existing ditches providing ecological habitat
- ④ Existing pond near Longstanton
- ⑤ Existing pond in former airfield area
- ⑥ View of All Saints Church Longstanton
- ⑦ Existing hedgerow structure
- ⑧ Golf course
- ⑨ Lime tree avenue at the former barracks



Aerial view circa 2007



## The 'grain' of the land, topography and drainage

### Small scale paddocks

#### Landscape analysis

The historic small scale field pattern contributes positively to the setting of Oakington and Longstanton. Substantial mature field boundary vegetation creates a strong sense of enclosure and largely screens the two settlements from the wider landscape. The wide plantation blocks to the north of Oakington, in particular, provide a significant visual screen.

#### Ecology

Improved grassland surrounded by dense native hedgerows. They support breeding birds, small mammals and common insects. Elm hedges in the wider area support populations of the white spotted Pinion moth.

### Golf course

This is an open manicured landscape with a large number of small water bodies and young trees that are beginning to establish. There are remnants of hedgerows that partly define the historic field pattern.

Extensive areas of improved grasslands with young trees. Unmanaged areas support common reptiles and abundance of ponds provides ideal habitat for aquatic invertebrates. Kingfishers breed on one of the larger ponds.

### Open agricultural land

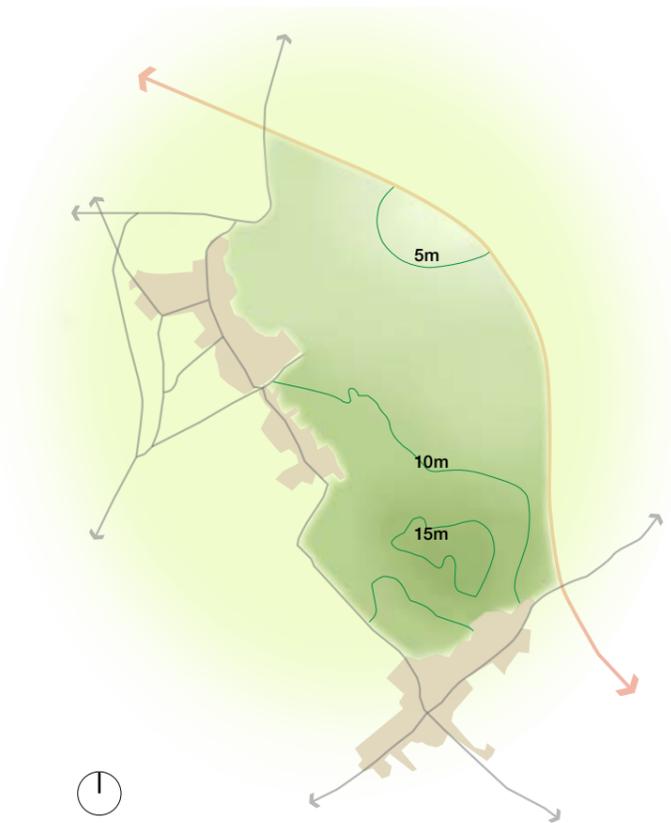
Large scale field pattern with little substantial boundary vegetation. Views are generally open and expansive and the area has a generally rural fringe character.

A mix of cultivated land and pasture. Arable fields supporting scarce farmland birds and brown hares. Ditches and hedgerows add diversity. Grassland used by hunting barn owls.

### Former airfield

This area is generally open with groups of more substantial vegetation contributing to areas of parkland character. Remnants of hangars, formal planting and a tree lined avenue create a more formal arrangement in areas close to the former barracks. Security fences and areas of hardstanding reduce the quality of the landscape character.

Extensive grasslands plantation woodland and redundant buildings supporting roosting bats. Area used by foraging badgers and a wide range of breeding birds.



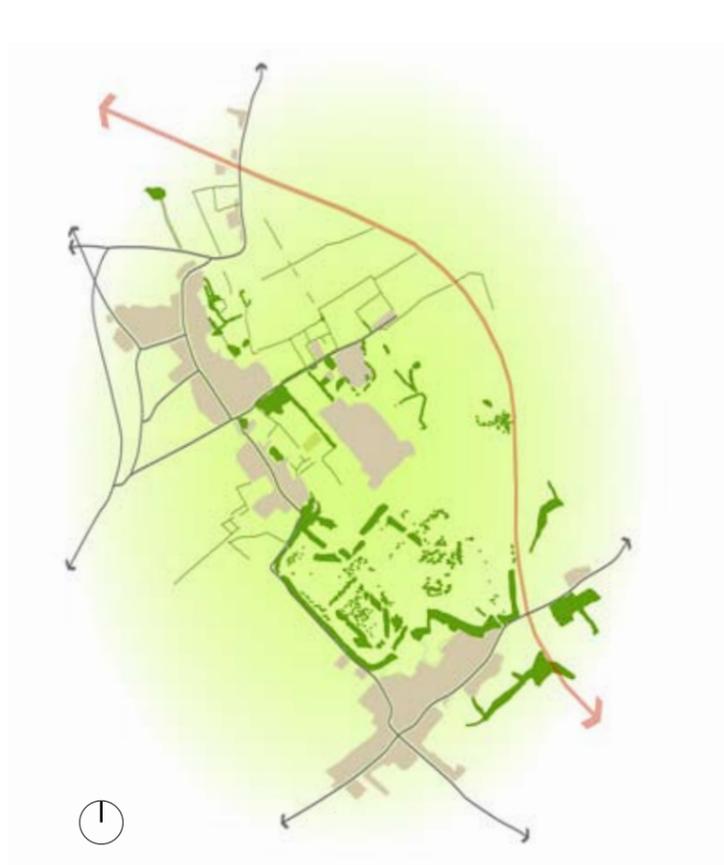
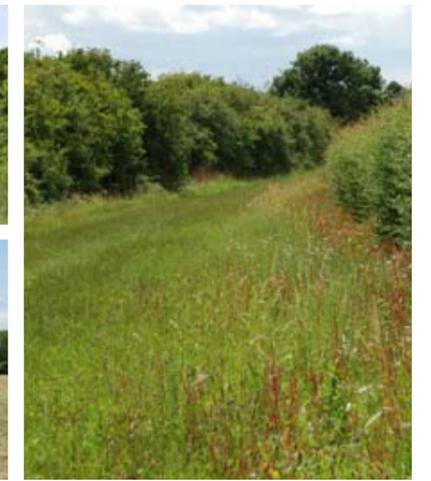
Existing topography

- Settlement
- Development area
- 5m contours



Existing drainage

- Settlement
- Existing drainage system ditches, river and ponds



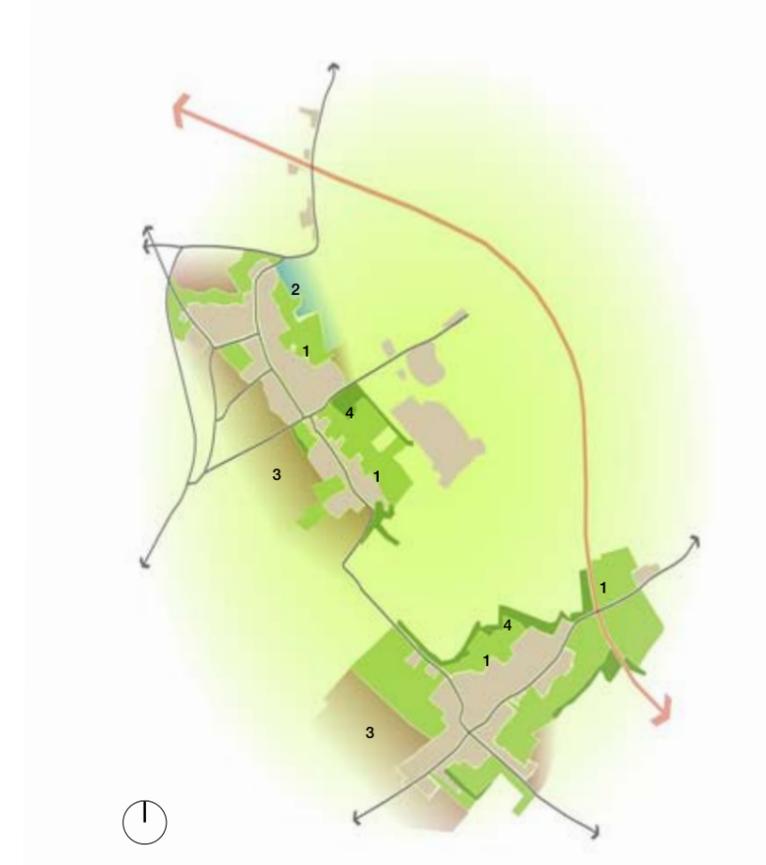
**Existing vegetation**

- Settlement
- Existing key vegetation – woodland block, structural planting, hedgerow etc.



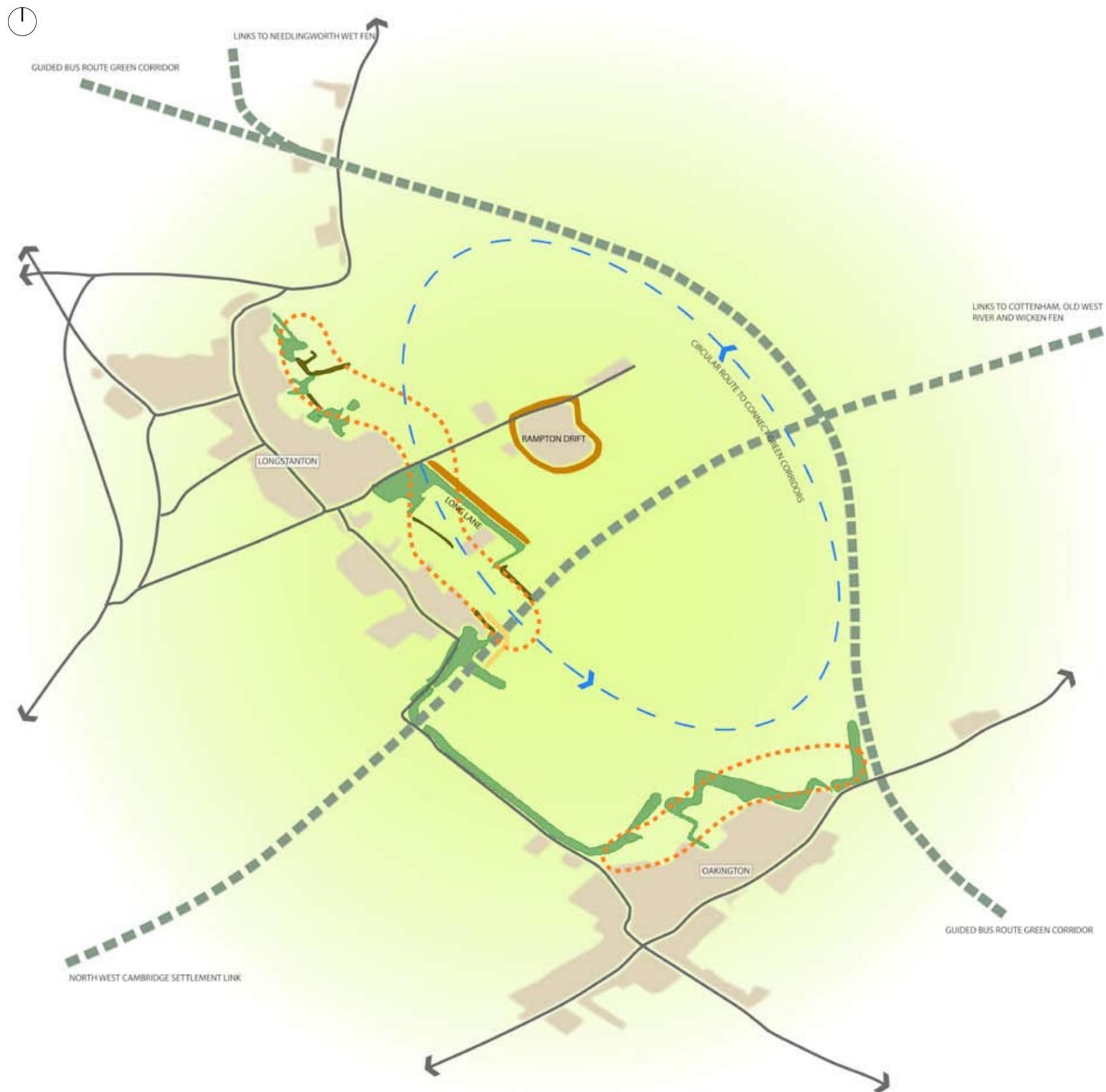
**Landscape character**

- Open views
- Conservation areas
- Settlement
- 1 Fields / small scale paddocks
- 2 Golf course
- 3 Open agricultural land
- 4 Former airfield
- 5 Woodland / copse



**Landscape setting on the edges to Longstanton and Oakington**

- 1 Landscape allowing some open views to the surrounding countryside. Positive contribution to the settlement setting
- 2 Landscape setting with minimal positive contribution to settlement / settlement setting
- 3 Small scale, landscape composed of mature vegetation and positive landscape features. Significant positive contribution to settlement / landscape setting
- 4 Significant vegetation enclosing views and defining the visual edge of the settlement landscape setting



## Green framework

The Northstowe Area Action Plan provides guidance on a green framework as summarised below:

### Green separation

- Appropriate treatment along the edges of Longstanton and Oakington, taking into account the landscape character of the villages and their fringes
- Long Lane, a long established tree lined bridleway requires careful treatment to maintain its character
- St Michaels Mount requires additional tree planting to preserve its landscape setting
- Well considered treatment is needed to successfully integrate Rampton Drift within the new development

### Water

- Water should be a defining characteristic throughout this fen edge town
- There is an opportunity to create a water park along the edge of the guided bus route
- The preferred option is for a linear water formation, consistent with the fen edge landscape

### Access

- Opportunities for creating greater access to the countryside through the green corridors, informal public open space areas and parklands

These guiding principles have been embedded within the framework master plan.

