



NORTHSTOWE

Phase 3B

Design and Access Statement
(Incorporating Design Principles Document)

March 2020



Homes
England

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Executive Summary

Executive Summary

Northstowe is a planned new town of approximately 10,000 homes to the North West of Cambridge. It aspires to be a vibrant 21st Century settlement enabling sustainable lifestyle choices and patterns of living.

Located north west of Cambridge, Northstowe is one of the largest new settlements in the country. When complete, Northstowe will be the home of around 25,000 people.

This Design and Access Statement is submitted in support of the Phase 3B Outline Application. The following development description applies:

Outline planning application for the development of Northstowe phase 3B, comprising up to 1,000 homes, a primary school, secondary mixed use zone (with retail and associated services, food and drink, community, leisure, employment and residential uses), open space and landscaped areas, engineering and infrastructure works, with details of appearance, landscaping, layout, scale and access reserved.

Community

Phase 3B will provide a range of house types, including affordable homes for rent and purchase, self-build and custom build homes to help establish a mixed community. Opportunities for employment within Northstowe (in the Town Centre, the Local Centres within Phase 1 and 3A and in education, shopping and community/sports facilities) together with measures to facilitate home working will support the development of the town as a place to live and work.

Northstowe is one of ten Healthy New Towns in England. As a Healthy New Town, priorities are to reduce obesity and promote a healthy and active lifestyle to deliver a healthy community. This can be achieved through a framework of interventions many of which are embedded within the masterplan/development form. This framework can then be applied as the town develops; to create a healthy town through infrastructure and place shaping; and deliver a new model of care for Northstowe.

Homes England are committed to ensuring that Healthy New Town principles are applied to all aspects of Northstowe's development.

The proposed masterplan for Phase 3B incorporates a range of semi-formal and informal open spaces as well as opportunities for formal play, in the form of a Neighbourhood Equipped Area for Play (NEAP) and a Locally Equipped Area for Play (LEAP). This range of open space provision provides opportunities for a range of activities, such as allotments and community orchards, running and walking routes, thus enabling an active and healthy lifestyle for residents of all ages.

Connectivity

Northstowe Phase 3B will be accessible by sustainable modes of transport, with local bus stops and Longstanton Park and Ride, (served by Cambridgeshire Guided Busway) being within short walking distances of the site. The walking and cycling networks will connect into the established movement network within Phase 1. These, and the existing bridleway that runs along the Cambridgeshire Guided Busway (CGB), will ensure that there are convenient routes to the Town Centre, schools and sports facilities.

Improvements to the existing roundabout on Station Road will provide a direct vehicular, pedestrian and cycle access point into the site and improved pedestrian and cycling crossing points into Longstanton.

The masterplan has been developed to maximise opportunities for active travel with walking and cycling routes given prominence throughout the development, with segregated routes alongside the primary and secondary streets, as well as links through greenways, with the majority of homes being within close proximity of a principal cycle route. These cycle routes may be segregated, shared, or accommodated within shared surface residential streets. The development will create a walkable neighbourhood within easy walking distance to primary schools (Phase 3B and Phase 1) and open space provision.

The masterplan safeguards potential future links to land to the east of Phase 3B that may be bought forward by others.

Character

Analysis of the local context has been carried out to inform the preparation of the masterplan for Phase 3B. The character and setting of the adjacent settlements including Longstanton and Willingham, as well as Phases 1, 2 and 3A have been carefully considered throughout the design development process as well as the historic street pattern of the former British Romano settlement located within the site.

The intrinsic characteristics of the Phase 3B site, specifically the central copse of trees and hedgerows, have shaped the distinctive character of this phase.

A variety of spaces are to be created as character drivers, consistent with the approach set out in the Phase 2 Design Code. These spaces will vary in form, function and character and incorporate the intrinsic characteristics of Phase 3B, including the retained tree copse and hedgerows. Buildings will draw on the best of local tradition from adjoining villages as well as new development on the Cambridge fringes to create a modern yet locally distinct character. The historic influence of the former Fishpond Road (which led to the former Fishpond Cottages) and the surrounding landscape character are both recognised within the masterplan and landscape strategy.

Climate

The masterplan develops and embeds the principles of climate change mitigation and adaptation into the development, with the aim of demonstrating innovation and future proofing the development. Key themes include building design, overheating, materials, flood risk and layout in relation to climate hazards and risks.

Climate change is likely to impact on Water Supply and Management due to increasing irregularity in precipitation patterns and a higher likelihood of droughts. Protecting and conserving water supplies and resources in order to secure Northstowe's needs in a sustainable manner is seen as an urgent priority for the masterplan. It is recognised that in order to achieve this, water consumption per person needs to be reduced. The aim is to create a development that has adapted to climate change, ensuring it is safe from flood risk, controls surface water flows; improves water quality and has reduced water consumption. Climate resilience has been built into the masterplan with the surface and flood risk strategy being beyond standard practice (i.e. 1:200 year event plus climate change and 48 hours storage). The extensive green infrastructure network will help in combating heat islands. SuDS are an integral part of the design of Phase 3B. Attenuation features in the form of predominantly dry ponds are key elements of the masterplan and some primary and secondary streets contain swales and SuDS features. The design of Phase 3B is based on an integrated network of blue and green infrastructure.

Sustainable Travel is a key aspect of the development to minimise carbon impacts, with high accessibility by walking, cycling and public transport, continuation of the approach to Travel Planning set out in Phase 1 and 2 as well as provision for electric vehicles.

This Sustainability Statement, submitted as part of this application, demonstrates that the proposed new development will:

- Minimise carbon emissions through the approach to energy use
- Minimise water usage and flood impacts
- Provide a sustainable approach to waste and materials and resources
- Provide for a high level of accessibility by sustainable travel modes
- Provide substantial amounts of high quality green infrastructure
- Develop sustainable new buildings;
- Create a cohesive community and culture;
- Support the local economy; and
- Be an exemplar for health and wellbeing.

I Introduction

I Introduction

I.1 Role and Structure of the Design and Access Statement

This Design and Access Statement (DAS) has been prepared on behalf of Homes England and is submitted in support of the Outline Planning Application for Northstowe Phase 3B. This DAS document describes the:

- Design evolution and considerations that have led to the development proposals;
- Design concepts that underpin the masterplan and subsequent parameter plans;
- Design principles that should be read alongside the parameter plans; and
- Illustrative material that describes the design intentions and brings the application drawings to life.

The DAS describes how the design relates to the technical, planning and site considerations. The main chapters of this document have been structured as follows:

1. **Introduction:** This chapter sets out the summary of the application and the description of the development.
2. **Strategic Context:** The social and economic context of the site, and facilities provided outside of Northstowe's boundaries are discussed in this chapter. The three phases of Northstowe are set out here before a brief overview of the relevant planning policy guidance is provided.
3. **Health and Wellbeing:** This chapter sets out Homes England's commitments to Northstowe's Healthy New Town (HNT) legacy, and the key priorities for the development with regards to this.
4. **Site and Context Appraisal:** The physical context of Phase 3B is discussed in this chapter, including existing site features and the opportunities and constraints with regards to: movement, facilities, landscape and heritage. The local character influences in terms of architecture and urban design are also analysed in this chapter.
5. **Design Development:** The initial stages of design are presented and explained in this chapter, with an overview of the community, stakeholder and Design Review Panel engagement undertaken.
6. **The Masterplan:** The key principles for the masterplan are set out in this chapter, before describing how the Character, Connectivity and Community objectives have been addressed and integrated into the proposals for Phase 3B. This chapter then sets out an overview of the open space, recreation and landscape strategy for the phase.
7. **Climate:** This chapter summarises the key sustainability objectives for the development.
8. **Delivering Design Quality:** This chapter sets out how design quality could be achieved through the planning process.

9. Appendices:

- **Appendix A: Design Principles Document:** This document sets out the primary urban design principles that will guide the future design development of Phase 3B. It also sets out the Urban Design Framework Plan, which brings together the Parameter Plans to illustrate how the different elements of green space, land use and movement interact with each other.
- **Appendix B: Building for Life 12:** This Appendix assesses the scheme against the criteria set out in Building for Life 12 (BfL 12, Third Edition - January 2015).

The Town and Country Planning (Development Management Procedure) Order 2015 (DMPO) sets out the requirements that must be addressed within a DAS. These requirements, and the locations of where they are addressed throughout this DAS are as follows:

- Chapter 6 explains the design principles and concepts that have been applied to the development (DMPO Regulations 9.(2)(a) and 9.(3)(a))
- Chapter 6, Section 6.4 explains how issues relating to access to the development have been dealt with (DMPO Regulation 9.(2)(b))
- Chapter 4 demonstrates the steps that have been taken to appraise the context of the development and how the design of the development takes that context into account (DMPO Regulation 9.(3)(b)) Chapters 5 and 6 then continue to describe how the context has been taken into account as the design was developed.
- Chapter 6 explains the approach adopted for access and section 6.3 describes how policies relating to access in relevant local development documents have been taken into account; (DMPO Regulation 9.(3)(c))
- Chapter 5, Sections 5.2 and 5.3 explain the consultation that has been undertaken on issues relating to access to the development and Section 6.4 describes what account has been taken of the outcome of any such consultation (DMPO Regulation 9.(3)(d))
- Chapter 6, Section 6.4 explains how any specific issues which might affect access to the development have been addressed (DMPO Regulation 9.(3)(e))

I.2 Scope of the Document

The purpose of this DAS is to describe the design process which has resulted in the application proposals and to provide an illustrated explanation of the proposed development. One of the roles of the DAS is to demonstrate to the planning authority and other stakeholders that the parameters of the proposed development are sound and able to create a high quality place.

Chapter 6, which incorporates the Illustrative Masterplan, illustrates how distinctive and site specific character can be created across the different areas of the site. The diagrams and illustrations set out in Chapter 6 are illustrative only and do not establish any further fixed elements of the development beyond those set out in the parameter plans. Where diagrams and illustrations in this DAS include parameters from the parameter plans, they may also include additional illustrative materials. For the fixed parameters, please refer to the 'Movement and Access', 'Building Heights' and 'Open Space and Land Use' Parameter Plans submitted as part of this planning application, which will be approved as part of the application. A set of Urban Design principles are identified in Chapter 6, which are also summarised in the Design Principles Document, included at Appendix A.

The Design Principles Document identifies the primary Urban Design Principles that will guide the future design development of Phase 3B. It is envisaged that the Design Principles Document will be approved as part of the Outline Planning Application for Phase 3B and that an appropriate condition ensures that future Design Code and Reserved Matters applications take account of these design principles.

I.3 Summary of Application and Description of Development -

Outline planning application for the development of Northstowe phase 3B, comprising up to 1,000 homes, a primary school, secondary mixed use zone (with retail and associated services, food and drink, community, leisure, employment and residential uses), open space and landscaped areas, engineering and infrastructure works, with details of appearance, landscaping, layout, scale and access reserved.

1.4 The Applicant and Team

Homes England

Applicant



Arcadis

Lead Consultant, Landscape Architects, Transport Consultant, Drainage Consultant



Tibbalds Planning and Urban Design

Planning Consultants, Urban Designers and Masterplanners



Key

- Application Site Boundary
- Indicative boundaries of Phases 1, 2 and 3A



Figure 1.1: Aerial Photo showing Site Location



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Strategic Context

2 Strategic Context

Northstowe is located within South Cambridgeshire, approximately 8.5km north west of Cambridge City Centre and 7km from Cambridge Science Park.

2.1 Northstowe

Northstowe is a new town in Cambridgeshire that is jointly promoted by Homes England (HE), the Government's housing and regeneration accelerator, and Gallagher Estates (now L&Q), a master developer and property investment company. Northstowe will occupy 490 hectares of land straddling the Longstanton and Oakington parish boundaries. Northstowe has an anticipated population of approximately 25,000 people (10,000 homes) and a broad range of supporting facilities and infrastructure, that will take shape over a period of 15-20 years. It aims to achieve the highest quality of community living and will contribute to the local identity of the area. The town will be delivered in three phases, with the Town Centre located within Phase 2.

2.2 Wider Context

Movement

Northstowe benefits from key strategic links to nearby settlements, such as Cambridge and Huntingdon. Northstowe has access points from the A14 (via the Southern Access Road West) to the south and the B1050 to the west. The A14 provides a direct link to the M11 to the south, ensuring ease of movement both regionally and nationally.

Cambridge North Train Station is the nearest major railway station to Northstowe; located approximately 8.5km to the south east of Northstowe's Town Centre, with onward services to London.

The Cambridgeshire Guided Busway (CGB) runs along the site's northern boundary, ensuring that public transport is a highly accessible, easy and fast mode of transport for the new residents. The bus services that use the CGB provide to connections to both Cambridge North and Cambridge railway stations, as well as serving Huntingdon and St Ives. A pedestrian and cycle route runs along the CGB, providing a sustainable and direct link between Cambridge City Centre, the Science Park, Cambridge North Station and Northstowe.

Local bus services are also accessible to the new residents of Northstowe, with routes running along Station Road, connecting to Bar Hill and Swavesey.

A network of public right of way paths that run around and through Northstowe provides walking links to nearby settlements including Rampton and Longstanton and the wider countryside.

Facilities

Cambridge City Centre and Cambridge Science Park are major employment hubs within 10km of Northstowe. Both are easily accessible to the residents of Northstowe via the CGB.

The local settlements within close proximity of Northstowe also offer the following:

- **Huntingdon** - medium-sized market town comprising a wide range of services and community facilities including a train station.
- **Willingham**: Facilities and services including public houses, convenience store, post office and primary school, amongst others.
- **Longstanton**: Facilities and services including a veterinary practice, bed & breakfast, supermarket, primary school and two places of worship.
- **Bar Hill** - Tesco Extra store that acts as the first choice for the majority of residents' food shopping in the local area.
- **Impington** : Local swimming pool

Social and Economic Context

The diverse economy of Cambridgeshire has particular strengths in sectors including engineering, research and development, pharmaceutical and tourism, amongst others.

The town of Northstowe is secondary to Cambridge, but the town as a whole has the opportunity to provide space for the supply chain, for example in the knowledge economy (B1) and food sector; machinery supply and maintenance (B1c).

Northstowe aims to be a forward thinking, modern development which will provide 21st Century workspace, with an emphasis on flexible, move on space and home-working.

More detailed information on the social and economic context can be found in the Economic Development Strategy submitted as part of this application.

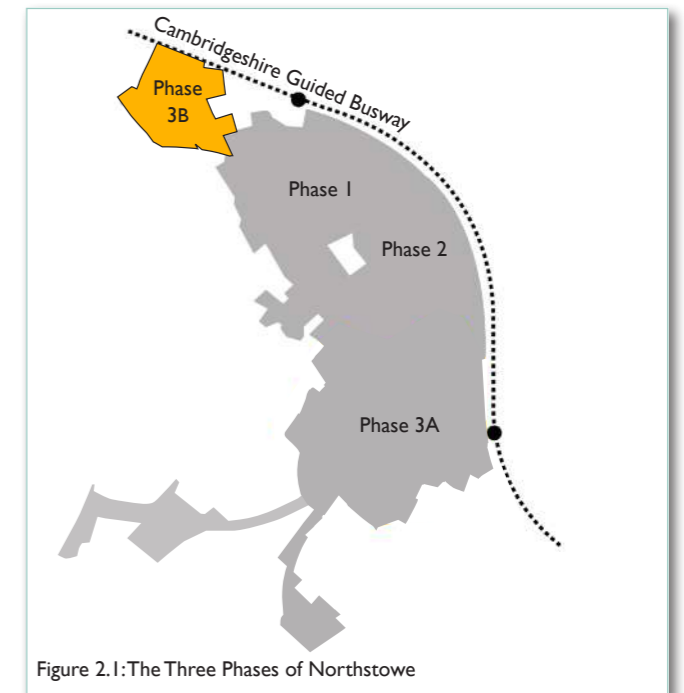


Figure 2.1: The Three Phases of Northstowe

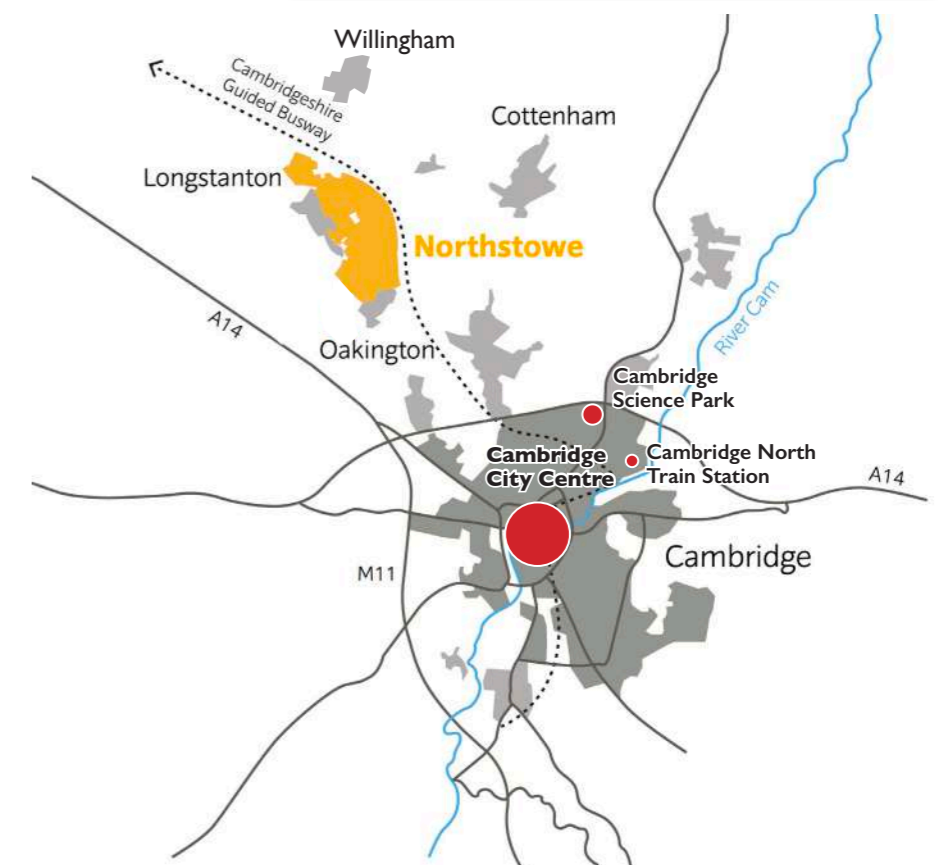


Figure 2.2: Strategic Location of Northstowe

2.3 Relevant Policy and Guidance

The overarching Masterplan proposals for the planning application have been developed in accordance with National and Local Planning policies. The design proposals have evolved with input from statutory consultees and discussions with South Cambridgeshire District Council (SCDC). An inclusive approach to design, planning and technical input has been adopted, including extensive public and community engagement, enabling the proposed development of the Application Site to be realised in a positive and sustainable way.

The Development Plan for the site consists of the following planning policy documents,;

- South Cambridge Local Plan ('LP') – September 2018
- Northstowe Area Action Plan ('NAAP') – July 2007

Other material considerations that the proposals have taken into account include:

- National Planning Policy Framework ('NPPF') – February 2019
- Northstowe Development Framework Document ('DFD') - August 2012 & Exemplar Addendum Document - October 2012
- South Cambridgeshire Supplementary Planning Documents ('SPD'):
 - Affordable Housing SPD
 - Biodiversity SPD
 - Development Affecting Conservation Areas SPD
 - District Design Guide SPD
 - Health Impact Assessment SPD
 - Landscape in New Developments SPD
 - Open Space in New Developments SPD
 - Public Art SPD
 - Trees and Development Sites SPD

A full schedule of planning policies relevant to Phase 3B and the scheme's response to each is set out in the Planning Statement submitted as part of this application.

The Design and Access Statement has taken into account policies relating to access in relevant local development documents. The relevant documents, and the sections in which they have been addressed within this document are as follows:

- South Cambridgeshire Local Plan (2018): Policy HQ/1: Design Principles (Section 6.4),
- Northstowe Area Action Plan (2007): All references to good access to services, permeable access and movement, and minimising disruption to villages, including the objectives set out in section D6 and policies NS/10 and NS/11.

2.3.1 Northstowe Development Framework Document (2012) (DFD)

The Development Framework remains a masterplan consideration. However, it has been overtaken by changes in the way people live and work.

The Healthy New Town status has brought an emphasis on health and wellbeing, requiring a multi-layered approach to open space and sport.

The Town Centre Strategy developed as part of Phase 2 has shifted the emphasis of land uses and size of the Town Centre, bringing it into line with today's shopping and working pattern. This also has an influence on Phases 3A and 3B and the local services provided within them. Nevertheless, the DFD sets out important considerations and has a role in ensuring Northstowe becomes a well integrated town.

The development proposals for Phase 3B incorporate the following principles set out in this DFD:

Community

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

Connectivity

- 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.
- 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. Longstanton.

Climate

- Towards low carbon with a combination of energy efficient solutions, local food production, green travel, innovative technology and communications systems and waste recycling centre.

Character

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



Figure 2.3: Northstowe Development Framework Plan (DFD 2012)

3

Health and Wellbeing

3 Health and Wellbeing

Northstowe was included in the NHS Healthy New Town (HNT) initiative. This chapter sets out the commitments and principles that will that apply to Northstowe as a whole and how strategies and detailed principles developed for Phase 2 will shape the development proposals for Phase 3B to continue the HNT legacy.

3.1 Health and Wellbeing Commitments

Northstowe is one of the NHS 'Healthy New Town' (HNT) initiatives. This national initiative is both based on existing evidence and intended to generate new evidence about what works, why and how. Therefore, Northstowe is expected to explore innovative strategies and initiatives that will contribute towards the health and wellbeing of its future population. Good design and placemaking can have a significant impact on encouraging an active and sustainable lifestyle for a community, therefore this section is of particular importance to the Design and Access Statement; ensuring that the key principles for healthy living are embedded into the design process from the outset.

Northstowe's Healthy New Town priorities are to:

- Deliver a healthy community through a framework of interventions which can be applied as the town develops;
- Create a healthy town through infrastructure and place shaping; and
- Develop a new model of care for Northstowe.

The commitment to create a healthy community through infrastructure and place shaping includes:

- The delivery of open space, landscape, and green infrastructure to create nudge and pull factors and maximise opportunities for positive lifestyle choices around obesity.
- The provision to cater for all ages and abilities with a focus on dementia and older people.

Homes England are committed to ensuring that Healthy New Town principles are applied to all aspects of Northstowe's development. While the NHS programme has ended, Homes England and its partners, including South Cambridgeshire District Council and Cambridgeshire County Council (CCC), have made a joint commitment to continue with the programme for the benefit of future residents of Northstowe.

3.1.1 Northstowe Healthy Living and Youth & Play Strategy (2018)

A Healthy Living and Youth & Play Strategy was approved as part of Phase 2. Within this document is the Healthy Living Strategy which sets out 9 principles, which based on scientific research are considered to be fundamental drivers in improving physical and mental health and wellbeing.

These principles are:

- Providing contact with nature;
- Promoting a positive community identity;
- Providing access to sports;
- Providing inclusive design / design for all;
- Health and wellbeing through play;
- Promoting positive social interaction;
- Promoting access to healthy food;
- Increasing physical activity; and
- Creating a low pollution environment and adapting to climate change.

The development proposals for Phase 3B will adhere to these principles. Their detailed implementation will be defined through later stages in the planning process, such as the Design Code.

3.1.2 Northstowe Phase 2 Design Code (2017)

The Design Code for Phase 2 is an important bridge between the outline planning consent and detailed proposals for Northstowe Phase 2. It builds on the Phase 1 Design Code, and is an appropriate forum for embedding principles of healthy neighbourhoods. The final document demonstrates how these objectives can be embedded in design requirements at a strategic as well as detailed level. Some of the principles that aim to promote healthy and active lifestyles within the Phase 2 Design Code include:

- **Development density and permeability:** Higher densities can create active and animated streets. A choice of attractive routes, higher densities and variation in character help to deliver streets and spaces that are safe and interesting to walk along.
- **Spatial organisation of parks: and the provision of community allotments and orchards:** The benefits of this include catering for gentle outdoor activity, increased sense of community and belonging and healthy, fresh produce.
- **Walking and cycling:** Provision of a choice of walking and cycle routes at a fine grain is an important consideration in promoting healthy activities including the use of bikes as an active mode of transport.
- **Accessibility of public transport:** Including high quality bus connectivity throughout the site as well as connecting to adjacent settlements.

3.1.3 Summary

The Healthy New Town priorities and the detailed strategies developed for Phase 2 have informed the masterplan for Phase 3B, to ensure these are embedded from the strategic level down to the detailed implementation. Homes England has made the commitment to extend the principles set out in the above documents to Phase 3B.

This will provide a coherent town wide approach and ensure that all residents have the opportunity for healthier and happier lives.



Figure 3.1: 'Putting Health into Place' (NHS England)



Figure 3.2: Northstowe Phase 2 Healthy Living and Youth & Play Strategy (Approved as part of Northstowe Phase 2)



Figure 3.3: Northstowe Phase 2 Design Code (October 2017)



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Site and Context Appraisal

4 Site and Context Appraisal

This section sets out the social and physical context of the site, the existing site features and the design influences associated with Phase 3B.

4.1 Northstowe:

The development proposals for Phase 3B, will complete the northern neighbourhoods of Northstowe. As such it must be seen in the context of Phase 1, 2 and 3A of Northstowe as well as the adjacent village of Longstanton.

The next pages illustrate the design influences that have been considered during the masterplan development. These also formed the basis of stakeholder and community engagement in the early stages of the design development.

4.1.1 Phase 1

Northstowe Phase 1 has been promoted by Gallagher Estates (now L&Q). Planning permission for this phase was granted on 22 April 2014, with the associated design code approved later that year.

Phase 1 is located to the north east of Longstanton and abuts the western boundary of the Cambridgeshire Guided Busway (CGB). The main area of Phase 1 accommodating the development proposal measures 97ha, with an additional 25ha of land within the application red line located southwest of Longstanton, accommodating flood attenuation ponds.

The Phase 1 proposal included:

- Up to 1,500 dwellings, including affordable housing in a mix of tenure types;
- A Local Centre, including space for a community building and provision for retail and other appropriate uses;
- A primary school;
- 5ha of employment land including a household waste recycling centre and foul water pumping station;
- Formal and informal public open space, including a sports hub of over 6ha and approximately 23ha of additional public open space including parks/play space and a network of footpaths and cycleways;
- Water bodies of approximately 5.2ha including a water park providing a recreational, ecological and drainage resource;
- 1.57ha of allotments and community orchard;
- Improvements to the existing B1050;
- Earthworks and cut and fill to enable land raising and re-profiling of the site for sustainable drainage purposes.

A Design Code was produced by Gallagher Estates (now L&Q) and Homes England in order to satisfy the requirements of the NAAP and, meet the requirements of a planning condition. This document comprises high level, town-wide design guidance as well as detailed guidance for Phase 1 only.

At the time of writing, the primary school, Pathfinder C of E Primary School is open and approximately 529 new homes (as of January 2020) within Phase 1 are occupied.

4.1.2 Phase 2

Northstowe Phase 2 lies to the south east of Phase 3B and delivers the central part of the development, comprising the Town Centre, and is approximately 165ha in size. This phase is bordered to the east by the CGB and to the west by Longstanton and surrounds the existing settlement of Rampton Drift.

Phase 2 of Northstowe, which is currently under construction, will be a series of urban neighbourhoods of up to 3,500 homes with Town Centre facilities and schools as well as community and sports facilities. The application for Phase 2 included:

- Up to 3,500 dwellings
- 1 secondary school as part of an education campus
- 2 primary schools
- Special Educational Needs (SEN) School
- Town Centre, including employment uses, formal and informal recreational space and landscaped areas
- Eastern sports hub
- Remainder of western sports hub (to complete the provision delivered as part of Phase 1)
- Dedicated Busway
- Primary road links
- Construction of a new highway link (Southern Access Road (West)) between the proposed new town of Northstowe and the B1050, and associated landscaping and drainage.

