6

building A balanced Community

A Balanced Community

The vision is for North Ely to be 'more than a housing estate' – it should be a community with homes, shops to serve local and daily needs and it should provide a choice of job opportunities for people wanting to work close to home. The neighbourhood should be walkable and have a mix of housing types and sizes.

Quality of Life

The aim is to attract a mixed community with people of different ages and economic status and with different lifestyles and levels of mobility and independence. This should:

- Lead to a better balance of demand for community services and facilities e.g. schools and care for the elderly.
- Provide a 'lifetime community' where people can move without leaving the area.
- Make a robust neighbourhood, avoiding large concentrations of housing of the same type.
- Assist community surveillance with activity throughout the day and evening.

Integration

The new development must maximise integration between the new and existing communities of Ely.

Development at North Ely should place emphasis on the physical and social integration of new development with existing communities and the wider city.

Proposals should seek to strengthen both social and physical links, fully integrating North Ely into the city:

- Providing new or extended bus routes and strong connections by foot and cycle
- Providing new green links and delivering an extension to Ely Country Park
- Locating community facilities to maximise their use

Sense of Place

With imaginative design, the provision of community facilities can help create a focus and sense of identity for a neighbourhood. Too often inadequate attention is paid to this potential for example:

- A school or open space being provided as a planning requirement, rather than as an integral part of an urban design strategy.
- A facility being developed to meet the functional requirements of the user or provider without proper regard for its civic design potential.
- Roads that create a route that people simply travel through rather then streets that create a usable community space.

The following pages describe the requirements for each land use type.

Housing

North Ely should make efficient use of land accommodating approximately 3,000 new dwellings. A wide range of dwelling type, size and tenure should be provided – creating choice, a varied building form and meeting community needs.

Housing Objectives

- Providing a range of homes and community for all ages
- Reinforcing the special quality and character of Ely through high quality design

Development Principles

- To provide a mix of dwellings which caters for need and demand in the local area.
- Create a varied and high quality development with built form and density of housing in line with the character areas as set out in this document
- Incorporate a range of different developments and typologies, with self build plots, affordable homes and Lifetime homes integrated into the layout and the design of the development

Mix and Tenure

The development should make provision for:

- Approximately 2,100 market homes for a wide variety of market segments (including 'executive' homes and self build plots)
- Approximately 900 affordable homes, subject to viability

Provision should also be made for some dwellings to be self build plots, enabling people to design and construct their own homes.

The housing requirements from the Draft Local Plan and Draft Developer Contributions SPD are presented below, however, the mix of housing will need to be agreed with ECDC at application stage based on current demand and affordability data and of the overall viability of the proposals.

Type of Housing	1 bed	2 bed	3 bed	4+ bed	Total
Private	4%	18%	31%	47%	100%
Affordable	10%	45%	35%	10%	100%

Table 6.1 Draft SPD Housing Size Mix

Property Size	Minimum	Maximum
1 Bedroom	3%	5%
2 Bedroom	13%	23%
3 Bedroom	22%	39%
4 Bedroom	26%	47%
5+ Bedroom	7%	14%

Table 6.2 Draft Local Plan Housing Mix Requirements

Built Form & Density

The residential built form should respond to the information set out in the 'Detailing the Place' chapter. This divides the development into five character types:

- Arcadia
- Green Living
- Suburbia
- Urban Village
- Local Centres

The section on character areas provides an indicative outline of the design parameters for North Ely. The final densities and number of homes will need to be determined through detailed design work.

Access and Adaptability

The ageing population of Ely, East Cambridgeshire and the nation presents a major challenge in increasing the provision of housing for potentially frail and vulnerable households. Increasing provision for the elderly can also bring wider community benefits from releasing under occupied housing back into both the public sector and general housing market.

In accordance with Policy H1 of the Core Strategy, a proportion of the general market housing will be designed to be suitable, or easily adaptable, for occupation by the elderly or people with disabilities

Affordable Homes

Affordable housing will be delivered in clusters of 15-40 dwellings. This will enable housing management issues to be taken into consideration whilst also ensuring the delivery of a sustainable community.

All housing will be “tenure blind” as far as possible so as not to distinguish between private ownership and affordable properties by appearance of the dwelling.

The adopted policy is for the provision of at least 30% affordable housing.

Flexible Dwellings

Flexible dwellings allow for future adaptation and will assist in creating vibrant, mixed use communities. They are dwellings (C3) which are designed and built so as to facilitate alternative uses to be incorporated into ground floor space. Such alternative uses are likely to require a specific planning permission.

The types of uses envisaged could include: A1, A2, A3, B1a, C3, D1 and possibly some sui generis uses.

Flexible dwellings are appropriately located in areas of higher density housing fronting more active spaces. Such locations are likely to be served by bus stops, have more pedestrian activity due to footpath/cycleway connections and open space provision.

Within such dwellings internal flexibility (for future adaptation) will be created through:

- Higher floor to ceiling heights (3.2m+);
- Consideration of future means of escape;
- Consideration of future means for separate access to upper floors; and
- Adaptable services capability (electricity, telecoms, broadband etc).
- The details of flexible dwellings will be contained within individual reserved matters applications.

Self Build Dwellings

Definition of Self Build

The definition of self build includes housing built by individuals or groups of individuals for their own use, either by building the homes themselves or working with builders, and includes community housing projects (mostly affordable homes) for the benefit of the community, either individually or in cooperation with a builder or housing provider. Community groups are likely to be co-operatives, community land trusts, community interest companies or co housing groups.

Self-build is important for supply and private sector investment with improved affordability and access to home ownership.

Self build (or ‘custom build’ - a term for self build favoured by government) also brings many other benefits such as providing affordable bespoke-designed market housing, promoting design quality, environmental sustainability, driving innovation in building techniques and entrepreneurialism, supports small and medium sized builders and strengthens the house building supply chain as well as createing local employment opportunities in Ely and its region for building professionals and contractors.

The Government has recognised self-build in the National Planning Policy Framework (NPPF) Under ‘Plan-Making’, at paragraph 159 ‘ Local Authorities are placed under a new duty to assess the demand in their area for all types of housing:

“…including affordable housing and the needs of different groups in the community (such as, but not limited to, families with children, older people, people with disabilities, service families and people wishing to build their own homes)”.

Types of Self Build

There are six main ways of undertaking a self build project envisgaed at North Ely:

Self-build one off home

Under this option, the self builder manages the design and construction process and undertakes a significant proportion of the actual building work too.

Contractor built one off home

The vast majority of 'self build' homes are constructed this way – approx two thirds. This approach usually involves the owner finding a suitable plot of land, hiring an architect, getting planning and building regulation approval and then finding a suitable main contractor to do most of the building work.

Developer built one off home

Under this scheme, the self builder finds a developer with a site and a design they like – the developer then takes care of almost everything.

Supported community self-build group

This method involves a group of people coming together to pool their skills so they can build a number of self build houses collectively. Usually the group will include people with some construction skills, though often there is training undertaken to boost the participants' building knowledge. Each member of the group will work on everyone's house, until all are ready for occupation.

Independent community collaboration

Under this approach a group of self builders is formed to acquire a larger site to split up into individual plots. They then organise the design and construction of their own homes and can deliver these homes more cost effectively.