- Green Corridor Initiatives set out in the South Cambridgeshire Green Infrastructure strategy
- ▭ Separation requirement as set out in the Northstowe Area Action Plan
- Additional treatment required for historic assets and Rampton Drift
- Partial screen to views into site
- Complete screen to views into site



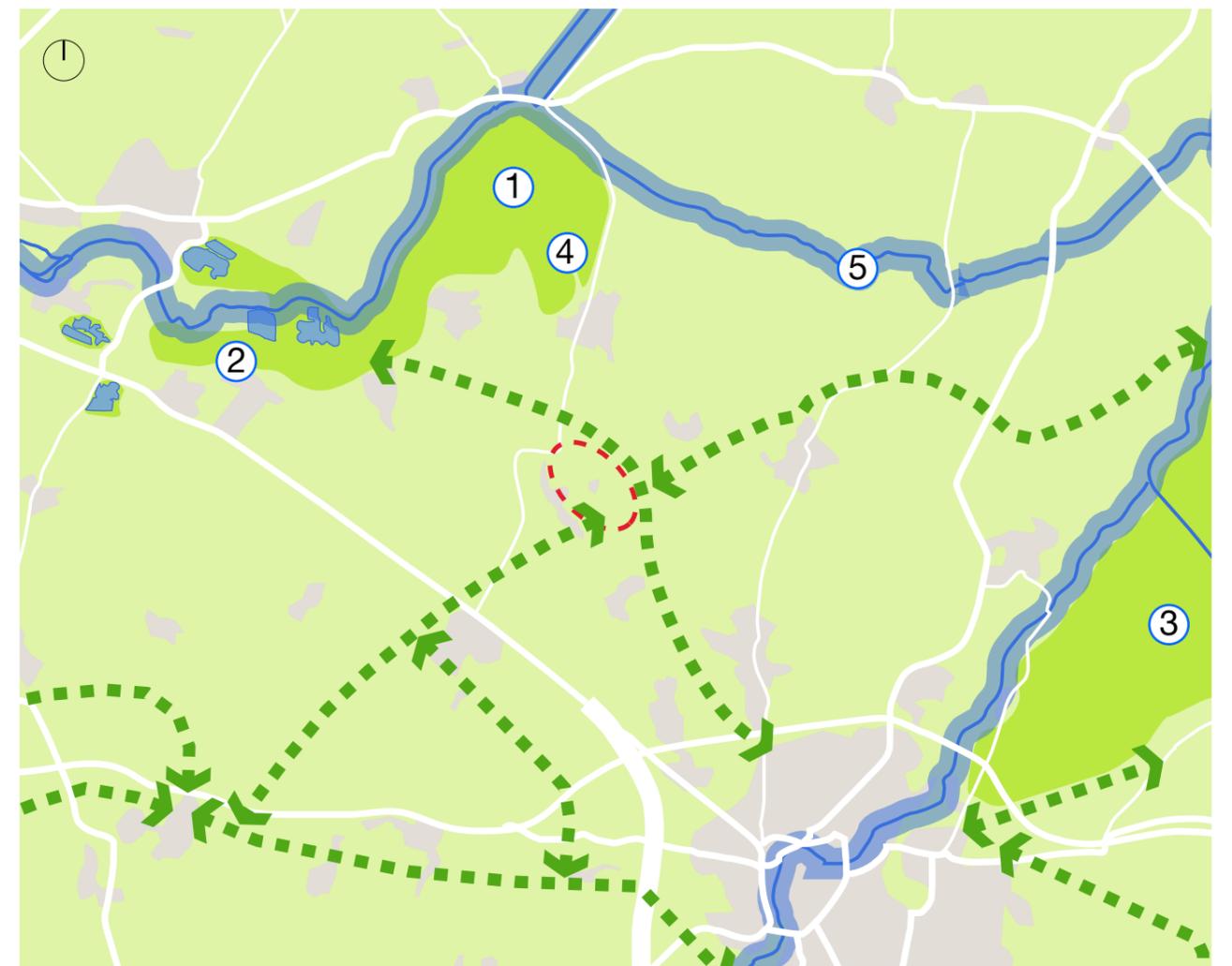
**Green corridors**

- A number of green corridors should penetrate into the urban area, based primarily on drainage infrastructure and existing landscape features
- There is an opportunity to incorporate existing tree belts, hedgerows and other landscape features
- Green corridors should be managed for biodiversity and should be continued beyond the town to provide links to larger scale wildlife habitats further afield such as Fen Drayton Pits and Needlingworth Quarry

**Delivering wider strategies as part of the Northstowe proposals**

Northstowe has been identified by the South Cambridgeshire Green Infrastructure Strategy as a major green infrastructure site. The provision of a landscape buffer along the CGB is identified to reduce the shortfall in green sites in the area between Camborne, Cottenham, Cambridge and St. Ives. Further green corridor initiatives have been proposed to provide interconnectivity between the Northstowe site, Wicken Fen, Fen Drayton and Needlingworth Quarry. These existing and developing green hubs are composed of restored gravel pits and fen ditches that are home to a rich diversity of rare birds. Development of the Northstowe site provides the opportunity to create a homogeneous and interconnected green network, replicating appropriate and complementary ecological habitat structures.

The master plan for Northstowe will facilitate the delivery of the green infrastructure strategy through careful considerations of a network of green corridors and their relationship and linkages to existing green hubs.



- Proposed site area – Northstowe
- Existing green corridor
- Proposed green corridor beyond Northstowe
- Existing and proposed green hub
- 1** Needlingworth wet fen
- 2** Fen Drayton
- 3** Wicken Fen
- 4** Ouse valley
- 5** Old West River

## Historic connections & archaeological zones

1887/88 OS – First edition



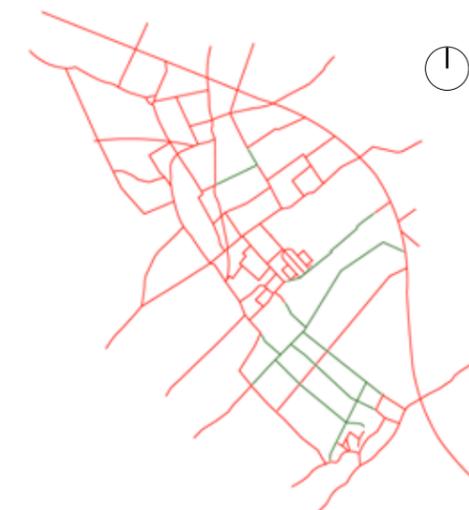
### Former landscape pattern and connections

The historical OS indicates a well connected movement network linking not only Oakington and Longstanton but east west connections to the other side of the former railway line.



### Remaining features and airfield heritage

Analysis of existing features suggests that the former airfield isolates the south of the site from its surroundings except for the major north south busway link and Longstanton road that border this land to the east and west.



### Reconnecting historic routes

Re-establishing historic connections as part of the new settlement will help strengthen vehicular, walking and cycle links through the site.



Prominent water tower



Oakington pillbox (listed)



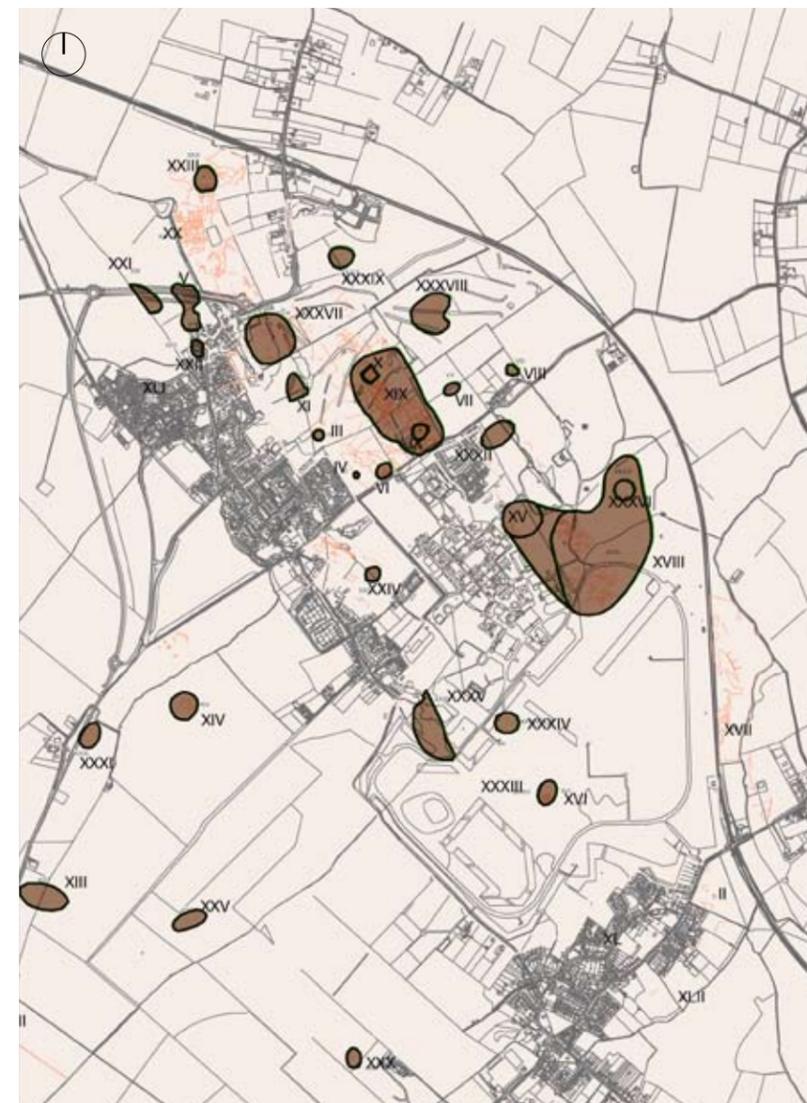
Officer's Mess – the complex consists of Georgian style buildings with dense planting to the sides and rear and a formal approach from the tree lined avenue



Formal mature tree lined avenue - view from Rampton Road



Plan of former barrack site



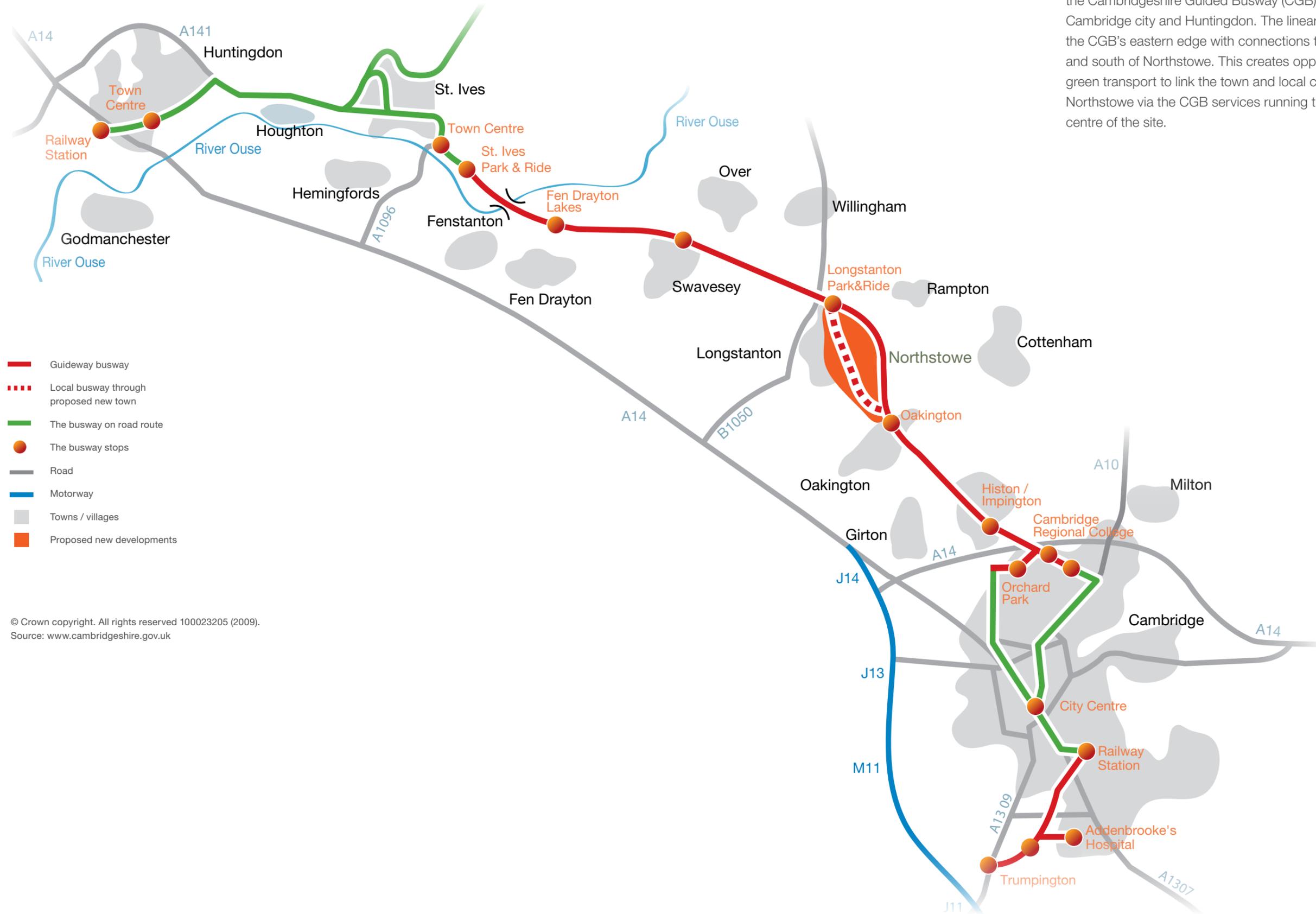
The master plan is designed to reflect the past through retention of key features such as the tree lined avenues.

**Identified archaeological zones**

The site is known to possess archaeological sites dating from the Bronze Age. There are two large Roman settlements, one 8ha in size adjacent to the northern end of the site and a second within Oakington Airfield 24ha. A number of key sites have been identified for preservation in situ. Appropriate mitigation will be undertaken in the form of detailed excavation prior to construction.

- Identified archaeological zones (numbered)
- Cropmarks

### High speed transport connections and key strategic links

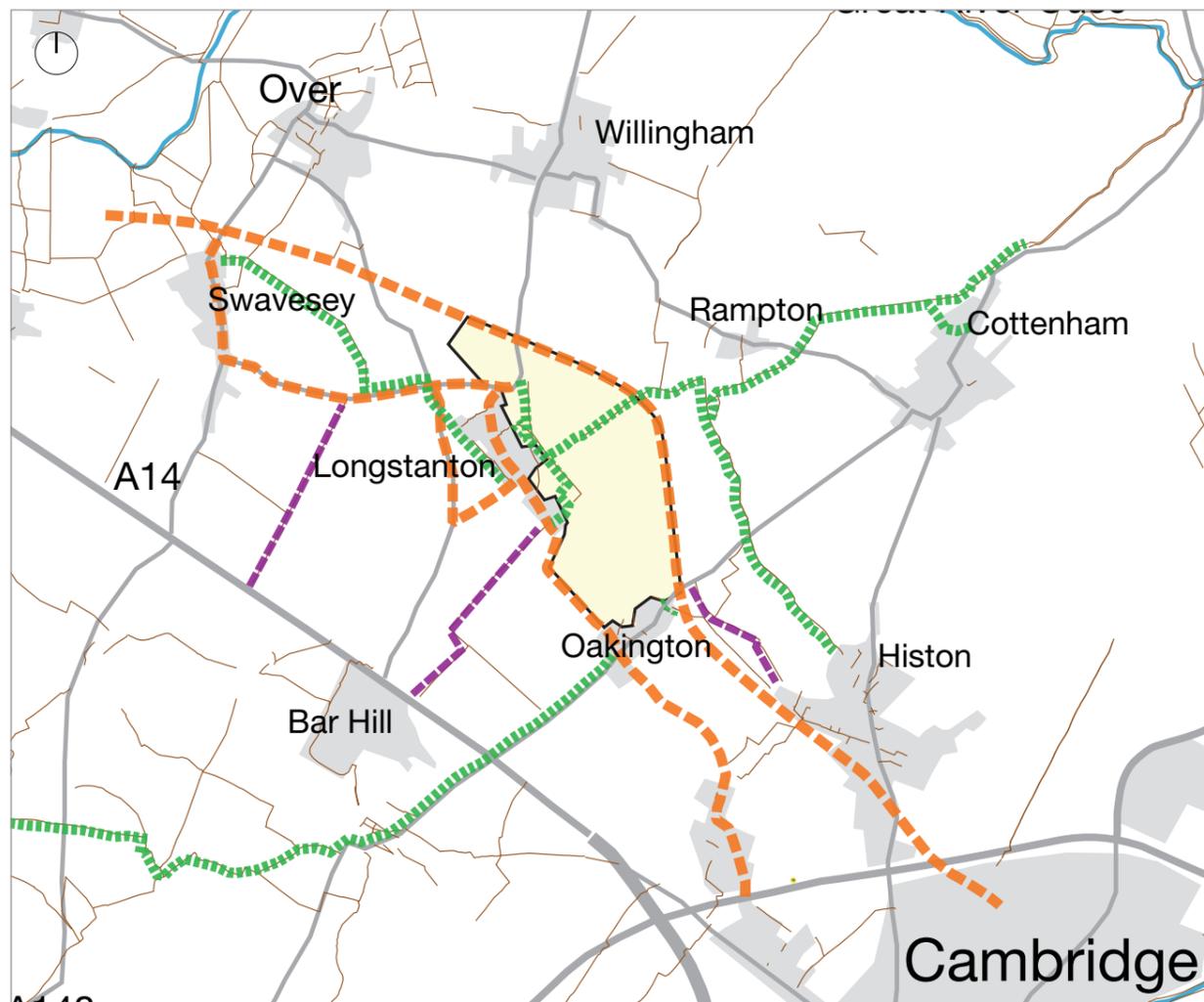


The site of Northstowe benefits from its strategic location on the route of the high speed transport corridor of the Cambridgeshire Guided Busway (CGB) between Cambridge city and Huntingdon. The linear site abuts the CGB's eastern edge with connections to the north and south of Northstowe. This creates opportunities for green transport to link the town and local centres within Northstowe via the CGB services running through the centre of the site.