The Town Centre within Phase 2 will provide the primary focal point for the town. It is within this central core that the key services and employment provision will be located.

At the time of writing, the secondary school is open and the reserved matters application for an initial parcel of development, Phase 2A, has been approved.



Figure 4.1: Composite Plan showing detailed design and illustrative layout of different parcels within Phase 1



Figure 4.2: Pathfinder C of E Primary School opened in September 2017

The Healthy Living, Youth and Play Strategy (2018) and Design Code (2017) described in Section 3, and the Town Centre Strategy (2019), summarised below and submitted relevant to Phase 2, have been taken into consideration in the development of the proposals for Phase 3B.

Town Centre Strategy (2019)

The aspiration for Northstowe Town Centre, as set out in the Town Centre Strategy prepared for Homes England by Allies and Morrison, is to:

'Provide a dynamic and innovative centre that meets the needs of residents throughout its phased delivery and long into the future, as well as serving residents in surrounding villages and attracting a diverse range of workers and visitors.'

It aims to establish the Town Centre as a destination and a hub of activity; growing and evolving as development progresses to continue to meet the wide ranging needs of new residents, workers and visitors. The Town Centre Strategy sets out the changing roles of Town Centres, as they transform into social destinations for experiences and interaction due to the rise in online shopping. The range of services and facilities available will be complementary to Cambridge and provide a differentiated offer which isn't available in the wider context; meeting the needs of the Northstowe residents as well as drawing on a wider context through the distinctive retail provision.

In addition to retail provision, Northstowe Town Centre will comprise a spectrum of employment spaces. It will be a place to have ideas, start and grow a business, with a wide range of working environments provided to encourage a range of business types and sizes. New spaces will complement the sci-tech provision in the region and provide spaces for creative endeavour, with the intention being to develop a strong relationship between the Education Campus in Phase 2 and the businesses within the town.

The Market Hall and Civic Hub typologies are key components of the Town Centre, providing a mix of uses in one location including employment space, retail, leisure, community and cultural.



Figure 4.3: CGI of Phase 2 Town Centre (Allies and Morrison)

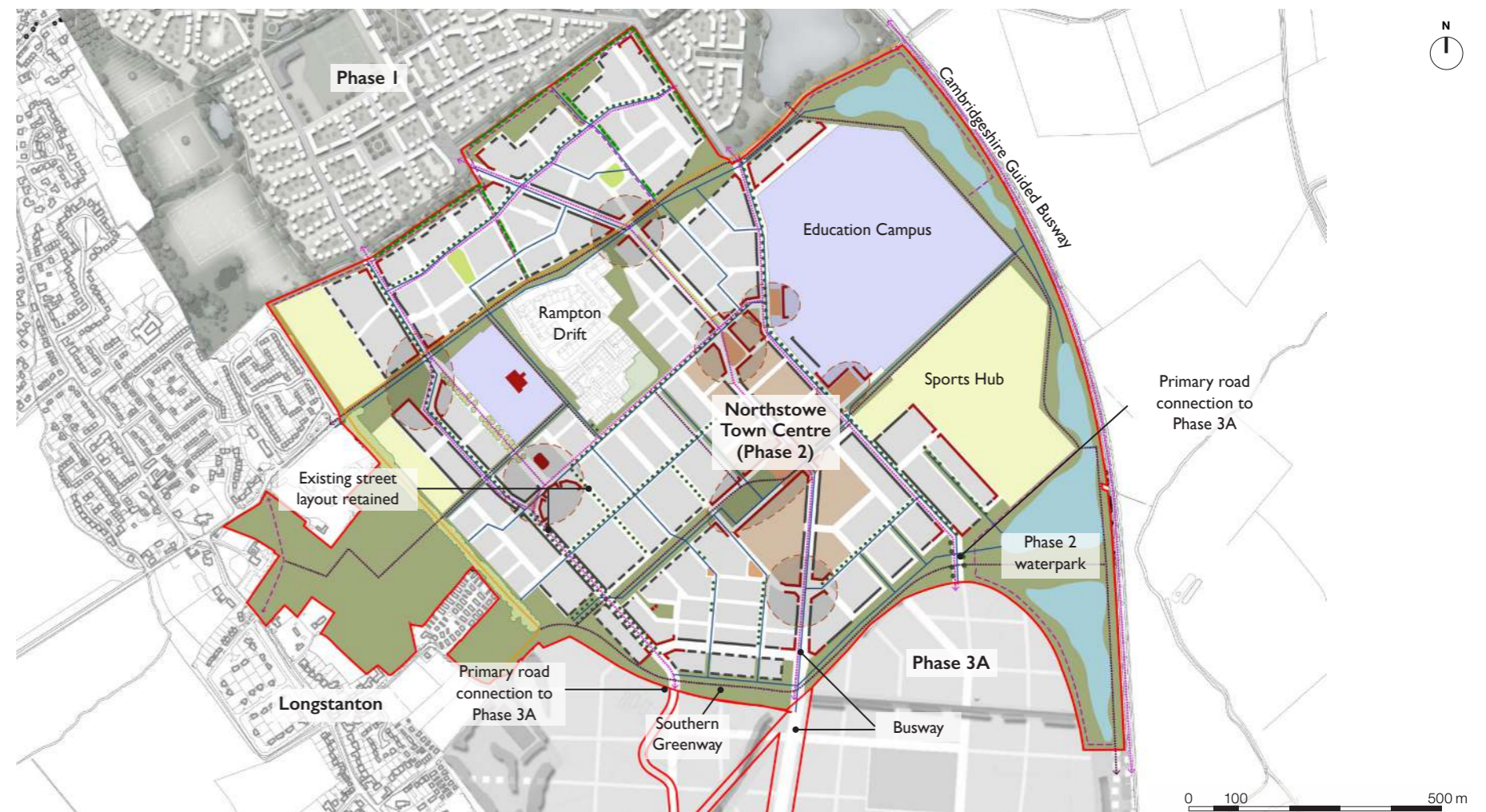


Figure 4.4: Phase 2 Urban Design Framework (extract from Design Code 2017)

4.1.3 Phase 3

Phase 3 is comprised of Phases 3A and 3B, which are located at the south and north of Northstowe respectively. Together, Phases 3A and 3B will deliver the remaining balance of homes (up to 5,000: 4,000 in Phase 3A and 1,000 in Phase 3B) and complete the town. Phase 3A will be covered by a separate outline planning application.

4.2 Phase 3B Site Location

The Application Site Boundary for Phase 3B is shown on Figure 4.5. The key points regarding the location of Phase 3B in relation to Northstowe and the wider context are listed below:

- Phase 3B will complete the northern neighbourhoods within Northstowe, adjoining Phase 1 in its south eastern corner.
- Phase 3B is located to the north of the B1050, with the settlement edge of Longstanton adjoining the southern edge of the carriageway.
- Improvements to the existing roundabout on Station Road will provide a direct access point into the site.
- The Cambridgeshire Guided Busway runs along the northern boundary of Phase 3B, with Longstanton Park and Ride (served by the guided busway) located within walking distance of the site.
- The surrounding area is predominantly occupied by farmland to the north, west and south-west.

4.3 Existing Site Features

An overview of the existing site features is set out in this section. For more information about the existing landscape character and site features please refer to the Landscape Strategy submitted as part of this application.

The Application Site is approximately 47ha, and is predominantly flat, comprising a large arable field. The existing features within the site include:

- A central woodland copse around a small pond. The central copse is connected to the western hedgerow boundary by a ditch and to the B1050 by an extent of hedgerow. A second ditch extends in a south west direction from the copse.
- Two attenuation ponds are situated to the west of the 3B site, on either side of Over Road.
- An area of semi-improved grassland along the northern edge of the site, immediately to the south of the CGB. This area is likely to have been created and managed as a mitigation area for the CGB.
- The former alignment of Fishpond Road, along the hedgerow that extends south from the central copse.
- A small number of broad-leaved trees scattered across the site, largely as occasional presence within hedges.

The following sections set out the site's context and associated opportunities and influences.




-  Application Site Boundary
-  Cambridgeshire Guided Busway
-  Access into site via improvements to the existing roundabout



Figure 4.5: Phase 3B Site Location Plan.

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4.4 Movement: Design Influences

The existing movement network within and surrounding the site has been analysed to ensure the structure of movement within the masterplan is well connected to its immediate and wider context. For a more extensive explanation of the movement analysis please refer to the Transport Assessment submitted as part of this Planning Application. The key opportunities identified are;

- To provide direct pedestrian and cycle links into Phase 1 and to the pedestrian/cycle route adjacent to the Cambridgeshire Guided Busway.
- Northstowe Phases 1 and 2 have established a network of strategic and local cycle routes. The principles and routes established in the earlier phases have influenced the masterplan for Phase 3B to create a well connected network of cycling routes, greenways and streets that encourage walking and cycling.
- The existing roundabout on Station Road will be improved to provide a direct access into the site and improved pedestrian / cycle crossing points.
- The existing informal pedestrian route which runs from the southern boundary of the site towards the copse of trees will be retained and integrated into the movement network. This route is used locally for walking.
- There is the opportunity to safeguard potential future links to land to the east, which may be bought forward by others.

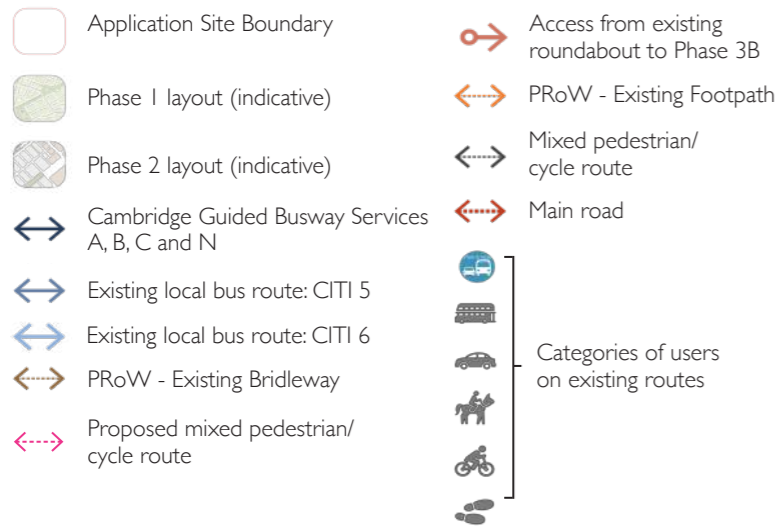
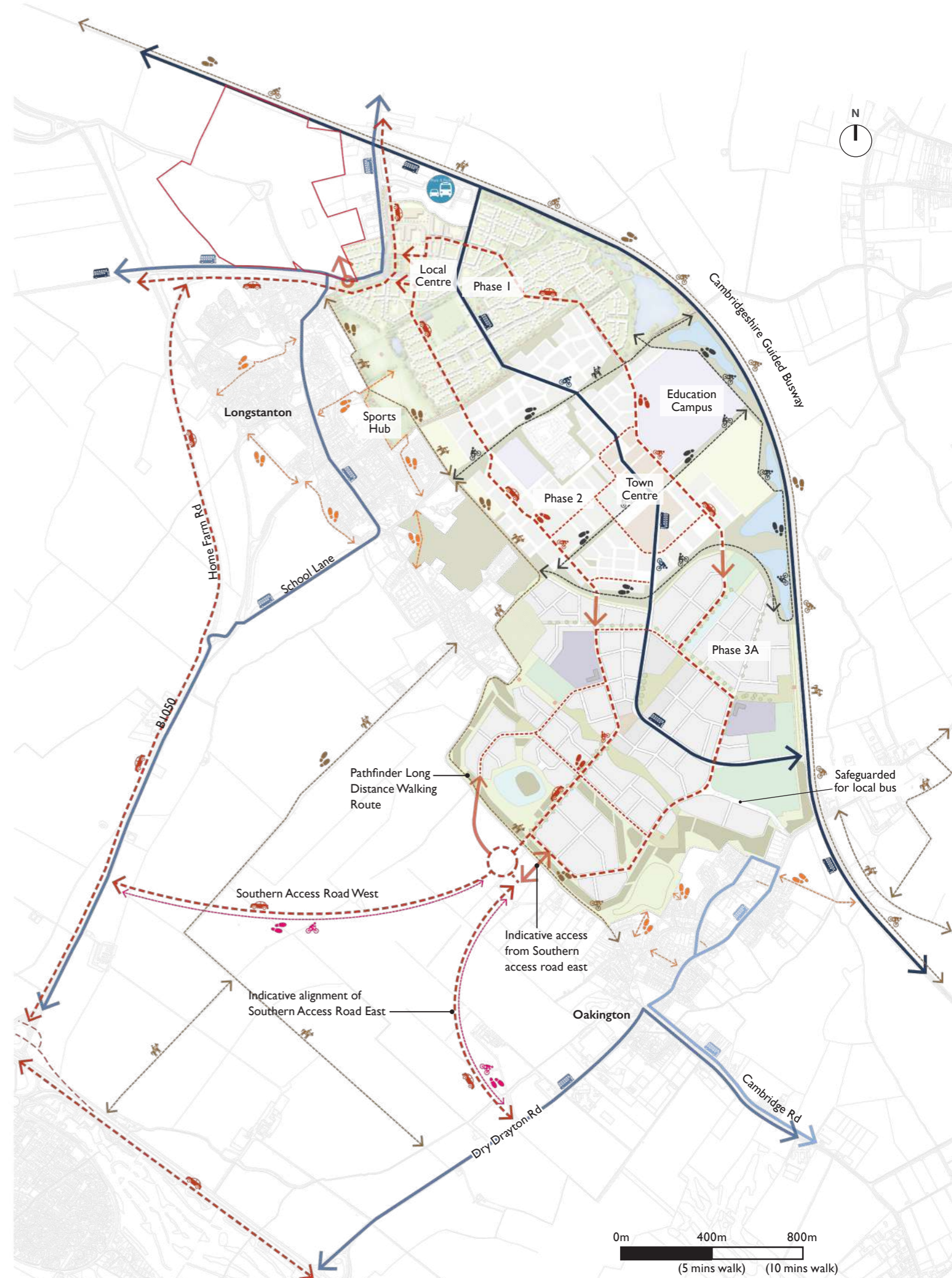


Figure 4.8: Movement Design Influences Plan.



4.5 Facilities: Design Influences

Cambridge is a regional city of great influence. It is located close to Northstowe and is connected by the CGB. There are a number of science parks in the wider sub-region, including Cambridge Research Park and Cambridge Innovation Park as well as the Cambridge Science Park, Alconbury Enterprise Park and Cambridge BioMedical Centre at Addenbrooke's, all three of which have direct CGB links from Northstowe. A number of these are currently being built out to meet the needs of the future residents of the area. More locally, the surrounding villages of Longstanton, Oakington, Cottenham, Willingham, Over and Swavesey are key locations in serving the needs of the local residents.

Northstowe Phase 1 comprises a number of facilities and services that will be easily accessible from Phase 3B, including a Local Centre, Sports Area and Primary School. The pedestrian and cycle network for Phase 3B will connect directly into Phase 1, encouraging sustainable travel for short distance journeys such as to the Local Centre.

Northstowe Town Centre's vision is to complement the employment provision within the area, and identify gaps in the market in terms of facility and service provision. A wide range of employment, leisure and commercial services and facilities will be provided within this phase of the town, which will complement those provided within Longstanton and Oakington and be easily accessible both within Northstowe and within the wider context.

Northstowe Phase 2, will provide a primary school, secondary school, special educational needs school, sports hub, community / health hub and a wealth of employment and retail provision, amongst others.

Longstanton is an important consideration for Phase 3B due to its proximity to the development and offering of services and facilities. The facilities within Longstanton include a supermarket, veterinary practice, primary school, post office and a public house.













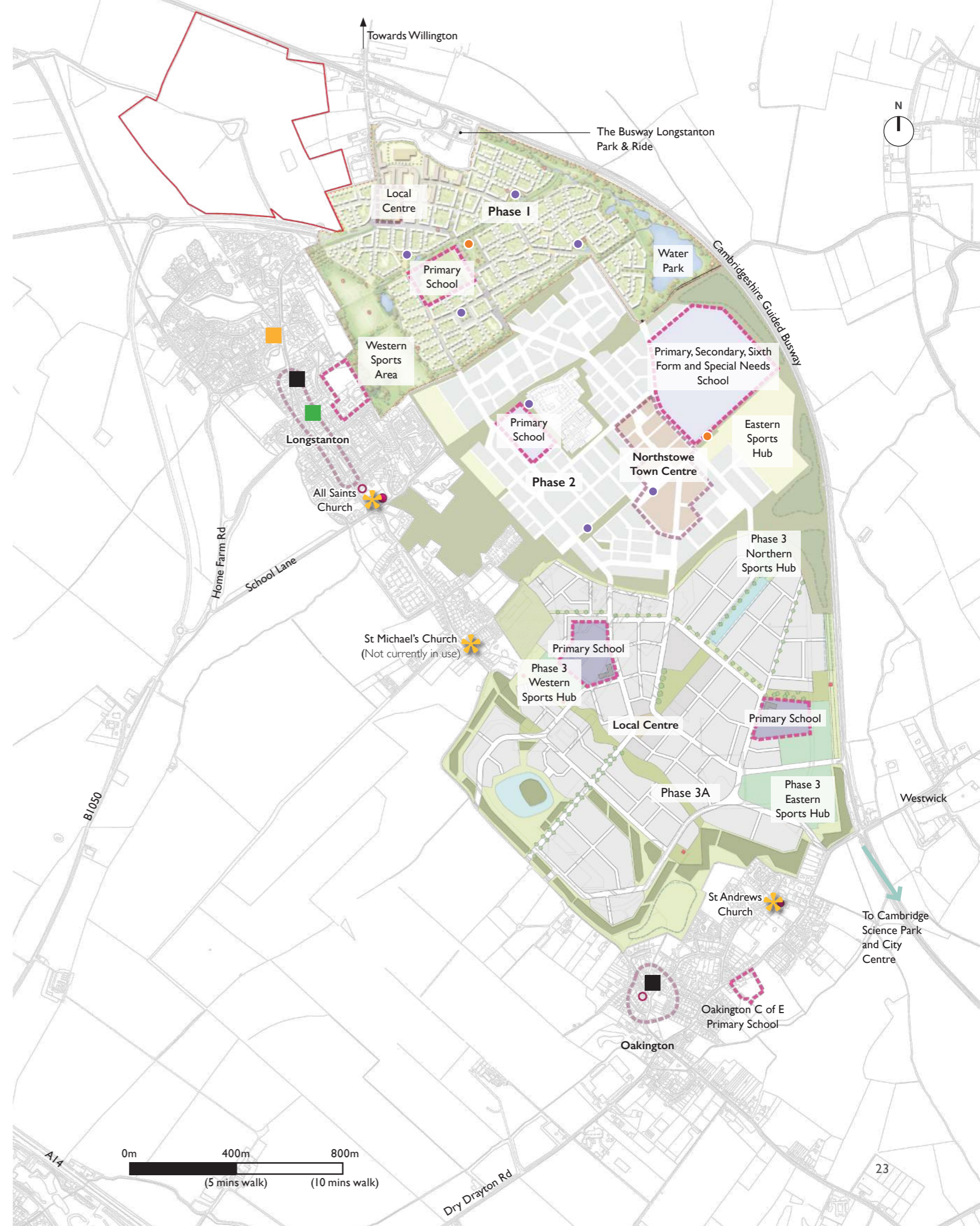
- | | | | |
|---|-----------------------------|---|--|
|  | Application Site Boundary |  | LEAP |
|  | Phase 1 layout (indicative) |  | NEAP |
|  | Phase 2 layout (indicative) |  | Place of Worship (St Michael's not currently in use) |
|  | School |  | Post office |
|  | Local settlement 'centres' |  | Supermarket |
| | |  | Veterinary practice |
| | |  | Public house |

Figure 4.9: Facilities Design Influences Plan.

March 2020



4.6 Landscape and Environment Design Influences

Landscape Character

Northstowe has a rich and complex landscape history, evolving through natural processes and human interactions, from its ancient origins. Throughout history it has significantly changed; the Northstowe development presents an opportunity for the next layer in its landscape evolution. For more information on the landscape character of Northstowe and the surrounding context, please refer to the Landscape Strategy submitted as part of this application.

The existing landscape features of Northstowe form the base layer of Green Infrastructure. Woodland, hedgerows delineating agricultural fields, and field ponds all form part of the existing mosaic of landscape typologies and biodiversity habitats in the surrounding area. The key components of the existing landscape character are:

- Surrounding arable farmland, offering open, flat long views.
- The Local Landscape Character of Longstanton comprises a medium sized village with orchards and paddocks on the periphery, providing an attractive setting.
- Tree copses represent an important feature in the wider landscapes and contribute to perceptions of landscape character.



Figure 4.10: The Fens National Character Area (NCA) is a large, low-lying landscape with a high number of drainage ditches, rivers and dykes



Figure 4.11: The Fens NCA is characterised by flat, open landscapes with extensive views



Figure 4.12: Aerial photo of the River Ouse and the surrounding fen landscape pattern.



Figure 4.13: Existing vegetation and watercourses will be retained where possible



Figure 4.14: Existing tree belts will be retained and enhanced as part of the green infrastructure strategy, where possible



Figure 4.15: The existing tree copse within Phase 3B will be retained.

Opportunities and Influences

The Landscape and Environment opportunities and influences have been identified as part of the site analysis. For further explanation please refer to the Environmental Impact Assessment and Landscape Strategy documents submitted as part of this Planning Application. The main influences are:

- Surveys have identified a range of considerations in relation to species including badgers, water voles and birds (including farmland birds). Their habitats have influenced the masterplan layout and mitigation strategies.
- There is the opportunity to retain and enhance the area of grassland along part of the site's northern boundary, that is likely to have been created and managed as a mitigation area for the CGB.
- The central tree copse will be retained as part of the proposals. It provides an important habitat as well as an attractive and distinctive landscape feature. The hedgerows within the site will also be retained where possible.
- There is the opportunity to retain and enhance the existing boundary hedgerows as part of the biodiversity net gain strategy as well as preservation of the interface with the surrounding countryside. They are also a key characteristic of the local landscape pattern.
- The opportunity exists to create Strategic Green Infrastructure corridors on site; providing walking and cycling links to the wider landscape context, including to Endurance Estates land to the east.



Figure 4.16: Landscape and Environment Design Influences Plan.



4.7 Heritage: Design Influences

The historical assets within Phase 3B have informed and shaped the development process, with the masterplan responding to the historical influences across the site.

The heritage of Northstowe and the wider context has been mapped and analysed to ensure that development maximises the opportunities that this historical context provides. Northstowe as a whole has a long and varied history, with wider fenland history suggesting the area could be traced back to Paleolithic and Neolithic times. In more recent history, parts of Northstowe were occupied by the RAF before it came into use by the Home Office. The RAF occupation has left its mark on the site, most notably in the form of the remains of the concrete runways in Phase 3A.

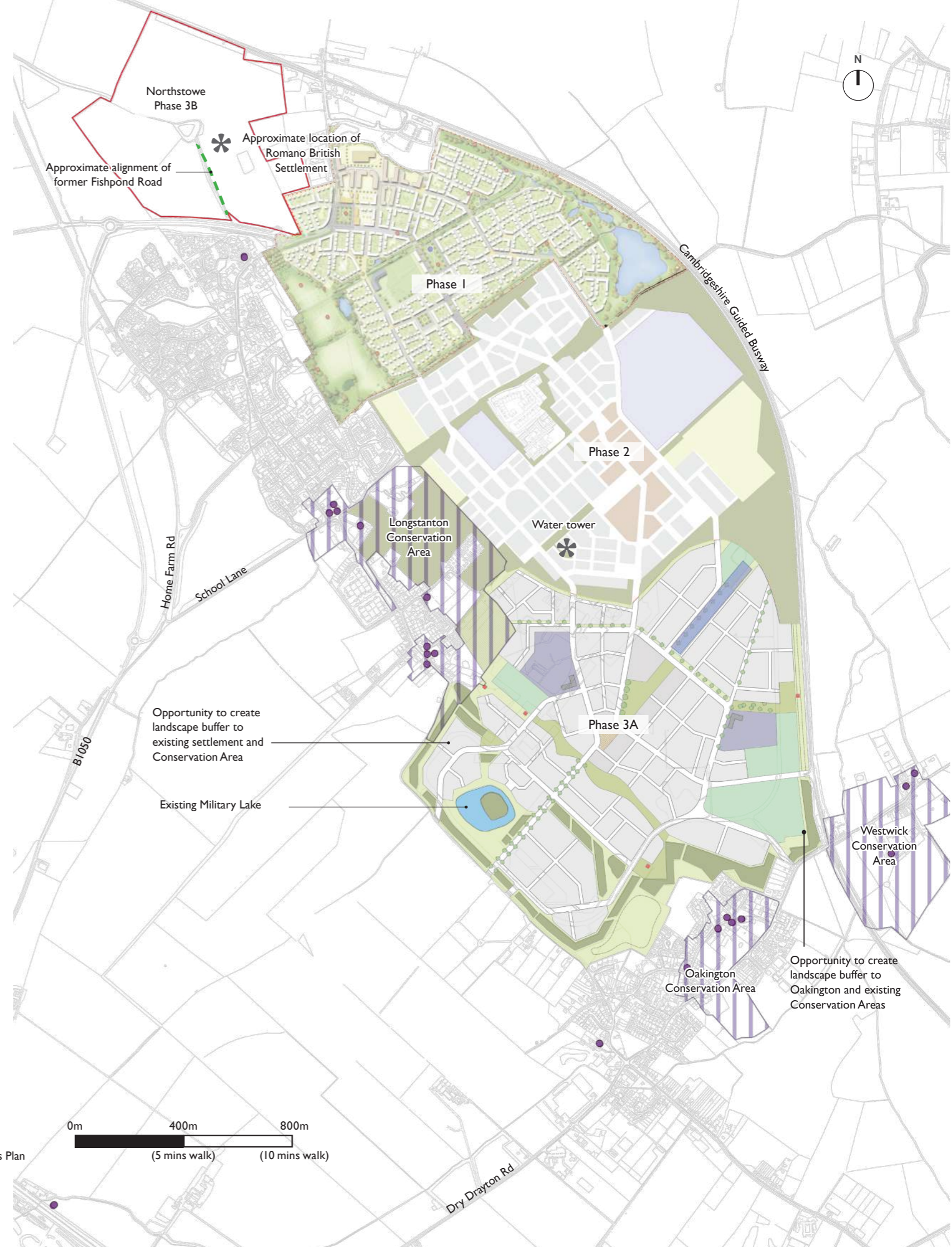
Whilst there are few formal designated heritage assets in the vicinity of Phase 3B, key heritage assets and considerations identified within Phase 3B comprise:

- Fishpond Cottages, which no longer exist on the site but were previously located within the central tree copse adjacent to the pond.
- The alignment of Fishpond Road, which leads towards the central copse from the site's southern boundary, originally serving the former Fishpond cottages.
- Site and street pattern of former Romano British Settlement, as shown on Figure 4.17 below.

For more detailed information on the heritage of the site please refer to the Environmental Statement Volume 1, Chapter 9: Cultural Heritage.



Figure 4.17: Historic map showing Romano British Settlement street pattern.



- Application Site Boundary
- Phase 1 layout (indicative)
- Phase 2 layout (indicative)
- Phase 3 layout (indicative)
- ▨ Conservation area
- ★ Existing water tower - Phase 2
- Listed buildings
- Former alignment of Fishpond Road

Figure 4.18: Heritage Design Influences Plan

4.8 Character: Design Influences

The vision for Northstowe is to create a new town with a distinctive identity, that draws on aspects of the local traditional characteristics. Therefore, an understanding of its context in wider Cambridgeshire is essential.

