North Cambourne Garden Suburb
Delivering a sustainable community

February 2013
North Cambourne Garden Suburb: Delivering a sustainable community

01. Vision statement

This document demonstrates how a new community to the north of Cambourne can be delivered to achieve the twin objectives of contributing to the growth requirements of South Cambridgeshire and in a way that enhances the sustainability, integration and vitality of the overall settlement.

The Vision for the new community of North Cambourne is as follows:

North Cambourne will complement the existing villages that together comprise the settlement of Cambourne and help deliver a sustainable community that is a new Garden Suburb for the 21st Century. It will be a welcoming place with its own identity and sensitively designed environment where nature and landscape form an integral part of the development. It will be a place where people can live and work, educate their children, have access to health and leisure facilities, meet friends, create communities and enjoy both the built and natural environment.

Illustration: Three Magnets - Principles to the Garden City movement
Illustrative masterplan for North Cambourne
The proposal aims to deliver a sustainable and well-designed new community to north of Cambourne that achieves the following key objectives:

Creating a modern ‘Garden Suburb’ that preserves the important aspects of the existing landscape and natural habitats and integrates them with the new built environment;

Establishing a viable and sustainable place that contributes to the economic vitality of Cambourne and supports a more diverse range of services and facilities that meet the requirements of the whole community;

Connecting neighbourhoods by providing an enhanced network of footpath and cycle routes that integrate the new community with the rest of Cambourne;

Making a ‘welcoming place’ by achieving a high quality of design that fosters a strong sense of community and where the needs of that community are met in an accessible and sustainable way in order to minimise the need to travel;

Providing transport choices: where travel is necessary a range of sustainable transport choices will be available;

Delivering best practice and innovation by utilising new technologies that will reduce energy demand and ensure that the environmental effects of the proposals are minimised;

Focussing on ‘Quality of life’ by providing access to the local countryside, providing places to play, good access to facilities and a place residents can be proud of.

Key components of the North Cambourne development include:

- 4,000 new homes provided in a mix of housing types and tenures to meet all the needs of the community including affordable housing;
- a greater choice of local employment opportunities;
- new local services and facilities that will be provided along a new village ‘high street’;
- enhanced education provision including new primary schools;
- new allotments, community gardens and orchards;
- public open space including a Community Park and a network of green infrastructure that safeguards important landscape features and habitats;
- leisure facilities including sports pitches;
- high quality public transport services including a Park and Ride providing improved public transport links into Cambridge;
- measures to control drainage and prevent flooding, including Sustainable Drainage Systems (SuDS); and
- improved pedestrian and cycle linkages across the A428 to provide integration with the existing areas of Cambourne.
02. Delivering sustainable growth for South Cambridgeshire

1.1. Creating a sustainable Cambourne

This document sets out the rationale and strategy for a sustainable new community as an extension of the existing settlement of Cambourne. The study has been commissioned by Martin Grant Homes and Harcourt Developments who jointly control approximately 473 hectares (1,169 acres) that is located on the northern edge of Cambourne (Figure 1).

The site has been the subject of both technical and environmental studies to determine the key features of the site and its surrounding context. The proposed development concept, as defined within this document, has therefore been informed by:

- the context of the site including the relation with the existing settlement of Cambourne;
- the physical attributes of the site, including the contours of the local landscape,
- the location of key hedgerows, water courses and wooded areas; and
- the presence of ecological habitats.

The outcome of this analysis is a proposal that is sensitive to its location and embodies the principles of a Garden Suburb. It therefore represents a sustainable and sensible option for meeting the development needs of the District.

Figure 1. Site Location
2.1. Emerging Spatial Strategy

This document has been prepared in response to publication of the ‘Issues and Options 2’ document, issued by South Cambridgeshire Council.

The emerging spatial strategy jointly prepared by South Cambridgeshire and Cambridge City Councils anticipates a continuation of a hierarchy of development locations as follows:

- new homes within or on the edge of Cambridge;
- new homes in one of more new settlements close to Cambridge;
- new homes in or on the edge of existing market towns;
- new homes in villages.