Kit or package home

Under this option, the self builder finds the plot of land, but then they tend to work alongside a specialist kit home provider to finalise the design and to plan the construction.

Local Centres

The local centres should be located where the main streets of the development meet, with Lynn Road and Cam Drive representing the obvious locations.

Objectives

- Grouping together facilities and encouraging shared services and linked trips
- Providing a range of homes and facilities for all of the community

Development Principles

- Mixed use area linked to employment and community uses
- Most parts of North Ely within 5 mins walk of the main streets
- A retail offer in North Ely which does not compete with Ely's City Centre
- Sufficient convenience shopping and other facilities to meet everyday needs of North Ely residents

Design and Scale

The local centres should contain active and vibrant frontages to encourage social interaction and create a sense of place.

In addition, design principles from Manual for Streets 2 will inform how all modes of transport and social interaction can be reconciled while supporting a sense of place.

The design and scale should relate to:

- The role and function of centres to serve the local needs of North Ely residents
- Catchment areas which includes existing developments within walking distance (800m)
- The wider retail hierarchy which places Ely City Centre at the top

Uses

The local centres should include a mix of retail and community uses at ground level. Cafes, restaurants and small retail units will be encouraged to 'spill out' onto the streets, creating vitality and social interaction.

There is an opportunity for the local centre to be anchored by modest foodstores to serve the new development, that are convenient for residents of North Ely without placing undue pressure on the highways network.

Further details on the approach to shopping and services is provided opposite.

Shopping and Services

The total planned size of the North Ely urban extension is of the order of 3,000 dwellings to 2031. It is considered appropriate to use a population of 2.75 residents per household and on this basis, the total population would be approximately 8,250. On the same basis, the convenience goods expenditure per head on a forecast year of 2021 is £1,912, giving available expenditure for the population of the North Ely growth area of about £15.8m.

Generally, a high proportion of convenience goods expenditure will currently be expected to go to one of the main foodstores with a main household shopping trip being carried out. This would leave, on the basis of survey results, between 15-20% of expenditure on convenience goods to be spent on top-up shopping trips at local facilities.

There is no nationally accepted standard for appropriate and/or acceptable distances or access to basic local shopping facilities, however, the assumption that convenience goods provision should generally be available within 500 metres from residential areas is not uncommon. There is a general view from ECDC that "all parts of North Ely should be within 400 metres (five minutes walk) of a local convenience store".

The JSMP proposals for North Ely suggest that retail provision should be associated with other community-related uses and potentially also with business development so that shops can play a dual function, meeting the needs of residents and those working within the area. Consequently, the particular locations of any retail development will be a product of the need to meet the maximum distances to serve the day to day shopping needs of the community appropriately and synergy with other related uses.

The JSMP proposes two local centres for North Ely; a larger centre at the Lynn Road junction and a smaller centre at the Cam Drive junction. Initial design work suggest that the larger centre might be anchored by a 'modest foodstore' of some 500 to 650 sq m net, while the smaller centre might have a 'corner shop' type development.

It is considered that delivery of facilities to the residents of the new community at an early stage is important and so a good level of commercial confidence is critical.

Given the consensus that provision in North Ely is to meet local needs, and therefore effectively top-up shopping, convenience goods retail provision at this level in the hierarchy is best delivered in the form of convenience stores of approximately 290 sq m net sales area.

Job Creation

ECDC is committed to increasing the scale of jobs growth taking place in the district. This is because of concerns about the high levels of out-commuting, currently involving some 50% of the workforce, with even higher levels on the newer housing estates. Not only does this result in the more highly skilled sector of the workforce working outside of the district and significant commuter congestion on the strategic road network, particularly the A10, but there is the danger of Ely developing into a 'dormitory' city.

ECDC also proposes to seek a more balanced approach to growth, planning effectively for jobs as well as housing. The JSMP therefore demonstrates how the development is planned to maintain and ideally improve the job density ratio in Ely from the outset of the development.

Development Principles

- Offering a range of local jobs
- Grouping together facilities and encouraging shared services
- Creating strong links to the city and beyond, and defining North Ely's employment role in relation to that for Ely as a whole

Outcomes

- Between 1,500 - 1,800 new jobs
- An average of 0.43 jobs to be created per new dwelling built.
- An innovative approach to job delivery, providing a range of job opportunities.
- Employment uses that do not undermine other key employment locations in Ely

Number of Jobs Required

ECDC's Jobs Growth Strategy was approved by councillors in July 2012. In the context of substantial planned population growth and concern about current employment densities (which are the lowest in the county), it argued that East Cambridgeshire as a whole needs an ambitious jobs growth target of 9,200 jobs over 20 years, or 460 jobs per annum. Further, it argued that within the District, growth should be focused on Ely. Currently, the city accounts for about a third of jobs in East Cambridgeshire, but the intention is that this figure should rise to over 40% by 2031.

This means that of the 9,200 additional jobs planned for the District as a whole, some 5,700 (close to two-thirds) are earmarked for Ely.

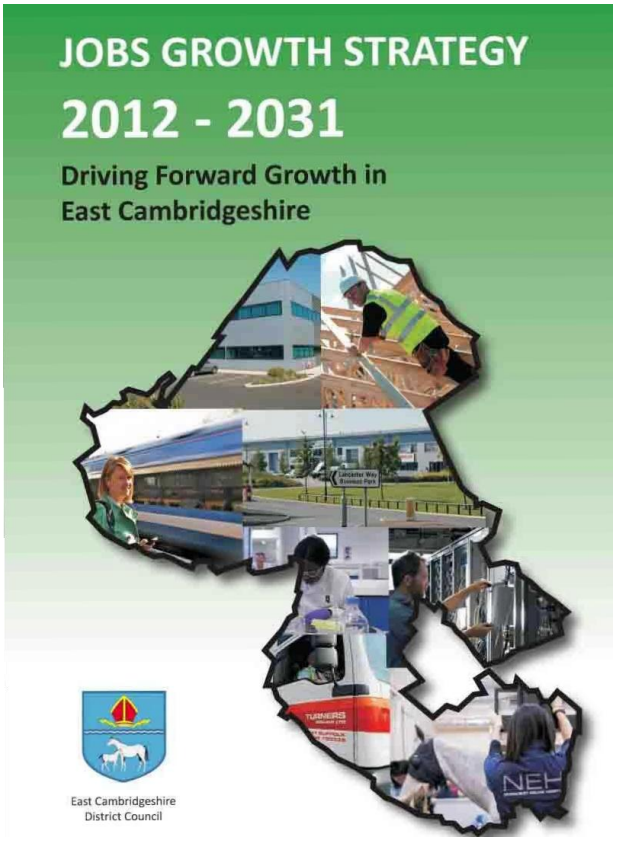
There are a number of commercial and industrial developments across the city, including Lancaster Way, the Station Gateway and the city centre, which have the potential to create an estimated 4,100 new jobs over the period to 2031 – this is a significant proportion of the total jobs requirement but not all.

On this basis ECDC would require the North Ely Development to create some 1,500 jobs over the plan period to 2031.

However, ideally ECDC would wish to see an increase in Ely's job density ratio. A target of 1500 -1800 jobs (75 - 90 jobs per annum) from the development of North Ely would be desirable.