On the next few pages we have drawn out the key characteristics that have influenced the masterplan and development form. These contain influences from:

- Policy: Northstowe Development Framework Document (2012);
- Analysis of Cambridgeshire architecture; and
- Local influences.

It must be noted that this DAS supports an outline planning application and therefore, the level of detail of the development proposals remains at a high level. Future planning stages, such as the Design Code and Reserved Matter Application(s) will provide further detail on how individual buildings and architecture will relate and respond to local characteristics.

4.8.1 Northstowe DFD (2012)

The DFD includes a contextual study of Cambridgeshire settlements within proximity of Northstowe that are influential in determining key aspects of the town's character, layout and structure. These are:

Overall structure

- Urban form with a dense core set around a grid street pattern;
- Based on a linear form;
- Clearly defined approaches and gateways with marker buildings; and
- Connected greens and spaces.

Vernacular

- Cambridge stock brick of buff colour or yellow Gault clay bricks, pastel and white render;
- Plain grey roof tiles; turned gables;
- Varied building heights and plot width in specific locations; and
- Contemporary civic buildings.

Density and uses

- Mixed use located along Town Centre approaches;
- Mixed use commercial focus within Town Centre; and
- Continuous frontages along Town Centre approaches.

Landscape and drainage

- Use of open swales and water overlooked by development;
- Hedgerows, woodland or tree belts at settlement edges.
- Village greens; and
- Orchards and hedgerows paddocks.

4.8.2 Cambridge Architectural Character

In its contextual analysis, the DFD says relatively little about building form and materials - it is focused more on the structuring elements described above. Vernacular forms and materials are described in depth in the Council's District Design Guide SPD. The masterplan and proposed development form has been influenced by site visits of Huntingdon, Peterborough, Ely, St Ives and more recent developments in Cambridge (Abode, Accordia, Eddington, Trumpington Meadows and Addenbrooke's/Ninewells) to develop a greater understanding of how regional forms and materials could be interpreted in a contemporary way at Northstowe. This work has influenced the Phase 2 Design Code and is envisaged to influence the detailed proposals for Phase 3B. The following pages illustrate the key principles, grouped around the following themes:

- **How buildings define streets and spaces;**
- **Built form: rooflines;**
- **Built form: rhythm and proportion; and**
- **Materials.**

Materials

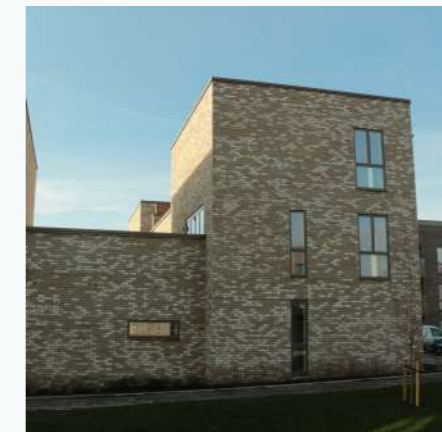


Figure 4.19: Consistent brick used for boundary walls and buildings create a coherent townscape in Addenbrooke's/Ninewells.



Figure 4.20: Materials vary in Huntingdon Town Centre, but the variety is controlled by being within a limited palette of brick types and render, and varying only building-by-building, not within each building.

Materials



Figure 4.21: Variation in material in this street in Great Kneighton is unified by the symmetrical buildings form, creating a high quality appearance.



Figure 4.22: Consistent use of a single brick type in Ely brings together these varied building forms.



Figure 4.23: Variation in material which respects the same colour palette in Eddington unifies the street and ensures it is seen as a cohesive whole.

Defining Streets and Spaces



Figure 4.24: This street in Ely is typical of the way that strong linear building forms define and enclose the street. The setback varies, but it is consistent within each building block.



Figure 4.25: Ely: different materials and built form but the consistent building line within blocks strongly defines the river-front street.



Figure 4.26: Contemporary forms in Eddington, Cambridge achieve a similarly strong enclosure of the street and a consistent approach within the building block.



Figure 4.27: Strong definition of Town Centre streets in Peterborough (left) and Huntingdon (right) but there is no doubt which is the main street. The greater width of the street and scale of the buildings on the left gives it a much greater sense of importance than the lane on the right.



Figure 4.28: More subtle changes distinguish these two streets in Great Kneighton, Cambridge. The regular building line, consistent street width and defined kerbs on the left give the street a more formal look and feel than the shared surface, varying width and irregular building line of the street on the right. Although subtle, the differences make the hierarchy clear.

Built Form: Rhythm and Proportion



Figure 4.29: Although the building scales and materials vary, the proportions in St Ives Town Centre are similar with a strong vertical rhythm and window proportions consistent across building types.



Figure 4.30: Strong vertical rhythm and consistent window proportions in Huntingdon.



Figure 4.31: Away from the Huntingdon Town Centre, buildings become more informal with varied proportions and sometimes horizontal window proportions



Figure 4.32: Informal buildings on the edge of Ely Town Centre have varied window proportions that make the building group appear complex. This complexity is 'calmed down' by the consistency of degree of roof pitch pitched roofs and building line



Figure 4.33: Trumpington Meadows: the distinctive building rhythm allows for a simple approach to elevations.

Built Form: Rooflines



Figure 4.34: The bringing together of a series of simple roof forms creates a rich townscape in Peterborough. Built forms do not need to be complex to be interesting - it is the way that simple forms come together that creates richness



Figure 4.35: Strong, simple roof forms create a solid, homely character to these homes in Ely.



Figure 4.36: The simplicity of form of this University building in Eddington gives a similar feeling of solidity. The quality of the materials and detailing ensure the built form doesn't appear too simple.

4.8.3 Local Context Analysis

This section analyses the immediate context of Phase 3B, which for the purpose of this DAS comprises Longstanton, Willingham and Over; the newly built homes in Phase 1 as well as the character and design principles established for Phase 2.

Phase 2 and 3, promoted by Homes England aim to deliver a step change to the design quality. The commitment to delivering design quality has been set out in the Design Code for Phase 2 and is envisaged to be taken forward in Phase 3.

'Lessons learned' workshops (from Phase 1 and other developments) within the team and also with SCDC officers have helped to inform character and design approach for Phase 3.

Longstanton

Longstanton is an historic, linear village stretching along the western side of Northstowe. The settlement of Longstanton expanded from the High Street, with the Conservation area formed around the two churches of All Saints and St Michael's Church and the historic core of the village lying in the south adjacent to Phase 3A. A range of buildings from different periods characterise this village, including the two churches, historic cottages and a recent development in the north, adjacent to Phase 3B. The recent developments are typically suburban in character, formed of two storey brick buildings which are set back from the main road. This, as was found in Oakington, contrasts with the more historic buildings in the village which sit much closer to the pavement edge and incorporate more permeable boundary treatments, as seen on the images opposite. Red and buff brick, rendering and pitched tiled roofs are all prevalent throughout Longstanton.

Willingham

Willingham was originally a "fen-edge" village that is located approximately 2km north east of Phase 3B. The landscapes within and around Willingham have defined much of its character over the course of its history and the village was noted for the growing of fruit throughout a large portion of the 20th Century, with extensive areas of land dedicated to orchards. However, with the growth of the tech-industry in Cambridge, flower growing and fruit growing now continues on a much smaller scale within the village.

There is an eclectic range of architectural styles within the village, ranging from historic thatched houses, to 1960s bungalows to more modern and contemporary houses. The large amount of infill development that has occurred as the village has grown results in a patchwork of different types of neighbourhood and streets.

Over

Over, like Willingham, was a "fen-edge" village that sits approximately 3km north west of Phase 3B. Originally, Over comprised two settlements; one of which was centred on St Mary's Parish Church and the other at the south eastern end of what is now the High Street. There are a number of Victorian buildings throughout the village. This historic character is dispersed amongst later infill development and housing estates, which reflect architectural characteristics of when they were built, resulting in a range of different building types and styles throughout the village.

Figure 4.37: Examples of local vernacular in Longstanton



Two storey dwellings set back from the pavement edge characterise much of Longstanton.



The more historic buildings within the village have a stronger relationship with the street afforded by their minimal set back and visually permeable boundary treatments.



St Michael's Church, a distinctive thatched church in Longstanton

Figure 4.38: Examples of local vernacular in Over and Willingham



Above: There are a number of Victorian buildings throughout Over scattered amongst more recent infill development.



Willingham comprises an eclectic range of architectural styles, from thatched cottages to modern infill development.

Northstowe

The town-wide structure for Northstowe is set out in the DFD and has been further developed as part of the Design Codes for Phases 1 and 2. In order to create a town that feels coherent and has a strong identity the following overarching requirements and principles have been developed.

Landscape and open space:

Landscape and open space is an essential part of the vision for Northstowe. Town-wide requirements include:

- Create a series of public open spaces for all ages and abilities;
- Use of native species;
- Integrate flood mitigation as design features, creating locally distinct spaces; and
- Provide natural areas of play.

Urban Form:

The objectives are to create an adaptable urban form that stands the test of time, is rich in character, locally distinctive and legible and memorable. Town-wide requirements include:

- Create walk-able streets to encourage ease of use for pedestrian and cyclists;
- Allow a variety of architectural approaches and provide active edges to the main spaces.

Movement: The dedicated busway provides the central spine through the town.

Town-wide requirements include:

- Give priority to pedestrians and cyclists, by creating a connected network of legible streets that provide a safe cycle and pedestrian environment;
- Use of tree planting to soften the street scene;
- Create a clearly defined street hierarchy; and
- Include streets that are paved and promote the use of shared surface areas.

Phase 1

A new residential neighbourhood with a range of houses of contemporary and traditional character. Phase 1 provides a variety of different house types and a Primary School, and it has established the beginnings of a 'town' character with appropriate building scales and character. A Local Centre is also planned.

Phase 2

Phase 2 of Northstowe contains the Town Centre and higher density development than in Phases 1 and 3.

The Phase 2 Design Code (2017) sets out the vision for this part of the town in terms of character. The following principles are set out to guide how Phase 2 is bought forward:

- The architecture will be contemporary and of urban character.
- Phase 2 will be of higher density than other large developments in South Cambridgeshire, such as Cambourne or Northstowe Phase 1. It will comprise a high percentage of terraces, urban housing and flatted development.
- The development character will vary across Phase 2 with distinct differences to aid legibility. The Town Centre will be the most urban in character with mixed-use blocks of around five storeys. Residential areas surrounding the Town Centre will be more intimate with buildings of mostly 3 storeys and focussed on creating a high quality living environment.
- Medium to high-density housing will be combined with high quality open spaces that are located within short walking distances from all homes.
- Local tradition will inform the overall structure, scale and order of buildings as well as the use of materials, ensuring that Northstowe will be based on the local context and vernacular architecture.
- Streets and spaces will be social areas that encourage community interaction and avoid segregation of the elderly and less able.

Phase 2A - Urban Splash

The proposals for Phase 2a, prepared by Urban Splash, have Reserved Matters approval. The proposals show a neighbourhood that is strongly shaped by the fenland context of the site. The vision for this parcel is to create a contemporary fenland village, 'Inholm Village', which has a perimeter of landscape and is a clearly defined new neighbourhood quarter. The parcel will be permeable and connected to surrounding neighbourhoods within Phase 2 and wider Northstowe.

The dwellings within Inholm Village will all be of modular construction and will offer a range of urban typologies, with an innovative approach to amenity and parking. The proposals demonstrate the quality of development that can be achieved with appropriate masterplanning and design coding.



Figure 4.39: Northstowe Phase 1.



Figure 4.40: Phase 2 Town Centre Visualisation (Allies and Morrison)



Figure 4.41: Phase 2A Reserved Matters Application (Urban Splash)



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5

Design Development Process

5 Design Development Process

This chapter sets out the process of initial design and early engagement that was undertaken following the site and contextual analysis.

5.1 Introduction

The design of Phase 3B has been through a number of iterations, each responding to key contextual, design and technical considerations. The key principles that underpin each of the design iterations are as follows:

- Creating a direct vehicular access point on the site's southern boundary via improvements to the existing roundabout on Station Road;
- Retaining the existing copse and hedgerows woodland within an integrated network of green infrastructure;
- Creating pedestrian and cycle links through Phase 1, which in turn improve connectivity to the Phase 1 Local Centre and the Town Centre within Phase 2; and
- Responding to the surrounding context with suitable design approaches.

The additional principles that have helped inform each of the design iterations are set out over the following pages.

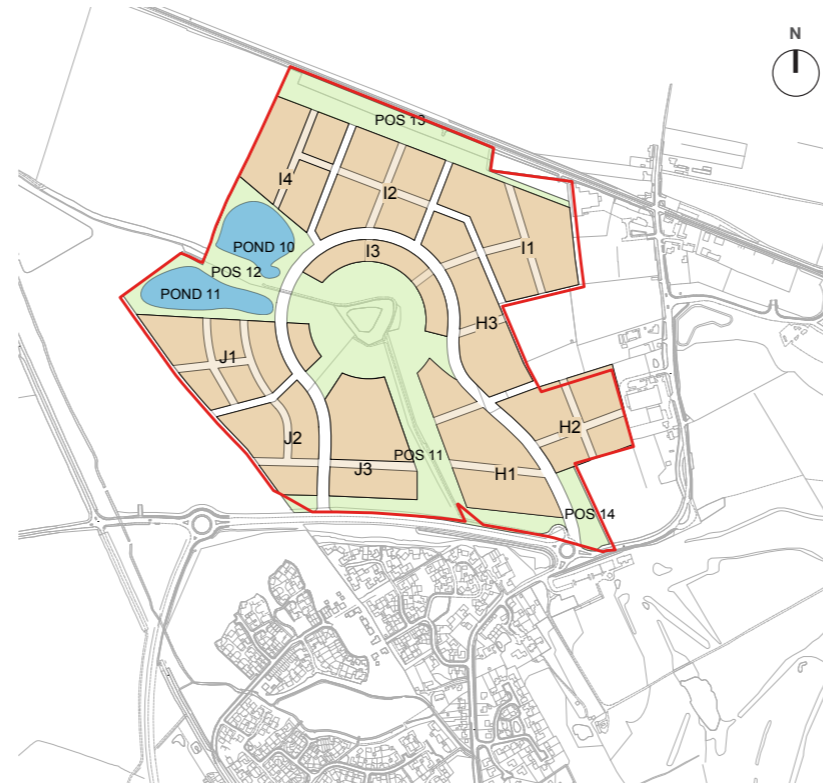


Figure 5.1: Iteration 1

Iteration 1:

- Iteration 1 was developed to provide an initial concept that tested how the residential development, open space and school could be arranged, taking into consideration the opportunities and constraints across the site. This iteration retains the existing tree copse and associated hedgerows within a network of new open space, a principle which is seen as fundamental to the development of this phase and has thus been carried through all subsequent iterations.
- A confident building line along the site's boundary with the CGB was incorporated in this early iteration to respect the approach that is characteristic throughout the new town
- Iteration 1 tested a conceptual idea of looping the access road around the copse of trees to result in development blocks that encircled and overlooked this distinctive landscape feature.
- Whilst the concept of overlooking the central tree copse is seen to be a key principle of the phase, the development pattern explored in this concept were too formal in character and not in keeping with the existing landscape characteristics.
- Resulted in less efficient development parcels, allowing less land to be set aside for open space.

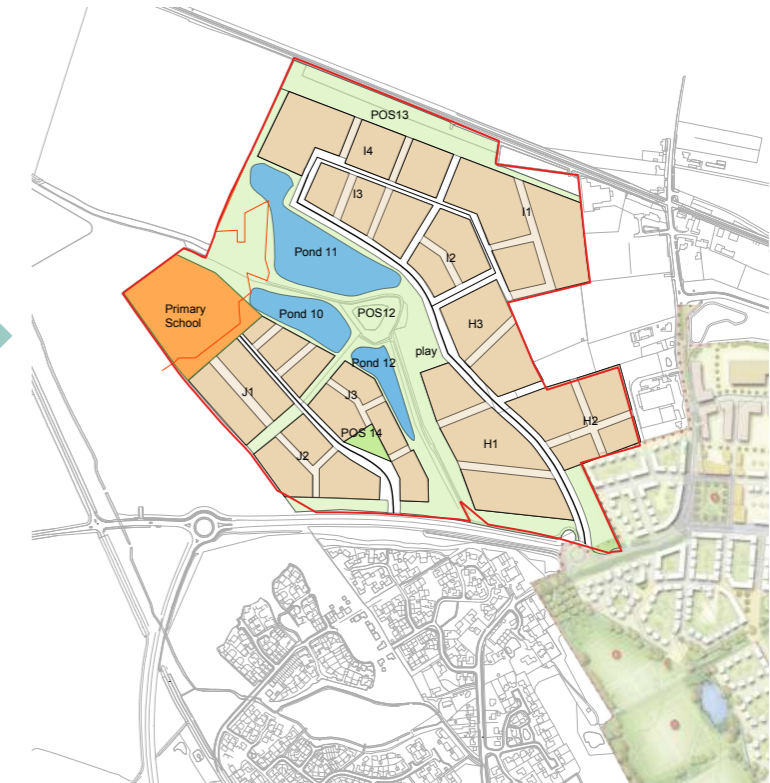


Figure 5.2: Iteration 2

Iteration 2:

- Iteration 2 was developed to test how the provision of two separate access points could be accommodated within the site, with pedestrian / cycle links only between the eastern and western parcels to create two main bodies of development.
- It was felt that the provision of two unconnected development parcels created unnecessary segregation within the site, with the western parcel in particular appearing fragmented and detached from the main body of Northstowe.
- This option also tested a new location for the school: in the north western corner of the site. This would allow the school to sit away from the key roads and within an area of open space. However; this location is not as easily accessible via foot, bike or car as other locations within the site and sits in the opposite corner of the site to Phase 1. This lack of connectivity was seen to override the positive environmental factors associated with this location.
- A large proportion of the external space for the school site would sit within the flood zone, which would be a design challenge to ensure usability at all times.
- The green space provided to the east of the access road provided in all of the iterations thus far was felt to be creating segregation between Phase 1 and Phase 3B, which could have an impact on how the town is experienced.



Figure 5.3: Iteration 3

Iteration 3:

- The school within Iteration 3 was located within close proximity of the access point, extending up to meet the open space surrounding the tree copse. This location is beneficial in terms of accessibility, however it would not create a positive, active edge overlooking this central area of public open space.
- This iteration comprises a looped road that connects into Station Road, with one linkage between the eastern and western development parcels. It was felt that the presence of this secondary road within the north of the site could have a negative impact on the landscape quality and usability of this area of public open space.



Figure 5.4: Iteration 4

Iteration 4:

- The final iteration provides one primary access point into the site, via improvements to the existing roundabout on Station Road.
- Future proofed to enable potential creation of secondary vehicular access and additional pedestrian and cycle links provided via land to the east.
- The building line along the southern boundary of the site sits in line with that of Phase I in the south eastern corner; visually integrating the site into the setting of the wider town.
- The school has been retained within the parcel north west of the primary access point. This ensures pedestrian, cycle and vehicular accessibility for residents of Northstowe and the surrounding settlements in comparison to the location tested in Iteration 2. Furthermore, a development parcel is located to the north of the school site, ensuring the tree copse and associated open space is overlooked.
- The street that connects the eastern and western development parcels within the north of the site has been downgraded to lessen the impact on the open space it runs through.
- The block pattern developed in this final iteration explores the use of key streets along view corridors, creating views towards the central tree copse from the CGB.

The proposals for Phase 3B have been developed and informed in response to a series of community and stakeholder engagement events as well as presentations to design review panels.

5.2 Stakeholder and Community Engagement

The Stakeholder and Community Engagement Report which accompanies this Planning Application sets out the process of community engagement that has closely informed the design development of Phase 3B.

The initial concept proposals were discussed with the local community, stakeholders and interested parties at an early stage to establish their key priorities and interests, and to ensure that the masterplan was founded on a generally agreed concept.

Three stakeholder engagement events have been undertaken in July 2018, November 2018, and September 2019. These engagement events comprised the following:

- A Council member session
- An interactive workshop attended by a range of stakeholders; and
- Two public drop-in sessions

Online questionnaires were made available for any stakeholder or interested individual to complete following the sessions.

July 2018

The first engagement event took place in July 2018, to introduce stakeholders, Northstowe residents and the wider community to the development of the emerging masterplan. The first was held on July 7th 2018 at Pathfinder School, Northstowe and the second in Crossways Communita Café, Oakington on 30th July 2018.

Boards explaining the site analysis process and presenting the initial concept ideas and access strategies for the masterplan were displayed at the events, with the opportunity for attendees to comment on these either via post-it notes stuck onto the boards or via a questionnaire which was handed out. There was a further opportunity for people to comment online via a surveymonkey questionnaire which was posted on the Northstowe website.

The key topics raised at the engagement events (by stakeholders and the public) were:

- Desire to retain the existing tree copse and woodland on the site;
- Keen to promote the sense of a healthy town;
- Establishing the opportunity to integrate Phase 3B with the rest of Northstowe; and
- Sustainable travel was raised as a key interest and ensuring that footpaths and cycle paths are provided where possible.

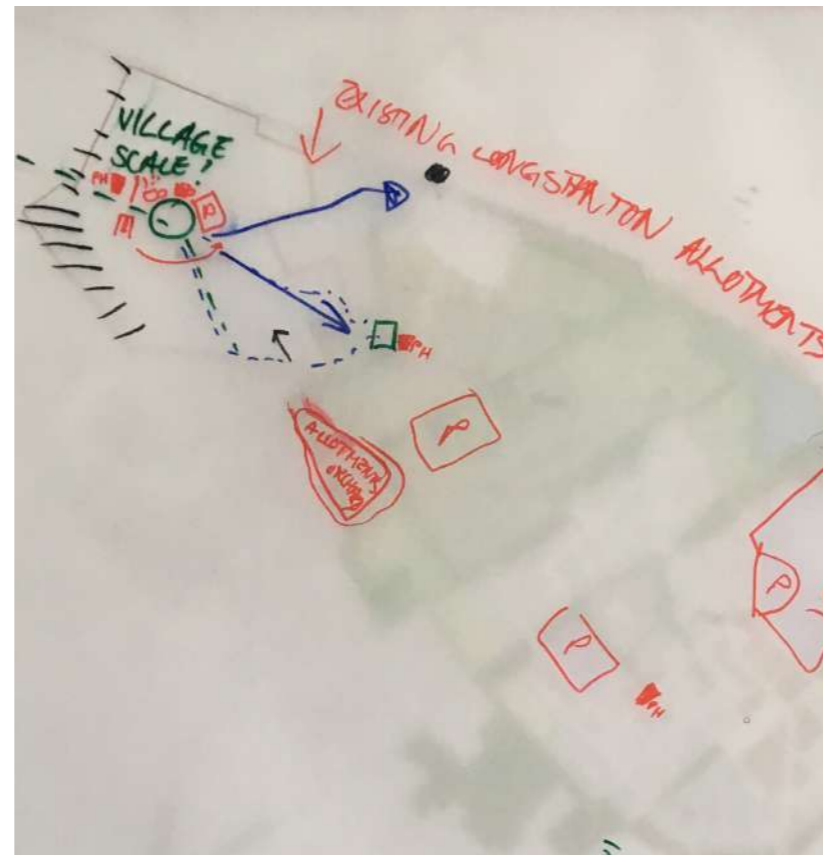
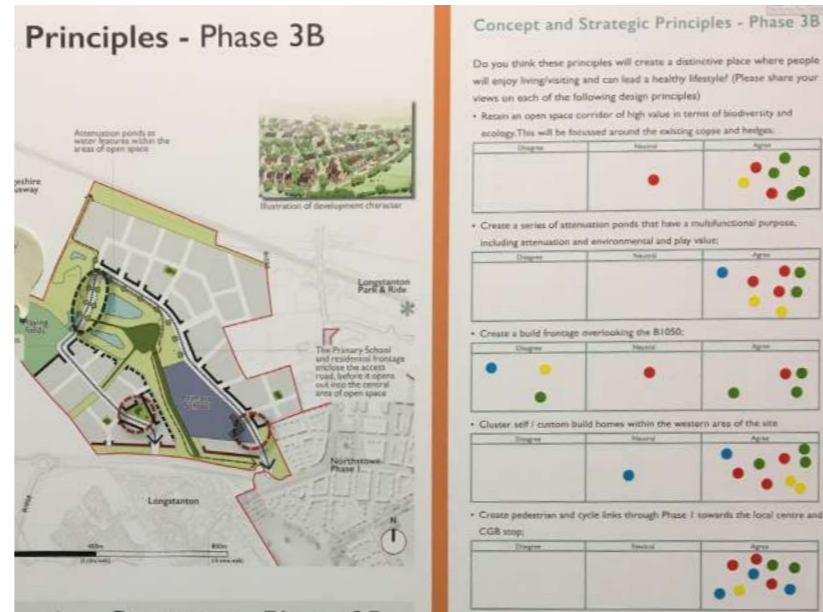


Figure 5.5 (above two images) : Attendees were invited to comment on the site analysis and concept proposals. These comments then helped shape the further development of the masterplan.



Figure 5.6 (above two images): The initial masterplan proposals were discussed with stakeholders and the local community.

November 2018

Following the structure of the engagement events held in July 2018, the two events held in November were located in the Pathfinder School and Crossways Community Café, Oakington, with the opportunity to comment on the proposals online after the engagement had been held. The engagement sessions presented the initial masterplan and access proposals to stakeholders, Northstowe residents and the local community, demonstrating how the design process had evolved in response to the previous comments received.

The responses to the initial proposals included:

- Multiple references to prioritising sustainable transport in the movement and access strategy over cars; and
- Desire to ensure cycle and footpaths are integrated into those around Phase 3.

September 2019

The engagement event in September 2019 was held at Homes England's offices in Northstowe. This event comprised two public drop in sessions. A council members session was held at SCDC offices.

The responses received to the pre-application proposals for design and access included:

- A desire to see cycle paths to encourage cycling as a mode of transport.
- Desire to see play facilities for youth / teenagers.

An additional update session was held in Oakington in November 2019.

5.3 Design Council (December 2018)

In December 2018 the emerging masterplan for Phase 3B was presented to the Design Council Review Panel. Some of the key points raised included:

- The Phase 3 masterplan has the potential to embody Homes England's vision for ensuring community health and wellbeing, placemaking and sustainability in the delivery of housing, and set a benchmark for future developments.
- Ensure that the development in design at Phase 3B focusses on integrating the development with Phases 1, 2 and the surrounding area.
- Encouragement to challenge current ways of thinking and develop a flexible parking strategy; one that can gradually reduce car-use over time.

5.4 Cambridge Quality Panel (May 2019)

In May 2019 Cambridgeshire Quality Panel reviewed the proposals and conducted a site visit. Their points included:

- Ensure design strategy addresses potential future trends and aims with the capability for self-sustaining healthy communities, landscape quality and recreation at the heart of the future town.
- Aspiration to make Northstowe a low carbon development that is able to accommodate the impacts of climate change.
- Promote walking and cycling as part of ethos.
- Potential to challenge level of car parking and provide creative solutions to parking, appropriate to ensure the public realm isn't car dominated.