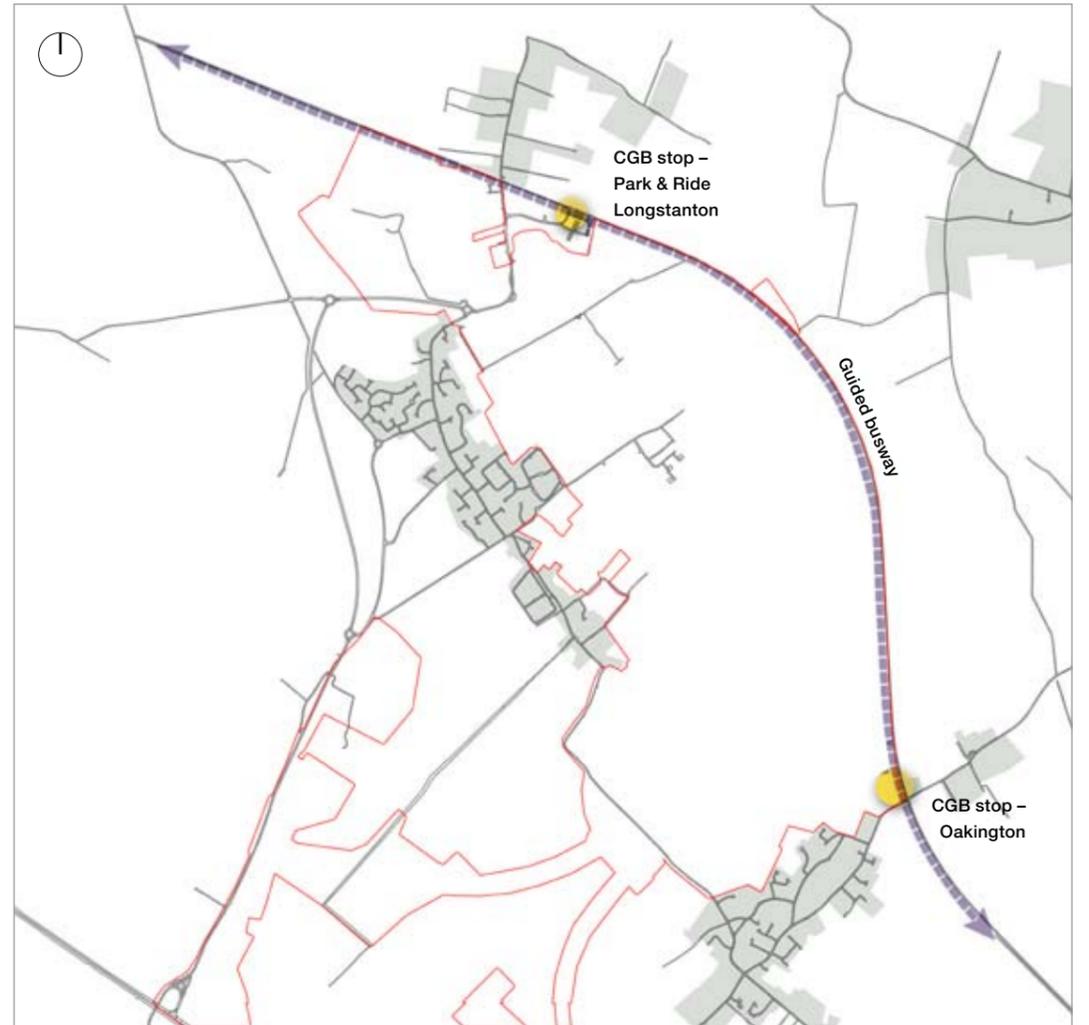
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Source: www.cambridgeshire.gov.uk



- — — Strategic cycle routes
- - - - - Footways / byways
- - - - - Bridleway
- — — Rights of way



Strategic cycleways, byways and pedestrian routes directly adjacent and linking with Northstowe



CGB bus route and stops around Northstowe

## 4. Structuring Elements & Design Evolution

Explains the rationale behind the settlement structure with reference to fundamental place making principles and local context.



This chapter explains the design rationale and urban design principles that underpin the framework master plan. They have been illustrated through a series of thematic layers, which include key place making objectives such as attaining high levels of connectivity, walkable social infrastructure and high quality multi-functional green space.

These fundamental structuring principles are important because through them:

- Positive characteristics of local settlement forms will become embedded in Northstowe. These include a linear development following a key route with an alternating alignment. The town centre widens as a market space with a loose grid pattern which becomes deformed at the development edge. Varied building heights and architectural vernacular is a defining feature, as is the fen edge drainage including linear dykes and ditches. A series of interconnected green spaces, often linked via strong linear axis also add to the character of the town
- Site assets will be protected and become positive features within the new settlement
- The settlement will be responsive to its setting and context
- The aspirations defined in the vision for Northstowe will be realised

It is also considered that the structuring elements, that combine to construct the framework master plan, are pivotal in ensuring that the phased delivery of Northstowe will create a comprehensive and legible settlement form.

### Existing framework

#### Drainage network



— Principal existing brooks and ponds

Key structure vegetation



Principal existing hedges and trees

Key routes / linkages



Principal existing public rights of way and roads

**Movement and centres**



**1. New connections**

Opportunity to re-establish former routes, drainage ditches and boundaries



**2. Dedicated busway / high street**

A central linear 'high street' and busway through the settlement replicates the linear development form characteristic of a number of the local settlements. Access points off the CGB are fixed



**3. Key connections**

Connecting the new high street to strategic routes begins to define principal routes and possible centres



**4. Overlay of existing and new key connections**

Existing routes and desirable new connections based on former historic links are overlaid



**5. Key nodal points**

Important intersections of routes and nodal points become apparent



**6. High street with town and local centres on hot spots**

The high street and secondary connections are reconfigured to align with routes and nodes

**7. Summary plan with structuring elements for movement**

Three main centres are located on 'hot spots'. The town centre is located centrally and two local centres are positioned north and south at intersections of routes. Importantly, the northern centre, which will be delivered in the first phase, is located on the B1050 to utilise passing trade.

The development blocks and the street network take shape, as does the principle of connecting Northstowe with existing communities.



Green Infrastructure and site assets



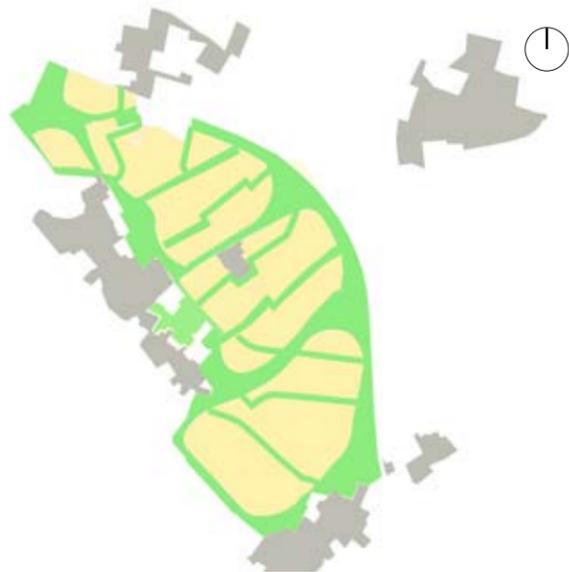
**8. Existing key vegetation**  
Existing trees, drainage and historic features are defined



**9. Linear park along guided busway blends with countryside**  
A strategic linear park along the eastern settlement boundary provides a strong setting



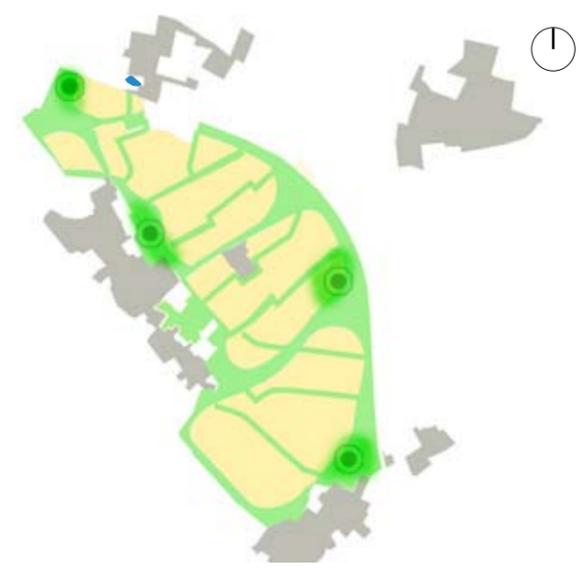
**10. Green separation zones along Longstanton and Oakington**  
A landscape separation zone is provided between the new settlement and Longstanton and Oakington. This rural park will comprise informal open space and ecological corridors. Adjoining sports hubs and allotments ensure these multi-functional linear landscape spaces do not become a barrier between existing and new communities



**12. Tertiary green corridors**  
Tertiary green infrastructure combines with the above to create a comprehensive and hierarchical network of interconnected green space. Water will become a defining feature of the green space and is an integral structuring element coordinated with public open space



**13. Drainage connections / water strategy**  
Water will become a defining feature of the green space and is an integral structuring element coordinated with public open space



**14. Sports provision**  
Four sports hubs will provide a range of high quality sports pitches integrated into adjoining informal open spaces to create an inclusive and vibrant landscape.



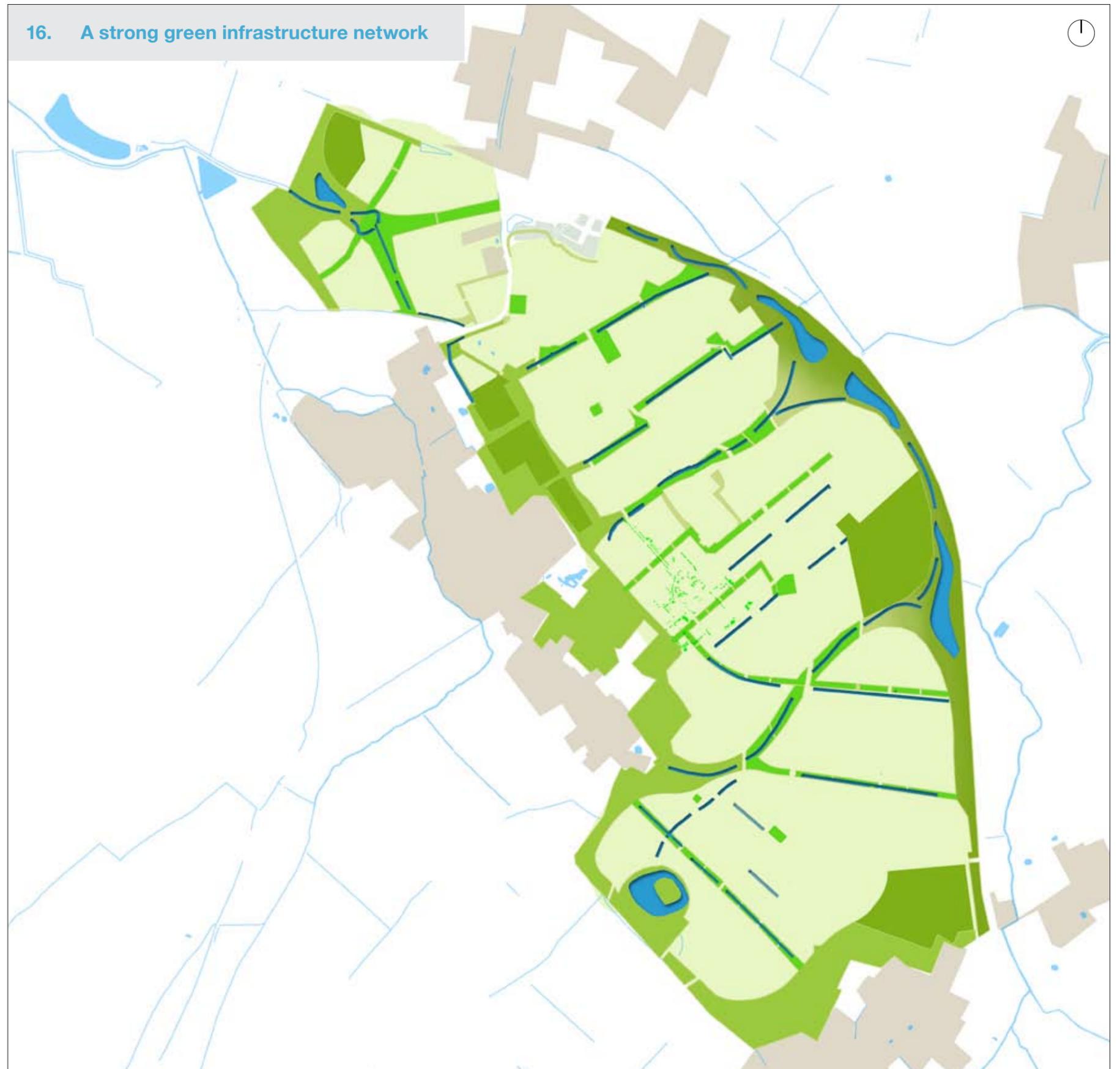
**11. Greenways / habitat corridors**

Secondary greenways sub-divide development into three sectors



**15. Community parks**

A series of formal community parks are located -along principal routes to aid with legibility