This is considered to be a reasonable expectation, given that between 2001–2006 Ely delivered 416 new jobs per annum.

It is recognised that this will be dependent upon market conditions and progress of developments both on this site and elsewhere in Ely, and this requirement will need to be subject to ongoing monitoring and review at each phase of the development.



Delivery

Achieving this number of jobs in North Ely will be challenging. The commercial market in Ely is steady but not dynamic. The District Council's Employment Land Study Update (2011) indicates that large scale development of commercial property will be challenging in the foreseeable future and smaller developments, offering a variety of unit types, sizes, specifications and rents/prices may prove more fruitful.

Nevertheless the District Council considers it imperative that housing growth does not exceed employment growth in Ely. Therefore developers will be required to adopt an innovative approach towards the provision of new jobs in North Ely.

A Employment Strategy has been prepared by economic consultancy SQW on behalf of the landowners. This sets out further detail on the approach to job creation in North Ely and should be read in conjunction with the JSMP.

The Employment Strategy considers the strategic employment context; Ely's existing economy; and propses an employment strategy for North Ely.

The Employment Strategy identifies two overarching challenges that North Ely will need to respond to:

- As an employment location, North Ely is less well located than the other suggested schemes in relation to Ely's overarching growth dynamic – it is on the "wrong side" of Ely and transport access is less good than is the case for all of the other major schemes
- The other suggested schemes are – for the most part – long term development proposals which bring with them their own uncertainties and some challenges in terms both of deliverability and viability: in planning for Ely's long term future, it will be important that employment provision at North Ely does not inadvertently compete with them, challenging their development economics further

Within this context the employment strategy for North Ely ought to be built up from a number of distinctive elements, each of which has a contribution to make. These include:

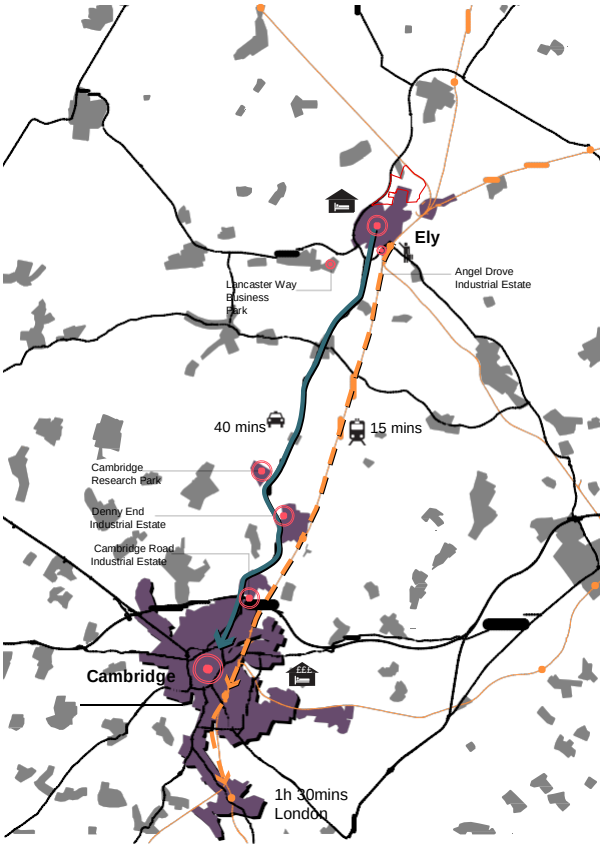
- Development of business incubator units. These could take the format of 'workhub' buildings (for which ECDC has identified a demand) to offer communal business and meeting space for homeworkers and small start up businesses in the local centres. In addition, the possibility of relocating – and potentially expanding – espace south ought to be explored with ECDC
- Local commercial and public services supported by the new development e.g. care for the young and elderly, education, community and cultural facilities.
- The green edge and Country Park could create jobs related to managing the land and any associated leisure or recreation uses.
- Encouraging and enabling homeworking by the design and configuration of dwellings and delivering the latest broadband infrastructure. In 2001, 11% of the working population of East Cambridgeshire worked at or mainly from home – given advances in technology over the past decade North Ely should aim for 15-20%. According to the East Cambridgeshire Jobs Growth Strategy, over 16% of those working in the district were working from home at the time of the last Census (compared to 9% in England and 10% in the East of England), and these figures will have increased subsequently, given advances in broadband and fast-changing working practices, cultures and expectations
- Provision for pockets of B1 light industrial/office uses within the overall development, potentially in association with the Main Street and local centres (rather than a major allocation of land for commercial development which, based on past experience in the district, is likely to be slow to develop out). In addition, there ought to be scope for some light industrial uses linked to the expansion of Chettisham Business Park to the north of North Ely.
- In the medium-long term, there could be scope for a hotel as part of the North Ely scheme. The number of jobs associated with this will depend on the quality and size of the hotel.

The illustrative Masterplan includes the identification of an area of 2.8ha for an extension to the existing Chettisham Business Park on Lynn Road. This site would be suitable for light industrial and office uses in a landscaped setting and could potentially accommodate some 5,000m² of business floorspace. That level of floorspace could host approximately150-250 jobs subject to the type of occupiers. This site will be brought forward as part of later phases of the Church Commissioners' land east of Lynn Road and the site would be marketed following the grant of outline planning permission.

In addition, developers will be expected to demonstrate how residents at North Ely will be encouraged to use public transport services for their journey to work in the city centre, Angel Drove and Lancaster Way and to the railway station.