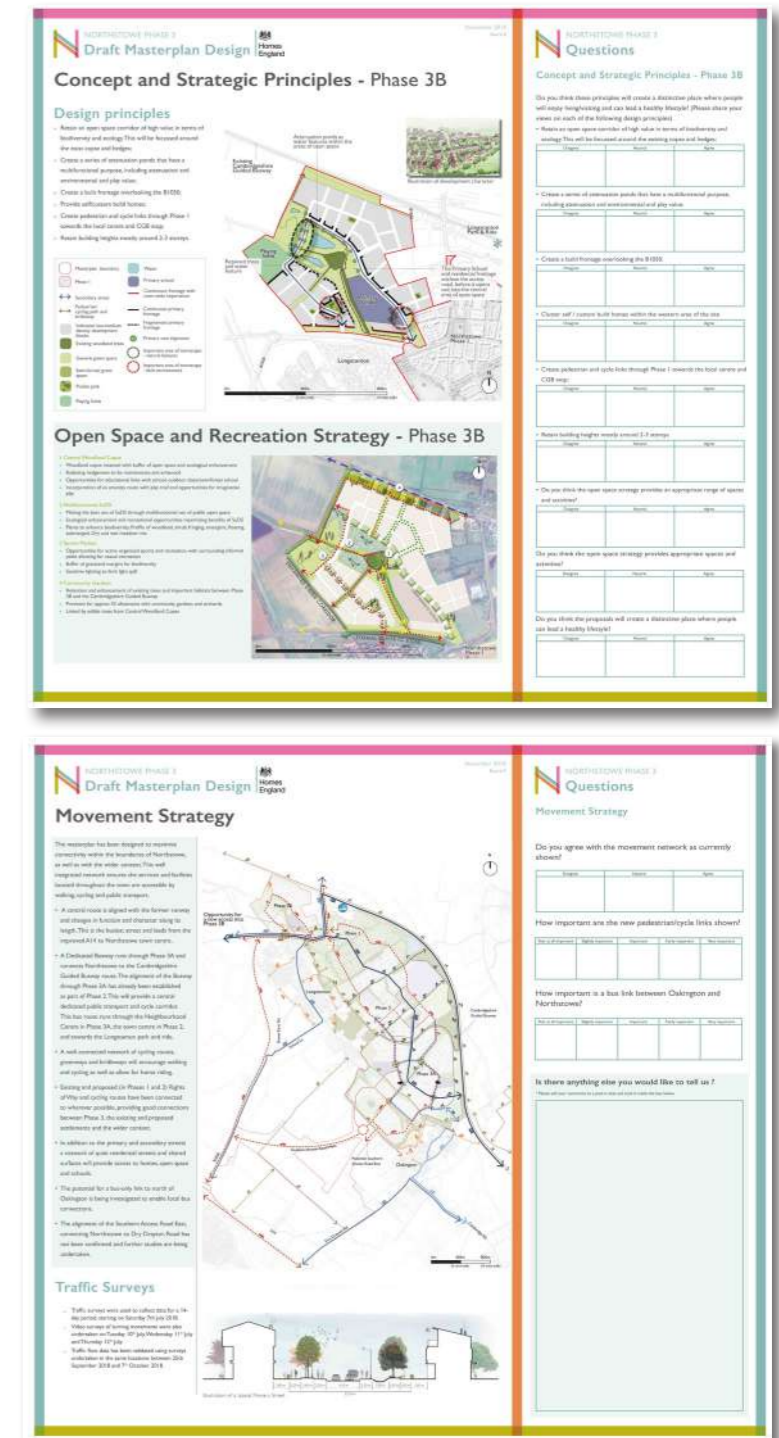


Figure 5.8: Stakeholders and the public have been invited to comment on the proposals at various stages of the design process.



Figure 5.7: Engagement Timeline



N

6

The Masterplan

6 The Masterplan

The key driving principles and concepts behind the proposals are explained within this chapter. These have influenced the masterplan, Parameter Plans and Urban Design Principles. Illustrative drawings and descriptions further explain the masterplan vision and opportunities to create a high quality neighbourhood.

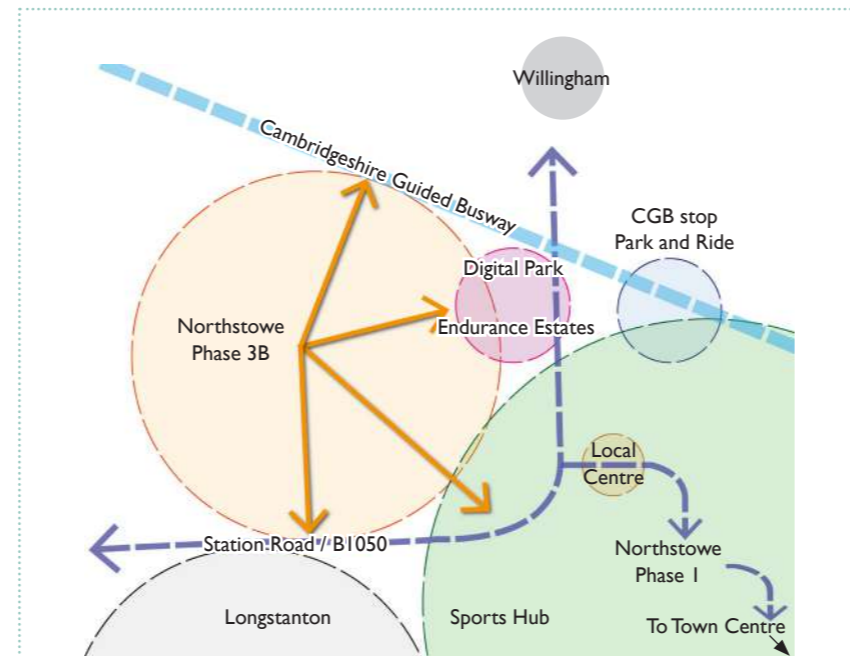
The purpose of this chapter is to explain the rationale behind the proposals for Phase 3B. The diagrams and illustrations set out in this chapter are illustrative only and do not establish any further fixed elements of the development beyond those set out in the parameter plans. Where diagrams and illustrations in this DAS include extracts from the parameter plans, they may also include additional illustrative materials. For the fixed parameters, please refer to the 'Movement and Access', 'Building Heights' and 'Open Space and Land Use' Parameter Plans submitted as part of this planning application. All other plans and diagrams, including the illustrative masterplan, are for illustrative purposes only to demonstrate how the proposed mix of uses and character areas could be accommodated within the site.

This chapter sets out the key Urban Design Principles for Phase 3B. These principles have been extracted into the Design Principles Document (Appendix A) which forms one of the approved documents supporting this application. The Design Principles Document also contains an Urban Design Framework Plan, which draws together the Parameter Plans set out in this chapter, and illustrates how the different elements of green space, land use and movement interact with each other.

6.1 Concept and Strategic Principles: Phase 3B

A number of key influences have shaped the development of the masterplan. This section explains these design influences and how they have helped form the emerging masterplan. These have been drawn directly from the community and stakeholder feedback and the site analysis undertaken.

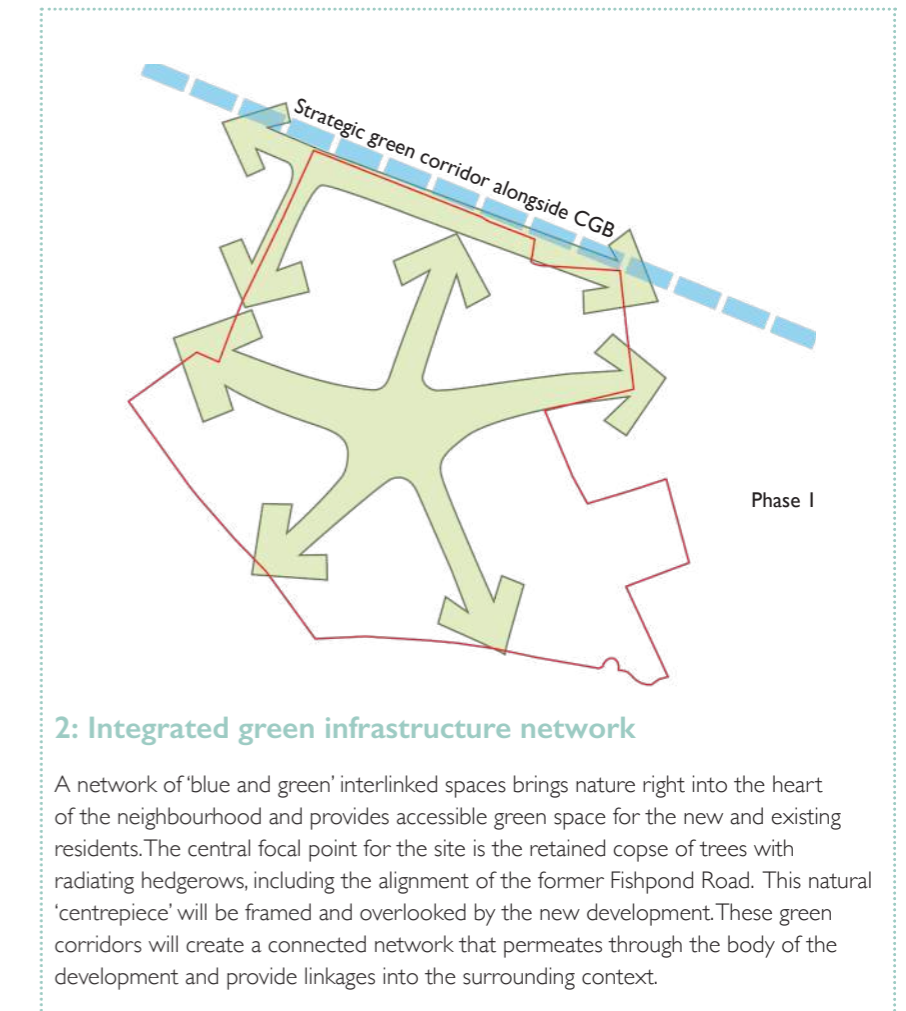
Figure 6.1: Design Principle 1



1: A connected neighbourhood that is integrated into Northstowe and the wider context

The masterplan incorporates potential pedestrian, cycle and emergency links that connect directly into Northstowe Phase I and the remaining allocation area to the east promoted by others. The connections proposed have been designed to provide convenient access to the local facilities including the Local Centre within Phase I and Longstanton Park and Ride, as well as ensuring the open space and primary school provided within Phase 3B are easily accessible to the wider community.

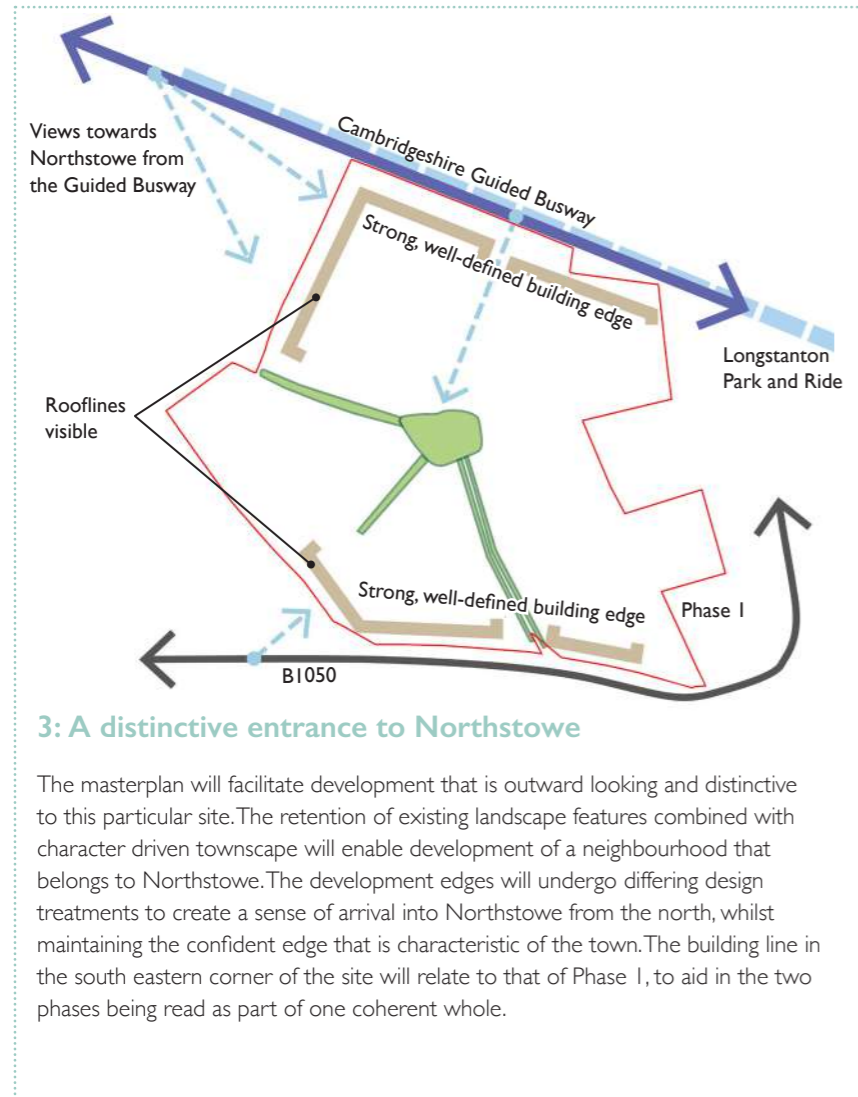
Figure 6.2: Design Principle 2



2: Integrated green infrastructure network

A network of 'blue and green' interlinked spaces brings nature right into the heart of the neighbourhood and provides accessible green space for the new and existing residents. The central focal point for the site is the retained copse of trees with radiating hedgerows, including the alignment of the former Fishpond Road. This natural 'centrepiece' will be framed and overlooked by the new development. These green corridors will create a connected network that permeates through the body of the development and provide linkages into the surrounding context.

Figure 6.3: Design Principle 3



3: A distinctive entrance to Northstowe

The masterplan will facilitate development that is outward looking and distinctive to this particular site. The retention of existing landscape features combined with character driven townscape will enable development of a neighbourhood that belongs to Northstowe. The development edges will undergo differing design treatments to create a sense of arrival into Northstowe from the north, whilst maintaining the confident edge that is characteristic of the town. The building line in the south eastern corner of the site will relate to that of Phase I, to aid in the two phases being read as part of one coherent whole.

4: Sustainability

Sustainability in its widest sense is a key principle for the development of Phase 3B. As Northstowe is a new town, future-proofing the development is important. The masterplan, movement network and built form will have the capacity to stand the test of time.

6.2 Vision

Phase 3B will provide an array of recreational and community opportunities in a safe and attractive setting that facilitate healthy lifestyles and wellbeing. Distinctive character areas and a connected network of landscapes will create a series of streets and spaces with defined identities. The following two pages set out some of the key design principles and aspirations for Phase 3B.



Streets that ensure safe pedestrian and cycle movement as well as social interaction



Community facilities encouraging interaction with nature



Landscaping carefully integrated into the streetscene



Informal landscape character



Ensure all spaces are overlooked and feel safe



Variety in types of open spaces, all comfortable and accessible

Figure 6.4: Key design principles and aspirations for Phase 3B



Strong degree of enclosure to proposed green corridors



Building form that overlooks the open spaces and streets



Neighbourhoods that encourage and accommodate cycling



Informal and natural play incorporated into open spaces



Retention of distinctive landscape features



Spaces that are exciting, fun and engaging

6.3 Character

The masterplan is driven by the aim to create a distinctive character and an urban form that is memorable. Building on the urban design approach of the wider town, the masterplan is formed around a series of distinct townscape features - or character generators. These draw together the design concepts developed with the community, heritage influences and existing landscape and site features. Together, these form neighbourhoods of varied and distinctive identities driving the structure of the development.

6.3.1 Masterplan Framework

The arrangement of open space and development plots has been informed through an iterative process of design and engagement, with the proposed structure shown in the Masterplan Framework in Figure 6.5.

The structure of the framework has been designed to maximise accessibility of the site, taking into account the access principles described in Northstowe Development Framework Document (2012), including the need for schooling to be within 600m and co-located to any services within the site, in the case of Phase 3B these services comprise a secondary mixed-use zone.

A series of key principles have informed the development of the Masterplan Framework on a town-wide scale. These are:

- Creating a legible movement network that is well integrated into Northstowe and the wider context. The movement network must promote sustainable travel options, with direct and accessible pedestrian and cycle links.
- Ensuring the potential block structure is robust, creating clearly defined streets and spaces and the movement network connects to the surrounding street pattern within Phase 1, ensuring that the town will be seen as a comprehensive whole.
- Reflecting the strong development edge adopted in Phases 1 and 2 where the site boundary meets the CGB and fronting onto the B1050 Station Road.
- Ensure the approach to Northstowe from the north via the CGB and the B1050 is distinctive in character.
- Integration of generous green spaces.

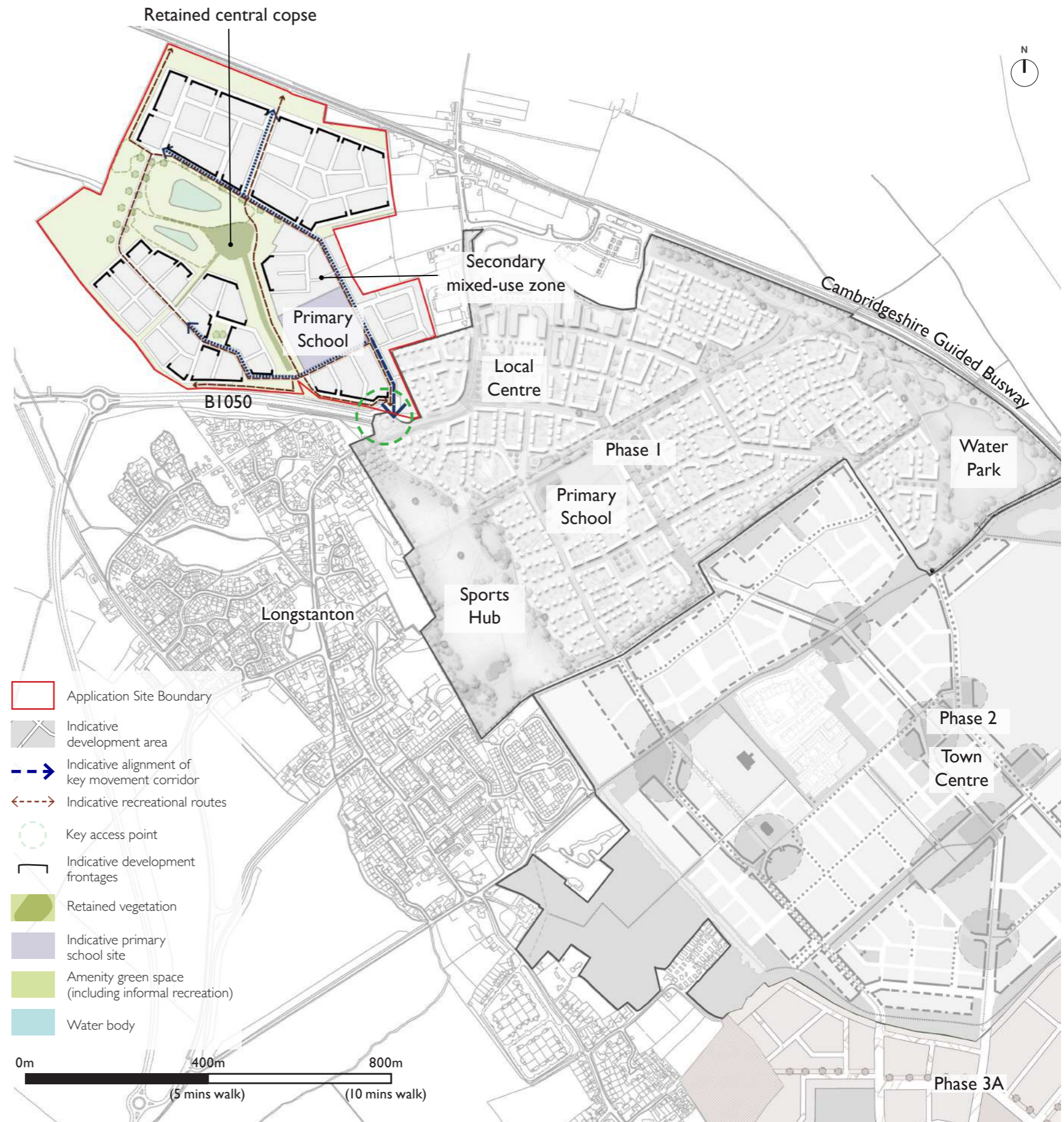


Figure 6.5: Masterplan Framework - Northstowe

6.3.2 Phase 3B Urban Design Principles

The key character generators, made up of a combination of spaces and development frontages are:

- The existing tree copse.
- Existing hedgerows that radiate from this central copse.
- Reflecting the grid alignment of wider Northstowe and the former British Romano settlement.
- The different edges of the development which will perform different townscape functions to create a sense of arrival into Northstowe from the north.

In addition to the character generators the masterplan is underpinned by the following Urban Design Principles. These have been extracted into the Design Principles Document (Appendix A) which forms one of the approved documents supporting this application.

These principles have been developed in response to the site context and design influences discussed in Chapter 5, the community and stakeholder engagement events and feedback from The Design Council and Quality Panel (as set out in Chapter 5).

Character

- Create development edges that achieve a clear distinction between countryside and town and establish a sense of arrival into Northstowe from the north.
- Create a legible structure of development that is reinforced by well researched and locally appropriate building characters, planting and clear forms of development that are recognisable from the local context.
- Arrange housing into streets to support strong and characterful frontages. This ensures that all streets and open spaces are well overlooked by development frontages.
- Create a development block pattern that creates short, medium and longer distance views to the retained tree copse.
- The majority of the buildings are between 2-3 storeys, with localized high points of 4 storeys. As well as creating interest in the townscape, the building heights will respond to the secondary mixed-use zone, which is located along a key corridor within the development. The design code will provide further detail and refinements to this broad brushed height strategy to secure legibility.
- Retain and frame the existing copse of trees as a central focal point for the development.
- Retain the existing hedgerows and integrate these into street scenes and new public spaces. Enhance the landscape to compliment the architecture and create a desirable setting for new homes.
- Use a number of strategies to create distinctive public realm and arrangements of buildings around open space, squares and play. These include incidental spaces, retention of existing trees, street tree planting, reinforcing of existing tree belts and vegetation.
- Use simple, well designed buildings that are contemporary in style but informed by the local architectural context.

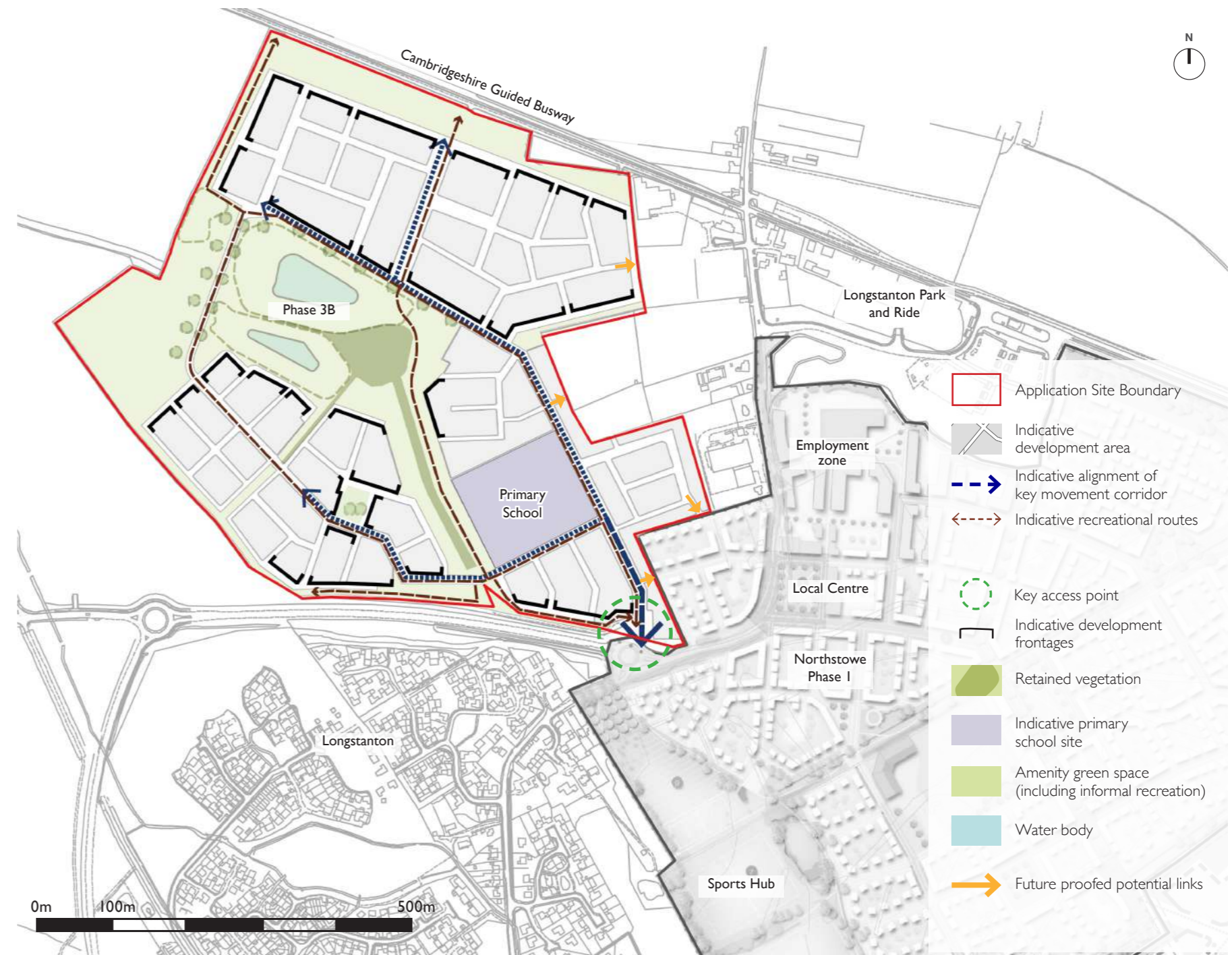


Figure 6.6: Masterplan Framework: Phase 3B

6.3.3 Illustrative Masterplan

The Masterplan Framework has been developed into an Illustrative Masterplan (Figure 6.7) to illustrate the key character generators and concepts for the site. The Illustrative Masterplan demonstrates:

- How 1000 homes could be accommodated on the site, with variety in terms of density and character;
- How the secondary mixed use zone could be located in an easily accessible location within the development;
- How the potential pedestrian, cycle and emergency access points between Phase 3B and Phase I could be accommodated;
- The structure of the key movement corridors that run through the site and enable possible future connections into Phase I and land to the east;
- The articulation of the urban blocks across the site, and how they have been structured to encourage walking and cycling and enhance legibility;
- How the green network permeates the main body of development, radiating from the central tree copse with a series of key green routes incorporating existing hedgerows and connecting the peripheral open space to the central focal point;
- The location of the Primary School to ensure it is easily accessible by new and existing residents, and via sustainable modes of transport;
- How different urban design principles could be applied to create variety and interest as part of the townscape;
- How the development could utilise the natural flood plain to accommodate flooding whilst also providing open space;
- The natural screening afforded by the existing hedgerows around the perimeter of the site; and
- How the new development edges could be designed to visually signal an entrance into Northstowe from the north; a transition from countryside to town.

Key	
1	2FE Primary School
2	Retained tree copse
3	Retained hedgerows
4	Greenway
5	Potential pedestrian/cycle link to Cambridgeshire Guided Busway
6	Secondary zone for mixed-use
7	Potential pedestrian, cycle and emergency access
➡	Framed view towards central copse



Figure 6.7: Phase 3B Illustrative Masterplan.