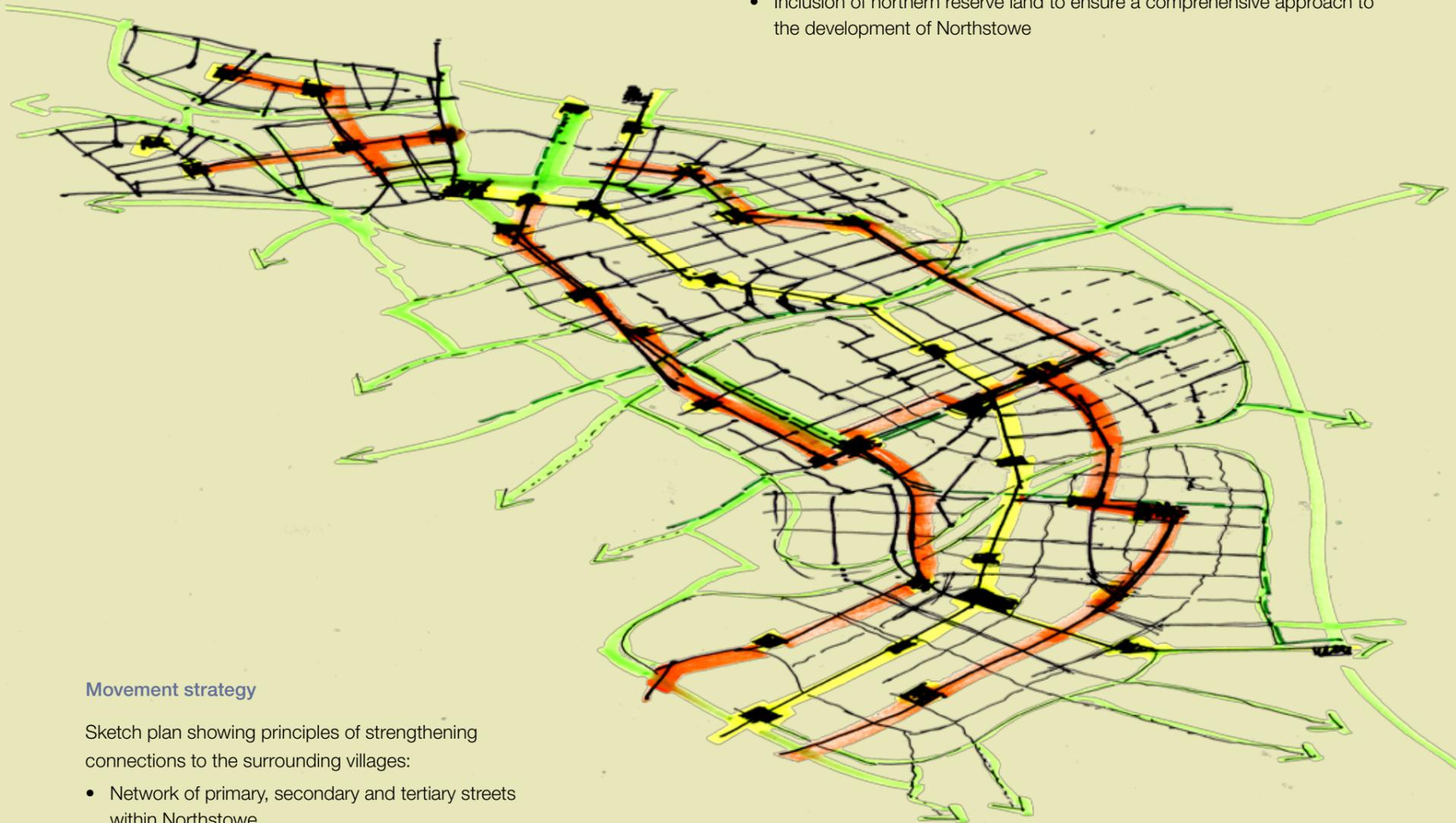
**16. A strong green infrastructure network**

### Design evolution

The Framework master plan has been informed by a review of the 2007 planning application master plan, including the comments received from statutory organisations and members of the public. In addition a series of workshops were held with Northstowe Parish Forum from May to September 2011 and it was subject to consultation in October 2011 alongside phase 1 outline planning application.

Key changes since the 2007 planning application master plan include:

- Relocation of the town centre further north, closer to phase 1 and the geographical centre of the town
- Relocation of the secondary school north and east (to maintain relationship with town centre) and facilitate its early delivery
- Adoption of segmented alignment to busway spine through site (rather than a curved route)
- Fewer local centres but larger
- Northern local centre, close to the B1050 Station Road
- Inclusion of northern reserve land to ensure a comprehensive approach to the development of Northstowe



### Movement strategy

Sketch plan showing principles of strengthening connections to the surrounding villages:

- Network of primary, secondary and tertiary streets within Northstowe
- Network of cycle and pedestrian routes with Northstowe
- Footpath and cycle linkages from Northstowe to Longstanton and Oakington

### Sketch evolution

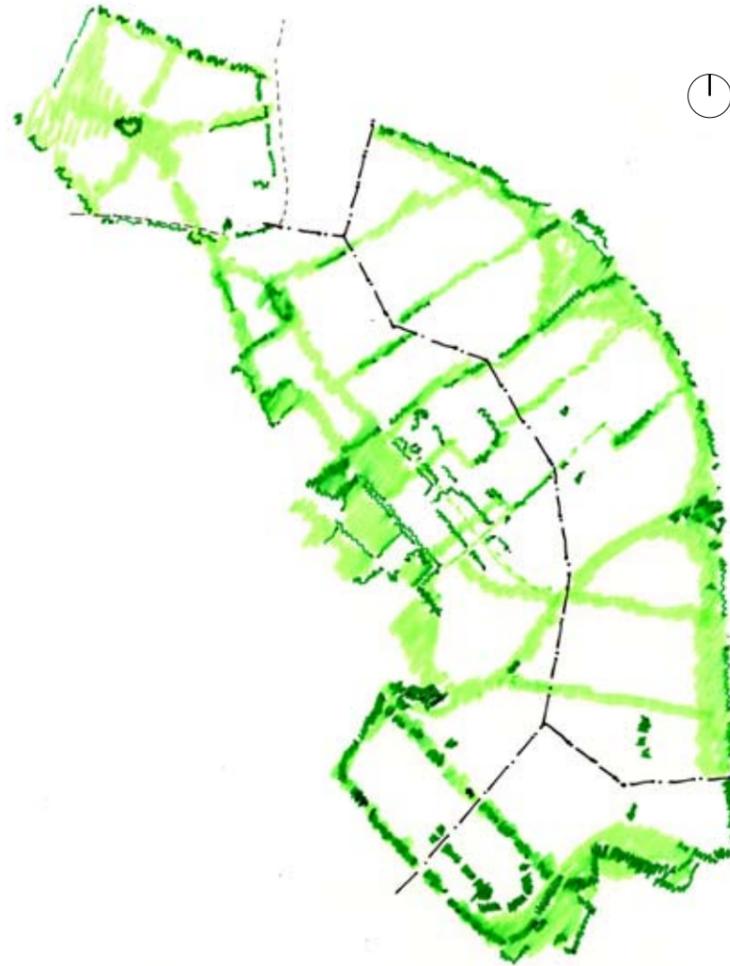
Through the development of initial sketch proposals the key principle of three centres and a deformed grid became established. This naturally led to building densities, heights and massing being concentrated along the dedicated busway and at the centres.



1. Initial rigid grid investigated and questioned



2. Deforming the grid



3. Potentially retained existing vegetation forms development zones and strengthens the reference to past features within the master plan



4. Gridded form at centres becoming fractured at the settlement edges

## 5. Framework master plan

Illustrates the town's urban structure with reference to morphology, linkages, local character, natural features, land use distribution and phasing.



## The Framework master plan for Northstowe will deliver:

- Up to 10,000 dwellings, a proportion of which will be affordable, at a density of about 40 dph with higher densities at the centre reducing towards the settlement edge
- Employment centres equivalent to approximately 20 hectares of dedicated employment land, including a business hub linked to the town centre to cater for office and technology research in addition to employment opportunities within the town and local centres and schools, etc
- Town and local centres comprising retail, hotel, leisure, community facilities such as police, fire and ambulance services and residential uses (approximately 11.6 hectares)
- Community and health facilities, including serviced sites for future community use
- Four sports hubs equivalent to approximately 39 hectares (including a synthetic turf pitch at the secondary school)
- Green separation between Longstanton and Oakington and the built development
- High quality education facilities from nurseries and early years to adult education, including one secondary school and seven primary schools
- Significant open spaces including informal open space and water park as well as children's play space (approximately 135 hectares)
- Household recycling centre
- Allotments and community orchards
- High quality public transport system serving the whole town
- High levels of social infrastructure based on the principle of walkable neighbourhoods
- Use of renewable energy sources, such as micro-generation, and minimisation of energy consumption through careful design
- High-tech communication networks including high speed fibre optic broadband to the home
- An exemplar drainage strategy



Illustrative sketch of Greenway



Illustrative sketch of dedicated busway



## Framework master plan design characteristics

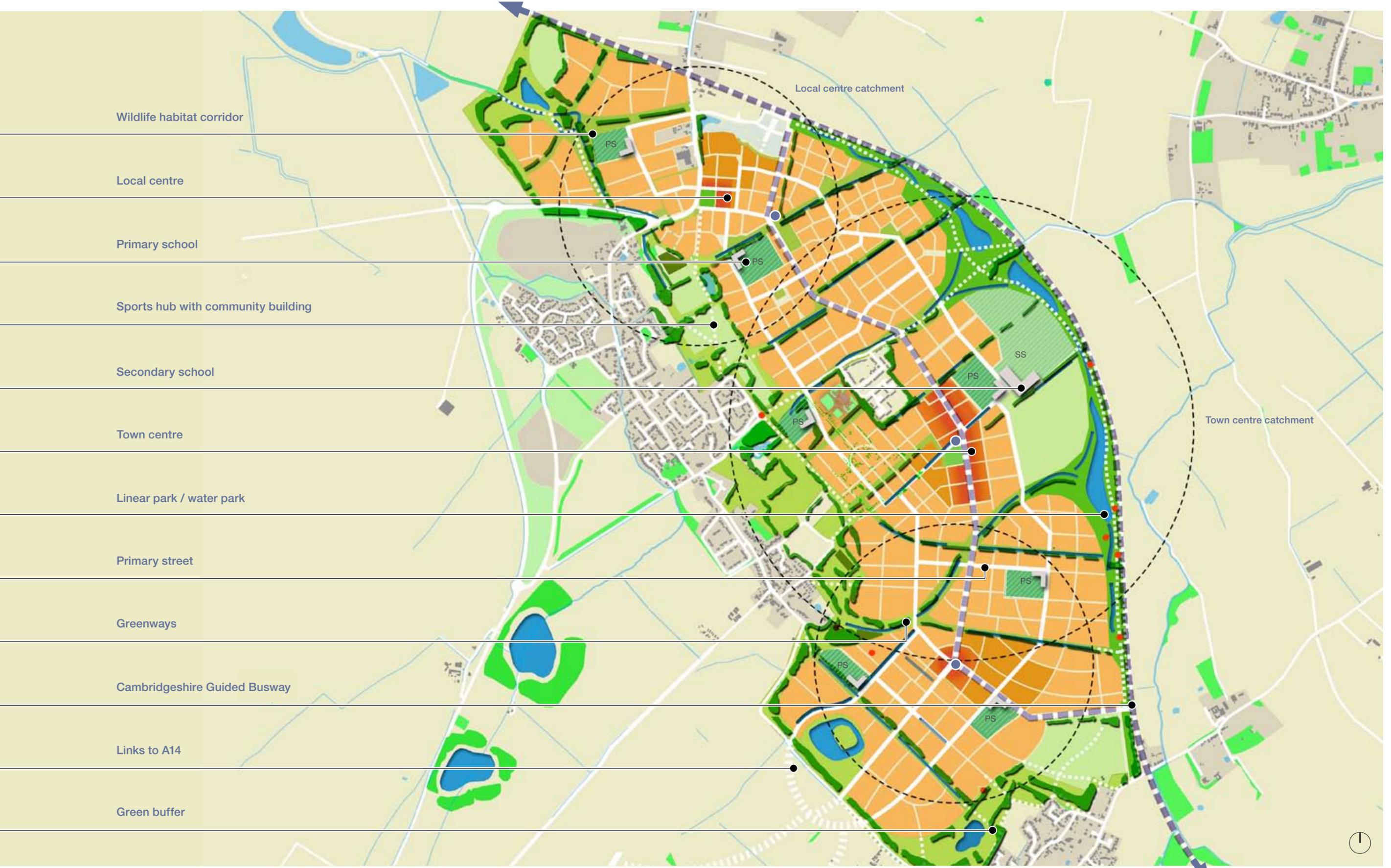
- Town aligned along key routes with a strong sequence of public spaces to aid legibility
- Alternating street alignment reflecting principal nodal points
- Centres on key intersection of routes and social infrastructure positioned to create walkable neighbourhoods
- Gridded street pattern in centres and along the dedicated busway route, becoming deformed and more organic on edge
- Strong connections with the surroundings
- Development edge responsive to its setting
- A strong landscape with a hierarchy of interconnected public spaces and public parks, based upon the grain of the land and incorporating existing site assets
- A mosaic of habitats and green space utilising and emphasising water features
- Social infrastructure, higher buildings and densities concentrated on key routes
- Flexibility for change and innovation over time inherent within the development form
- Walking, cycling and buses given priority on streets. Pedestrians afforded priority where there is any conflict between modes, and cyclists afforded second priority
- Natural play, food production and traffic calmed streets defining characteristics of each neighbourhood
- Pedestrian and cycle connections are provided between Northstowe and the adjoining settlements of Oakington and Longstanton, and links to settlement to the east are strengthened
- Footpath and cycle routes within the built environment should be overlooked to promote security
- Shared footpath and cycleway spaces should be designed to minimise conflict between pedestrians and cyclists
- Rampton Drift will be bounded by a greenway to the north which allows this part of Northstowe to drain into the water park as well as into the ground through local SUDS. In addition Rampton Drift has existing trees and vegetation around it which will be supplemented by additional planting. Therefore, it is envisaged that ground levels surrounding the existing properties will remain close to the existing levels
- Rampton Drift's integration with Northstowe will need to be defined. The adjacent areas forming a zone of integration will be subject to detailed design considerations such as landscape planting and the form and layout of any new development

## Framework master plan

Land Use	Area (ha)
Public Open Space	135 ha
Sports Hubs	36 ha – 41.1 ha subject to synthetic pitch provision
Education	27.4 ha as illustrated on the DFD master plan. Additional provision may be needed up to 30.9 ha depending on the ultimate population of Northstowe
Burial Grounds	3.9 ha in total for central municipal facility and a woodland burial site
Allotments & Community Orchards	4 ha
Combined Emergency Services	0.66 ha
Faith, Voluntary & Community Services	Number of sites throughout town & local centres
Other Community Uses (Museum, Library, Health Centres)	Number of sites throughout town & local centres

-  Residential development areas
-  Employment
-  Movement network of primary and secondary streets
-  Dedicated busway
-  Town centre & local centres
-  Schools / education buildings
-  Secondary school site
-  Primary school sites
-  Sports hubs
-  Existing settlements
-  Green infrastructure, existing and proposed key vegetation, greenways, green buffer & linear park
-  Strategic footpath / cycle links to neighbourhoods
-  Attenuation ponds (additional ponds north of the A14)
-  Potentially retained buildings in old barracks area
-  Existing trees within former barracks area
-  Allotments
-  Listed pillboxes
-  Bus stops on dedicated busway