The proposal for a further new community at Cambourne is consistent with this approach and falls within the second level of hierarchy i.e. new settlements. To date the Council has considered and included informal consultations at the ‘Issues and Options’ stage both Bourn Airfield and Waterbeach as potential locations for development in this level of the hierarchy. North Cambourne is a further option that should be incorporated in the Council’s analysis of options and similarly consulted upon.

2.2. Scale and sustainability in new settlements

There is an established body of both evidence and policy support for the principle that at the size of about 10,000 homes, or 25,000 population, settlements achieve sufficient critical mass to support a diverse mix of land uses that together make a truly sustainable community. It is at this scale that a settlement has sufficient population that it is capable of supporting a viable range of services and facilities.

This diversity of economic activity means that residents can obtain local jobs, access local services and facilities and thereby an enhanced degree of self-containment is achieved that reduces the need for longer distance journeys. Below this level of population there is simply not the critical mass to support the diversity of economic activity and so longer distance journeys are required to access jobs and day-to-day services.
Consistent with this principle, research commissioned by the former Department of Transport and Department of Environment (‘Reducing Transport Emissions through Planning’, Ecotec, 1993) indicates that overall travel demand and especially car use tends to decrease as settlement size increases. Based on the National Travel Survey, the research showed that urban areas with a population of between 25,000 – 100,000 showed a marked decline in dependence on car travel.

Similarly, research commissioned specifically in relation to new settlements by the Department of Environment in 1993, titled ‘Alternative Development Patterns: New Settlements’ (Breheny, Hent & Lock) explored the relationship between the size of settlements and economic, social and environmental costs i.e. the three strands of sustainable development set out in the NPPF, paragraph 7.

The conclusions of the research indicated that a new settlement should preferably be at least 3,000 – 5,000 homes in order to support a secondary school, but ideally ‘environmental considerations’ point to schemes even larger than this, up to 10,000 dwellings (a population of 25,000 to 30,000).

More recent studies continue to support this general conclusion, including ‘Best Practice for Urban Extensions and New Settlements’ TCPA (2007), which advocates a minimum settlement size of 4,000 to 5,000 dwellings. In addition, the document ‘Eco-towns – Living a greener future’, DCLG (2008) advocates a critical mass of 5,000 to 25,000 homes.

The evidence is therefore consistent in identifying the ‘tipping point’ at which settlements become sustainable at circa 10,000 dwellings / 25,000 population. The evidence is drawn from analysis of real places and so can be applied to South Cambridgeshire. Indeed, we have undertaken analysis of reference settlements in Cambridge sub-region and the results of the analysis support this general conclusion (see Section 2.5).

‘A further increase of the order of an additional 4,000 homes would be required to meet a nominal settlement size of 10,000 homes.’
2.3. Location of growth at Cambourne

The existing settlement of Cambourne comprises about 3,500 homes. The first ‘Issues and Options’ document (July 2012) contained a proposal for a further 2,500 homes to the west of Cambourne, in the vicinity of the new secondary school. This proposed direction of growth represents a logical extension to the settlement in close proximity to existing facilities and the new secondary school and would bring the total scale of Cambourne to some 6,000 dwellings overall.

A further increase of the order of an additional 4,000 homes would be required to meet the critical benchmark figure for a sustainable settlement of 10,000 homes. Not all of these homes would be delivered in the plan period, with potentially 1,500 homes delivered after 2031. An allocation of this size would though confirm the ultimate intention for Cambourne to achieve a sustainable scale.

The proposed western extension of Cambourne would draw the ‘centre of gravity’ of the settlement further to the west, focusing on the existing district centre, the business park and the secondary school (Figure 2).

This would in itself argue against the next stage of expansion being to the east of Cambourne. Development to the east of Upper Cambourne would also encroach on the gap between Cambourne and the existing settlement of Highfields / Highfield Caldecote.

It would also extend the length of development out along the A428, which would have the effect of increasing journey lengths / times to the village centre and existing facilities, and to the new secondary school, increasing the propensity for local car travel.