6.3.4 Retention of the existing landscape features

The existing tree copse and hedgerows have driven the structure of the development for Phase 3B. The retained tree copse forms a natural focal point, with the hedgerows that radiate from the copse retained and enhanced within green corridors. The following principles have been applied to the retention, enhancement and integration of this existing vegetation:

- Retain the tree copse in an area of semi-natural open space.
- Ensure the green corridors are connected to form an integrated network of green infrastructure that accommodates sustainable movement corridors.
- Safeguard potential connections into the sites to the east which may be bought forward by others, via the network of green corridors.
- Ensure all areas of open space are overlooked by the new homes.
- The inclusion of low rise pavilion blocks in the illustrative masterplan allows the green corridor potentially connecting into Endurance Estates land to run continuously towards the central copse, penetrating the body of development with landscaping woven through these housing blocks. This creates visual continuation along the green corridors and allows the landscape to lead the character of this area.
- Provision of an orchard alongside the former Fishpond Road, enhancing this natural landscape asset and respecting the heritage of the site.
- Retaining and enhancing the grassland along the boundary with the CGB, originally thought to be provided as part of the mitigation strategy for the Busway. This open space will function as an ecological mitigation strip as well as incorporating allotments to serve the new and existing residents.
- Ensure the green corridors incorporating the existing hedgerows are usable and serve differing purposes, allowing the open space to be used for a variety of different recreational purposes.
- Create multi-functional greenspace to provide flood capacity as well as contribute to open space and green setting.



Figure 6.8: Illustrative sketch.

6.3.5 Edge Treatments and Character Areas

This sub-section describes the design of the townscape in relation to edge treatments and character areas.

The different design treatments applied to the edges of the development respond to the varying context of the site boundaries. The following principles have been adopted for the masterplan:

Northern development edge

The northern development edge is an important area of townscape as it overlooks the CGB, with the sparse hedgerow/tree cover creating relatively uninterrupted views between the busway and the development. This edge therefore must fulfil the role of signalling the approach to Northstowe, channelling the key design characteristics of the town whilst reflecting Phase 3B's role as a predominantly residential phase.

The approach to the design of this edge in the Illustrative Masterplan comprises a varied but confident building line, with a framed view towards the central tree copse, giving the phase a distinctive identity. The building line varies, allowing space for additional planting. Towards the east it steps forward, leading into the proposed development at Digital Park. These proposals step up building heights to 4 storeys at the intersection of the CGB and Station Road, marking the entrance to Northstowe.

Western development edge

The western edges will be visible predominantly as a roof-line behind the existing perimeter hedgerows on approach to Northstowe from the north (along the CGB or B1050). The filtered views of these buildings will signal the approach to the town, whilst also respecting the existing views of the surrounding countryside. Both of these edges are set back from the boundary to allow the hedgerows to be enhanced. The building line along the western edge will be looser and more varied as its location on the countryside edge defines it from the more linear, continuous and urban as you move further into the town.

Southern development edge

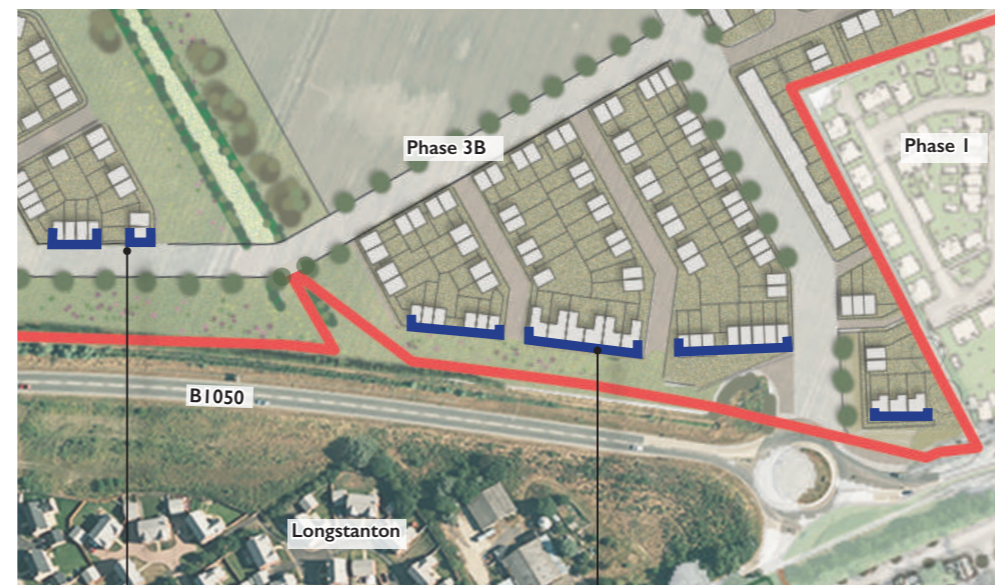
Much like the northern development edge, the southern development edge plays an important townscape role in signalling the approach to the new town. This has been responded to in the Illustrative Masterplan by the building line stepping forward as the B1050 moves further east. This increases the urbanising influence, ultimately resulting in the building line in the south eastern corner of the site being in line with that of Phase I, ensuring that Phase 3B and Phase I are read as two parts of a coherent whole.

Romano British Village

One overarching design principle of Northstowe is its orthogonal street layout and straight streets. Similarities can be found within the former Romano British settlement, although of a finer grain. There is an opportunity for new streets to reflect the alignment of this ancient street grid. This would create a distinctive character area that marks the previous settlement pattern.



Figure 6.9: Treatment along the Northern development edge, comprising a varied but confident building line



Looser development, with a greater set back from the carriageway

More continuous development creating a strong relationship with the carriageway edge

Figure 6.10: The building line steps towards the B1050 and becomes more urban in character on approach to Phase I.



Figure 6.11: Opportunity to reflect the alignment of ancient Romano British Village street pattern

6.3.6 Density Plan

A key desire from stakeholders and the local communities has been to avoid homogeneous 'everywhere' development. One way of ensuring variety in character is allowing densities to vary. Cambridgeshire market towns and villages comprise highly compact urban cores and lower density development at the edges, where garden sizes get larger.

Figure 6.13 shows how densities could be varied across Phase 3B to create variety in urban form.

Phase 3B contains areas of higher density than Phase I, which enables the large amounts of open space set aside for people and the natural environment.

Northstowe

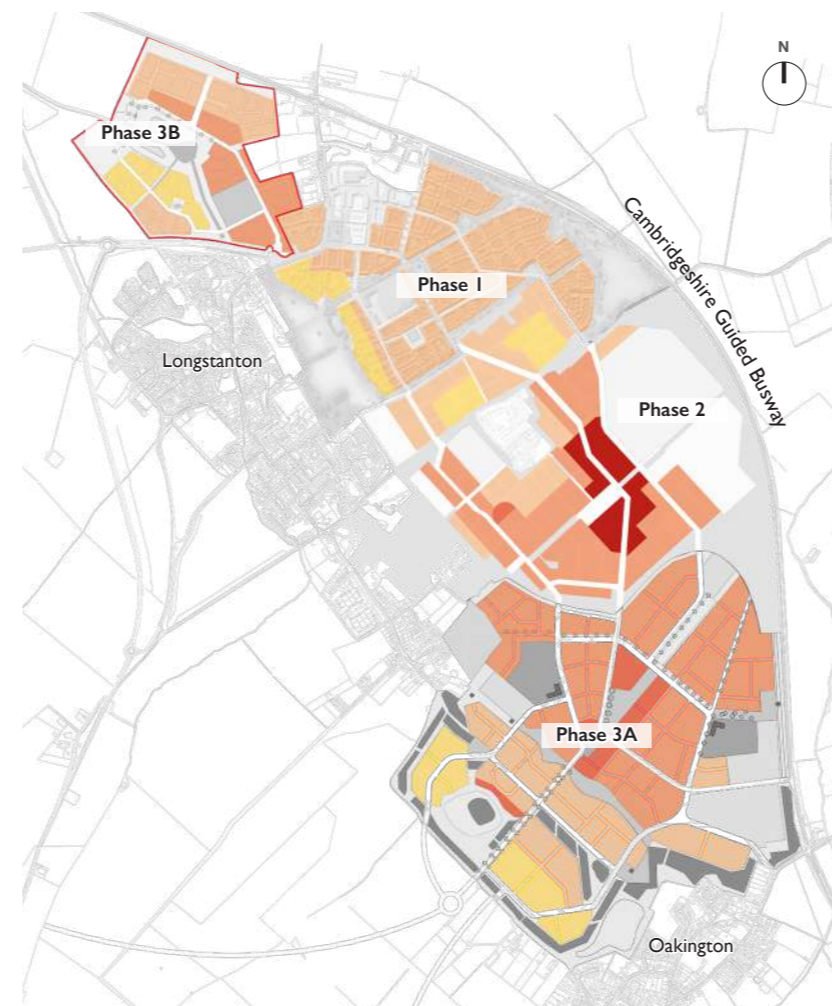
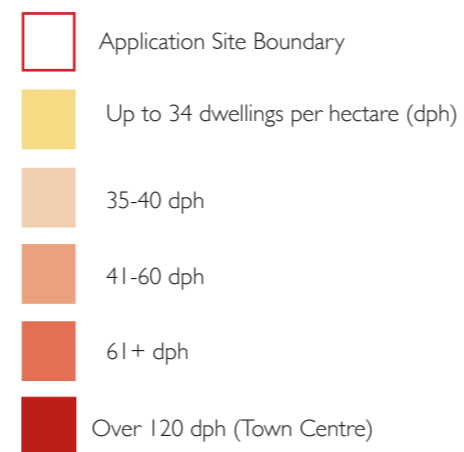


Figure 6.12: Broad density ranges at Northstowe



Phase 3B

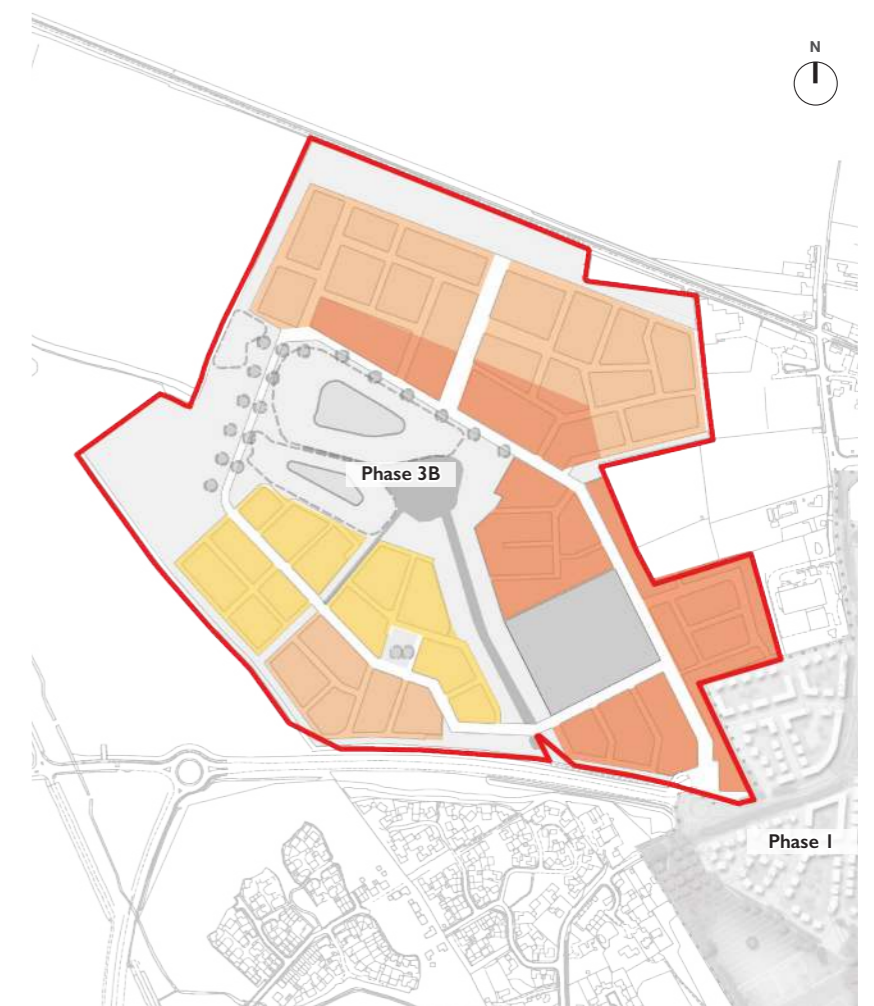
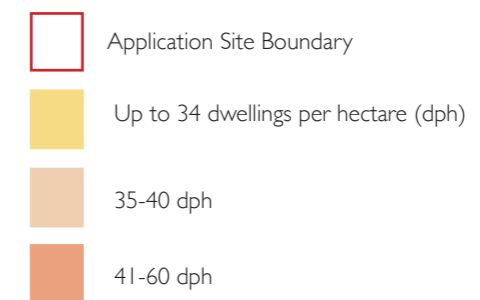


Figure 6.13: Illustrative Densities Phase 3B



6.3.7 Building Heights

Northstowe: Design Principles

Figure 6.14 shows how the heights proposed within Phase 3B relate to wider Northstowe. This diagram has been produced based on the Heights Parameter Plans for Phase 3A and Phase 3B, together with the approved Parameter Plans for Phases 1 and 2.

The plans shown at Figure 6.14 and Figure 6.15 set out the maximum development envelope for the visual impact analysis of the site. It is not intended that the storey heights set out are blanket heights to be applied across the site, instead they allow for variation in height up to and including the height set out on the plan.

The key principles that can be drawn from this diagram are:

- Phase 3B will predominately consist of buildings 2-3 storeys in height;
- A 2 storey zone along the 'Phase 1 edge' marks this particularly sensitive edge and respects the height of the existing homes;
- Key nodes within the development are marked with building zones of up to 4 storeys in height, includes a 'set-piece' green space and a potential area for mixed use development close to the school.

Northstowe

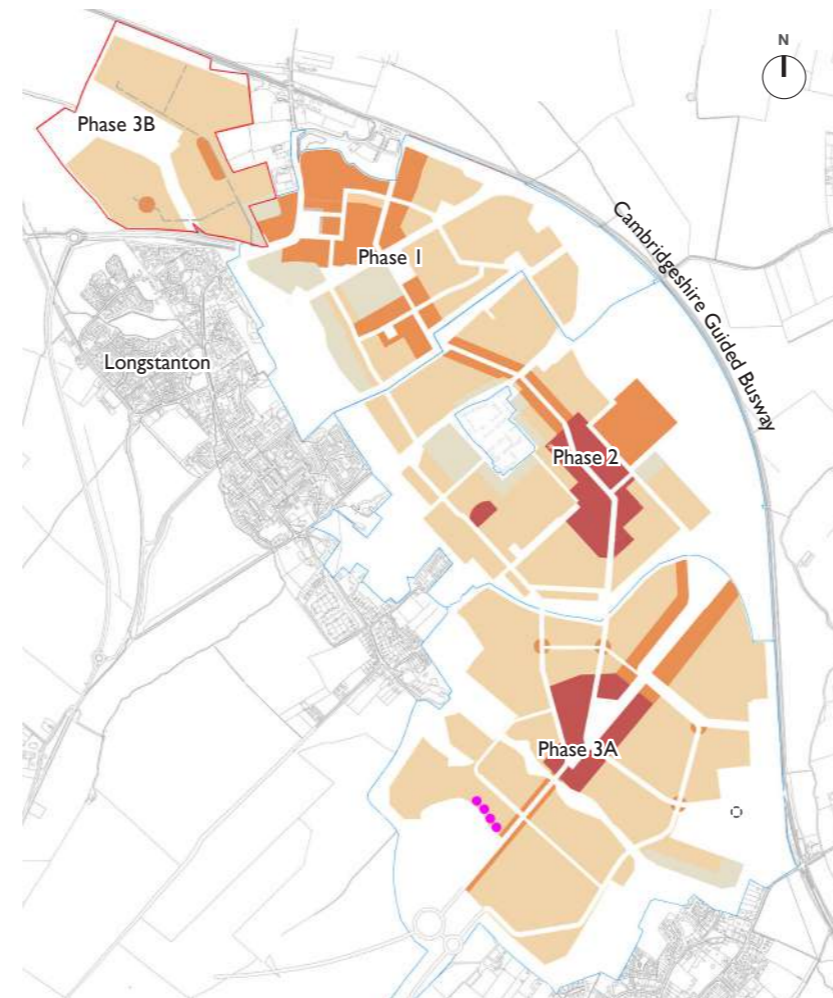


Figure 6.14: Building Heights across Northstowe.

Phase 3B

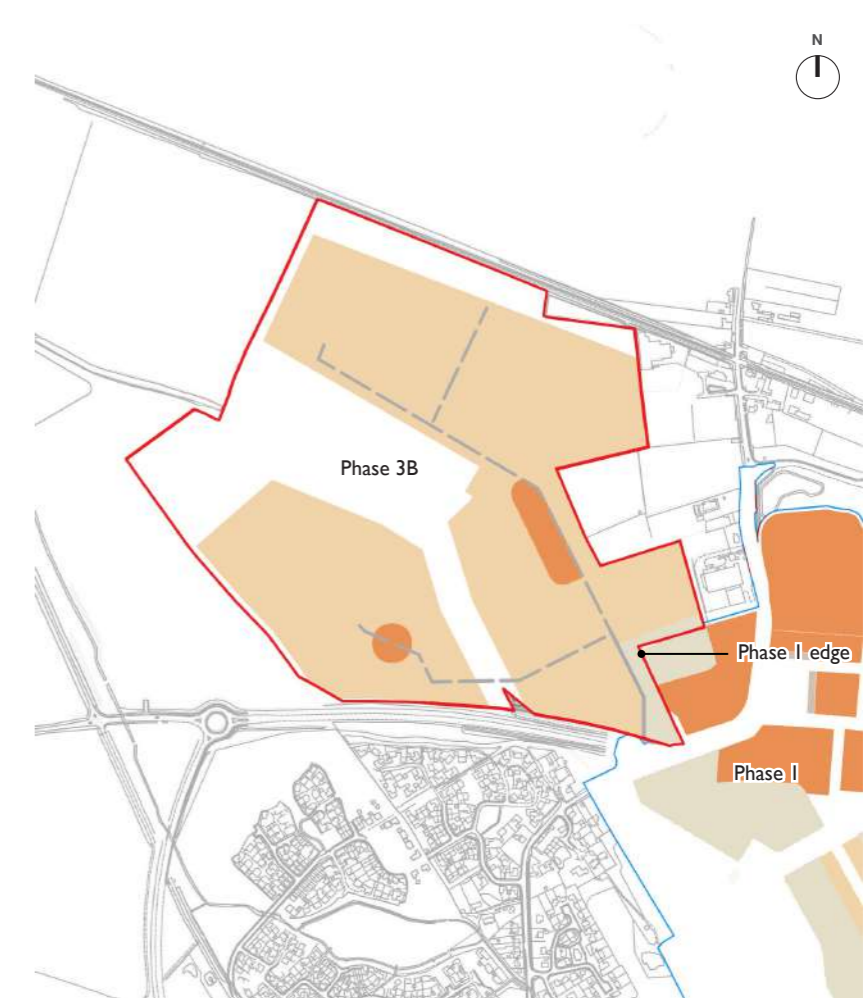
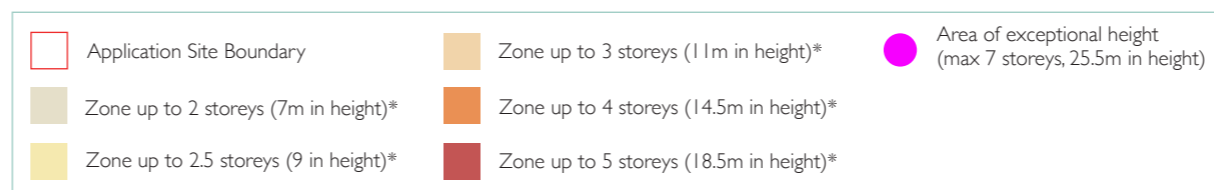


Figure 6.15: Illustrative Building Heights across Phase 3B.



*All references to height refer to the height above the proposed ground level.

Phase 3B: Design Principles

The diagrams and illustrations set out in this chapter are illustrative only and do not establish any further fixed elements of the development beyond those set out in the parameter plans.

The building heights for Phase 3B vary according to three key factors:

- **Character generators;**
- **Relationship to Phase I; and**
- **Key nodes.**

The height strategy will:

- Be refined through the design code and justified by a clear urban design strategy and reflect particular locations, activities, views and vistas; and
- Accommodate variation in building heights, with local high points to mark important nodes of activity, aid way-finding and create character.

Changes in building height are important to avoid a homogeneous development and create variety and interest within the townscape. Building heights inform character, but are not the only aspect. When creating character or focal buildings, it is the combination of the building height, use, street width and sense of enclosure that create a quality townscape. The opportunity should exist to allow, for example, corner buildings to be slightly higher to help people find their way around and create a legible place. Therefore, the building parameter height plan defines relatively wide zones of up to 2 storeys, 3 storeys and 4 storeys, however it is important to emphasise that these are not expected to be blanket heights, instead there will be local variation depending on location and suitability within the proposed streetscape. The areas for 4 storey buildings allow for local landmark buildings.

The 'Phase I Edge' zone marked on Figure 6.15 has been identified as the most sensitive area to height due to the proximity of the existing houses that back onto this boundary. Therefore, building heights up to 2 storeys have been proposed here to respect the privacy and amenity of existing residents, which will be located behind natural buffers afforded by tree belts along this boundary.

The movement network and key nodes have influenced the building heights proposed within Phase 3B. Key nodes have been identified as areas of up to 4 storeys in height, allowing for localised variations in height and the creation of local focal buildings. The two key nodes that have been identified for buildings up to 4 storeys are both within the main body of development. One of the identified nodes is adjacent to the primary school, within the area identified for a secondary mixed use zone and opposite the potential link through to the Endurance Estates site. The second identified key node sits on the proposed secondary road and marks a potential 'set piece' open space within the western body of development.



Figure 6.16: Phase 3B will predominantly consist of 2-3 storey homes, with key locations identified as having the ability to accommodate 4 storey buildings.

Creating a town-wide, comprehensive and integrated movement network is key to promoting active and convenient travel

6.4 Connectivity

The movement strategy for Northstowe is shown on Figure 6.17. The structure of the movement network within Phase 3B has been designed to integrate into the existing routes within Phase 1, and subsequently Phase 2 and the Town Centre. A connected network of pedestrian and cycle routes are provided to ensure that there are a number of safe opportunities for people to choose to travel more sustainably.

The movement strategy for Phase 3B has been influenced in response to the public consultation in the following ways:

- **Desire to promote sustainable travel to/from/within the site:** A dedicated pedestrian and cycleway are proposed along the primary and secondary roads within the site, as well as within the proposed greenways, ensuring easy sustainable access throughout the neighbourhood. The network of pedestrian and cycle routes links into the network established within Phase 1. Furthermore, a pedestrian and cycle connection is provided to connect into the existing bridleway that runs along the CGB.

The following issues relating to access have also been dealt with in the movement strategy:

- Safeguarding potential links to land to the east, which may be bought forward by others.
- Creating potential emergency, pedestrian and cycle access into Phase 1.
- Widening the primary street, which forms the access to the site, to a carriageway width of 7.3m for resilience, to accommodate vehicles if there was a blockage in another location within the development.

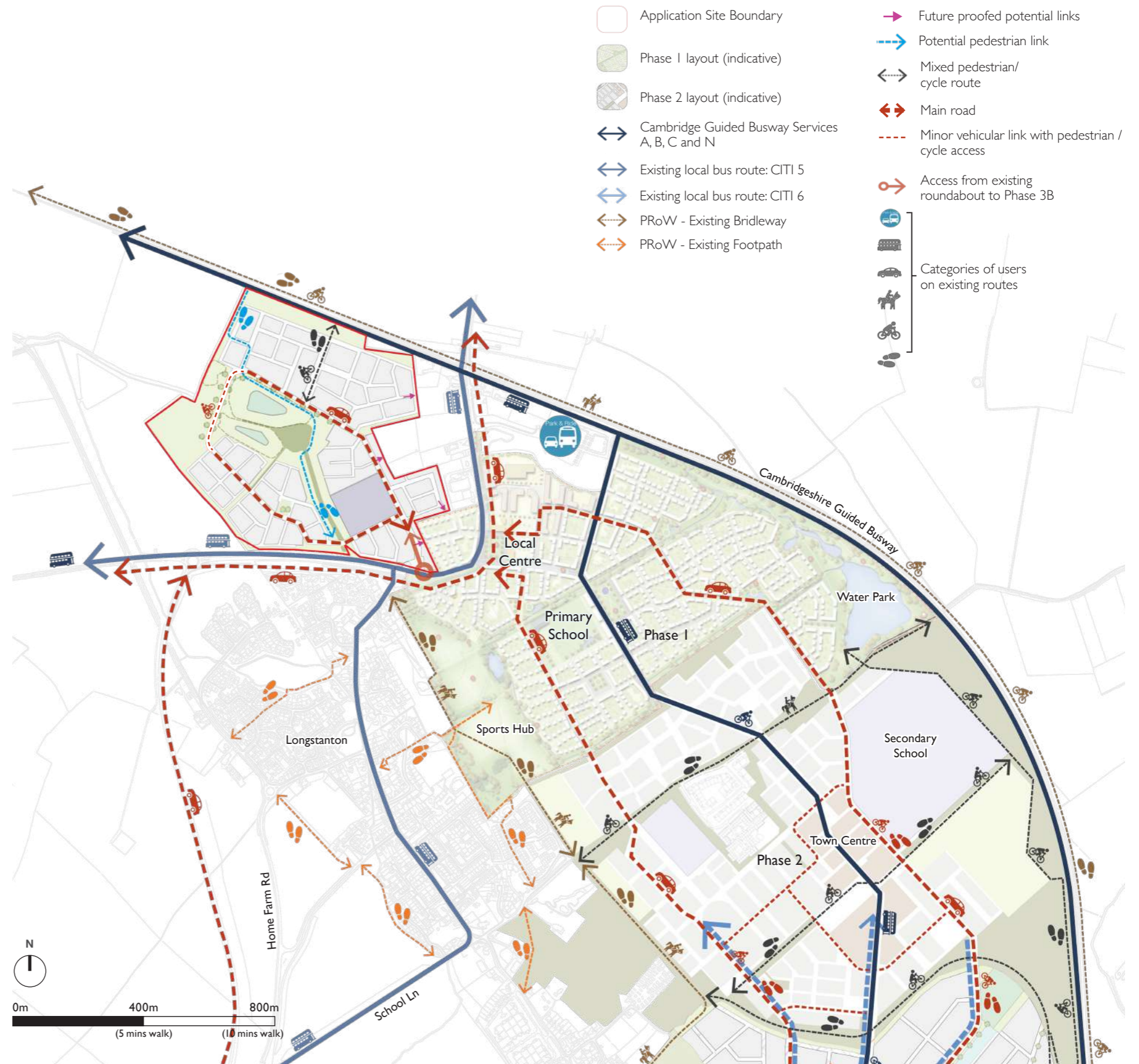


Figure 6.17: Proposed Connectivity

6.4.1 Connectivity: Phase 3B

The masterplan has been designed to maximise connectivity within the boundaries of Northstowe, as well as with the wider context where possible. The masterplan has made provision for future connections to be delivered as part of the development of adjoining allocated land. As such, the framework for the masterplan has been developed to ensure that the neighbourhood is highly permeable and key routes follow natural desire lines to ensure that the public open space and local services and facilities are easily accessible.

Northstowe Phase 3B will be accessible by sustainable modes of transport, with services for the Cambridgeshire Guided Busway serving Longstanton Park and Ride, which is within easy walking and cycling distance of the site. Local bus services that connect to Longstanton and further afield to settlements including Swavesey are also within walking and cycling distance from the site. There is an existing stop at the northern end of Longstanton High Street and following the adoption of the internal roads in Phase I, it is anticipated that a bus service will stop in the square on the western side of the Phase I development.

Strategic cycle routes will connect Northstowe to St Ives to the west, Bar Hill to the south west, Cambridge North Station and the Science Park and existing local communities. The pedestrian and cycle connection into the existing bridleway that runs along the CGB then links into the wider network which connects into Phase I, 2 and 3A as well as existing Public rights of Way, ensuring convenient routes to the Town Centre, schools, sports facilities and the wider countryside.