Wildlife habitat corridor

Local centre

Primary school

Sports hub with community building

Secondary school

Town centre

Linear park / water park

Primary street

Greenways

Cambridgeshire Guided Busway

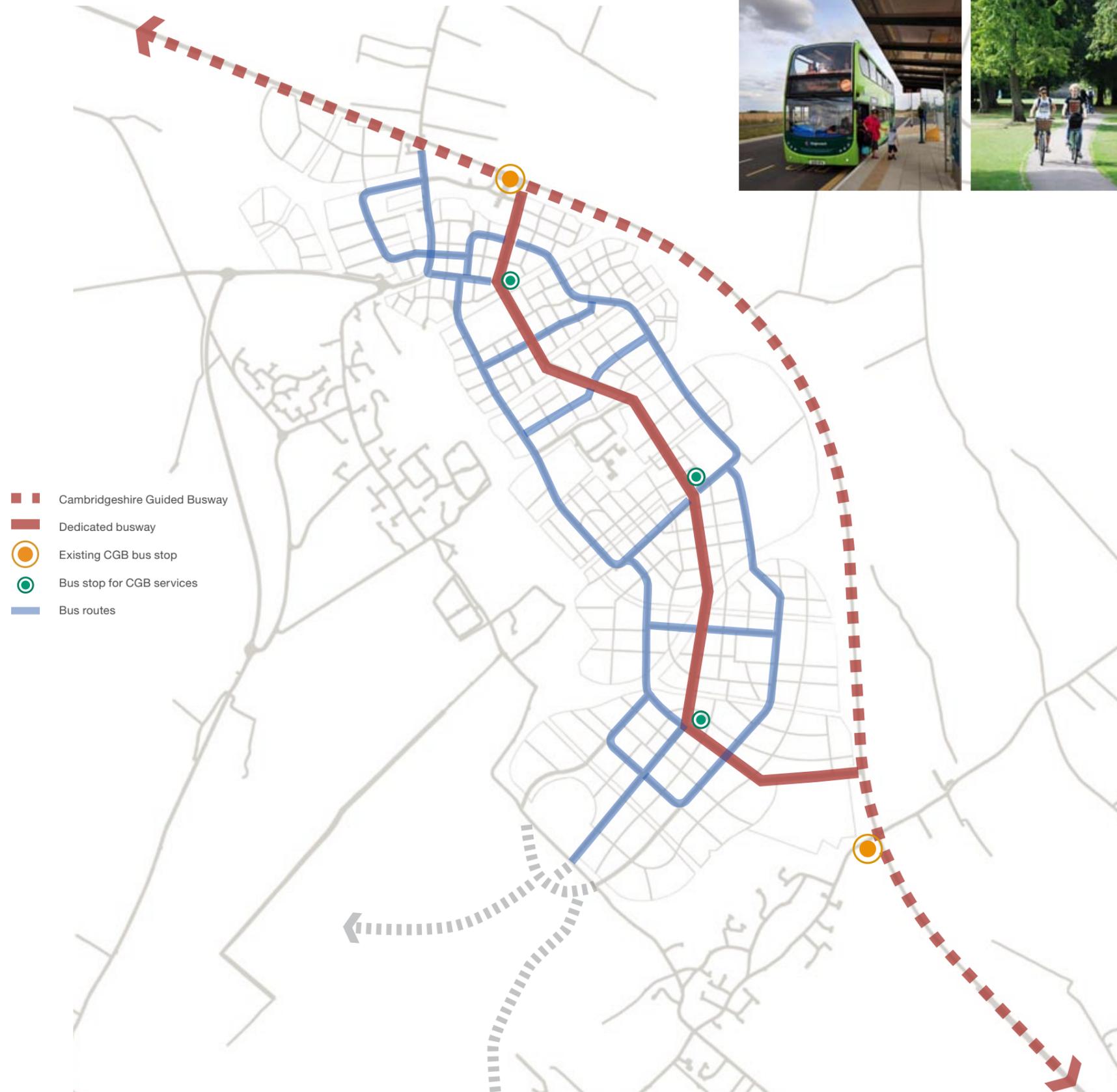
Links to A14

Green buffer

Local centre catchment

Town centre catchment

Indicative bus routes



- Cambridgeshire Guided Busway
- Dedicated busway
- Existing CGB bus stop
- Bus stop for CGB services
- Bus routes

The CGB is now operational and provides an express route into Cambridge to the south and Huntingdon to the north. A dedicated busway will branch off the CGB and bring primary high quality public transport services through the centre of Northstowe. After phase 1 has been constructed around the existing CGB stop, the busway will be completed during subsequent phases from the north of the site to the CGB junction at the south which has already been constructed. Additional CGB services will then run through the site serving all the subsequent phases. This will provide direct services to the Cambridge area in the south and St Ives and Huntingdon to the north.

A commuter cycleway will run alongside the busway also providing fast and direct access for cyclists through the centre of the town. Along stretches of the corridor, local roads will run parallel with the busway helping to bring further activity into this principal street without compromising the journey times of the CGB.

Existing bus routes will be extended into Northstowe, providing local services mainly along the primary streets. Nearly all residents of Northstowe will be within 400m walking distance of a bus stop.

New cycleways and footpaths will link up with strategic routes, connecting Northstowe with surrounding settlements and the countryside. Safe and direct cycle and pedestrian routes will be a defining feature of the town, as will the principle of walkable neighbourhoods and accessible public facilities.

Collaborative working with the local authorities and Highways Agency is anticipated to develop the site transport strategy, including Travel Plans for residential, employment and the school elements of Northstowe.

Close working with District and County Councils will continue to evolve the site layout strategy, including preparation of Design Codes, Adoption Strategy, parking provision and management arrangements for the highway and footway network, public rights of way and public realm.

## Connections / linkages

### Movement strategy

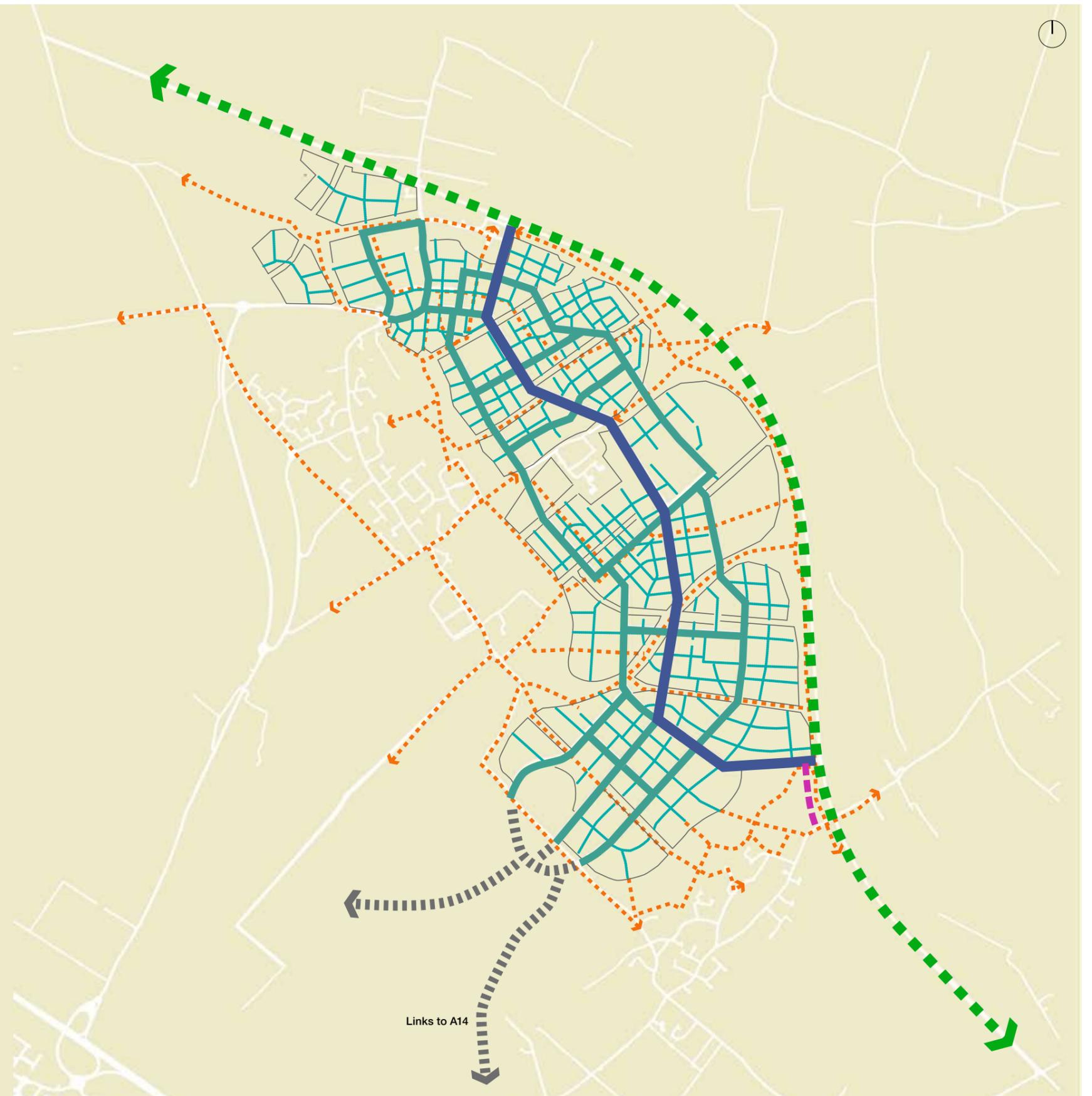
A clear hierarchy of streets is proposed reflecting key movement routes and the distribution of land uses. The design speed of the dedicated busway will be 30mph. The primary streets, along which local buses will run, will also be classified as 30mph, although speeds will be reduced to 20mph through a combination of traffic calming measures at important locations such as primary schools or public squares.

The dedicated busway and primary streets together comprise the main arteries through the town and for the most part key social infrastructure and public amenity is located on these routes. Tertiary streets will be traffic calmed and designed so as to provide safe and direct pedestrian and cycle routes. Dead ends for cyclists or pedestrians will be avoided, and where roads terminate on the development edge, cycle and pedestrian routes will extend out into the surrounding public open space and countryside beyond. The network as a whole achieves high levels of connectivity and legibility.

The master plan design allows for future road links to the West Longstanton bypass, subject to technical and financial feasibility. This would provide an alternative route and bypass the B1050 running through Northstowe, and would be considered through the South Cambridgeshire Local Plan process.

The layout and design of streets will accord with the principles set out in Manual for Streets, Manual for Streets 2 and the Cambridgeshire Design Guide.

- Cambridgeshire Guided Busway
- Dedicated busway with separate parallel local roads
- Primary streets
- ⋯ Secondary / tertiary street (indicative only)
- ▬▬▬ Link to A14
- - - Existing and proposed cycleways and footways
- Emergency access to Oakington

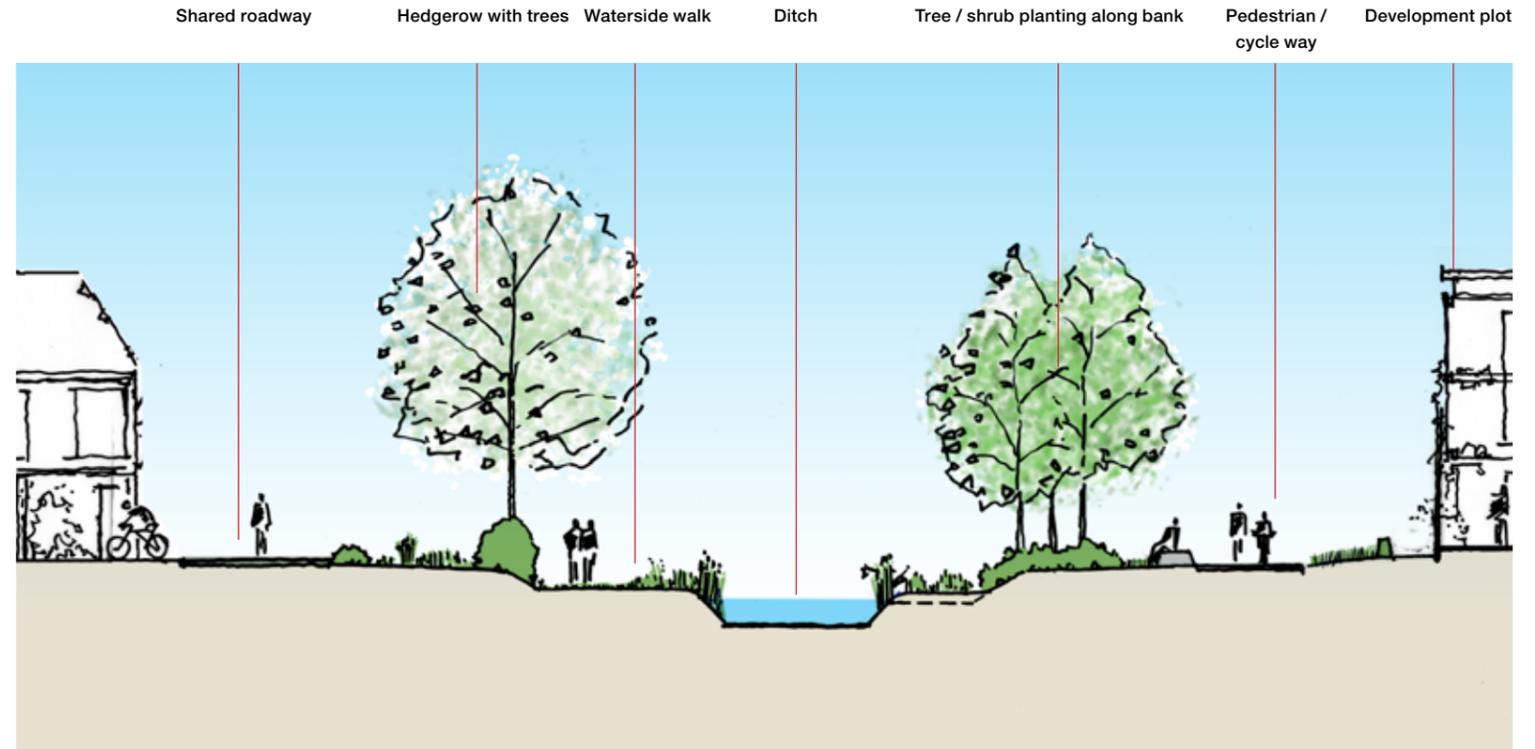


## Drainage and water

Water will be a defining component of Northstowe. A detailed description of the drainage strategy is provided on page 55 opposite, typical sections through a greenway and the eastern linear park are illustrated.