Development to the south would breach the landscaping that has been put in place to define the existing southern edge of Cambourne. To breach this established boundary would extend development in the direction of Caxton; up to the line of the bypass. As with the eastern option for expansion, it would also locate new development at some distance from the existing district centre / business park.

Figure 2. The triangle of sustainable growth for Cambourne. Three hubs of 5 and 10min walk distance, and 2km from the new secondary school.
The best location for additional growth is therefore to the north of Cambourne. This location would place new development in proximity to the existing centre of Cambourne. Under this arrangement, and providing sufficient pedestrian and cycle links can be provided across the dual carriageway, travel distances to key facilities can be kept to a minimum. This arrangement will therefore increase the footfall and expenditure at these facilities, ensuring their long-term economic viability. In addition, new facilities to the north of the A428 within the area of new development would be in close proximity to more residents within the existing settlement. Thus the arrangement would represent a reinforcement of the existing centre alongside an enhanced range of accessible new services / facilities.

**Connected public transport**

The Council’s Interim Sustainability Appraisal (2013) identifies as a performance objective that sites for development should have good public transport links to Cambridge.

The proposals achieve this through a number of bus-related measures:

- extending existing bus services through to North Cambourne,
- an improved service on the Citi 4 route; and
- an additional service linking all parts of the Cambourne settlement could also be provided as a circular route (Figure 5).

These measures are achievable as the increased size of settlement makes internal bus services viable so that public transport becomes a realistic alternative to the car for travel within Cambourne.

A Park & Ride site would also be provided to establish a hub for bus movements through and around the site. A Park & Ride in this location could utilise the existing bus services that run along St. Neots Road (A428) with increased service frequency. Locating the facility within North Cambourne means that the Park & Ride would not add traffic to existing roads in Cambourne.

**2.4. Integrating communities**

Growth at North Cambourne has the benefit of being located within a reasonable walking distance of the existing centre of Cambourne, where the business park and the secondary school are located. Existing infrastructure, including road crossings, generous paths and landscaped off-road routes, within Cambourne can all be made use of and extended to improve connectivity to the north.

Extensions to the network will include cycle/pedestrian bridges across the A428 at key locations that correspond with the main ‘desire lines’; for example to give direct pedestrian access to the new secondary school. The compactness of the proposals and the local topography mean that cycle trips will be particularly attractive; and indeed these have seen a noticeable growth in recent years.

By providing a mix of uses, the development at North Cambourne would also become accessible to the existing residents to the south. Businesses would have a larger catchment of customers and potential employees, this would increase their economic viability as well as increase the proportion of internal trips thereby reducing the need for external trips.
North Cambourne Garden Suburb: Delivering a sustainable community

Figure 3. Site Location and local sites currently identified for growth
2.5. A more self-contained place

Cambourne does not currently exhibit sustainable patterns of transport behaviour. This is because of a combination of factors that include the lack of services/facilities within the settlement and its relative isolation from major centres such as Cambridge. It is our case that the existing Cambourne settlement can be made more sustainable by an increase in its scale; up to 10,000 dwellings. We have already referred to the existing evidence and policy guidance that supports this ‘tipping point’ for sustainability.

To demonstrate the applicability of this point in the Cambridge sub-area we have undertaken a study of local towns of various sizes using data from the Census 2001 relating to journey to work. The following settlements have been used:

- Bourn
- Papworth Everard
- Bar Hill
- Great Shelford
- Sawston
- Cottenham
- St Ives
- Newmarket
- Haverhill

The data (shown in Table 1 below) shows that as the settlement size increases there is an increase in the internalisation of trips to work i.e. more residents live and work in the same place. This effect is particularly marked near to the 20,000 population mark, and beyond. As referred to earlier, this threshold has been identified in previous studies that define a minimum size for a self-contained new settlement. With a well-connected layout and a more balanced range of land uses; then a greater proportion of trips for education, shopping, leisure would be contained within an expanded Cambourne.