The key design principles to supplement the movement Parameter Plan are:

- Create a clear and legible street hierarchy that accommodates direct routes for pedestrians and cyclists.
- Provide potential pedestrian, cycle and emergency access from Phase I.
- Create Primary and Secondary Streets (aiming for a design speed of 20mph) that are: positive places to walk and cycle along; designed appropriately for the traffic volume; and to be accessible, fronted by development; and create a sense of place. Clear, obvious and safe crossing points should be incorporated into the design of the Primary and Secondary Streets.
- Provide a connected movement network that is adaptable, in terms of accommodating future changes in travel behaviour.
- Future proof connections to allocated land to the east that may be brought forward by others.
- Provide pedestrian/cycle connections that connect to the existing bridleway that runs along the Cambridgeshire Guided Busway.
- Aim to design streets that align with the Healthy Street principles (ref: <https://healthystreets.com/home/healthy-streets-in-policy/>).
- Create a connected cycle network. These cycle routes will be either segregated routes alongside primary and secondary streets, car free routes through greenways or routes on-street through quiet residential streets. (e.g. shared surface home zones).
- Different parking strategies should be integrated into the design so that parking does not dominate the streetscape and encourages sustainable modes of travel.
- Convenient private, communal and public bike parking as well as electric charging points for vehicles and bikes should be integrated into the design.

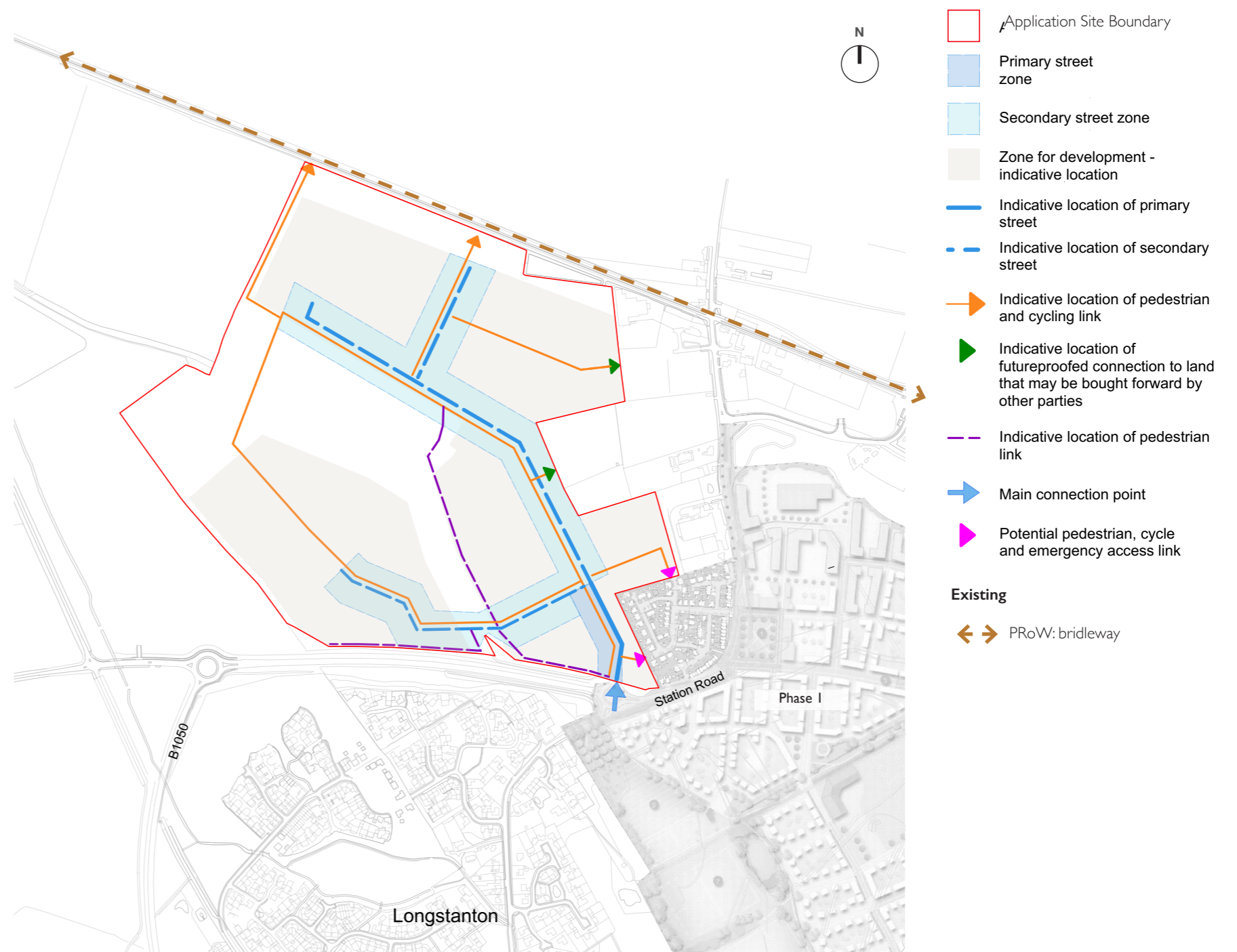


Figure 6.18: Movement Plan

6.4.2 Street Hierarchy

The street hierarchy for Phase 3B has been informed by design principles and learning from Phases 1 and 2.

The main street typologies utilised in Northstowe are:

- **Primary Streets:** Main vehicular routes through Northstowe with segregated cycle lanes. The indicative alignment of the section of Primary Street within Phase 3B is shown on Figure 6.19.
- **Secondary Streets:** Vehicular routes that provide local access and connections between primary streets. These are designed to allow buses and have segregated cycle lanes in most places. The indicative alignments of the secondary streets are shown on Figure 6.21.
- **Tertiary Streets:** Local roads that provide access to homes and generally designed to discourage through traffic, keeping these streets quiet and with limited traffic. The illustrative locations of the tertiary streets can be seen within the residential blocks shown on the Illustrative Masterplan, Figure 6.7. (page 42).

On this and the following pages, illustrative cross sections are used to explain the proposed street typologies. Whilst these street sections are illustrative, they will be used for the basis of future coding. All streets will vary in character along their length and further detail will need to be defined within the design code.

Healthy Street principles should be referred to during the detailed design of the streets to create attractive, safe and welcoming streets for all users.

6.4.3 Primary Street

The vehicular access point into Phase 3B from Station Road is a Primary Street, extending north west to the junction with the school site where it downgrades to a Secondary Street. This short section of Primary streets ensures a level of resilience within the movement network and allows for a more visible entrance to 3B, connecting it visually with the rest of the town.

The following design principle applies to this section of Primary Street within Phase 3B:

- Create positive development frontages alongside the street. Buildings should overlook the street and be accessed from it. Buildings may be set back to provide positive and landscaped separation between habitable rooms and the carriageway; and
- Incorporate segregated cycle routes.

Design Requirements for a Typical Primary Street:

The following design requirements are relevant:

- Provide tree planting alongside the street. This may vary in character and intensity, depending on the specific location;
- Allow space for on-street parking;
- Provide SuDS/ vegetated swale corridor;
- Treat the ground-cover below the trees with wild-flower, native and ornamental shrubs, grasses and bulbs; and
- Provide segregated cycleways.



Figure 6.19: Primary street.

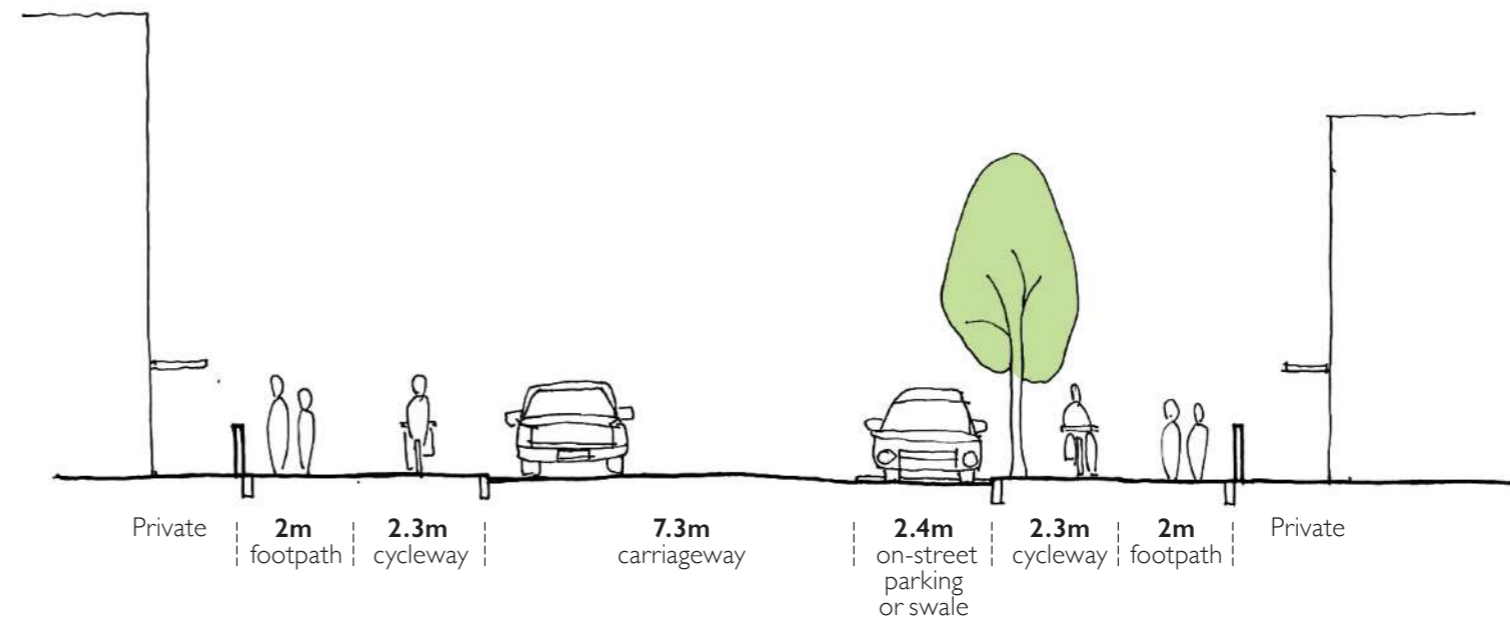


Figure 6.20: Illustrative Primary Street section A-A.

6.4.4 Secondary Streets

Secondary Streets, will extend from the primary access road into the development parcels, as illustrated on Figure 6.21 below.

Design Requirements for a Typical Secondary Street:

The following design requirements are relevant:

- Provide 'pocket' zones for large tree species in key locations at site entrance and adjacent to secondary mixed-use zone
- Provide SuDS/vegetated swale corridor;
- Treat the ground-cover below the trees with wild-flower, native and ornamental shrubs, grasses and bulbs;
- Provide segregated cycleways; and
- Provide opportunities for on-street parking.

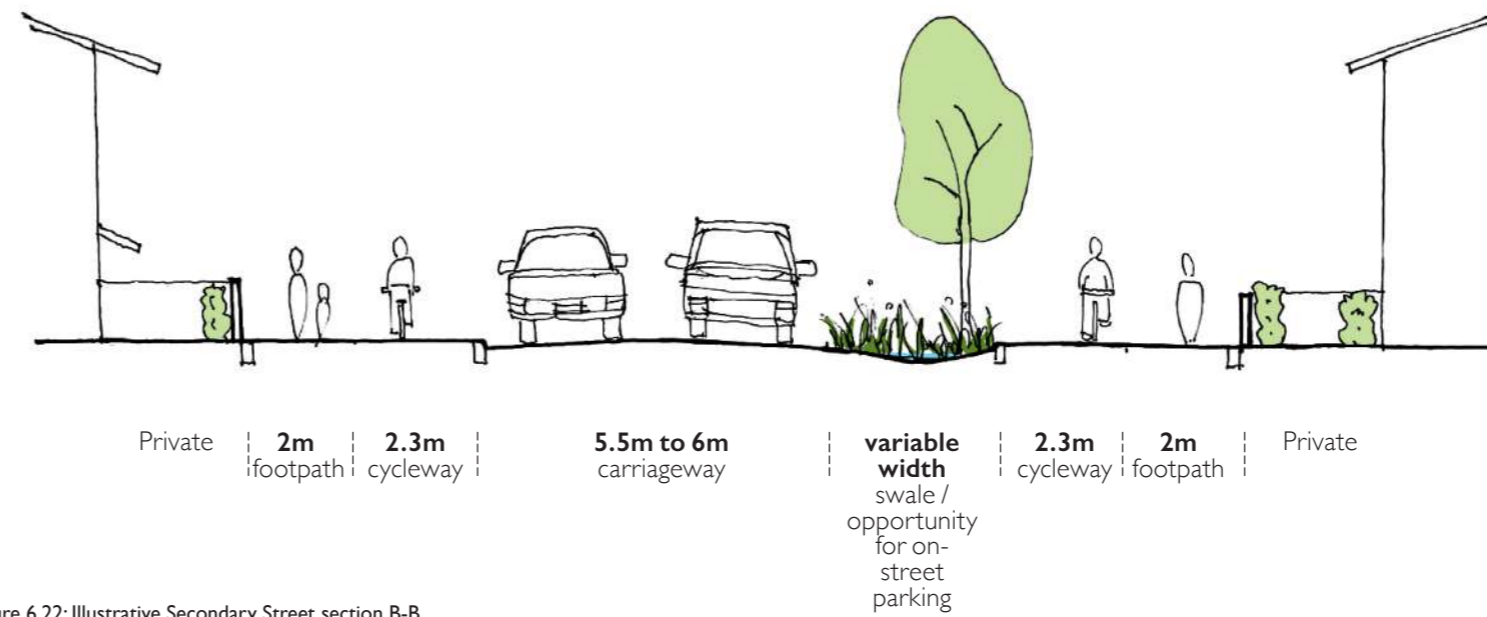


Figure 6.22: Illustrative Secondary Street section B-B

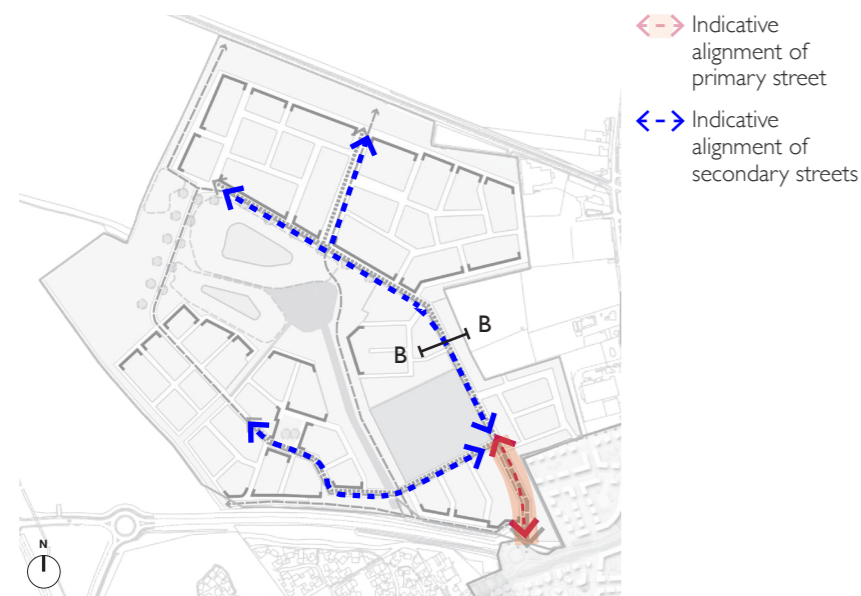


Figure 6.21: Secondary streets.

6.4.5 Tertiary Streets

The alignment of Tertiary Streets is not set within the application and will be determined by future detailed proposals.

Design Requirements for a Typical Tertiary Street:

The following design requirements are relevant:

- Pedestrian priority - safe, comfortable and social streets;
- Identify localised pockets for street tree planting;
- Provide SuDS/vegetated swale corridors in localised clusters where required;
- Treat the ground-cover below the trees with wild-flower, native and ornamental shrubs, grasses and bulbs; and
- Provide opportunities for on-street parking.



Figure 6.23: Illustrative Tertiary Street section linking through flood plain

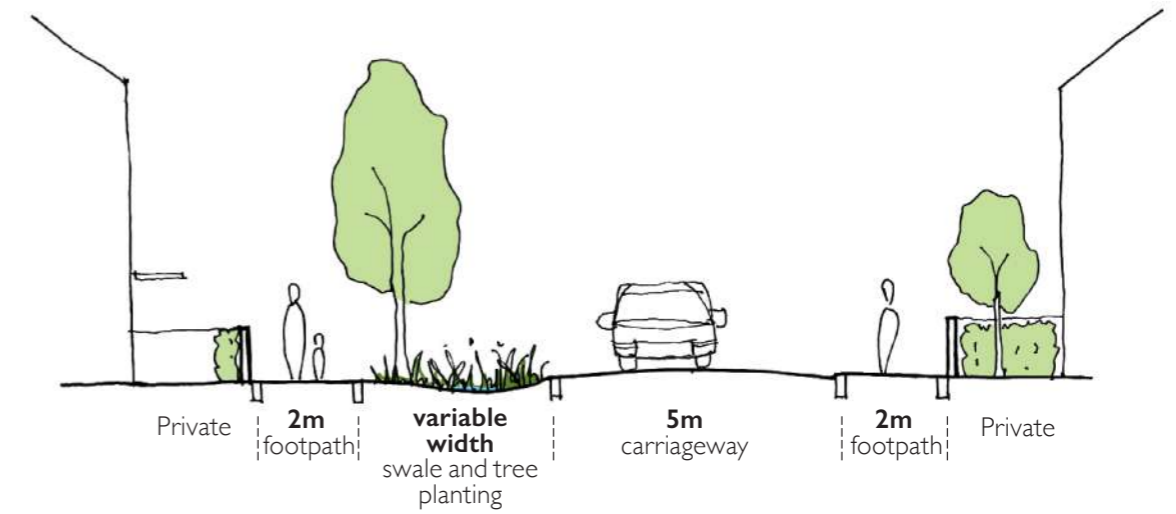


Figure 6.24: Illustrative Tertiary Street section incorporating SuDS

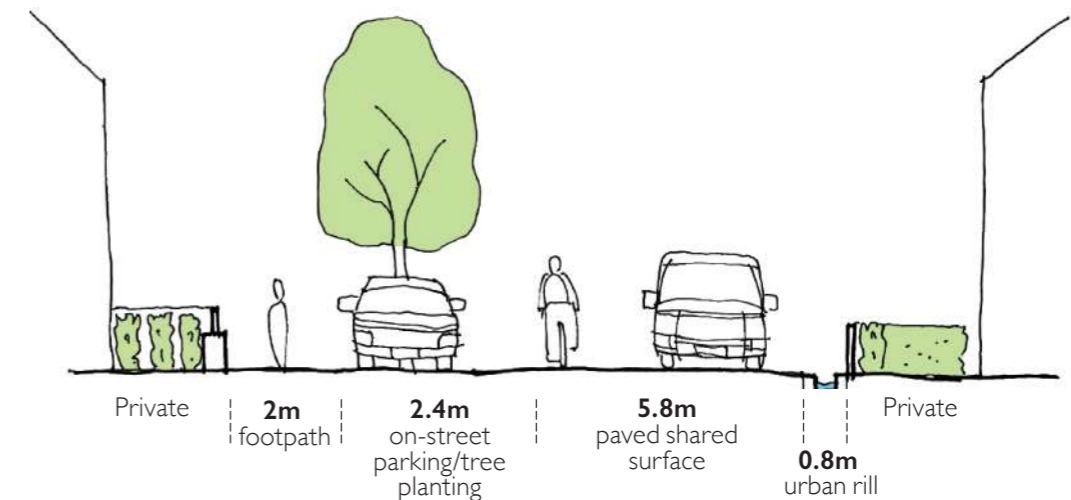


Figure 6.25: Illustrative Tertiary Street section with shared surfacing

6.4.6 Cycling Strategy

Cycle Network

To deliver the vision for Northstowe as a cycle friendly town and to promote active travel, the masterplan and movement network have been developed to encourage cycling and make it convenient for people to choose the bike over the private car. The provision for cycle parking will be detailed in future reserved matters applications in accordance with local planning policy and good practice.

Different typologies of cycle routes will be provided throughout the site, including:

- Segregated cycle routes adjacent to the Primary Street and Secondary Streets;
- Vehicle free cycle routes incorporated into greenways; and
- Cycleways through quiet routes that are not segregated and lead through calm residential streets and neighbourhoods.

Cycle Parking

It is important to provide suitable parking infrastructure to allow residents to own and conveniently use cycle for everyday transportation to deliver the vision for Northstowe as a cycle friendly town.

Cycle parking must be designed as an essential component of the development and located in key public spaces, outside destinations (such as the primary school), play areas (such as the NEAP and LEAP) and within private residences. Visitor spaces must be provided separately.

Design Requirements - Cycle Parking for Residential Buildings

Provide secure and practical cycle parking that is conveniently located. Cycle parking for all homes will be designed in line with the Cycle Parking Standards of SCDC. Cycle parking must be:

- Protected from the weather and secure with access for residents only;
- Easily accessible and convenient;
- Integrate well with the surroundings; and
- Where possible, accessed from the front of the building either in a specially constructed enclosure, communal bike storage or easily accessible garage.

Communal cycle parking

In some locations it may be beneficial to provide communal cycle parking shared by a small number of homes. These communal cycle parking areas must be:

- Protected from the weather and secure with access for a limited number of residents only;
- Easily accessible and convenient, located in shared courtyards or at the end of streets;
- Integrate well with the surroundings, be attractive and robust.



Figure 6.26: Parking in the public realm.



Figure 6.27: Public cycle parking.



Figure 6.28: Communal cycle parking.

6.4.7 Vehicle Parking

Cycle and car parking is intended to be well integrated and flexible, to accommodate potential changes in travel patterns, car ownership and lifestyle changes.

Homes England intends to adopt a monitor and manage approach to car parking standards to ensure the development responds to potential future changes in car ownership and usage. In order to accommodate the required flexibility, the masterplan allows for a wide range of car parking options to be adopted including potential use of car barns and areas with reduced parking provision or, depending on further design development, elements of car free development.

Applied car parking standards and the specific approach to car parking would be defined at the detailed design stage, to ensure latest trends are being picked up.

Phase 3B intends to incorporate more flexible parking approaches than the more 'traditional' approach of providing between plot garages and car parking spaces.

Quality of place, health and wellbeing and flexibility are all compromised by developments that are dominated by cars, as described below:

Quality of Place

- Unattractive environment dominated by infrastructure serving vehicular traffic; and
- "There is a correlation between dissatisfaction with car parking and the overall neighbourhood perception" - post occupancy survey of major house builders.

Health and Wellbeing

Car based developments do not encourage:

- Active lifestyles due to 'suburban' form, lower densities and unattractive street environments (physical health); and
- Social interaction and sense of community (mental health).

Flexibility

- Places need the ability to adapt, as lifestyles change. This approach was encouraged by the design panels.

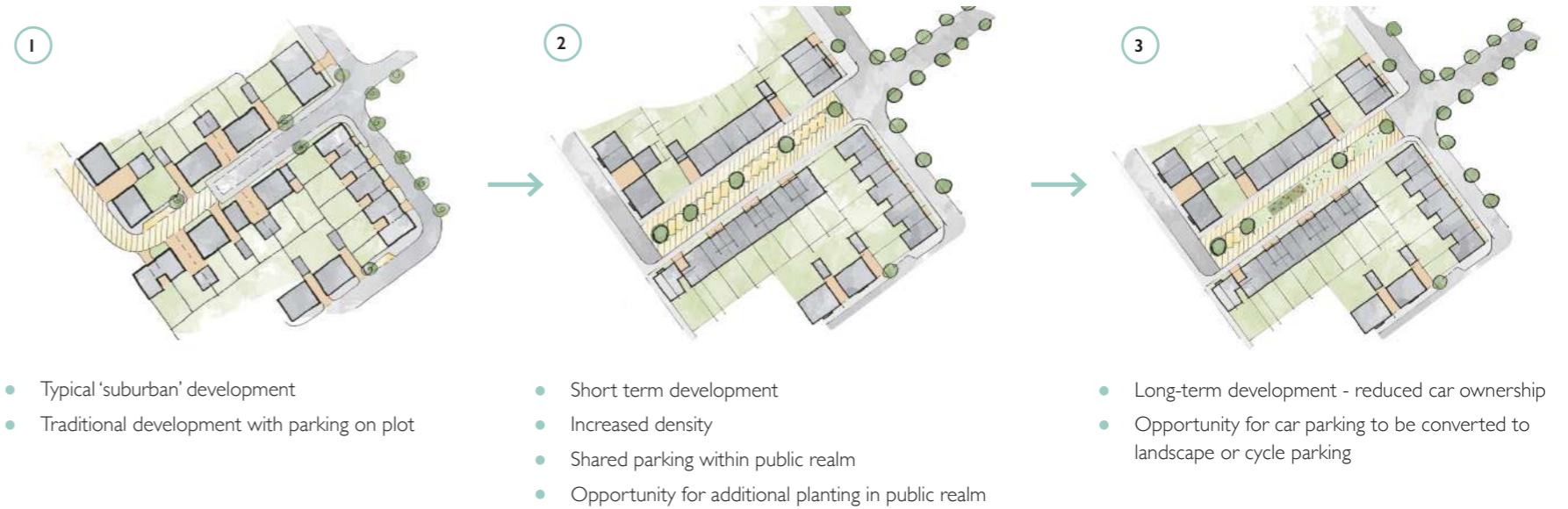


Figure 6.29: Illustrative parking impact

The three sketches above illustrate the impact that different parking solutions can have on the efficiency and flexibility of a site. Sketch 1 illustrates a 'typical' suburban layout, with parking accommodated on driveways or within garages that are on/in-between plots. Sketch 2 illustrates the same site, with the parking removed from in between the housing and instead placed on street as part of an integrated public realm strategy. This results in a more continuous frontage, and begins to offer a level of flexibility that parking on plot doesn't have. If car ownership were to decrease in the future, this on-street parking provides the opportunity for parking spaces to be converted into areas of open space, as shown in sketch 3, to serve the community and improve the visual amenity of the street.

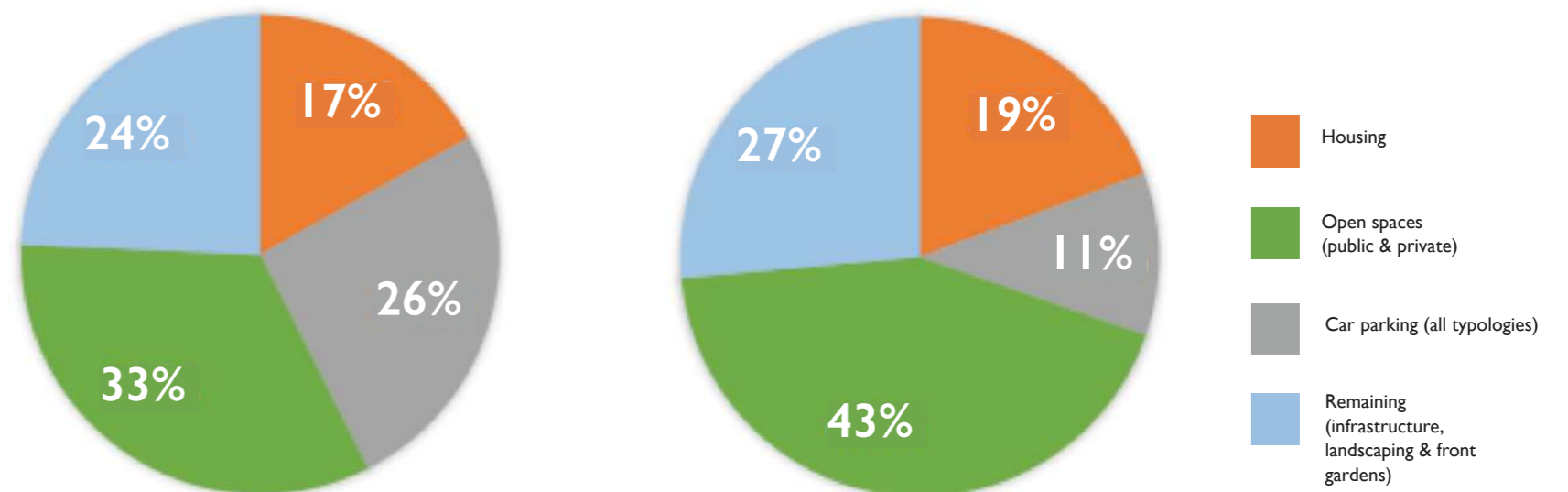


Figure 6.30: Case Study: Radstone Fields, Brackley - Suburban model with rear parking courtyards. This case study relates to the layout illustrated in sketch 1 above, resulting in a larger proportion of the land take used for parking.