Water and drainage are significant design considerations:

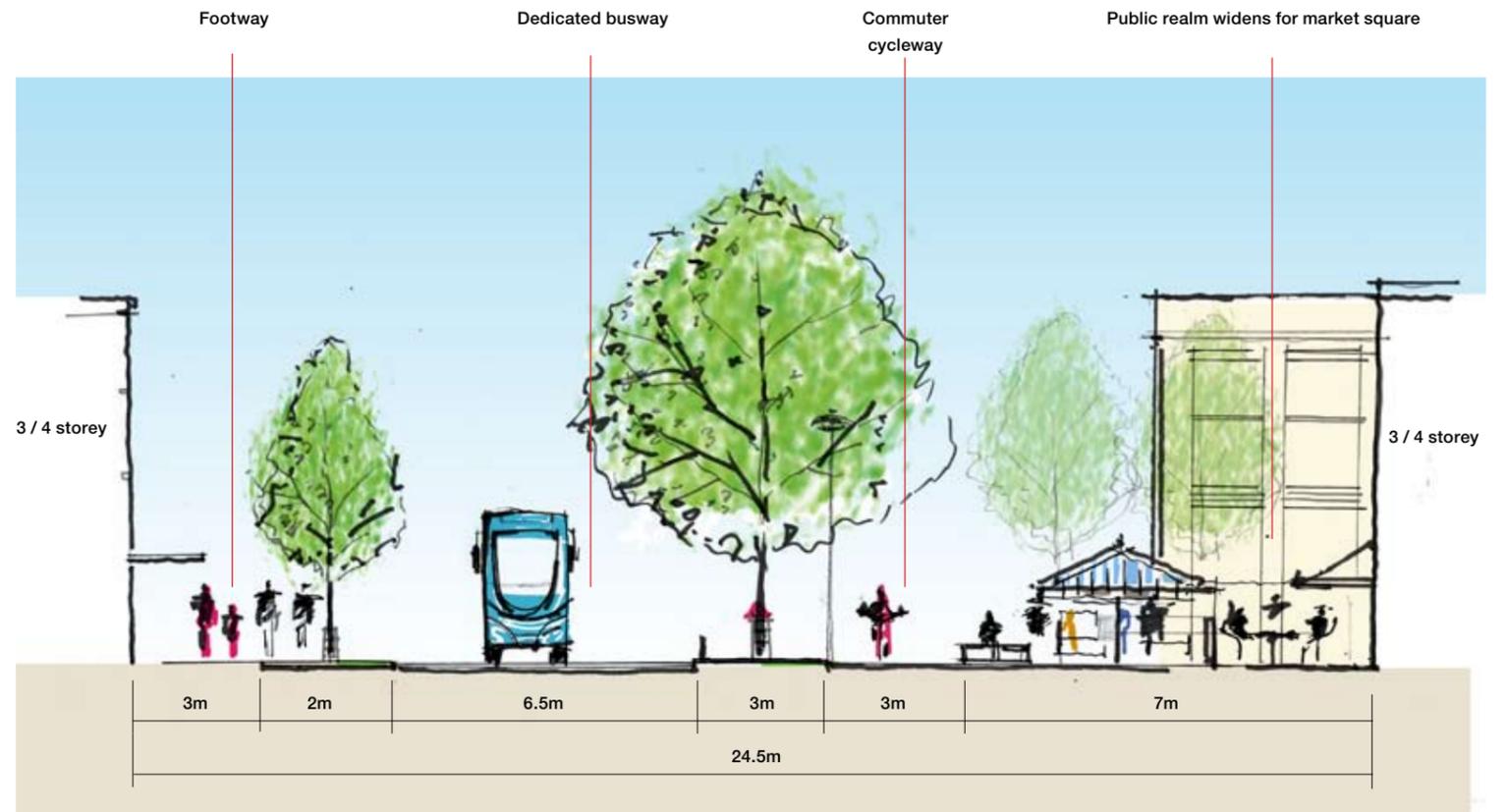
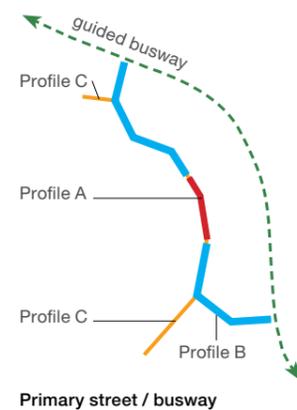
- Manage water holistically to minimise impact on the natural water cycle
- Manage rainwater through exemplar sustainable drainage strategy for the benefit of the development and surrounding community
- Water to permeate the street network and areas of open space
- Opportunity to use drainage water features as an integral part of the design and character of Northstowe
- Opportunity to promote water conservation in both residential and nonresidential parts of Northstowe and discussions with water companies will take place to promote these aspirations
- The scope for new water management/recycling technology will be tested in specific locations within Northstowe for residential and non-residential development, to represent examples of exemplar practice which may be of wider interest to other developments in the region.



Greenways

## Dedicated busway and primary street

The dedicated busway has been designed so as to be clearly legible as the principal street through the new town. Within the town centre, the street corridor widens to approximately 25m, allowing space for a regular farmers market. The dedicated busway and commuter cycleway have priority, with local road traffic excluded from within the town centre, except where it crosses the busway. Building heights increase to 3 and 4 storey (see street profile A). Elsewhere, the busway and commuter cycleway remain dedicated routes, but local roads run parallel alternating sides along the corridor. The street narrows to 21.5m and building heights reduce to mostly 3 storey, with some 2 storey development (see street profile B). Off the dedicated busway, the primary street that connects with the B1050 in the north and A14 in the south is designed to allow all vehicles including buses to run on one carriageway. The street corridor reduces to 16.5m with building heights comprising a mix of 2 and 3 storey development. A dedicated commuter cycleway separate to the main carriageway is retained (see street profile C).



Profile A – Dedicated busway section through town centre

Along the whole corridor high levels of enclosure are proposed through an emphasis on terrace housing and some apartments, together with extensive avenue planting of large native species such as oak and lime.

Cambridgeshire Guided bus

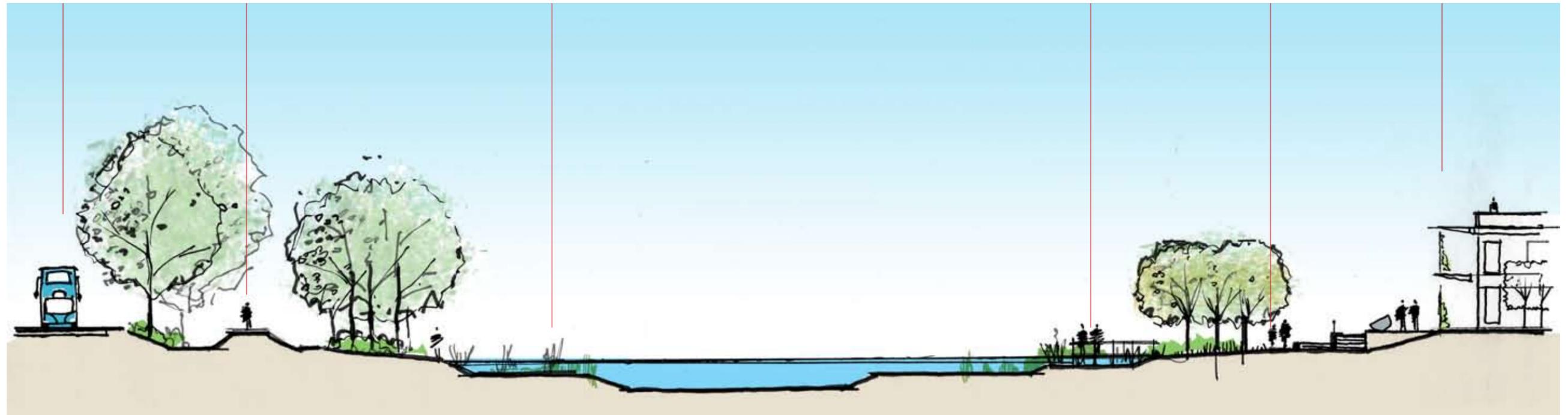
Raised walkway on bund

Permanent lake in centre of linear park

Viewing platform

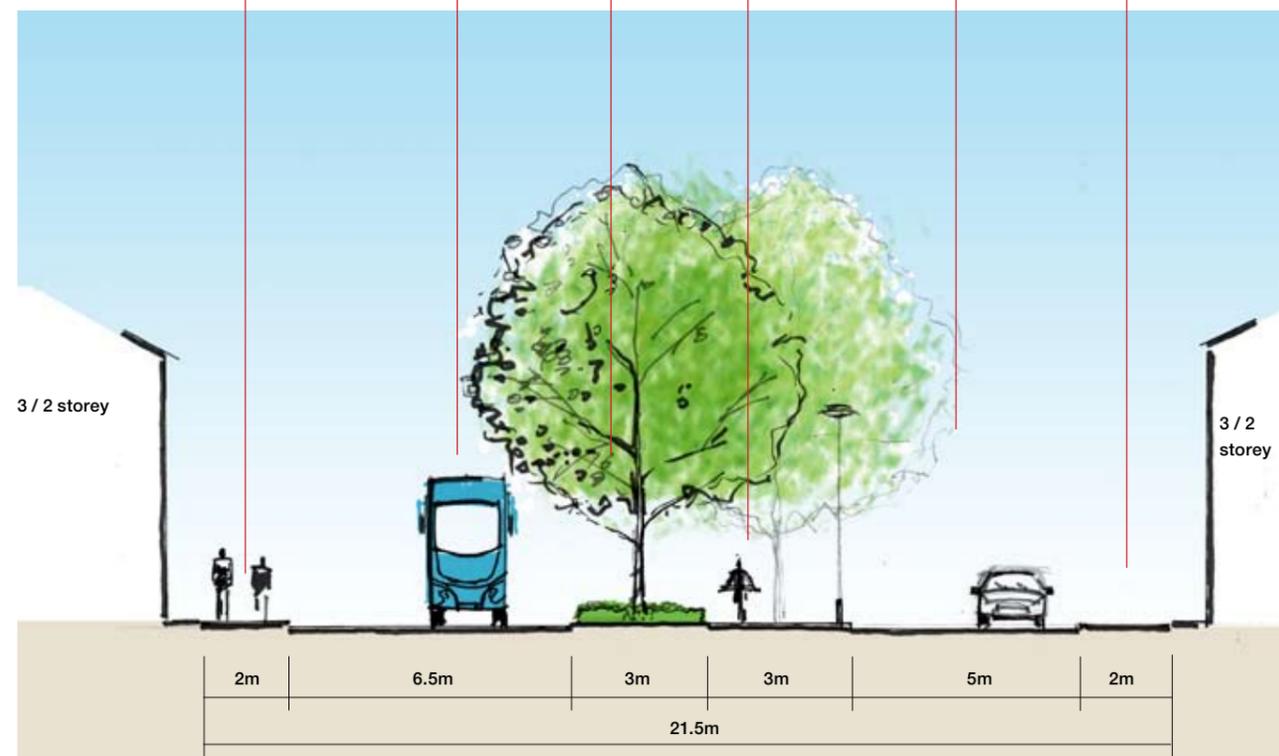
Lakeside walk

High quality development edge overlooking linear park



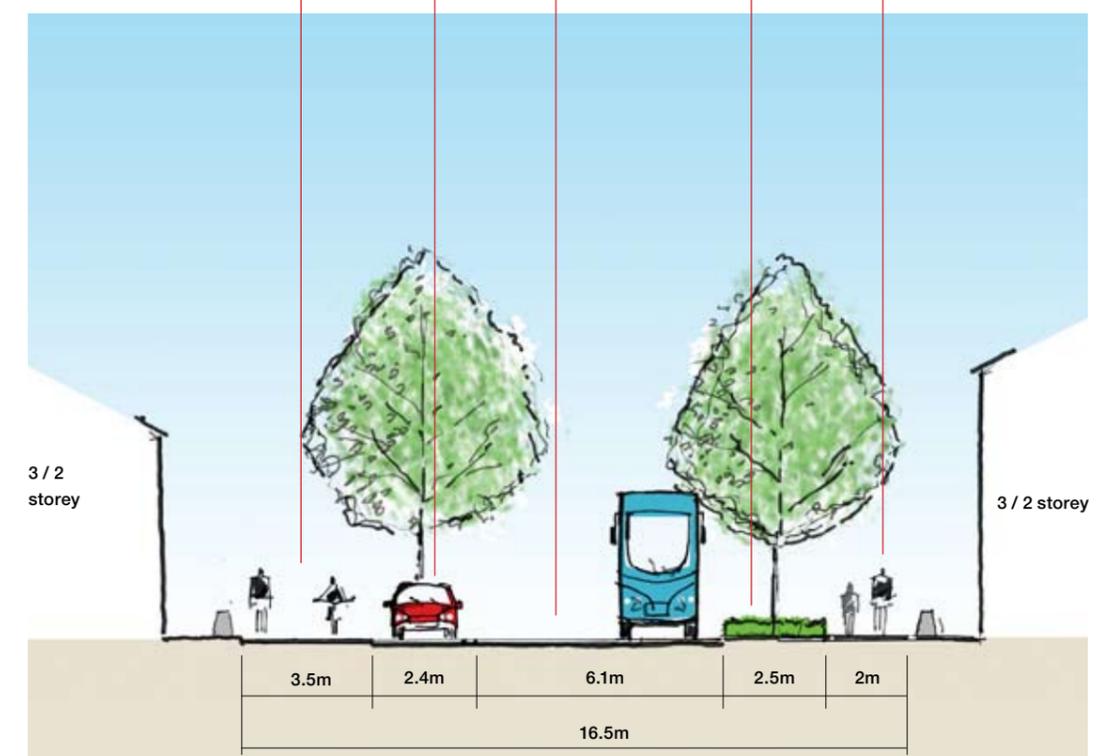
Linear park

Footway    Dedicated busway    Central avenue    Commuter cycleway    Local road    Footway



Profile B - Dedicated busway

Cycleway / footway    Parking    Carriageway    Verge    Footway



Profile C - Primary street - cars and buses on central carriageway

### Landscape strategy

A comprehensive network of green space will provide:

- A strong landscape setting to the town
- A range of habitats for wildlife and biodiversity interest
- Informal open space with an emphasis on water conservation
- A series of greenways linking the linear eastern and western landscapes
- A range of environments for children’s play including formal play provision such as NEAPs (neighbourhood area equipped for play) and large areas of informal open space for natural play
- A high level of sports provision via four sports hubs broadly serving each of the three development sectors
- Recreational open space, including a water park

A finer grain of open space and recreational provision including community orchards and allotments, pocket parks and public squares will be provided as part of each phase.

### Ecology

The design of the green infrastructure has focused on maximising ecological value, and includes:

- Significant new waterbodies and wetlands created along eastern boundary. An important addition to the network of wetlands in the wider area
- Species-rich grassland benefiting a wide range of insects, small mammals and reptiles; at night the areas provide habitat for foraging barn owls and bats
- Extensive parkland with mature trees, providing habitat for breeding birds, bats and insects
- Enhancement of retained habitats providing additional habitat for a range of species including water voles, kingfishers, dragonflies and amphibians
- An ecologically permeable design incorporating expansive greenways and a network of well-maintained hedgerows
- The inclusion of wildlife friendly features within the built environment to maximise biodiversity gain

### Drainage

The surface water drainage and flood management strategy designed for Northstowe is an exemplar scheme that manages water for the benefit of the wider area.

Northstowe is primarily located within two river catchments and the majority of the town will drain to the Beck Brook / Cottenham Lode to the east, and the northern ‘reserve’ area will drain primarily to the Longstanton Brook / Swavesey Drain to the west.