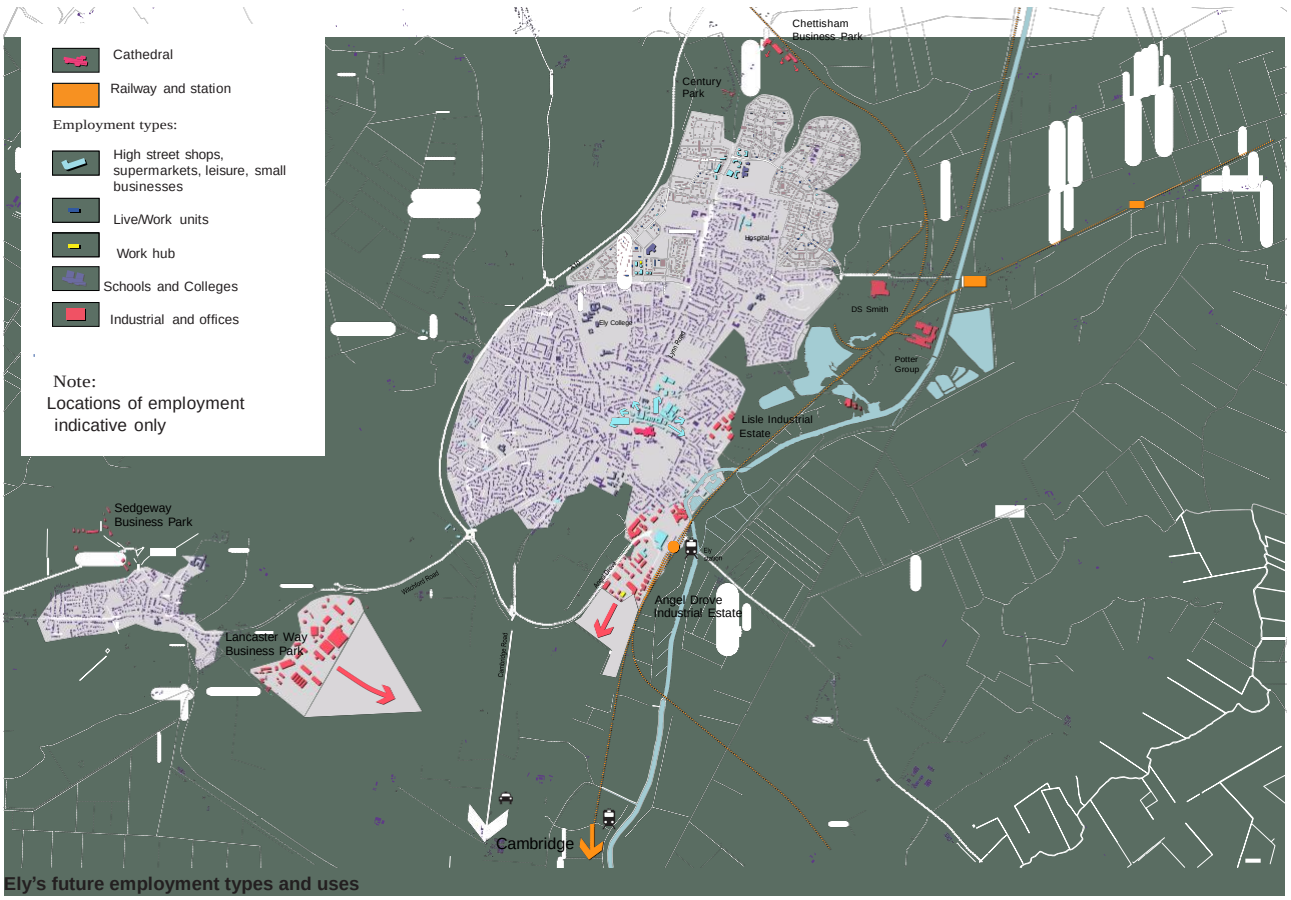
In respect of location, the western edge of the development is likely to be the most attractive business location given the visibility from the A10. The green edge could also offer high amenity office locations which may have appeal to high quality market segments.

The phasing plan for the development will need to be designed with the aim of maintaining, and preferably improving, the jobs/housing balance in Ely.



Ely's srategic employment context

Ely's existing employment types and uses



Ely's future employment types and uses

Community Uses

A range of community facilities will be needed to meet the further needs of the expanding population of Ely.

Development Principles

- Grouping together facilities and encouraging shared services
- Providing a range of homes and community facilities for all ages

Outcomes

- To develop a range of community facilities to meet the needs of North Ely residents
- To consider the spread of existing facilities within Ely when locating sites
- To consider co-locating facilities and developing spaces with multiple functions to make efficient use of the site

Where appropriate, certain community facilities can be co-located with other appropriate uses in single multi-use buildings. The following community facilities should be provided on-site:

- Community centre / faith building
- Primary schools
- Youth facilities and play areas
- Recreation and allotments

Financial contributions may be required towards off site provision or enhancement of the following community facilities, funded via s106 contributions or CIL to be agreed:

- Leisure village
- Health, social and library facilities
- Secondary school enhancements
- Post-16 enhancements

Leisure Village

The District Council has plans to construct a leisure village to the west of the proposed development, off Downham Road.

Development at North Ely should incorporate pedestrian and cycle links to the leisure village as far as is practical.

It may also be appropriate for certain recreational facilities, such as formal playing pitches, to located outside of the North Ely development area, within the leisure village, where they will be able to better serve both the existing and new community.

Community Centre

The development at North Ely will trigger a need for a further community centre. This should include a range of rooms of varying sizes so as to enable flexible use from sports to performing arts. Potential for creating a shared or dual-use facility (for example with one of the primary schools) should also be explored.

The community centre could also attract use by the existing communites of North Ely.

The strategic masterplan currently makes provision for a community hall to the east of Lynn Road, within the Highflyer Green neighbourhood, and for a work-hub (which could include community space) to the west of Lynn Road, as part of the Cam Drive Local Centre.

Library Facility

Cambridgeshire County Council has identified a need for a micro-library within North Ely, in order to meet the day-to-day needs of the local community and enhance the resource of the existing Ely library.

The exact location of the micro-library will be determined as part of the detailed design process, however, it should form part of one of the local centres and/or could be accommodated within one of the proposed community centre (i.e. the community hall or work-hub or primary school).

Health Facilities

Additional health facilities will be required for the expanded population. At present, it is expected that facilities will be expanded on the existing Princess of Wales Hospital site, however, developers may also wish to explore opportunities with private GP operators.

Should there be a need for new health facilities in North Ely, these should be located near the Local Centres. Other social service provision such as elderly care or supported living should be located close to/within the Centres in areas of activity and/ or along key public transport routes.

Proposals for the Lynn Road local centre currently make provision for a extra care facility, providing assisted living for the elderly, and a number of commercial units, that could be occupied by either a pharmacy or GP surgery.

Contributions will be sought towards the increased provision of other health, social and library facilities that may be required, in consultation with the relevant service providers.

Outdoor Youth & Children's Play Facilities

Play areas need to be provided to cater for both younger children and teenagers.

The exact size and location of play areas should be determined at the detailed design stage, however, the strategic masterplan indicates where play areas can be accommodated within the development.

All areas of the development should be within 400m of a local play area, with no physical barriers such as busy roads to cross. This is the catchment area used by Fields in Trust (formerly National Playing Fields Association) for a Local Area for Play.

Formal Sports Pitch Provision

ECDC is developing a leisure village to the west of Ely, which is anticipated will include the majority of formal leisure facilities for Ely. North Ely will need to provide clear walking and cycling connections to the facilities.

Development at North Ely could respond to this demand by either providing six playing pitches or with a combination of off-site contributions and provision on site.

This 6 pitch requirement could for example be met by:

- The provision of a new 3G football/rugby pitch adjacent to the new leisure centre and compensation to ECDC for the loss of land.
- The upgrade of 1 existing grass pitche at Ely City Football Club. This would include, re-grading, improving drainage, floodlighting and the upgrade of existing changing facilities to accommodate the increased use.
- The provision of 4 formal grass pitches on the North Ely development site. Ideally two of these would need to be located together and potentailly floodlit.

Education

Educational facilities have a major impact on the economic and community viability of an area. These facilities create social interaction points and are fundamental to the strategic movement within a site and more widely.

Development Principles

- Providing a range of educational facilities to meet the requirements of the local community
- Grouping together facilities and encouraging shared services

Outcomes

- Creation of new primary school provision
- New primary schools to operate as a focal point for the community

Required Provision

Cambridgeshire County Council has estimated the level of education provision that will be generated by the new development:

- Estimated population = 8,250
- Primary schools required = 6FE
- Secondary schools required = 0.6FE

Primary Provision

An additional 6FE of primary school provision will be required across North Ely. CCC's preferred approach is that this need is provided by way of 2 primary schools of 3FE size on 3Ha sites each.