Figure 6.31: Case Study: Great Kneighton, Cambridge - Mixed and flexible approach to parking. This case study relates to sketches 2/3 above, illustrating how the land take used for car parking can be traded off for an increase in open space, to serve a community.

6.4.8 Car Parking Strategies

Future flexibility of car parking spaces across Phase 3B has been a key design consideration throughout the development of the masterplan. On-street and other off-plot parking has been considered in suitable areas. This has many benefits, including:

- **Social interaction between neighbours through increased opportunities for ad-hoc meetings. This in turn strengthens the community;**
- **Increased on-street activity and sense of ownership of the public realm;**
- **Improved health and wellbeing through the promotion of walking and cycling, ensuring it is as accessible as other modes of transport, including the use of private cars; and**
- **Flexibility in future use. If car dependency declines then car parking spaces that are, for example, located within the public realm can be converted to open space to benefit the community.**

Northstowe is a Healthy New Town and as such promotes active travel. To encourage walking, densities within Northstowe are generally higher than in some other more suburban development. Many developments around the country, particularly those with mostly detached or semi-detached houses comprise high parking standards with on-plot parking. This approach has the following disadvantages:

- More land is used for parking than homes. Additional land take of lower densities is given to car parking and does not benefit residents in terms of larger gardens or more landscape;
- Many parking areas serving this single purpose do not have flexibility, i.e. amenity value or future opportunity for change; and
- Increased area taken up for parking reduces land available for public open space.

The quality of place of Phase 3B would be improved through the adoption of forward thinking parking strategies. This approach allows for future lifestyle changes and potential shifts in mindset towards private car use.

The masterplan approach comprises the following design principles:

- **Providing a range of parking opportunities, designed for specific areas;**
- **Creating more flexibility, i.e. clustered unallocated parking;**
- **Integrating parking positively into the public realm;**
- **Making use of the space above parking; and**
- **Exploring opportunities for a higher proportion of parking spaces to be provided remotely.**

Creating positive spaces

Parking spaces have to be designed into the public realm in a positive manner. On-street parking opportunities should be clearly defined and spaces delineated. This encourages the use of these spaces. The needs of cyclists and pedestrians have been given priority throughout the design and planning process to date, and will continue to be prioritised.

Many studies, including the recently published report *Transport for New Homes and Housing Design for Community Life* have identified the negative impact that inappropriately parked cars can have on the ability for people to walk, in particular the more vulnerable members of our community.

The report: *Housing Design for Community Life* further links cars, in particular anti-social car parking to the ability for children to be play safely within their neighbourhood. Apart from the impact on the ability of people to live a healthy lifestyle, wrongly parked cars can also undermine the quality of place.

Differing parking strategies can be applied across the development to reflect the character of an area and respond to the street hierarchy. For example, quieter areas of the development on tertiary streets could adopt a variety of on-plot car parking or car parking incorporated into the shared surfacing of quieter roads. Alternatively, primary and secondary roads, or areas of the neighbourhood that are significant for their community value, could incorporate integrated garages or on-street car parking within the public realm, allowing the frontages to be more continuous and thus providing more definition to the street. This principle is illustrated below:

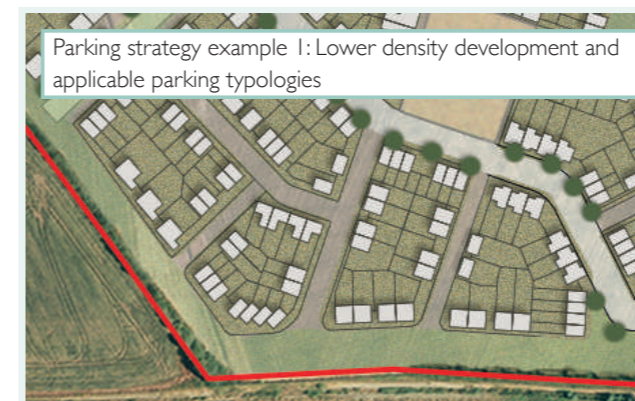


Figure 6.32: On-plot car parking.



Figure 6.34: On-street car parking integrated into public realm.



Figure 6.33: Car parking incorporated into the shared surfacing of quieter residential roads.



Figure 6.35: Integrated garages.

6.5 Community

6.5.1 Introduction

Many of Northstowe's community facilities, such as health and sport facilities, places of worship, and leisure and shopping opportunities are provided within the Town Centre in Phase 2 and within the Local Centre in Phase 1. Phase 3B has been considered in the context of the wider town, taking into account this wide ranging provision of facilities, in particular the Local Centre within Phase 1 that will be within a 10 minute walk (800m) for the majority of residents in Phase 3B.

The open spaces and the primary school within Phase 3B will form the focal points for community activity within the neighbourhood. The central area of open space has been integrated into a connected network of green infrastructure, offering a variety of informal and semi-formal recreational opportunities.

A secondary mixed-use zone has been identified at a key location within the site; sitting on a secondary street adjacent to the primary school. This is conceived as a residential area with adaptable ground floors where small businesses could be incorporated. The provision of this secondary mixed-use zone creates a level of flexibility within the masterplan that allows for future changes in employment patterns and enables the potential for local shops, cafés and small businesses to set up in this key zone of activity.

6.5.2 Working and Living in Northstowe

There are wide ranging opportunities for employment within Northstowe, notably within the Town Centre (Phase 2) and the Local Centres within Phases 1 and 3A. Phase 3B comprises a secondary mixed-use zone with measures to facilitate home working, which will support the development of this neighbourhood and the town as a place to live and work. For a more detailed explanation of the employment provision in Northstowe please refer to the Economic Development Strategy submitted as part of this application.

Home-working

Home-working is becoming of increasing importance and within a town that is looking towards the future, such as Northstowe, opportunities for home working need to be accommodated.

The Economic Development Strategy sets out the evidence and considerations in relation to home-working. The findings from the Strategy include (not exclusively):

- IT/Creative and Digital sector has one of the highest proportions of homeworkers. This is relevant to Northstowe as many of the likely growth sectors in and around Cambridge that are likely to be present in Northstowe are within the IT/Creative and Digital sectors.
- A National Small Business Association report revealed that arrangements for working from home increased 44% in 2012; and
- A desire for a better work-life balance, coupled with converging technologies and the digitisation of products has led to growing numbers of people leaving the office behind to work primarily from home.

The Economic Development Strategy states that the evidence demonstrates that home-working is likely to be a significant factor in Northstowe's economy, especially over the next decade and a half when the development is being built out.



Figure 6.36: Community facilities within Northstowe

6.5.3 Living in Phase 3B

A range of housing types and tenures will be provided within Phase 3B, accommodating people of all ages and abilities including affordable homes for rent and purchase, self-build and custom build homes. This will help to establish a mixed community and addresses local housing need.

The homes are intended to be delivered tenure-blind to ensure consistency in high quality construction methods. The different types and tenures will be appropriately integrated into the neighbourhoods to ensure a cohesive community.

6.5.4 School Provision

The Primary School proposed within Phase 3B is a key community facility. The school is a proposed 2 Form Entry School, the location of which has been influenced by the following key factors:

- Provision and location of schools within Phase 1;
- Ensuring that the 800m catchment area covers as much of the proposed development as possible;
- Connectivity and ease of access from both within or adjacent to Northstowe and from surrounding settlements; and
- Opportunity to create a community node.

School Connectivity

The proposed Primary School has been located at a key point within the movement network so that sustainable and active modes of transport are attractive options for new and existing residents to reach these destinations. The key factors that ensure the school is well connected by cycle and walking routes are:

- Proximity to the pedestrian and cycle links that connect directly between Phase 3B and Phase 1; and
- Location on a secondary road which incorporates segregated cycle routes and pathways.

Community Design Principles

The following community design principles are to be applied to Northstowe Phase 3B:

- Maximise opportunities to connect 3B to Longstanton and the wider town to enable residents to access community, leisure, education and sport facilities via safe and convenient walking and cycle routes.
- Ensure that green links and open space are well overlooked by development frontages to encourage passive surveillance and improved real and perceived sense of safety.
- Ensure each home will be within a short walk of public open space to enhance community wellbeing. Provide 'doorstep play' to further improve accessibility to play.
- Provide accessible, safe, comfortable space that promotes social interaction.
- Provide for a mixed and balanced community through a series of different types of open space and housing typologies.
- Design open space as multifunctional space, incorporating recreation, formal and informal play, drainage and ecological functions.
- Create an integrated network of green and blue infrastructure. Connect the open spaces through the provision of safe routes and green links.
- Ensure open spaces are integrated into the Northstowe movement network as well as being accessible to neighbouring communities.
- Provision of informal open space (including children's play space), natural open space, allotments and community orchards to meet the need generated by the development.

6.5.5 Open Space and Activity

The recreation strategy for Phase 3B provides semi-formal and informal open space, which:

- Directly contribute towards positive lifestyle choices, such as informal activity of walking and cycling; and
- Are likely to be used by the older generations and those that are less active. Both of these groups of people are less likely to engage in formal sports.

Those that are most sedentary and therefore at risk of obesity benefit the most from increased activity, with even small increases in walking and cycling helping health.

In the case of neighbourhood design, improving neighbourhood walk-ability (i.e. an area that is supportive of walking) and infrastructure designed to promote walking and cycling, has numerous positive health outcomes, including: increased physical activity levels and improved social engagement among older adults. (Northstowe Phase 2 Healthy Living and Youth & Play Strategy). The approach proposed for Northstowe Phase 3B includes as many walk-able features as possible to design activity-friendly neighbourhoods.

By including a range of informal and semi-formal spaces throughout the neighbourhood that are easily accessible encourages exercise to become part of daily routine.

Natural environments such as woodlands, gardens, parks, grassland and farmland, are supportive of a range of physical activities. As found in the Phase 2 Healthy Living and Youth & Play Strategy, physical activity in natural environments can be more beneficial to health than in other environments.

The open space strategy for Phase 3B seeks to:

- Provide contact with nature, by retaining and integrating the existing tree copse and hedgerows where possible and by creating new attractive open spaces; and
- Create varied opportunities for everyone to adopt a more active lifestyle and enjoy time outdoors, either by playing, walking, sitting or engaging in sporting activities.

The retention of the natural landscape features where possible, alongside the desire to provide a range of informal recreational opportunities across the site has resulted in the open space strategy for Phase 3B providing substantially more open space than required by policy. This includes 16.26ha of open space, which can be broken down into:

- Parks and gardens: 5.39ha
- Natural and semi-natural urban green space: 8.42ha
- Allotments and community space: 2.45ha

For a full description of the open space across the site, please refer to the Landscape Strategy submitted as part of this application. The key design principles of the open space strategy are:

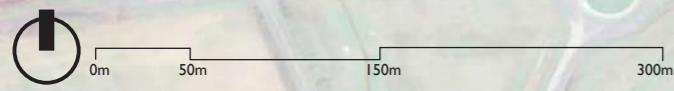
- Incorporating ancillary publicly usable open space over and above the Strategic Open Space within the Residential Development Areas to ensure each home is within easy walking distance of open space.
- Designing open space as multifunctional space incorporating, recreation, formal and informal play, drainage and ecological functions;
- Connecting open spaces by a network of safe routes and green links to give people a connection with the landscape, provide 'doorstep play' and create an integrated network of green infrastructure;
- Biodiverse streets and spaces including edible streets and community orchards to promote local food production with provision for community allotments;
- Retention of natural inherited assets to establish a strong sense of place;
- Enhancing the landscape to compliment the architecture and create a desirable setting for new homes; and
- Ensuring that green links and open space are well overlooked by development frontages.



Figure 6.37: A range of different play spaces will be integrated into the green infrastructure strategy. Natural settings and features will influence these play spaces where appropriate.



Figure 6.38: Illustrative Landscape Masterplan



Aerial map background, Google Earth Pro, 2018

March 2020

Play Provision

Distribution of formal play areas within Phase 3B has been considered in relation to existing and proposed formal play provision in Northstowe Phase I. Site constraints such as the central woodland copse and the requirement for suitable buffers have been considered and the location of the proposed formal play ensures that there is adequate coverage across Phase 3B.

Play provision must meet the needs of the new development as well as offering opportunities for social interaction with residents from surrounding neighbourhoods.

The following designated play provision must be provided:

- 1 Neighbourhood Equipped Area of Play (NEAP);
- 1 Local Equipped Area of Play (LEAP); and
- Approximately 10 Local Areas of Play (LAP) to ensure access from all residential properties within a 100m radius.

Throughout the provision of the above, the following design principles are relevant:

- Play provision must go beyond the offer of designated play spaces and must include playful landscapes and routes for people of all ages and abilities; and
- Play areas must be located where they are easily accessible and where natural surveillance is good.

Open spaces such as semi-formal kickabout areas, play areas, community planting and allotments will need to be designed and landscaped to a high standard. These open spaces must link to, and integrate with, other landscaped and amenity areas as well as contribute to the overall quality of the setting for the urban fabric of Northstowe.

The value of the landscaped areas within the town will be enhanced by linking them together to form a network with the landscapes created on the periphery of the town, in the country parks and through to the wider countryside.

In addition to the above, opportunities to encourage doorstep play and 'play on the way' will be explored in the future design code.



Figure 6.39: Precedent image - Opportunities for formal and imaginative play



Figure 6.40: Formal Play Provision Phase 3B

Integrating Public Art

Public Art Strategy

The public art strategy for Phase 3B will draw on the strategy set out within the Phase 2 Design Code (2017). This section sets out the approach.

Public art can play an important role in the creation of a thriving and distinct new community by making direct connections with the character areas of the town, the historic uses of the area and the values of the people that live there.

The public art provision shall be informed by SCDC's Public Art SPD (2009). The SPD refers to public art as permanent works, temporary, ephemeral or time-based contributions by an artist or crafts-person in any publicly accessible location. The 'art' can be part of the public realm, open space, and architecture of the development.

To ensure there is a coordinated and coherent approach to the site all art should find inspiration and be influenced by the following supporting themes:

- Roman heritage.
- Pioneers.
- Landscape / nature.

Public art commissions including installations, functional, practical urban furniture and way-finding features may be influenced by the above themes. Where possible, these should be integrated within the fabric of buildings and spaces rather than being conceived as isolated add-ons.

Public art will also have an important part to play in being a voice for the people and the place, in promoting a shared sense of community in which everyone has a role and in celebrating a sense of place for all.

As a key requirement, the art must always be developed in consultation with, and to be accessible for, the whole community.

Educational elements that tell residents and visitors about the history and landscape qualities are positive ways of integrating art and education.

Maintenance

Artworks must have low maintenance requirements, be durable and vandal proof. The artist commissioned is responsible for outlining any maintenance requirements at the time of proposal. It should be confirmed that there is available resource to comply with these requirements before any artwork can go into production.

It is intended that a Design Code for Phase 3B will provide further guidance on the provision of Public Art.



Interactive playable public art



Ecological/Educational Interpretation Points



Ecological/Educational Interpretation



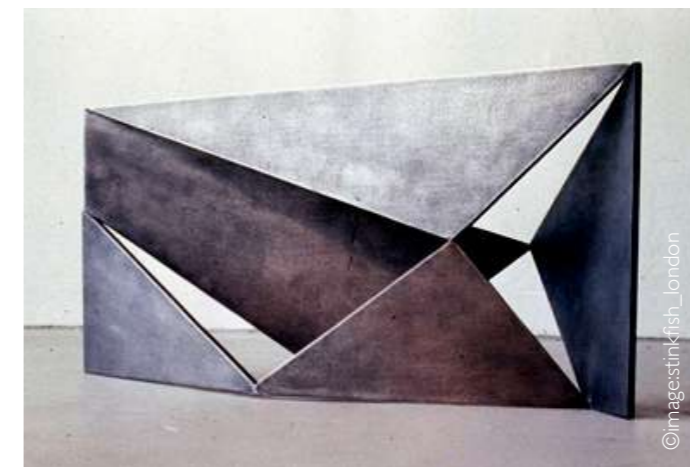
Feature Building Façade



Public Art Focal Point



Youth-Focused Public Art



Interpretation of Site History



Interpretation of Site History

Figure 6.41: Examples of public art



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7
Climate

7 Climate

This section provides a high level summary of the Sustainability and Climate Strategy for Phase 3B. For further information please refer to Chapter 8: Climate of the Environmental Statement Volume 1, and the Sustainability Statement submitted as part of this application.

Sustainability Strategy

The Sustainability Strategy submitted as part of this application outlines the sustainability approach in line with the requirements set out by national and local planning policy as well as good practice.

The structure of the approach is based on the Arcadis STAR (Sustainability Targeting and Assessment Rating) framework which assists in delivering improved sustainability performance and identifies opportunities for enhancing value during the development of masterplans based on national, regional, local policy, best in class examples and expertise. The Arcadis STAR is shown in diagrammatic format at Figure 7.1.

The Sustainability Strategy demonstrates that the proposed new development will:

- Minimise carbon emissions through the approach to energy use;
- Minimise water usage and flood impacts;
- Provide a sustainable approach to waste and materials and resources;
- Provide for a high level of accessibility by sustainable travel modes;
- Provide substantial amounts of high quality green infrastructure;
- Develop sustainable new buildings;
- Create a cohesive community and culture;
- Support the local economy; and
- Be an exemplar for health and wellbeing.

In addition to the STAR framework and the initial high level objectives, the series of checklist questions published in the policy of Greater Cambridge Sustainable Design and Construction Supplementary Planning Document (GCSDC-SDP) (South Cambridgeshire District Council, 2020) have been considered when addressing the measures in the sustainability approach.

3B Design Principles

The following climate design principles are to be applied to Northstowe Phase 3B:

- Sustainable construction methods will be adopted, using low-carbon materials; attracting green businesses; and creating demand for more sustainable products and services across the town. A fabric first approach to building design will improve energy efficiency and reduce carbon emissions.
- Widespread use of SuDS will provide sustainable storm water management and maximise available water resource from rainfall, as well as the creation of new wildlife corridors and spaces whilst incorporating existing wetlands and ponds, with a variety of flora and fauna, creating valuable open amenity areas.
- Enabling and promoting low carbon transport within, to and from Northstowe by ensuring access to public transport and cycle routes to reduce carbon emissions and encourage health and wellbeing.
- Incorporating low and zero carbon technologies into all buildings to provide energy, financial and carbon savings, therefore supporting the transition to net zero carbon where possible.
- Protecting and enhancing biodiversity and habitat connectivity via a strong network of Greenways and interconnected green and blue spaces to achieve a biodiversity net gain.

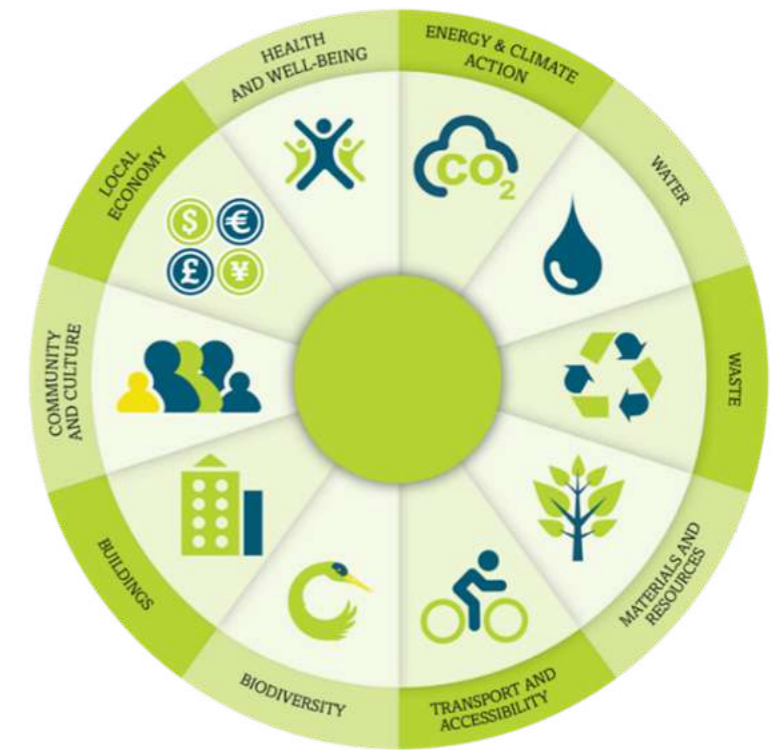


Figure 7.1: Arcadis STAR (Sustainability Targeting and Assessment Rating)

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8
**Delivering
Design Quality**

8 Delivering Design Quality

8.1 The Planning Application

The first step to delivering design quality is provided through this application, its content as well as the process and conditions that are proposed. The outline application and masterplan/design principles is a first step in a longer process that will lead to detailed design proposals and subsequent implementation.

The outline application has been structured to secure fixed parameters of the Proposed Development which have been assessed in the Environmental Statement. These are secured through the three submitted Parameter Plans:

- **Plan 01:** Open Space and Land Use
- **Plan 02:** Movement and Access
- **Plan 03:** Heights

Within these high level parameters a variety of detailed design approaches could be acceptable in planning terms.

In addition to the Parameter Plans the Application contains a Design Principles Document within Appendix A of this Design and Access Statement. This contains design principles that add further detail to the Parameter Plans and an Urban Design Framework Plan that brings all Parameter Plans together and defines the urban design approach. It is envisaged that all subsequent design stages are to be in substantial conformity with the Design Principles Document and that this will be secured through a planning condition. It brings together the Parameter Plans to illustrate how the different elements of green space, land use and movement interact with each other. Frontages are identified onto public open spaces and landscape features. In addition, frontages are expected to overlook all streets and spaces. The will inform future Design Coding.

This Design and Access Statement illustrates how the Parameter Plans and the design principles can lead to a high quality design.

Following approval of the Application and prior to the commencement of development, Homes England is committed to producing a Design Code. This Design Code will follow the high level principles and parameters established through the Application and inform the subsequent Reserved Matter applications. It is expected that a condition attached to the outline planning approval will require the preparation of the Design Code. At this stage further engagement with stakeholders and the communities are expected.

This plan is illustrated in the diagram to the right.

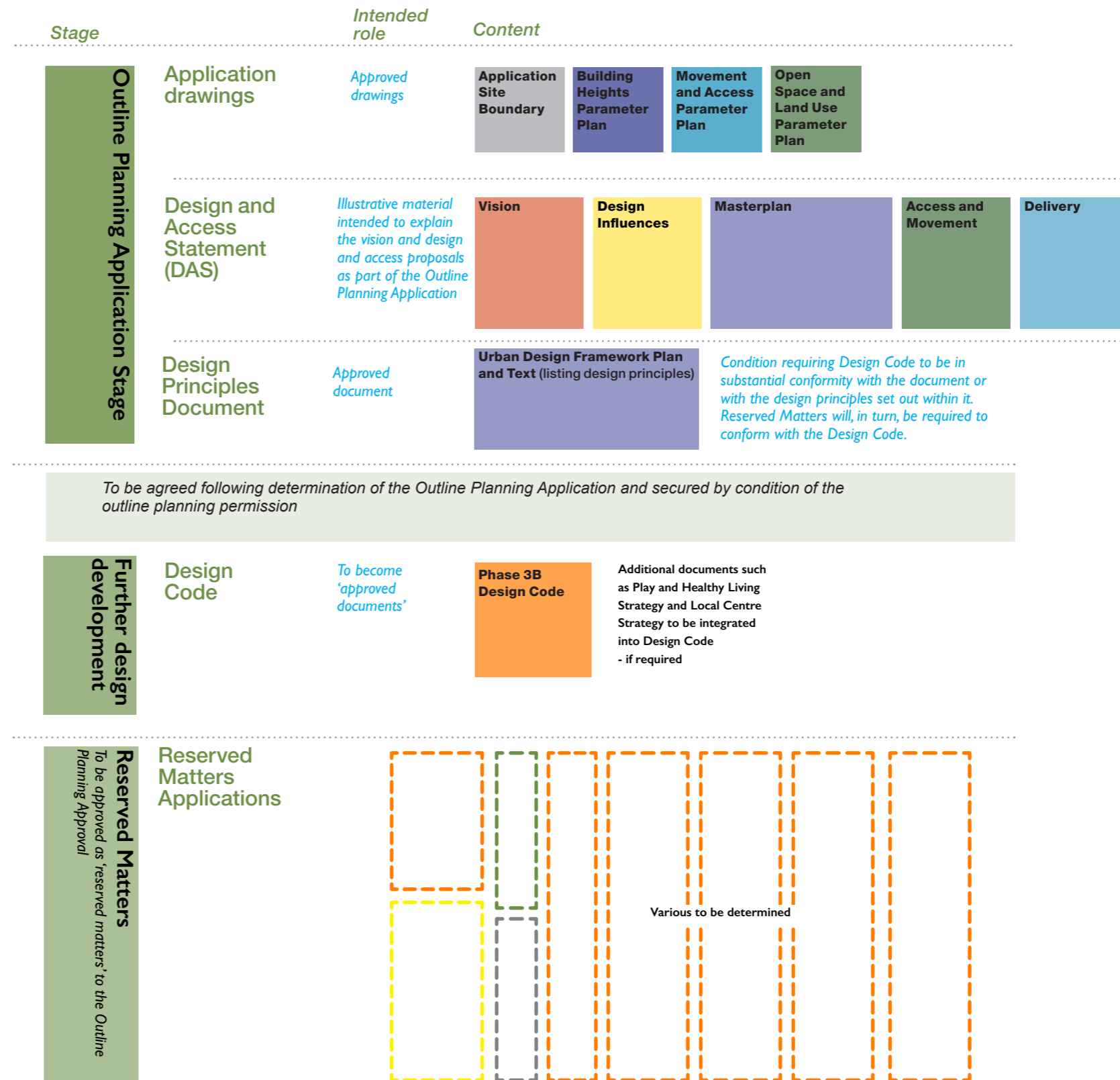


Figure 8.1: Delivering design quality through planning

8.2 Building for Life 12

Homes England is committed to delivering design quality and has its internal Design Quality Assessments, which are used when selecting development partners. The Homes England Strategic Plan for 2018/19–2022/23 refers to the ambition to show leadership on design, and this mission is supported by the desire to ‘create a more resilient market’, including ‘promoting better design and higher quality homes’. Homes England aims to improve design quality through the use of Building for Life 12 (BfL12).

This is an industry recognised initiative that has been widely adopted across the house building sector. Its success has secured support from government, and it is referenced in the revised National Planning Policy Framework under Section 12, ‘achieving well-designed places’.

Homes England will use the BfL12 criteria throughout the whole life of a project, as a ‘common thread’ of quality assessment. The initial step of this has been demonstrated within this DAS and the BfL12 pre-assessment, included in Appendix B.