Table 1: Measure of Internalised Journeys to Work Compared to Settlement Size (Source: Census 2001)
03. Constraints and infrastructure

3.1. Context objectives and opportunities

The masterplan vision is to create a high-quality environment where it is desirable to live and work and where the built elements of the scheme are contained within an extensive network of green space, in accordance with the principles of the Garden City.

A number of technical studies have been carried out on the North Cambourne area as well as having regard to its context so as to identify the physical constraints, investigate infrastructure issues and define areas of opportunity to determine the capacity for future development. The following summarises the key issues.

3.2. Hydrology

From a review of the Environment Agency mapping the entire site lies within Flood Zone 1. Land in this zone is assessed as having a less than 1-in-1,000 annual probability of river flooding. The topography of the site, and hence drainage catchment, generally falls in a northerly direction towards an existing watercourse that then runs through the village of Elsworth. The provision of balancing capacity at the northern edge of the site would achieve a greater level of control on discharge via the watercourse towards the village and thereby address any flooding issues.

The NPPF states that opportunities should be sought on all sites to reduce the overall flood risk in the area and beyond through various means including the application of SuDS. The proposed development will incorporate a range of SuDS measures in order to provide surface water attenuation, water quality improvement and biodiversity enhancement in accordance with the ‘Design and Adoption Guide for Sustainable Drainage Systems’ (Cambridge City Council, 2010).

Surface water runoff from the proposed development will therefore be restricted to existing Greenfield rates or better (where practicable) to ensure as a minimum that off-site flood risk is not exacerbated and where possible is reduced.

3.3. Utilities

A Utilities Report is underway by consultants WSP to identify the existing services infrastructure within the proposed development area. There are no significant constraints to the proposed development in terms of utilities, and sufficient new utility infrastructure can be provided given appropriate investment. A key feature north and outside of the site is a high voltage power line (as illustrated in Figure 4).
3.4. Heritage

Our constraints plan identifies a number of Statutory Listed Buildings are located within the wider study area, primarily within Knapwell, Elsworth and Caxton. The core areas of Elsworth and Knapwell villages are designated as Conservation Areas, approximately 1km distant to the north of the site (Figure 4).

Adjoining the site there are two grade II Listed Buildings as part of New Inn Farm. The farmhouse is located off St Neots Road, south west of Knapwell. It forms part of a small cluster of farm buildings which have been listed for group value.

Any new development north of the New Inn Farm buildings will need to carefully consider and safeguard their setting. A significance assessment will be produced in due course, in accordance with the NPPF and current best practice.

Figure 4. Key constraints and opportunities
3.5. Movement

The existing arrangement of transport facilities and routes associated within Cambourne mean that the proposal to the north provides the best opportunity to utilise existing infrastructure and deliver opportunities to enhance and extend transport provision for all.

Current public transport services include the Citi 4 route to Cambridge which uses the St Neots Road adjacent to the site. This could be enhanced to provide greater frequency of service and capacity helping improve its use and improve viability. Diverting the Citi 4 into North Cambourne would also serve to better link the two sides of the expanded Cambourne settlement either side of the A428 with a frequent bus service (Figure 6).

There are existing footway and cycleway connections in the area with signal controlled crossings on the A428 slip roads and a high quality link from the north to the existing district centre and business park in Cambourne (Figure 5).
Movement opportunities

There are opportunities for further north/south connections to be delivered to the east and west of the A428 junction in the form of new pedestrian / cycle bridges and / or improved provision along Broadway towards Upper Cambourne.

In addition, major highway improvement schemes are being prepared in the area with significant investment confirmed at M11 junction 14. Improvement schemes are also being considered at M11 junction 13 and Caxton Gibbet, which will significantly enhance the capacity of the highway network in the general vicinity of the site.

Figure 6. A new network for public transport
04. Ecology and landscape

4.1. Context

North Cambourne is located in an area that is predominantly in agricultural use, including three farmsteads. It is characterised by woodland, copses and field hedgerows. To the south lies the new settlement of Cambourne. To the north, outlying villages include Caxton, Papworth Everard, Elsworth and Knapwell.