Historically, the Longstanton Brook / Swavesey watercourses have caused flooding within the villages of Longstanton and Oakington. However, the Northstowe drainage strategy will provide flood attenuation areas on these watercourses upstream of Oakington and Longstanton by holding back peak flood flows and mitigating this existing flooding risk. This drainage system will operate independently of Northstowe’s.

For Northstowe, the general principle is to reduce flood risk by holding back surface water in attenuation areas (water parks) located around the edge of the town. The water park on the north-eastern edge of Northstowe provides primary attenuation areas and a significant amenity and forms part of the green infrastructure for the town. Its drainage function is designed to have sufficient capacity to cope with requirements for holding back surface water. The water park is designed to have enough capacity for subsequent storms allowing time for the water park to drain down. The water is to be pumped using two pumping stations via culverts under the former railway line (CGB) into the existing drainage channels of Cottenham Lode / Beck Brook to the east. These pumping stations will be controlled via a telemetry system and only pump when the rivers are not in flood.

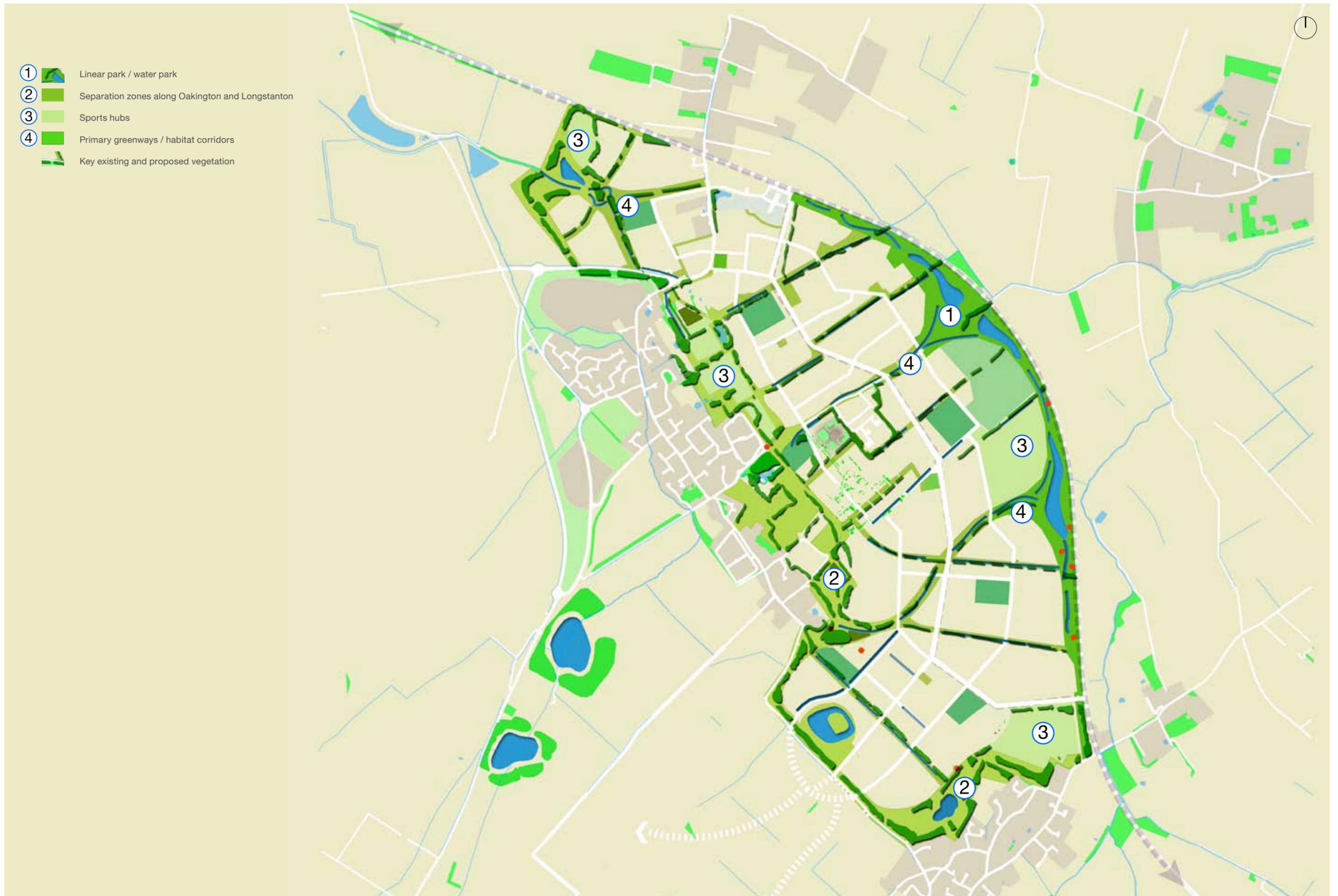
Additional attenuation facilities will be provided within the town where the land drains away from the water park, within the northern ‘reserve’ land and along the Airfield Road between Longstanton and Oakington.

The creation of the surface water management system requires alterations to the levels of the site. Land needs to be raised to above the flood levels in the Beck Brook to drain the town. The newly created attenuation areas require large excavations to enable the flood water to be held back. These works have been planned to ensure that there is a balance and it is anticipated that no material will be imported or exported to or from the site.

The water park is part of the strategy for the whole of Northstowe and the first half is being delivered in phase 1.

Within the town, drains will utilise sustainable drainage techniques and will use open water channels designed to be easily accessible for maintenance and visually overlooked from surrounding buildings and open space areas. A regular inspection regime together with public surveillance will help to ensure they are maintained / managed and along with the water park, will be a key feature of Northstowe, ensuring that water pervades the landscape of the new town.





## Social infrastructure

Key social facilities such as schools, shops, community buildings, bus services, leisure or local employment areas have all been positioned to ensure that the concept of the walkable neighbourhood becomes ingrained. Social infrastructure will be delivered early as part of each phase.

The secondary school and central sports hub are sited close to the town centre on an east-west axis, which will help with the movement of people between these key facilities and enliven the town centre.



Sports hubs 1000m catchment – 4 nos



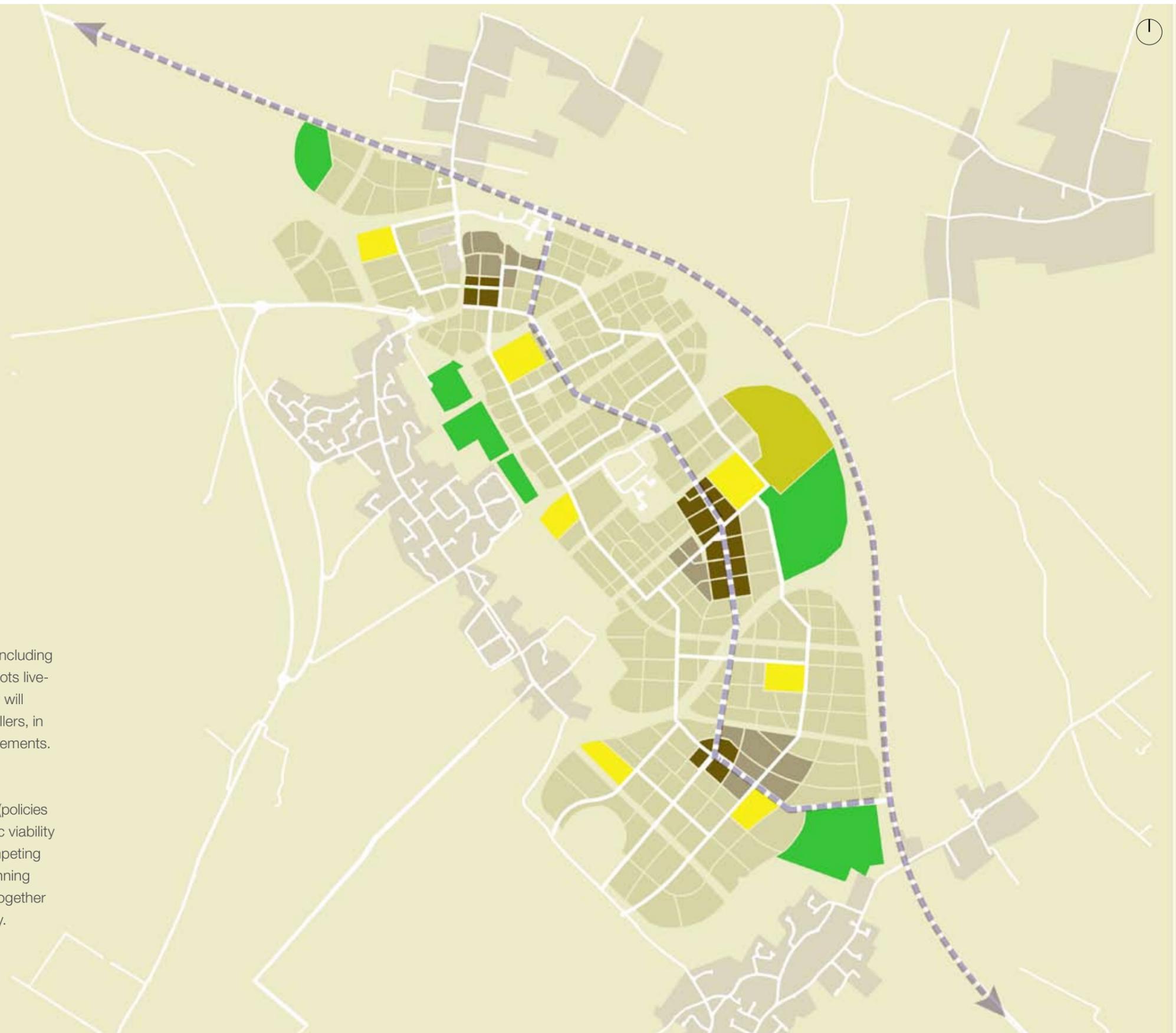
Primary school 450m catchment – 7 nos  
Secondary school 1500m catchment – 1 no



Town centre 1000m catchment  
Local centres 600m catchment

**Social infrastructure**

- Primary schools
- Secondary school
- Sports hubs
- Town centre / local centres
- Employment
- Residential



**Residential**

Northstowe will provide a range of house types including opportunities for Lifetime Homes, self building plots live-work units and extra-care homes. Consideration will also be given to an appropriate location for travellers, in accordance with any future adopted policy requirements.

Affordable homes provision will be delivered in accordance with the policy requirement of 40% (policies HG/3 and NS/7) but which is subject to economic viability testing and a balance to be struck between competing requirements, infrastructure costs and other planning considerations which need to be given priority, together with achieving a mixed and balanced community.

## Public realm / town centre

The town centre has been laid out as a traditional linear street, similar to that at St Ives. A key difference however is that vehicular traffic is rerouted around the town centre. While this will encourage travel to the town centre by bus, cycle or foot, some car parking accessed via the primary streets will be located close to the shops and social amenities. The principal civic buildings will be located within the town centre and could include a place of worship, library or town hall.

A regular town market will be a defining feature, as will the town park, visible from and adjacent to the dedicated busway. A tight urban grain is proposed, with a distinct increase in building heights, density and apartment housing. An integrated mix of retail, civic, employment, residential and educational land uses will maximize the potential to realise an active and vibrant town centre.



Illustrative plan and sketch of town centre

## Secondary school

### Location

The secondary school is located close to the town centre and dedicated busway, while also enjoying an attractive eastern aspect across the new linear park and countryside beyond. The opportunity to design the secondary school and adjacent sports hub as an integrated whole is considerable, affording the potential to establish secondary school with exceptional sporting facilities. Key development principles include:

- Well connected to town centre, dedicated busway and primary street
- Sits within landscape setting and proposed landuse
- Potential to provide large sports complex through combining public sports pitches with secondary school and sports hub
- Adjacent to phase 1 to facilitate its early delivery



Illustrative sketch of secondary school



## 6. Northstowe - A sustainable and locally distinctive settlement

Explains how Northstowe will deliver a sustainable and vibrant new community and summarises its defining characteristics.



C St Ives Bus Station

Whippet

AE59 EHR

BUS STOP

tickets

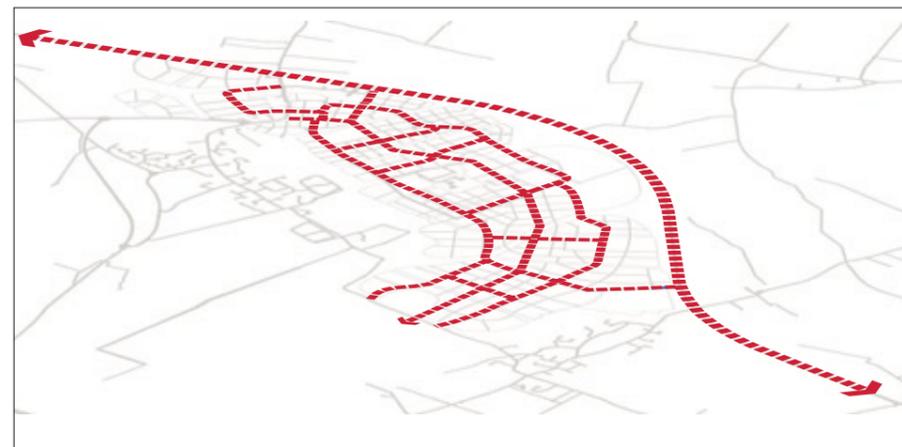
cash & cards

**Sustainability: Northstowe is to be planned, designed and promoted as a high quality settlement and an exemplar in sustainability**