Cambridgeshire County Council has indicated that new provision will be required early in the life of the development as there is no spare capacity in the primary sector within Ely, however, this will be subject to practicalities such as servicing, access, phasing and viability.

Each new school needs to operate as a focal point for the community where support services can be located alongside the education provision. Schools should be located to maximise walking and cycling opportunities.

The design and architectural layout should ensure that all school buildings are appropriate to their context and sit well within the overall development.

Cambridgeshire County Council will ultimately determine the specification of each school, however, the school design should fit within the design principles as set out in the JSMP.

Secondary Provision

The new development will generate a need for an additional 4 forms of entry of secondary school provision. This equates to an additional 600 secondary school places for pupils aged 11-16.

Secondary school provision will be CIL funded off site for a new secondary school in Littleport (equivalent to the cost of providing 600 places). The proposal to provide a new secondary school in Littleport followed a review of secondary school provision across the ECDC area in response to the levels of housing growth proposed across the District.

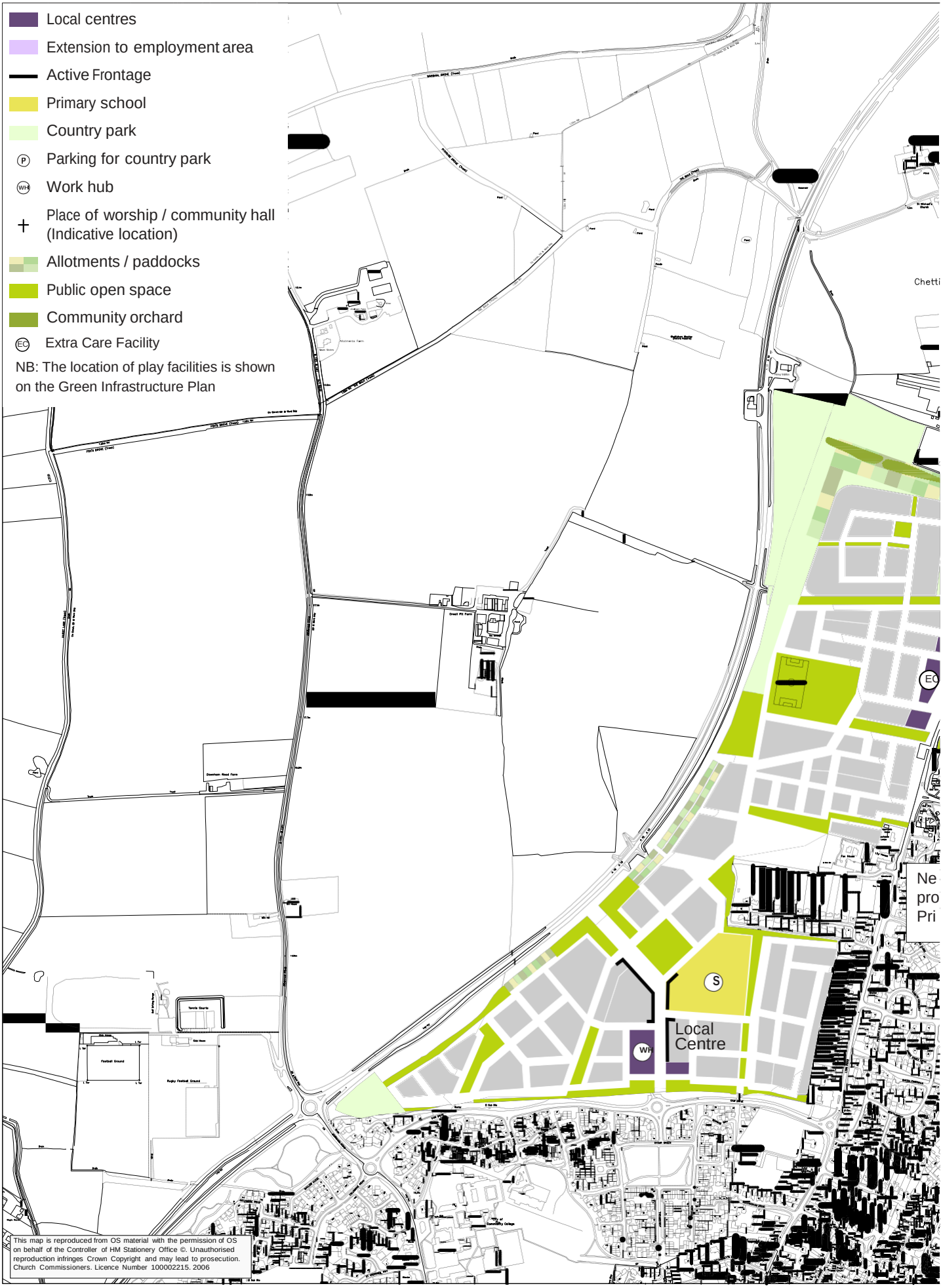
Post-16 education

Currently, many post-16 students commute to Cambridge for their education. This exacerbates peak time congestion on road and rail.

ECDC is keen to find a site in Ely for a new facility, however, it is acknowledged that a City centre location is likely to be preferable to North Ely. As such, an appropriate level of financial contribution should be made to the development of post-16 education if there is a demonstrable need.

Early Years Provision

Cambridgeshire County Council has also identified a potential need for early years/nursery school provision. The proposals for both local centres could accomodate a nursery should there be a demand and/or interest from operators.


Local centres
Extension to employment area
Active Frontage
Primary school
Country park
Parking for country park
Work hub
Place of worship / community hall (Indicative location)
Allotments / paddocks
Public open space
Community orchard
Extra Care Facility
NB: The location of play facilities is shown on the Green Infrastructure Plan
Local Centre
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Community Uses and Employment

7

making the Connections

The Core Strategy emphasises the need for sustainable transport, requiring new development to be designed to reduce the need to travel, particularly by car.

Encouraging a shift to non-car transport modes is also an essential element of the Ely Masterplan vision so that Ely can develop sustainably with minimal congestion.

Development Principles

- Creating strong links to the city centre, rail station and key destinations within the surrounding area.
- Locating key facilities, such as employment and leisure destinations, close to housing to maximise walking and cycling opportunities
- Integrating green space into the structure of the development and improving access to recreation facilities.

Outcomes

- Prioritisation of movement on foot, cycle and by public transport
- Strong public transport links to other key destinations
- A primary route through the development that brings together residential, commercial and community uses
- Walkable neighbourhoods, with conveniently located new community facilities directly accessible on foot or by bike, and with walking and cycling integral to the development
- Legible transport networks providing safe, easy to navigate and logical routes
- Good, convenient provision for private parking in recognition of high car ownership in this rural area
- Principal routes designed to accommodate buses
- Streets that create a sense of place, where people want to live, work and spend time, whilst providing views to key landmarks and shaping the character of North Ely.
- Appropriate diversion of Footpath 10 linking North Ely with Chettisham village

As the local highway authority, CCC will provide transport related advice/support to ECDC. It would be desirable for potential developers to:

- Undertake a joint outline traffic modelling assessment for the North Ely Area
- Identify transport measures that are required to support growth and when they are needed in the context of the whole of North Ely
- Coordinate implementation of the approved travel plans

CCC has indicated that they will require each parcel of the proposed development to be considered within the context of an overall transport modelling study for the wider development.