The masterplan is based upon a multi-layered web of landscape and wildlife features which are incorporated to enhance not only the appearance of the Garden Suburb, but also its wild life value, in accordance with Ebenezer Howard’s Garden City concept. Therefore initial assessments of both the ecology and landscape have been carried out to help identify key issues and develop a robust development rationale for North Cambourne.

4.2. Ecology

An initial ecological assessment has been undertaken by Hyder Consulting. The aims of the study were to assess the conservation value of the survey area, investigate the likely presence of rare or protected species, and to identify any features, habitats or species, which would constitute potential constraints to the proposals for development within this area.

A combination of a review of desk study data and a site walkover survey revealed that the site largely comprises habitats of limited nature conservation value. However, the site does contain two woodlands and one area of road verge, which have been designated for their nature conservation interest, namely Elsworth Wood Site of Special Scientific Interest (SSSI), Knapwell Wood and Knapwell Road Verge CWS (Figure 7).

The site largely comprises arable fields bordered by fragmented hedgerows. It also supports a network of water bodies and a small number of broad-leaved copses. Whilst the majority of these features are considered to be of low nature conservation value in their own right, they may be of value to protected species, for example bats, great crested newts and farmland birds. A main badger sett was recorded on the boundary of the area identified for residential development and it is likely that badgers forage throughout the site. The majority of habitats and features identified as being of potential value to protected species would be retained within the proposed development layout.

The RSPB Hope Farm, lies to the north of the site and which comprises agricultural land managed to maximise potential habitats for birds, within a commercial farming context.
Figure 7. Ecological assessment plan
4.3. Landscape

The proposed development area lies on the northern margin of a broad plateau 65 – 70m AOD, falling from the mid part of the site to approximately 55-50m AOD. Within the site, the landform comprises a series of gentle ridges and valleys generally orientated north - south.

Landscape Planning Policy Context
A number of trees and woodland within the site are covered by Tree Preservation Orders. Elsworth Wood in the west part of the site and Knapwell Wood in the east part of the site are designated as Ancient Semi Natural Woodland. The proposed development area is crossed by a bridleway and two public footpaths. The Pathfinder Long Distance Walk passes approximately 1km to the north of the site, taking in the two Conservation Areas at Elsworth and Knapwell.

‘Areas of new woodland structure planting to provide wildlife and recreational benefits and to reinforce the natural landscape pattern.’

Character
North Cambourne would lie within the Bedfordshire and Cambridgeshire Claylands National Character Area, defined by Natural England. At the regional level, the site lies within the large Western Claylands landscape character area, defined by Cambridgeshire County Council, which extends between Cambridge and St. Neots. The Western Claylands, a gently undulating lowland landscape, is also characteristic of the site and typically comprises large-scale open arable farmland defined by trimmed hedgerows and woodlands.

Cold Harbour Farm at the centre of the site

4.4. Views

Views from the north: The northern margin of the site is visible south of Elsworth and from parts of the Pathfinder Long Distance Walk. The rolling landform, together with woodland and copses, provides a degree of visual enclosure to the central and south eastern parts of the site. The land rises towards the A428(T) (see photo 2).

Views from the west: Views of the more elevated and open west and south-west margins of the site are mainly seen briefly from the road leading to Elsworth.

Views from the south: Views from the south are limited by buildings within Cambourne and the planted mounding along the A428(T) corridor.

Views from the east: Views into the site from the east are mainly limited to those from the road leading to Knapwell.
Photo 1. View looking north-west towards the site over the A428(T)

Photo 2. View looking south-east from the site towards the rising section of the A428(T)
4.5. Opportunities

The landscape character of the site provides a framework for sustainable growth, local identity and place making (Figure 8). Key to this will be the creation of a web of new multi-functional Green Infrastructure as part of the new Garden Suburb approach.