8.3 Development Partner Selection

Homes England’s Strategic Plan encourages the use of a range of different developers, including SMEs and self-builders. The detailed phasing and parcel strategy is envisaged to support this by defining parcels of different sizes. The developer selection process will utilise the future design code to ensure development partners fully understand the design quality aspirations.

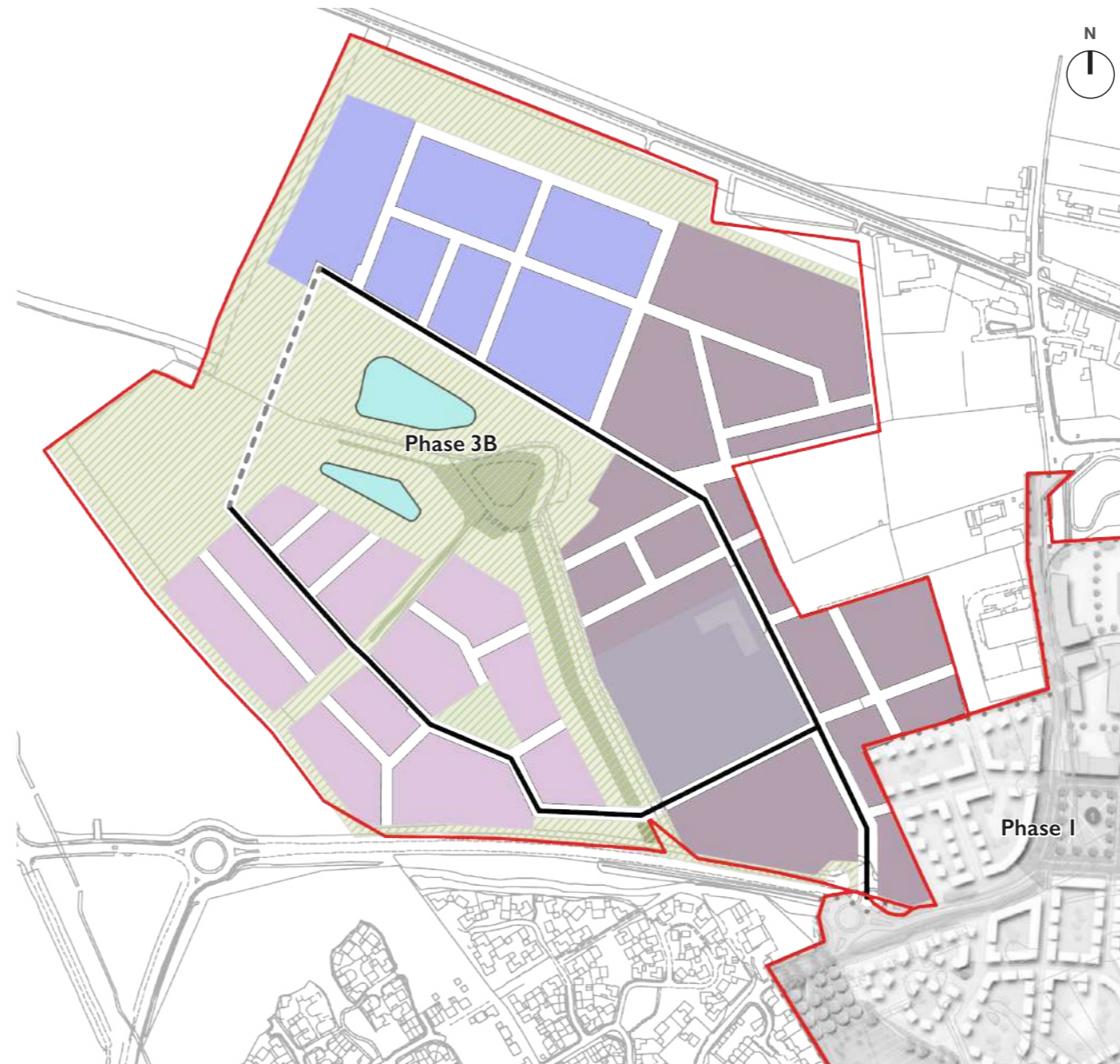
8.4 Master Developer Approach

Homes England will be acting as Master Developer for Phase 3B. As currently planned, they will deliver the primary infrastructure, strategic spaces, greenways and primary and secondary streets. Their long-term involvement and use of building leases will maintain control, ensure consistency/overview and help to ensure quality. Homes England is happy to continue collaborating with owners of adjoining development sites to ensure proposals are complementary.

8.5 Phased Approach

Phase 3B will be delivered in a phased approach. This Application contains an indicative high level phasing plan. As further detail is developed it will be refined. The following principles would influence the Phasing Strategy:

- Placemaking
- Developing a Community
- Buildability
- Movement Network



Key	Phase	Homes	Build out
	Phase 3b.1	450	Pre 2035
	Phase 3b.2	260	2032-2035
	Phase 3b.3	290	2033-2036
Total Units Phase 3b		1,000	

Figure 8.2: Phase 3B delivery phasing



N

Appendices



NORTHSTOWE

Phase 3B

Appendix A: Design Principles Document



Homes
England

Appendix A: Design Principles Document

Role and Status of the Design Principles Document

This Design Principles Document comprises the Urban Design Framework Plan (Figure A.1) for Phase 3B and an accompanying set of key design principles. For the purpose of this Design Principles Document, some of the text is repeated from the Design and Access Statement (DAS). Further explanation and illustration of the principles included within this document is set out within the DAS. This document is to be read in conjunction with the three submitted Parameter Plans:

- **Plan 01:** Open Space and Land Use
- **Plan 02:** Movement and Access
- **Plan 03:** Heights

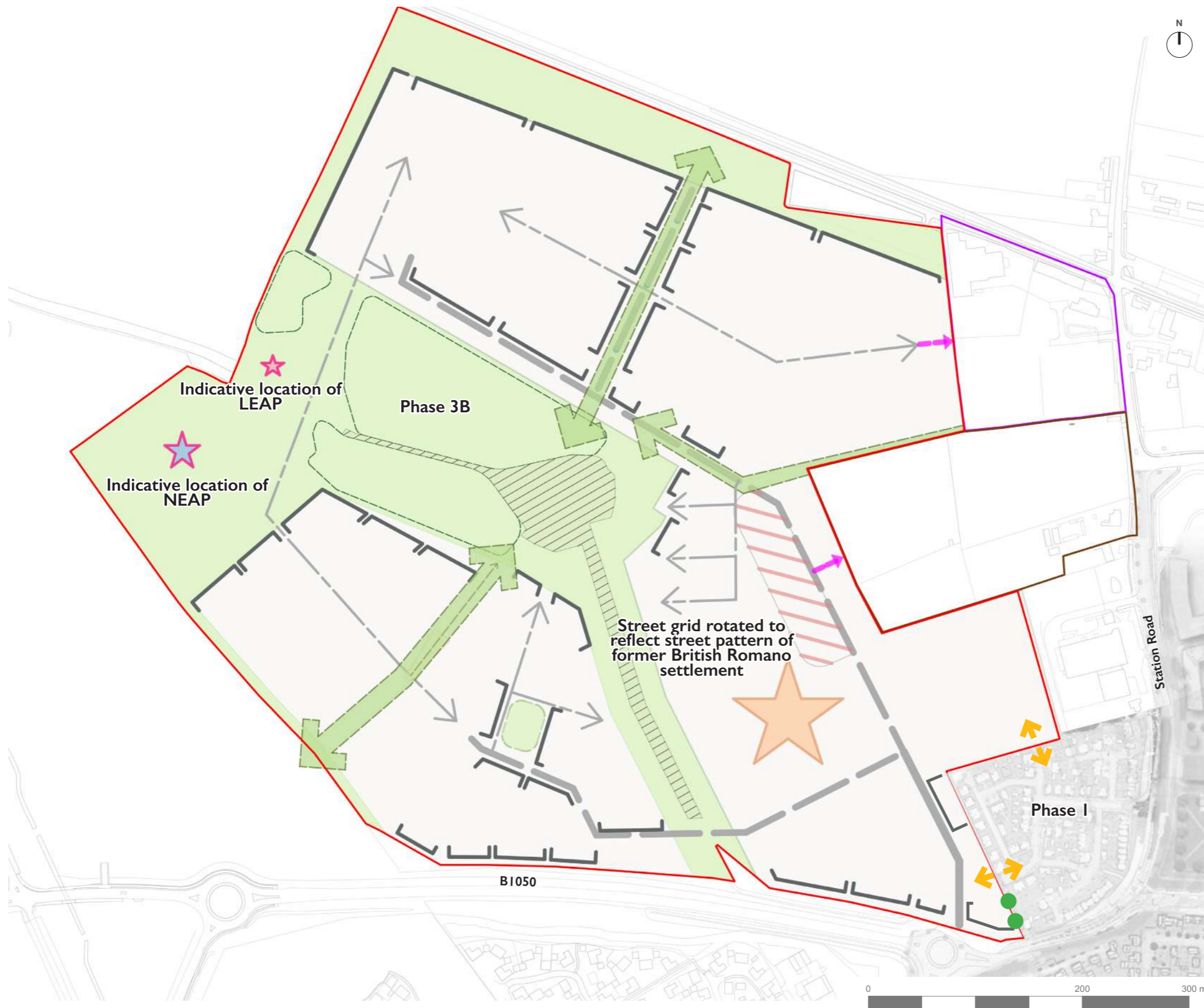
Within these high level parameters a variety of detailed design approaches could be acceptable in planning terms.

The Design and Access Statement illustrates how the high level design principles, extracted into this document, and the Parameter Plans, can lead to a high quality design for Phase 3B. The purpose of extracting the urban design principles from the DAS into this document is to provide a clear and comprehensive set of guiding principles for the development.

In addition to the design principles, this document comprises the Urban Design Framework Plan (Figure A.1). This plan brings together the Parameter Plans and illustrates these primary urban design principles to demonstrate how the different elements of green space, land use and movement interact with each other. Frontages are identified onto public open spaces, landscape features, streets and spaces. These primary urban design principles should guide the development of Phase 3B and inform a future Design Code.

Figure 8.1 (Chapter 8) in the Design and Access Statement illustrates how the Design Principles Document is intended to relate to other documents - either submitted as part of this outline application or to be submitted in the future.

It is envisaged that an appropriate condition will ensure that future Design Code and Reserved Matters applications are in conformity with these design principles.



- Northstowe Phase 3B
- Digital Park Longstanton indicative site boundary
- Land at Longstanton, Endurance Estates indicative site boundary
- Phase 3B residential built development and ancillary open spaces
- Indicative outline and location of primary attenuation areas
- Green buffer (including multifunctional green space)
- Indicative location of secondary mixed use zone (with retail and associated services, food and drink, community, leisure, employment and residential uses)
- Retained woodland blocks
- Indicative location and size of pocket park
- Indicative location of greenways
- ★ Indicative location of Primary School
- ★ Indicative location of Locally Equipped Area for Play (LEAP)
- ★ Indicative location of Neighbourhood Equipped Area for Play (NEAP)
- Indicative location of primary street
- Indicative location of secondary street
- Indicative location of other routes
- Approximate location of safeguarded link to land to east, that may be bought forward by others in the future
- Primary frontages
- ↔ Potential pedestrian / cycle and secondary / emergency vehicular access links to Phase 1
- Individual trees for retention

Figure A.1: Urban Design Framework Plan (Illustrative)

Design Principles

The design principles set out within this section are grouped under the four broad themes identified in the Cambridgeshire Quality Charter for Growth: Character, Connectivity, Community and Climate. Further explanation and illustration of these principles are set out within the DAS.

The proposals for Northstowe Phase 3B adopt a holistic approach to sustainability, covering social, economic and environmental factors. This holistic approach has led to a number of the 'Climate' objectives being integrated into the 'Character', 'Community' and 'Connectivity' sections. The 'Climate' section broadly sets out the key climate/ environmental objectives of the scheme.

The following design principles are to be applied to Northstowe Phase 3B:

Character

- Create development edges that achieve a clear distinction between countryside and town and establish a sense of arrival into Northstowe from the north.
- Create a legible structure of development that is reinforced by well researched and locally appropriate building characters, planting and clear forms of development that are recognisable from the local context.
- Arrange housing into streets to support strong and characterful frontages. This ensures that all streets and open spaces are well overlooked by development frontages.
- Create a development block pattern that creates short, medium and longer distance views to the retained tree copse.
- The majority of the buildings are between 2-3 storeys, with localized high points of 4 storeys. As well as creating interest in the townscape, the building heights will respond to the secondary zone for mixed-use development, which is located along a key corridor within the development. The design code will provide further detail and refinements to this broad brushed height strategy to secure legibility.
- Retain the existing copse of trees as a central focal point for the development.
- Retain the existing hedgerows and integrate these into street scenes and new public spaces. Enhance the landscape to compliment the architecture and create a desirable setting for new homes.
- Use a number of strategies to create distinctive public realm and arrangements of buildings around open space, squares and play. These include incidental spaces, retention of existing trees, street tree planting, reinforcing of existing tree belts and vegetation.
- Use simple, well designed buildings that are contemporary in style but informed by the local architectural context.

Connectivity

- Create a clear and legible street hierarchy that accommodates direct routes for pedestrians and cyclists.
- Provide potential pedestrian, cycle and emergency access from Phase 1.
- Create Primary and Secondary Streets (aiming for a design speed of 20mph) that are: positive places to walk and cycle along; designed appropriately for the traffic volume; fronted by development; and create a sense of place. Clear, obvious and safe crossing points should be incorporated into the design of the Primary and Secondary Streets.
- Provide a connected movement network that is adaptable, in terms of accommodating future changes in travel behaviour.
- Future proof potential links to the land to the east that may be bought forward by others.
- Provide pedestrian/cycle connections that connect to the existing bridleway that runs along the Cambridgeshire Guided Busway.
- Create a connected cycle network. These cycle routes will be either segregated routes alongside primary and secondary streets, car free routes through greenways or routes on-street through quiet residential streets. (e.g. shared surface home zones).
- Different parking strategies should be integrated into the design so that parking does not dominate the streetscape and encourages sustainable modes of travel.
- Convenient private, communal and public bike parking as well as electric charging points for vehicles and bikes should be integrated into the design.

Community

- Maximise opportunities to connect 3B to Longstanton and the wider town to enable residents to access community, leisure, education and sport facilities via safe and convenient walking and cycle routes.
- Ensure that green links and open space are well overlooked by development frontages to encourage passive surveillance and improved real and perceived sense of safety.
- Ensure each home will be within a short walk of public open space to enhance community wellbeing. Provide 'doorstep play' to further improve accessibility to play.
- Provide safe, comfortable space that promotes social interaction.
- Provision of a secondary zone for mixed use (with retail and associated services, food and drink, community, leisure, employment and residential uses).
- Provide for a mixed and balanced community through a series of different types of open space and housing typologies.
- Design open space as multifunctional space, incorporating recreation, formal and informal play, drainage and ecological functions.
- Create an integrated network of green and blue infrastructure. Connect the open spaces through the provision of safe routes and green links.
- Ensure open spaces are integrated into the Northstowe movement network as well as being accessible to neighbouring communities.
- Provision of informal open space (including children's play space), natural open space, allotments and community orchards to meet the need generated by the development.

Climate




- Sustainable construction methods will be adopted, using low-carbon materials; attracting green businesses; and creating demand for more sustainable products and services across the town. A fabric first approach to building design will improve energy efficiency and reduce carbon emissions.
- Widespread use of Sustainable Drainage Systems (SuDS) will provide sustainable storm water management and maximise available water resource from rainfall, as well as the creation of new wildlife corridors and spaces whilst incorporating existing wetlands and ponds, with a variety of flora and fauna, creating valuable open amenity areas.
- Enabling and promoting low carbon transport within, to and from Northstowe by ensuring access to public transport and cycle routes to reduce carbon emissions and encourage health and wellbeing.
- Incorporating low and zero carbon technologies into all buildings to provide energy, financial and carbon savings, therefore supporting the transition to net zero carbon where possible.
- Protecting and enhancing biodiversity and habitat connectivity via a strong network of Greenways and interconnected green and blue spaces to achieve a biodiversity net gain.



Appendix B: Building for Life 12 Assessment

This Appendix assesses the scheme against the criteria set out in Building for Life 12 (BfL 12, Third Edition - January 2015).

How does the traffic light system work?

Details are provided within the BfL 12 Guide. In brief:

-  Green shows the design of the scheme has responded positively to the question.
-  Amber is used where there is clear evidence of local constraints on the scheme beyond the control of the design team that prevent it from achieving a green.
-  Red elements identify aspects of proposals that need to be changed and where the scheme design at the time of assessment fails to respond to the question positively.

Questions	Response	
Integrating into the neighbourhood		
I. Connections: Does the scheme integrate into its surroundings by reinforcing existing connections and creating new ones, while also respecting existing buildings and land uses around the development site?	Ia Where should vehicles come in and out of the development?	 Vehicles will enter the site from Station Road, via a northern arm provided as part of improvements to the existing roundabout. An additional potential secondary access point through the Endurance Estates land has been accommodated in the layout of the development. Furthermore, a potential emergency vehicle only access has been accommodated for to connect into the immediately adjacent Digital Park site.
	Ib Should there be pedestrian and cycle only routes into and through the development? if so, where should they go?	 There will be segregated pedestrian and cycle routes along the primary and secondary streets within the site to encourage active and sustainable travel. The proposed pedestrian and cycle routes will connect into the Phase 1 movement network and the adjoining Endurance Estates and Digital Park sites to create an integrated and comprehensive strategy. The cycleways will be located adjacent to the carriageways to ensure that cyclists have priority at junctions, thus improving safety and ease of movement through the site.
	Ic Where should new streets be placed, could they be used to cross the development site and help create linkages across the scheme and into the existing neighbourhood?	 The new streets form a permeable movement network through the site. The vehicular movement network does not connect directly into Phase 1, however permeability is provided through the pedestrian and cycle network which allows for sustainable travel throughout the new town.
	Id How should the new development relate to existing development? What should happen at the edges of the development site?	 The proposed pedestrian and cycle network connects into Phase 1, the adjoining sites on Station Road and further afield to Cambridge City via the existing bridleway along the Cambridgeshire Guided Busway. A key priority for the scheme has been to ensure the pedestrian and cycle networks in Phase 1 and 3B are integrated to ensure ease of travel throughout the town. The movement network in Phase 3B also safeguards links to provide connections to land to the east, which may be bought forward by others.

2. Facilities and services: Does the development provide (or is it close to) community facilities, such as shops, schools, workplaces, parks, play areas, pubs or cafés?	2a	Are there enough facilities and services in the local area to support the development? If not, what is needed?	Northstowe's Town Centre within Phase 2, and Local Centre within Phase 1, will provide a range of employment, leisure and commercial services and facilities which complement those provided within the adjacent settlements of Longstanton. The facilities in Phase 1, 2 and in Longstanton are accessible from Phase 3B through the connected footpath and cycle networks.
	2b	Where new facilities are proposed, are these facilities what the area needs?	The Economic Development Strategy for Phase 3B takes into account the existing provisions within Northstowe Phase 2 Town Centre, Longstanton and other commercial and economic centres in the wider region. A secondary mixed-use zone has been identified in a key location within the development allowing for future changes in employment patterns and enabling local shops, cafés and small businesses to set up in key zones of activity.
	2c	Where new facilities are proposed, are these new facilities located in the right place? If not, where should they go?	The secondary mixed-use zone Primary School proposed within Phase 3B are located at the heart of the movement network for the site, thus ensuring they are easily accessible for residents of Northstowe and other surrounding settlements.
	2d	Where new facilities are proposed, does the layout encourage walking, cycling or using public transport to reach them?	The Primary School and secondary mixed-use zone are both accessible via public footpaths and cycle routes provided along the primary street and secondary streets. .
3. Public transport: Does the scheme have good access to public transport to help reduce car dependency?	3a	What can the development do to encourage more people (both existing and new residents) to use public transport more often?	The masterplan has been developed to encourage 'green' transport methods. Longstanton Park and Ride, which is served by the Cambridgeshire Guided Busway and situated within walking distance of the site. The pedestrian and cycle network proposed within Phase 3B connects into the existing bridleway along the CGB, providing direct connections to this bus stop via sustainable modes of transport. Other local bus services providing to surrounding settlements, including Longstanton and Swavesey, are also within easy walking distance of the site.
	3b	Where should new public transport stops be located?	No new public transport stops are proposed, as the local bus services and stops are accessible from the new development.
4. Meeting local housing requirements: Does the development have a mix of housing types and tenures that suit local requirements?	4a	What types of homes, tenure and price range are needed in the area (for example, starter homes, family homes or homes for those downsizing?)	A full range of housing types will be provided in line with the local housing need.
	4b	Is there a need for different types of home ownership (such as part buy and part rent) or rented properties to help people on lower incomes?	A range of housing types and tenures will be provided within Phase 3B, accommodating for people of all ages and abilities including affordable homes for rent and purchase, self-build and custom build housing to help establish a mixed community. The housing provided will be tenure-blind.
	4c	Are the different types and tenures spatially integrated to create a cohesive community?	The different types and tenures will be appropriately integrated into the neighbourhoods to ensure a cohesive community.
Creating a place			
5. Character: Does the scheme create a place with a locally inspired or otherwise distinctive character?	5a	How can the development be designed to have a local or distinctive identity?	The proposed development of Phase 3B draws on the intrinsic characteristics of the site to create areas of distinctive identity. The retained central tree copse and radiating hedgerows define the unique character of this Phase. Variety in the design approaches reinforces defined areas of character, for example with regards to building height and density.
	5b	Are there any distinctive characteristics within the area, such as building shapes, styles, colours and materials or the character of streets and spaces that the development should draw inspiration from?	The development will draw on the overarching design principles set out in the Design Codes for Phases 1 and 2 to ensure the town forms a coherent whole. Northstowe will have its own, distinctive identity as a new town.
6. Working with the site and its context: Does the scheme take advantage of existing topography, landscape features (including water courses), trees and plants, wildlife habitats, existing buildings, site orientation and microclimate?	6a	Are there any views into or from the site that need to be carefully considered?	The hedgerows along the western, southern and part of the northern boundary filter views of the development from the surrounding landscape. The privacy of the existing residents in Phase 1 has been considered in the development of the masterplan, which has responded through the provision of a lower height range that relates to the existing homes, and frontages orientated to ensure the privacy of the existing homes is not compromised. The Guided Busway runs along a section of the site's northern boundary, visually separating the site from the fenland landscape beyond.
	6b	Are there any existing trees, hedgerows or other features, such as streams that need to be carefully designed into the development?	The majority of the trees and hedgerows have been retained as part of the proposals for Phase 3B. The tree copse (which encompasses a pond) that has been retained in the centre of the site forms the landscape landmark for the Phase. This copse has been carefully integrated into the development proposals to respect its ecological value.
	6c	Should the development keep any existing building(s) on the site? If so, how could they be used?	There are no existing buildings within the boundaries of Phase 3B.
7. Creating well defined streets and spaces: Are buildings designed and positioned with landscaping to define and enhance streets and spaces and are buildings designed to turn street corners well?	7a	Are buildings and landscaping schemes used to create enclosed streets and spaces?	Building heights and densities have been defined relative to the size of the street or open space they overlook to provide appropriate levels of enclosure. The street hierarchy within the site is defined by different levels of tree planting and enclosure to ensure a legible movement network.
	7b	Do buildings turn corners well?	The development blocks have been designed to ensure that there are no 'dead frontages' overlooking streets where corners occur. This will be further refined at the detailed design stage.
	7c	Do all fronts of buildings, including front doors and habitable rooms, face the street?	Buildings will overlook the streets and spaces throughout the development, ensuring there is passive surveillance of the public open space and thus improving safety.

8. Easy to find your way around: Is the development designed to make it easy to find your way around?	8a Will the development be easy to find your way around? If not, what could be done to make it easier to find your way around?	The development has been designed to have a distinctive street hierarchy that runs through different character areas to improve wayfinding. The retained tree copse forms the central point in a network of green infrastructure and is a landmark feature for the Phase. The different design approaches to the distinct character areas, will improve wayfinding through the Phase. The secondary mixed-use zone and Primary School form a key node within the development, which is reflected in the provision for up to 4 storey buildings in this location.	
	8b Are there any obvious landmarks?		As stated above, there are a series of landmarks both within the green infrastructure network and within the built development that will aid wayfinding through the Phase.
	8c Are the routes between places clear and direct?		The movement network follows desire lines, for example between the different areas of open space and Primary School to ensure that pedestrian and cycle routes are direct and easily navigable.
Street and home			
9. Streets for all: Are streets designed in a way that encourage low vehicle speeds and allow them to function as social spaces?	9a Are streets pedestrian friendly and are they designed to encourage cars to drive slower and more carefully?	The streets have been designed to ensure safety for all users, with segregated cycleways and footpaths along the section of primary street and the secondary streets. Appropriate speed limits will be enforced to ensure the safety of the users. The Primary Street will comprise landscaping and tree planting, to clearly mark the entrance into the Phase. Smaller residential streets will prioritise pedestrian and cycle movement, with shared paving treatment, on-street parking and appropriate landscaping incorporated into the streetscape to ensure slow vehicular movement.	
	9b Are streets designed in a way that they can be used as social spaces, such as places for children to play safely or for neighbours to converse	Within the residential blocks, shared paved surfaces will be carefully designed to prioritise pedestrians and cyclists and allow for the safe recreational use of the space by the residents. Boundaries between public and private spaces will be designed to encourage social interaction and provide active frontages onto the street.	
10. Car parking: Is resident and visitor parking sufficient and well integrated so that it does not dominate the street?	10a Is there enough parking for residents and visitors?	The development proposes a range of different parking solutions to anticipate future changes in car ownership and usage. Parking is provided both on-plot within integral garages and driveways and off-plot within the public realm. The different parking approaches have been developed relative to the characteristics of the street, for example more on-plot parking is provided in quieter areas of looser development whereas more central and key locations can support on-street and communal parking spaces.	
	10b Is parking positioned close to people's homes?	The range of parking solutions means that some of the parking is within the curtilage of people's homes, whereas some is on-street or within a communal car park further removed from the property. The masterplan allows for disabled and accessible parking to be provided where required.	
	10c Are any parking courtyards small in size (generally no more than five properties should use a parking courtyard) and are they well overlooked by neighbouring properties?	The masterplan demonstrates how communal parking courtyards could be approached if necessary, with the incorporation of dwellings into these spaces to ensure they are overlooked.	
	10d Are garages well positioned so that they do not dominate the street scene?	The Illustrative Masterplan allows for a range of housing typologies to be used to ensure garages do not dominate the streetscene at ground level.	
11. Public and private space: Will public and private spaces be clearly defined and designed to have appropriate access and be able to be well managed and safe in use?	11a What types of open space should be provided within this development?	The scale of the development means that a wide range of open spaces have been provided to accommodate for people of all ages and abilities. The development provides substantially more open space than required by policy to support its role as a Healthy New Town; encouraging contact with nature and creating varied opportunities for everyone to adopt a more active lifestyle either by playing, walking, sitting or engaging in sporting activities.	
	11b Is there a need for play facilities for children and teenagers? If so, is this the right place or should the developer contribute towards an existing facility in the area that could be made better?	There is a need for play facilities for children and teenagers, which has been met through the formal provision of LAP's, a LEAP and a NEAP as well as the provision of informal recreational space. These facilities are provided as part of the extensive public open space within the development.	
	11c How will they be looked after?	A maintenance strategy will be developed for the proposed open spaces at the detailed design stage.	

12. External storage and amenity: Is there adequate external storage space for bins and recycling, as well as vehicles and cycles?	12a Is storage for bins and recycling items fully integrated, so that these items are less likely to be left on the street?	The masterplan allows for flexibility in the housing typologies so that bin stores can be integrated at the detailed design stage subject to future coding.
	12b Is access to cycle and other vehicle storage convenient and secure?	