This work has since been commissioned by the landowners and aspects of the results will be used to help inform subsequent planning applications made on the site.

Walking and Cycling

Residents should be encouraged to walk or cycle by the provision of a site-wide footpath/cycleway network, integrated with the street layout but segregated from the carriageway, where appropriate.

These routes need to be direct, pleasant, attractive and safe to use and should provide safer routes to school. Appropriate built form, lighting and landscaping should be designed to give pedestrians and cyclists a sense of security along all footpaths and cycle routes, with properties overlooking key routes where possible to encourage usage.

The development should maximise the number of residents living within walking and cycling distance of key facilities. Walking and cycling routes will be required to link to existing routes beyond the development site. Given the importance of the City Centre and railway station as key destinations for North Ely residents, mechanisms for developer contributions towards the wider city cycleway network will be expected.

Priority to pedestrians and cyclists can be achieved through consideration of:

- Carefully designed roads and streets to limit traffic speeds
- Safe, convenient pedestrian network linking to key destinations and the public transport system
- Provision of secure cycle parking
- Appropriate provision of shared surfaces

Opportunities for linking with existing and proposed leisure facilities should be maximised within the development site and it will be important for recreational connections between green areas to be provided, to create a legible network of green space around North Ely.

Leisure footpaths and cycling routes would be appropriate for the extension to Ely Country Park and consideration should also be given to linkages with the National Cycleway Route 11 Cambridge – Kings Lynn which passes through Ely.

Public Transport

A sustainable transport strategy will secure attractive public transport services to be available from the earliest stages of development in order to encourage the uptake of this mode of travel for local journeys within Ely amongst new residents.

Bus services will need to be frequent, efficient, reliable and viable. The public transport strategy should build on existing services and enhance coverage and frequency as the site develops in phases as part of a holistic approach to the whole site.

Masterplans for the site should aim to locate the majority of residential development within 400m of a bus stop (5 minute walk). Bus stops should ideally be positioned at areas of activity on the street.

Streets must be designed to accommodate buses in a way that does not also encourage higher vehicle speeds.

Bus links will be required from North Ely to key destinations including Ely City Centre, railway station, Princess of Wales Hospital, local secondary schools and key employment areas

Initial transport studies have indicated appropriate bus routes from North Ely, however this requires further testing and discussion with potential service operators with a possible mixture of direct and circular bus routes.

Developers will be required to carry out further studies to verify this as well as road capacity to accommodate buses. Public transport policies for the area will be led by the County Council, in partnership with the District Council, bus operators and developers. Detailed route planning will be by discussion and negotiation between these groups.

Initial studies suggest that the development of North Ely could provide additional funding to support the continued operation of an orbital bus service which was launched in 2012 as part of the Sainsbury's development at Lisle Lane. This service is currently routed via Cam Drive and King's Avenue, operating to stops within 400m of the anticipated first phases of residential development in North Ely.

The developer contributions could be used either to provide further subsidy to this service, or an extended/ modified service, or other existing services passing along Lynn Road in the vicinity of both development sites. S106 funding will be determined at a later stage, however funds could be provided for the first five years from opening, with diminishing funding year-on-year as patronage grows.

Once the spine roads within North Ely are connected, the opportunity is available for any new or extended bus service to divert into the site to serve the additional development population. However, the final service routing is likely to be determined by the bus operator.

According to the current service operator, there has been a recent uptake of existing bus services from new developments on King's Avenue travelling to the rail station and city centre and the existing service has adapted its routing to respond to this demand. It is therefore anticipated that the new residents in North Ely would similarly find it convenient to travel to the rail station by bus and the travel plans for the proposed development sites would support this by incentivising combined bus and rail travel.

Route Structure and Hierarchy

A key aim is to encourage a shift to non-car modes. However, it is recognised that in rural areas people tend to have a greater reliance on the car. Therefore, provision needs to be made for movement by road and for adequate levels of on-site car parking.

Upgrades will be required to the wider local road network to mitigate foreseeable impacts arising from additional traffic generated by the planned levels of growth. Such upgrades should be carefully designed to accommodate residual traffic from the most sustainable scenario for traffic flows to and from the development such that they do not over provide for car use.

Primary Route

A primary connecting route will link from Thistle Corner to Cam Drive, via Lynn Road. This has notionally been referred to as 'Highflyer Avenue', but it's final name will be determined by the developers and ECDC alongside the marketing strategies for the North Ely development.

It is proposed that the masterplan will include a junction onto the A10, although the timing for the delivery of this junction will be subject to the findings of future traffic modelling and capacity testing.

It is acknowledged that the complete route cannot be delivered in the early stages of development, and will be built in a phased approach. Future planning applications will include a series of triggers which indicate when certain sections of the road (and other on-site infrastructure) need to be provided, based on the number of dwellings completed.

The route should be designed to be able to take buses and higher traffic flows, but not as a high speed road. Effective use of junctions and tree planting should be provided to add character and define space as envisaged in the 'Manual for Streets 2'.

A careful balance will be required between the different travel modes, provision of safe cycle parking facilities at focal points, convenient location of bus stops, and 'at grade' pedestrian crossings.

Where the route adjoins retail, employment and community uses, it may require different treatments in order to respond to the greater levels of activity. It is anticipated that the retail and employment functions along the route will grow organically over time, and the design of the route will need to provide some flexibility in order to achieve this. The route forms a strong over arching design element that spans the entire North Ely site, with distinct character sections and built form to reflect vibrant new neighbourhoods with unique identities along this route. Careful consideration should be given to the design, location and treatment of buildings and open space along the route in order to improve orientation and legibility.

In summary, key features of the primary route include:

- Carriageway that accommodates all modes of travel, including bus routes
- Boulevard tree planting
- Surrounding land uses to influence zoning and dimensions of the street
- Allow for prominent buildings and local facilities to influence the layout of the street/ space

Local Streets

The movement strategy for vehicles on local streets and roads within the development should demonstrate a clear structure and route hierarchy following on from effective provision of cycle and walking routes.

This should be based on the concept of connecting roads across the development and local roads. The primary route will carry the majority of traffic through the development, but the principles will be to disburse traffic throughout North Ely to avoid pressure points on the network and roads with excessive traffic flows. The principle aim of these roads is for the distribution of all forms of traffic, but they should be designed with attention to the needs of all road users, particularly pedestrians and cyclists.

Local streets will lead from the primary route. These local streets should reflect a greater priority for pedestrians and cyclists, but must be designed to accommodate on road parking, adequate access for services and emergency vehicles. These streets should also have a 'green' emphasis and incorporate tree planting and landscaping to help soften the visual impact of the built environment.