The Green Infrastructure for North Cambourne will respect the local landscape character and enhance the principles set out in the County Council’s Cambridgeshire Landscape Guidelines for the area, including:

- positive management and enhancement of existing woodlands;
- areas of new woodland structure planting to provide wildlife and recreational benefits and to reinforce the natural landscape pattern;
- creation of new biodiverse wild flower meadows;
- creation of generous landscape corridors within valley bottoms;
- enhancement of existing footpath corridors; and
- sensitive use of tree planting in roadside hedgerows, tree belts and woodland planting, thereby helping to absorb new development into the landscape.

‘The landscape character of the site provides a framework for sustainable growth, local identity and place making.’
Figure 8. Landscape issues and opportunities assessment
05. The Masterplan

An environment-led approach to delivering sustainable development principles in the form of a Garden Suburb is at the forefront of the masterplan concept, guided by both the ecological and landscape assessments. The masterplan vision responds to the particular characteristics of the site to ensure delivery of a mixed-use and sustainable community that is valued in terms of its aesthetic qualities, abundance of green spaces and residential amenity.

The design principles that follow have been devised to create a well-structured and legible place (Figure 9), which delivers a high quality living environment for both people and wildlife:

- creating a well connected place;
- creating a sense of community through a mix of uses;
- creating opportunities for people to live and work in Cambourne;
- incorporating a high quality landscape and biodiversity; and
- delivering a sustainable healthy place that, with high quality energy efficient new homes.

Figure 9. Connected neighbourhoods - connected facilities within a 5 and 10 minute walk distance
5.1. Creating a well connected place

A key objective of the movement framework is to create a clear pattern of streets that establish a ‘movement hierarchy’ that favours sustainable modes. The movement hierarchy in the development will respond to the requirements of the following key users in this order of priority:

1. Pedestrians
2. Cyclists
3. Buses
4. Cars

**General Principles**

The principal access to the site will be via the A428 junction. Additional bus links onto the Knapwell Road will be provided via a park & ride facility.

A key component of the masterplan will be the creation of a high street orientated broadly north to south, which forms the ‘spine’ of development. From this spine, a network of streets will produce a well connected environment, focused on good pedestrian movement.

These will be overlooked streets and lanes and not purely roads or footpaths between development blocks.

Separate footpaths and cycle routes will be designed to be overlooked by development wherever possible to provide natural surveillance.

A new cycle link over the A428 will create good connections to the core area of Cambourne, including the new Secondary School.

Development will follow the principles of traditional perimeter blocks (street elevations that are enlivened by visible activity) and create a coherent new street pattern, responding to uses, scale and landscape design (Figure 10).
Figure 10. Illustrative masterplan framework
North Cambourne Garden Suburb: Delivering a sustainable community

Concept of linear green street
5.2. Creating a sense of community

The North Cambourne Garden Suburb will create a thriving and viable community and contribute to the vitality of adjoining neighbourhoods in Cambourne. The development will be able to deliver a local centre, including a convenience store, local facilities and employment. Services for the community are a vital attribute of the masterplan and will ensure community cohesion and integration.

The range of facilities and services that it is proposed to be included in the new community is as follows:

- a local centre with a range of uses, including retail, healthcare and leisure, set around a square and along the 'high street';
- a range of employment uses, including 'start-up/incubator' units;
- new education provision (2 or 3 primary schools);
- community gardens, orchards and allotments for the local production of food;
- park & ride (with a park and share component) and public transport hub; and
- extensive recreational space throughout the development including a recreation/leisure facility, sports pitches, and informal recreation space, for example in the form of a Country Park.

‘North Cambourne Garden Suburb will be a thriving and viable community and contribute to the vitality of adjoining neighbourhoods in Cambourne.’
5.3. A mix of uses

A variety of uses, with a strong mixed-use heart, will help to establish a vibrant urban environment, attractive to all users, including new businesses and local service providers. There is an opportunity to create a successful urban environment that builds on the mix of uses and activities that already exist in parts of Cambourne and also introduce new uses to create an interesting and vibrant urban environment.