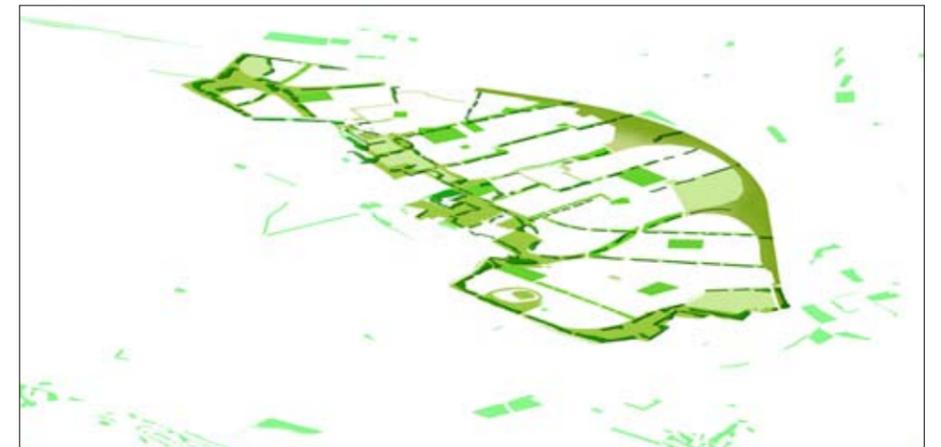
	Energy	Ecology	Health	Built environment	Place making and design	Transport and movement	Management and resource
Climate	<ul style="list-style-type: none"> <li>Potential use of district heating for higher density areas including town centre. A detailed technical and financial assessment will be undertaken in relation to CHP for phase 2 and later phases containing the town centre, high density uses.</li> <li>Identification of an appropriate energy strategy taking into account renewable energy technologies and appraisal of wind and solar energy</li> <li>A commitment to investigate the technical and financial feasibility of promoting BREEAM 'excellent' rating for non-residential buildings and achieving 'outstanding' standard post 2016</li> </ul>	<ul style="list-style-type: none"> <li>Existing vegetation to be retained where possible</li> <li>Enhancement of retained habitats</li> </ul>	<ul style="list-style-type: none"> <li>Network of walking and cycling routes providing opportunity for healthy travel</li> </ul>	<ul style="list-style-type: none"> <li>Units will be Code for Sustainable Homes Code (CfSH) Level 4 from the outset, subject to viability considerations and other competing requirements</li> <li>Higher code levels / BREEAM ratings will be investigated to identify opportunities for clusters of 'exemplar' development / buildings or, subject to viability, an increased level of sustainability (above current requirements) across development as a whole, subject to viability and other competing requirements</li> <li>Passive solar heating, sufficient day lighting, and natural cooling</li> </ul>	<ul style="list-style-type: none"> <li>Traffic calmed street design for all residential areas</li> <li>A network of safe pedestrian and cycle routes</li> <li>Town and local centres located along a 'high street' close to employment zone providing distinctive urban hubs</li> </ul>	<ul style="list-style-type: none"> <li>Within walking distance of public transport, including CGB</li> <li>High quality public transport rapid connections to major destinations</li> </ul>	<ul style="list-style-type: none"> <li>Provision of household recycling centre and neighbourhood recycling points</li> <li>Water consumption minimised through urban design</li> <li>Rainwater managed through exemplar sustainable drainage strategy benefiting new &amp; existing community</li> <li>Rainwater managed for the benefit of built development, green infrastructure, and downstream water quality and riparian responsibilities</li> <li>Rainwater and or grey water recycling</li> <li>Exemplar test plots for new water management /recycling technology (residential &amp; non-residential) or, an increased level of sustainability (above current requirements) across development as a whole, subject to viability and other competing requirements</li> </ul>
Community	<ul style="list-style-type: none"> <li>The layout encourages residents to cycle and walk to community hubs, employment areas and primary schools</li> <li>Encouragement of community based initiatives to promote sustainable living</li> </ul>	<ul style="list-style-type: none"> <li>Extensive green space provides opportunities for families to enjoy the natural environment.</li> </ul>	<ul style="list-style-type: none"> <li>Provision of allotments and community orchards to promote domestic food production</li> <li>Significant areas of public open space and formal sports provision</li> <li>Range of environments for children's play</li> </ul>	<ul style="list-style-type: none"> <li>Appropriate mix of affordable and private units</li> <li>Secondary school and seven primary schools</li> </ul>	<ul style="list-style-type: none"> <li>A place with clear identity and well defined centres</li> <li>Promotion of community activity at social centres</li> <li>Provision of local community facilities</li> <li>Socially engaged work and arts facilities that enable new residents to create their own work will be accommodated in design proposals</li> </ul>	<ul style="list-style-type: none"> <li>The majority of all residents within 600m walking distance of local centres, town centre and community facilities</li> </ul>	<ul style="list-style-type: none"> <li>Public art as a tool to involve the first residents in community projects and to mix with existing communities</li> <li>Public art to be part of a range of strategies e.g. landscape, play, governance etc</li> </ul>
Connectivity	<ul style="list-style-type: none"> <li>Exemplar high quality settlement connecting to Cambridge and Huntingdon with rapid public transport system</li> </ul>	<ul style="list-style-type: none"> <li>Primary and secondary greenways providing rich wildlife corridor</li> </ul>	<ul style="list-style-type: none"> <li>Well connected walking and cycle routes to leisure activities and sports hubs to promote active lifestyles</li> </ul>	<ul style="list-style-type: none"> <li>Strong urban form creates a clear hierarchy of routes and legible townscape</li> </ul>	<ul style="list-style-type: none"> <li>Safe walking routes with appropriate visual connectivity and way finding</li> <li>Well connected network of attractive green spaces</li> </ul>	<ul style="list-style-type: none"> <li>Dedicated busway and commuter cycleway as a green spine through the development</li> <li>Permeable street network</li> <li>Well connected pedestrian and cycle routes linking to the countryside and existing settlements</li> <li>Bridleways</li> </ul>	<ul style="list-style-type: none"> <li>High-tech communications network including high speed fibre optic broadband to the home</li> </ul>
Character	<ul style="list-style-type: none"> <li>Flexible design to ensure future proofing</li> </ul>	<ul style="list-style-type: none"> <li>Attractive and locally distinct green infrastructure</li> <li>Proposed linear water park and ditches will make water a defining feature</li> </ul>		<ul style="list-style-type: none"> <li>Use of local building materials</li> <li>Settlement pattern reflect local characteristics</li> <li>Flexible design</li> </ul>	<ul style="list-style-type: none"> <li>Locally distinctive market town</li> </ul>	<ul style="list-style-type: none"> <li>Dedicated busway will be a defining feature of the town</li> </ul>	<ul style="list-style-type: none"> <li>Integrated Sustainable Urban Drainage , including use of ditches as water features</li> </ul>



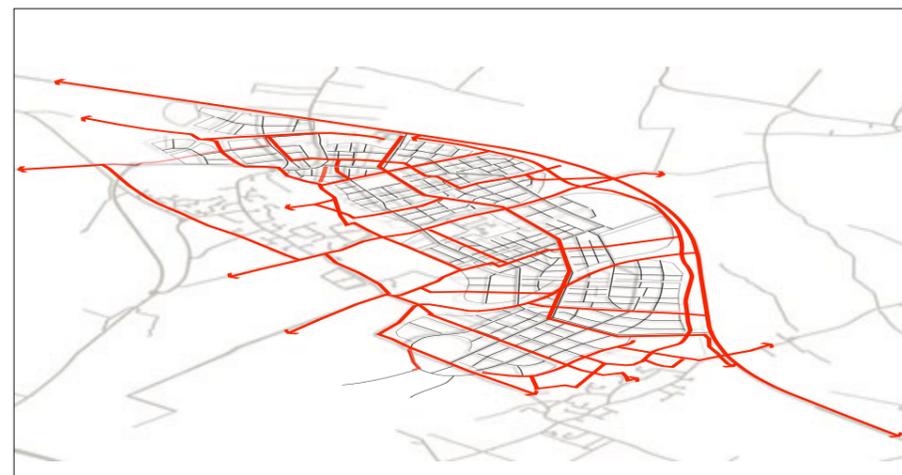
- Dwellings will be developed to Code for Sustainable Homes Code (CfSH) Level 4 from the outset and will accord with any amended standards for carbon emissions and energy use when introduced in future revisions of the Building Regulations and CfSH
- Meeting the requirements of Code Level 4 in respect of energy, water conservation and other credit earning measures and the additional costs involved, will require a balance to be struck between this commitment to sustainability and other competing requirements of Northstowe, which represents a major development scheme
- Construction will be to high environmental and sustainability standards and present an opportunity to build into the fabric of the town a range of renewable energy technologies for low carbon emissions
- Northstowe will embrace emerging technologies as they develop for on and off-site provision including the possible use of district heating for the higher density areas including the town centre
- There will be flexibility to make provision to meet changing technological and environmental circumstances. In terms of overall value and viability, it will be important to ensure future proofing to cope with the challenges of climate change.
- A strategy will be produced for the identification, management and maintenance of the areas of public realm including formal and informal public open space, recreational land and community facilities and for the design, landscaping and adoption of these areas.
- The aspiration during the build out of Northstowe is progressively reduce the maximum domestic water consumption (litres/person/day) to an exemplar of 80 l/p/d through the implementation of a range of water conservation and recycling measures. The technical and financial feasibility of recycling will be tested at each phase and investigated both at a property scale and town scale with a Utility provider when one has been appointed.



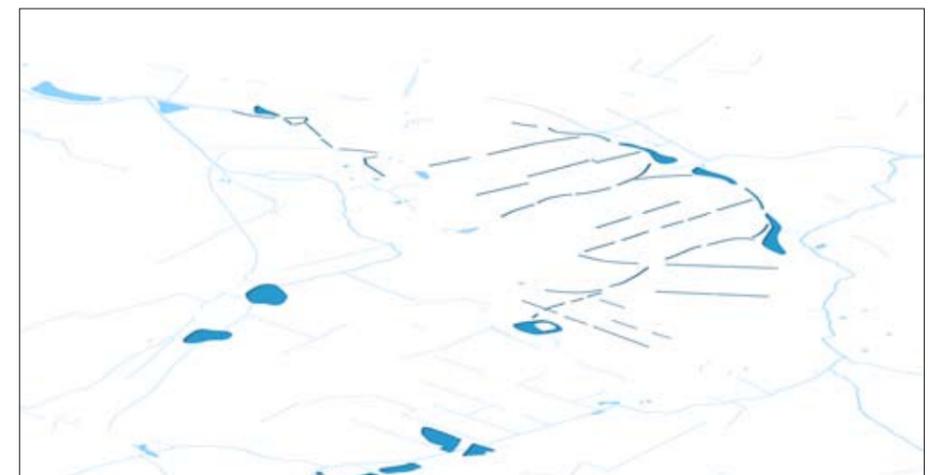
Efficient public transport system



Significant landscape framework



Priority for walking / cycling network



Exemplar drainage strategy

## Sustainability – design characteristics

### Urban form

Strong gridded form in centre becoming deformed on development edge. Building heights and densities, and levels of enclosure concentrated along the dedicated busway and primary streets. Linear greenways and civic parks subdivide the urban form into legible and walkable neighbourhoods.



### Significant open space

- Strong linear park along the eastern development edge
- Rural edges to Longstanton and Oakington retained
- Even distribution of town parks through the settlement and a clear hierarchy of public open spaces
- Greenways have strong linear connecting spaces. Defining axial views and open watercourses breach the settlement
- Sports provision on periphery, designed to have amenity and ecological value



Character



Eastern development edge overlooking water park – illustrative sketch

**Key urban design parameters which facilitate low carbon community**

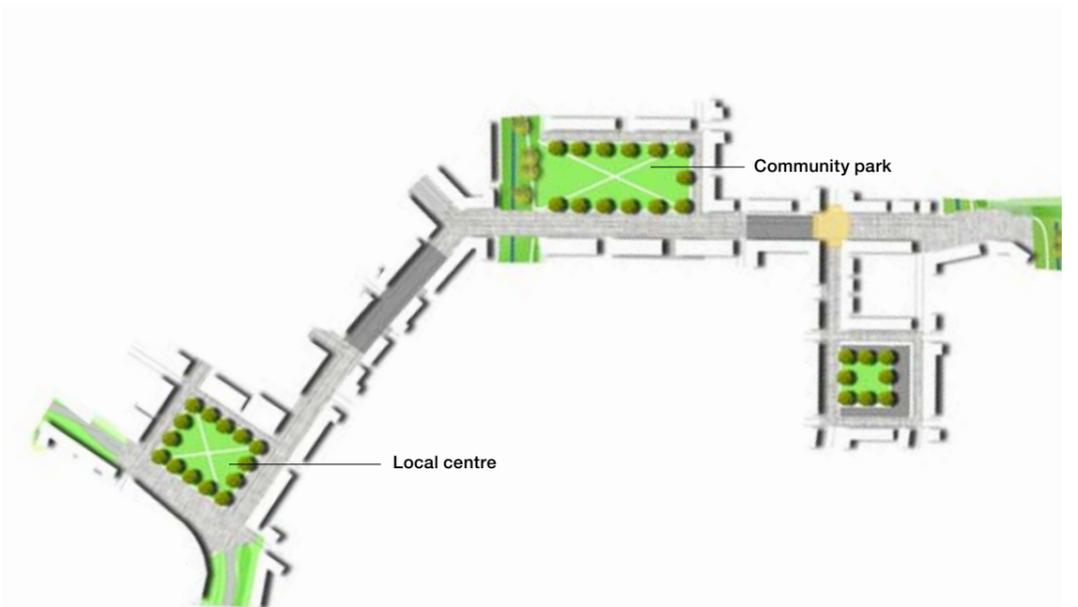
- The main route runs north south through the town, with changes of alignment at key intersections
- The town centre is located centrally on a key intersection of routes
- The town centre has a tight and dense urban form, and heights and densities are concentrated along the main route
- The greatest mix of land uses are within or close to the town centre, including the secondary school and largest sports hub
- There is a strong sequence of spaces along main routes
- Employment uses are located next to centres
- Lower densities and a more organic urban form along the settlement edge



Town centre

**Town centre / local centre**

A strong sequence of spaces along the primary and secondary streets (or dedicated busway) will be a defining feature of Northstowe



Local centre

## 7. Delivering Northstowe

Explains the delivery and phasing strategy for Northstowe.



### Indicative phasing

The Joint Promoters are committed to the delivery of the whole of Northstowe and are considering a variety of scenarios for the delivery of further phases to follow Phase 1, the location of which is shown below. The size and timing of delivery of new homes in Phase 2, and subsequent phases, will be determined by a range of factors, the most important of which are general market conditions and the approval of significant improvements to the A14 corridor. The broad extent of Phase 2 is shown on the plan.

Phase 2 will be situated on the HCA controlled land adjacent to Rampton Road and will include development both north of Rampton Drift and around the area formerly used as the barracks. Situating the residential component of Phase 2 in this area will ensure that suitable access arrangements can be made via Phase 1 to enable residents to connect to the B1050, and will also enable residents to access community and other services established as part of Phase 1. Locating Phase 2 in this location will enable the Joint Promoters to establish quality residential development utilising the road and 'green infrastructure' of the barracks area and will enable the retained heritage buildings to be considered for new uses. The existing green infrastructure will be strengthened by the provision of one of the strategic greenways along the southern side of Rampton Road.



Phase 2 will also include early elements of delivery of the town centre, subject to the necessary improvements to the local transport network, and will provide the site for the secondary school.

The Joint Promoters intend that the phases of residential development will be 'staggered', meaning that Phase 2 may begin on site before Phase 1 is fully complete although it is expected that the secondary school site will need to be accessed at the same time as Phase 1.

Phase 1 will include:

- A primary school and local centre
- Up to 1,500 homes
- Sports hub and community facilities
- Household recycling centre
- A range of employment uses
- Significant water features (for drainage, ecology and informal recreation)
- Substantial green space for recreation and habitat creation
- Attenuation ponds off Hatton's Road

Future phases:

A separate addendum to this document will contain information about the phasing of Northstowe beyond Phase 1.

### Delivery and design quality

Northstowe will be delivered by the lead developers (Gallagher and the HCA), with land parcels sold on a phased basis to residential developers. The lead developer will implement the primary infrastructure, including the strategic green space, primary roads, and strategic utilities including the foul and surface water drainage. The ownership, adoption and management of non-residential uses will be agreed through ongoing discussions with South Cambridgeshire District Council, Cambridgeshire County Council, Northstowe Parish Forum and the local community.

Design quality will be achieved through various mechanisms. In particular the design code will deliver high quality architecture and public places and ensure a coordinated new town over the timescale of the project. Codes will be produced for each phase, and will accord with relevance design guidance including the Informal Guidance Note (May 2012) prepared by Cambridge City in consultation with South Cambridgeshire. Ongoing design reviews and workshops will take place throughout the design process. In consultation with the local authority, the lead developers will also take an active roll in reviewing land parcel designs and intend to retain the ability to influence and shape quality at Northstowe as the development is built out.