Each road intersection requires detailed consideration in terms of the orientation and setback of buildings, landscape, signage and pedestrian/cycle crossing points. A fundamental aim is to create a new development which is legible for local residents and visitors, providing safe, easily understood and logical routes. Local people should be able to orientate themselves and find their destinations easily and quickly. This requires:

- Clear street hierarchy
- Streets that create places for use by the community
- Vistas and landmarks to promote way finding
- Use of materials to help define the different character areas
- Well lit streets and clear signage
- Permeability to encourage movement and activity
- Natural surveillance to increase pedestrian security

Off-site Transport Improvements

Additional road network upgrades will be required to accommodate the traffic which is anticipated to be generated by the planned levels of growth. Local residents should also be encouraged to use sustainable travel modes such as the rail services as much as possible . Ely has excellent rail connectivity and maximum benefit needs to be obtained from this, to reduce traffic on the A10 to Cambridge and other strategic routes. The transport strategy will need to incorporate a combination of:

- Encouraging use of sustainable travel modes such as rail and bus and improving linkage with the station
- Street design that encourages slower speeds
- Junction and highway improvements that accommodate traffic resulting from the most sustainable scenario

A Transport Assessment (TA) was prepared to support the planning application submitted in November 2011 for the first phase of the development to the east of Lynn Road, known as Highflyer Farm – Phase 1, principally comprising of 800 residential units and associated community facilities. A TA is being prepared to support the forthcoming application for 1,200 residential units to the west of Lynn Road. Both TAs include transport modelling using the local SATURN model of Ely (Ely Transport Model). The TAs identify specific measures in order to mitigate the likely traffic impacts of each site. However, as the wider North Ely development is built out, there are locations on the local highway network which may be sensitive to the effects of the full masterplan development and therefore an assessment using the Ely Transport Model has been undertaken for a completion year of 2031 to identify where mitigation may be required within the surrounding highway network.

The results of this outline modelling assessment indicate that the A10 western bypass corridor will experience some capacity issues in the 2031 baseline and development scenarios and since this is likely to be a key route used by residents choosing to drive from and to the proposed development therefore any improvements to the wider highway network should be focused on this section.

The model results suggest that strategic improvements are likely to be required in the following locations by 2031 to support the combined growth in North Ely. A phased approach to delivery of appropriate mitigation which responds to off-site impacts as the development in North Ely grows will be agreed as part of s106 discussions:

- Travel planning measures to encourage the use of more sustainable transport modes
- Improved bus and cycle connections to the City centre and Ely Station.
- Improvements to Lynn Road at the interface of the two sites to create a sense of place around the proposed local centre, enabling crossing movement between the two sites.
- Traffic management measures on Lynn Road and Cam Drive to improve opportunities for pedestrians crossing and influence reduced vehicle speeds.
- New spine road connections through North Ely linking the two sites from Thistle Corner to the A10
- Improved bus and cycle interchange facilities at Ely Rail Station
- Junction improvements along the A10 western bypass around Ely
- Public transport Bus services – both bus-related infrastructure and longer term service maintenance

Car Parking

The amount of car parking provision should conform to the Council's car parking standards as set out in the Adopted Core Strategy. Car parking should not dominate the street scene nor provide obstructions to pedestrian and cycle movement. Car parking solutions in residential areas should enable parking close to buildings which they serve and designed so that they are convenient and do not encourage inappropriate on-street parking.

Delivering Transport Improvements

A traffic modelling study has been undertaken to provide an indication of the impact of the full North Ely development on the surrounding highway network in 2031 when it is envisaged that the full masterplan development and all associated facilities in North Ely would be completed. This modelling assessment identified areas within the highway network where appropriate mitigation measures are likely to need to be directed.

The joint outline traffic modelling has not considered phasing of the proposed developments in detail. However, it is very unlikely that development would progress at identical rates on both sites. It is therefore anticipated that the locations of traffic impact would change as the development grows and the magnitude of impact is sensitive to the distribution of development in North Ely.

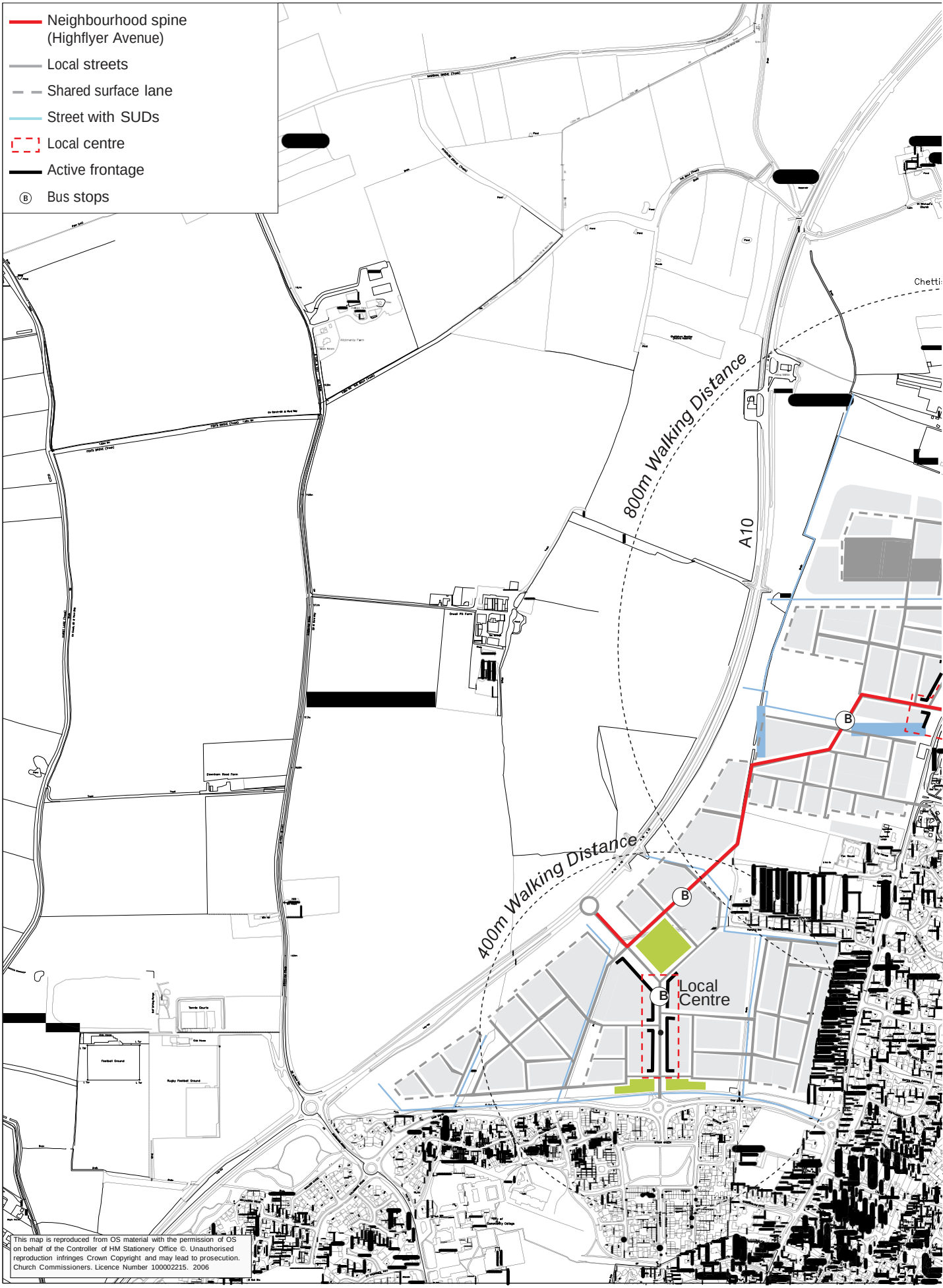
It is therefore not appropriate to consider the need for mitigation measures purely based on the total number of housing units delivered across North Ely as this may lead to measures installed in locations which are inappropriate to react to the actual development traffic impact for a particular phase.