- introduce community facilities currently missing;
- provide complimentary employment;
- opportunities serving the wider needs of the Cambridge economy;
- provide a choice of education options; and
- provide expanded retail provision.

5.4. Living and working in Cambourne

Housing

North Cambourne is able to deliver a balance of housing to help create a diverse and strong community. The development will need to provide a broad range of unit types and tenure to create a mixed community that responds to the local market requirements and housing needs. Residential units in the local centre will also help increase local footfall to enhance viability and provide natural surveillance to ensure security in the streets and spaces.

The scale and form of residential development should also be responsive to the existing site characteristics (including woodland, hedgerows and topography) as well as the roles of the place being created (relationship to public space, transport corridors and mixed-use areas).

Creating jobs

As part of creating a balanced, sustainable community we are also proposing a significant amount of job generating uses, including care units, retail activities, leisure facilities, start-up companies and other employment uses that can benefit the wider area. In addition, job creation will also be provided through a broader range of local services, including healthcare, and during the construction of the development itself.

A new employment hub adjoining the A428, would also be provided. This would provide a viable range of local employment opportunities that are well connected, both at the local level with the rest of Cambourne and more widely via the A428 and particularly to Cambridge.

Employment generating uses will also be a key part of creating a viable ‘high street’ that extends from the A428. This will create a sense of place and scale and establish a truly mixed-use centre at the heart of the new community.
5.5. Public Realm

The quality of the public realm within North Cambourne will play a key role in creating a quality place and a strong sense of identity for the new community. Through the use of a select palette of surfacing materials, street furniture and planting, the design of the streets and spaces can meet the following objectives:

- highlight the balance between vehicles and pedestrians, with increased priority given to pedestrians and cyclists;
- a ‘green’ neighbourhood, with on-street tree-planting to unify the architecture and embed the development into the wider landscape;
- create a green network to enhance biodiversity and access to amenity for the community (Figure 11);
- enhance the understanding of the hierarchy of streets and spaces through landscape treatment;
- create new opportunities for local food growing as part of a sustainable community;
- create a range of opportunities for play in line with NPPF (Section 8 Promoting healthy communities), the ‘Fields in Trust’ play requirements and local requirements; and
- create streets that are places for enjoying rather than passing through.

Figure 11. Illustrative landscape network within the masterplan
Green Infrastructure
As previously identified, the concept masterplan responds to the landscape contours, views, local land uses and development patterns. The form of development will also be influenced by landscape, such as lower densities on the sensitive edges, especially to the western edge of the site.

A network of bio-diverse and recreational corridors is designed to work with existing habitats, by creating strong connections between wooded areas, hedgerows and green lanes. The masterplan will create a web of green spaces for ecology throughout the development, developing ‘green lungs’ for the local community and also a strong landscape setting for the development parcels.

Visually the development will be set within a strong green context with a buffer of undeveloped land separating new development from countryside views.

Our approach includes:

- protecting local wildlife habitats and the flora and fauna that occupy them;
- retaining and enhancing the existing hedgerows and trees and creating new connections to extend wildlife interest; and
- proposing a site-wide SuDS network including ponds and other wetland features to create habitats of high value to native biodiversity and protect the water quality of receiving rivers.

‘The masterplan will create a web of green spaces for ecology throughout the development.’
Healthy Living
A theme underpinning North Cambourne is healthy living. Residents will be able to partake in a lifestyle that facilitates exercise and fitness, interaction with wildlife and the local production of food. This will be implemented by a number of practical measures, including; allotments and orchards running through the heart of the development, managed by the community for the community; fruit trees throughout the scheme, and the opportunity for a food market in the ‘high street’. This could be coupled with food-based activities and events in the community facilities and schools.

Exercise and fitness will be facilitated by the provision of trim trails, routes for walking/jogging and cycling routes both within the site and utilising the site’s connections to the local network of footpaths and bridleways.

A leisure facility incorporating sports pitches and courts will create a community focus for the whole of Cambourne.
5.6. Sustainable development and energy efficiency

Sustainability is a key component of the development vision with all 3 components of the concept identified in the NPPF being considered: environmental, social and economic sustainability.

The developers are currently considering provision of the following sustainability and energy efficiency measures:

- potential district heating system;
- a CHP scheme across the site;
- opportunities for solar thermal and photovoltaics pursued throughout the proposals; and
- provision of homes with high quality energy efficient homes, including Code for Sustainable Homes at level 5 and 6.

Environmental

The environmental aspects of the proposal are discussed above, with the existing landscape and ecology being key factors that have informed the masterplan. In addition, implementation of the scheme will include habitat enhancement and the creation of new environments that add to the biodiversity of the area. Further studies will be undertaken in the coming seasons to increase the bank of knowledge on the site and this will be used to refine the proposals to ensure adverse effects on the environment are minimised and opportunities for enhancement are maximised.

Social

Social inclusion, cohesion and a strong community focus are key elements of the vision and the design concept. The scheme incorporates education, healthcare, community facilities, open space, a local store, recreation and other essential elements. Affordable housing is to be integrated in all phases, built to a standard that is indistinguishable from housing for sale.
Economic
The addition of North Cambourne will enhance the economic viability of the existing and future Cambourne, creating a critical mass for businesses and thereby contributing to a more self-sufficient place.

The increased scale of Cambourne will therefore boost local economic activity and the provision of local jobs will be further enhanced by the incorporation of business spaces within the urban fabric. Establishing local jobs for residents of Cambourne is essential to making the overall settlement a more sustainable location for living in the future.

‘The addition of North Cambourne will enhance the economic viability of the existing and future Cambourne.’

Energy; reducing demand and renewable sources
In relation to energy and the desire to be a low carbon development, the most important factor in a major new housing scheme is to achieve low energy buildings and a low energy layout. In relation to low energy buildings, the development will comprise energy efficient buildings throughout; well insulated and energy efficient, encouraging energy monitoring systems so that future users are constantly aware and able to control energy use.

A high proportion of the houses will have at least one south facing main elevation, facilitating passive solar gain and accommodating photovoltaics and solar water heating.

The practicality of implementing other technologies is also being explored including potentially mini CHP for the schools, leisure, community, healthcare and care home buildings.

In terms of layout, the scheme has been designed to minimise car travel and maximise walking, cycling and public transport use and thereby reduce energy demand. The promoters of North Cambourne will engage with the District Council and their advisers in order to progress an appropriate energy efficiency strategy for the development.
06. Next steps

The North Cambourne Garden Suburb is a major opportunity to deliver a sustainable, safe and vibrant community in South Cambridgeshire. The key underlying principle is that the planned expansion of Cambourne up to a settlement of some 10,000 dwellings overall – 25,000 population – will enable it to achieve a critical mass that will sustain an enhanced level of local facilities and services. In addition, the commitment is to create a high quality place that is integrated with and complements the existing community of Cambourne and that safeguards the most important environmental features of the site and enhances and extends these within a framework of Green Infrastructure.

Much has already been done to better understand the site and its context. In terms of the next steps in defining and bringing forward the delivery of North Cambourne, the following actions are intended:

- **to liaise with key stakeholders**, including the Local Planning Authority, to ensure that the scope of the evidence base for the site is sufficient to support the allocation of North Cambourne in the emerging Local Plan;
- **to liaise with relevant agencies and authorities** to ensure that the proposals for North Cambourne comply with, and where possible exceed, relevant standards and guidelines;
- **to consult and engage with local residents** to ensure that the proposals take into account and are informed by local views and respond to what people want to see within their local community;
- **to engage with the business community**, including the Local Enterprise Partnership, to ensure that the proposals accommodate the needs of businesses and other commercial activities that we want to attract to North Cambourne;
- **to review and extend ongoing technical and environmental studies**, including seasonal surveys, to ensure that the strategy for the site is based on sound and fully tested principles; and
- **to refine the proposals** so that a comprehensive and integrated proposal is established that meets the requirements of a truly sustainable community in terms of all 3 strands of the concept: environmental, social and economic.