Therefore, to enable mitigation measures to respond sustainably to the final implemented phasing and actual traffic demands generated by the development within North Ely, a traffic monitoring based strategy has been suggested by Cambridgeshire County Council. CCC has suggested that this approach has been implemented on other schemes within Cambridgeshire and secured via a section 106 agreement, although the specific details of this would need to be confirmed and agreed with all parties.

Contributions towards any off-site funded transport infrastructure delivery would be provided as required as the two sites progress.

This approach may make best use of developer funding and encourage early delivery of the non-residential elements which help improve opportunities for sustainable travel.

In the context of NPPF, delivery of sustainable transport improvements should be prioritised for early delivery in order to maximise the uptake of non-car modes. It is important for both sites to have a sustainable Travel Plan in place from the outset and contributions towards bus service improvements are likely to be provided from opening with decreasing contributions per annum as the bus service becomes self-supporting.


Neighbourhood spine
(Highflyer Avenue)
Local streets
Shared surface lane
Street with SUDs
Local centre
Active frontage
B Bus stops
800m Walking Distance
400m Walking Distance
A10
Local
Centre
B
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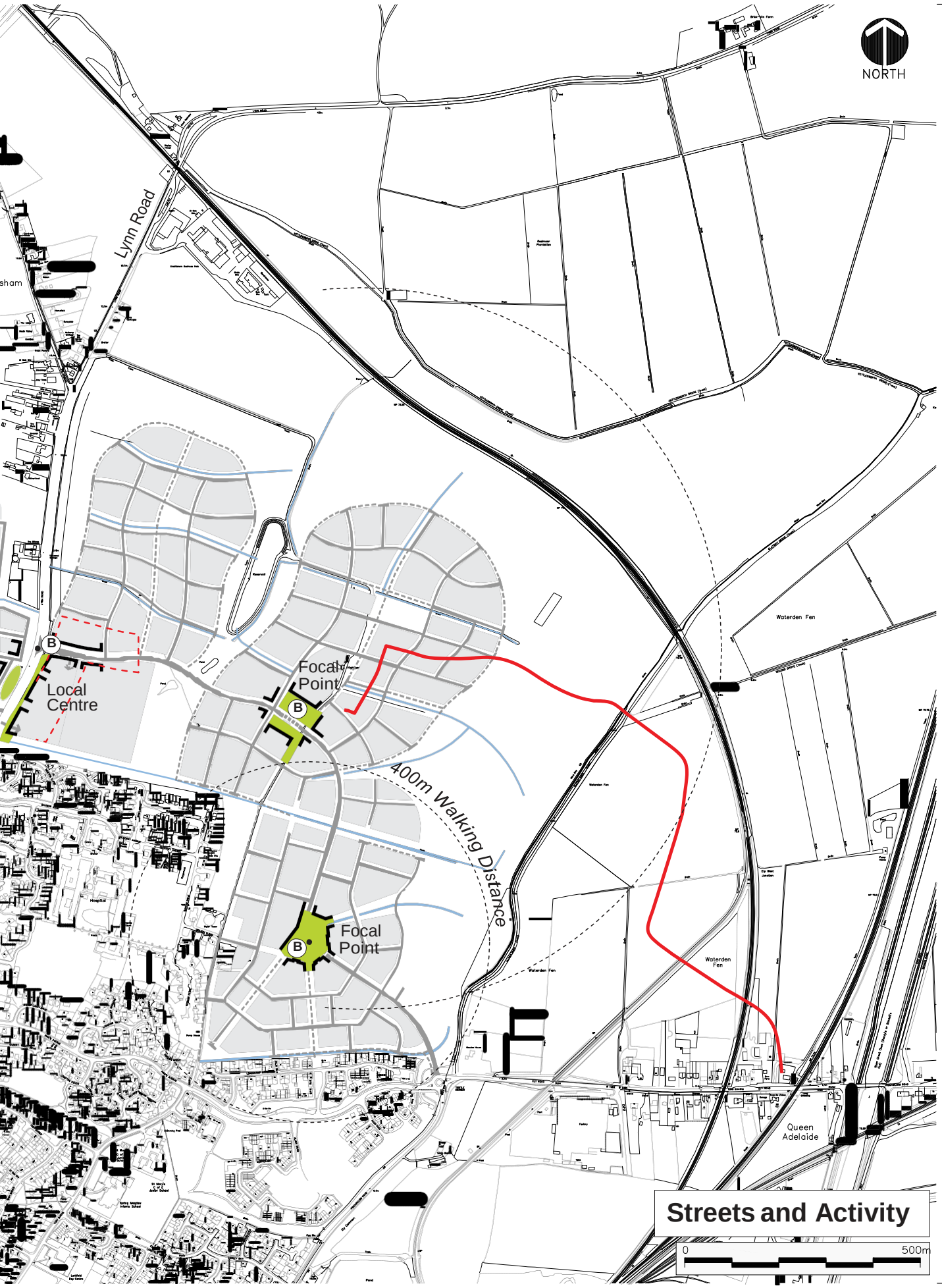

NORTH
Lynn Road
Local Centre
Focal Point
Focal Point
400m Walking Distance
Waterden Fen
Waterden Fen
Waterden Fen
Queen Adelaide
Streets and Activity
0
500m

8

setting high environmental standards

One of the cornerstones of the development of North Ely is environmental sustainability.

Development Principles

- Meet high environmental standards
- Give consideration to carbon saving opportunities.
- Reinforcing the special quality and character of Ely through high quality design

Outcomes

- All phases of development to meet a minimum of Code for Sustainable Homes Level 4 or BREEAM 'very good' as stipulated in Design Guide SPD, and comply with Building Regulations requirements applicable at the time of the application
- Consideration of renewable and low carbon technology at all scales of development
- Energy efficiency measures to be incorporated into all development
- Incorporation of measures to reduce the impact of surface water drainage, such as measures to make effective provision for storage and reuse of water and suds.

Code for Sustainable Homes & BREEAM

In 2006 the Government established the Code for Sustainable Homes (CSH), setting a 10-year timetable to achieve 'zero carbon standards' for all new housing by 2016. Performance is measured across 9 key sustainable design categories including energy/CO2, water consumption, materials, ecology, pollution and waste.

ECDC has incorporated CSH into the planning policy framework requiring all dwellings to be designed to the highest possible standard, to a minimum of CSH Level 4 (i.e. to achieve 44% of carbon reduction).

Given the scale and importance of the site, all development in North Ely should be built to best practice standards. At the current time, the proposed homes will need to be built to a minimum of Level 4 of the Code for Sustainable Homes. Going forward new housing will need to comply with the relevant Building Regulations standards, which will target 'zero carbon standards' as of 2016.

BREEAM is a similar rating system for new non-residential development. Non-residential development should reach BREEAM 'very good' or 'excellent' standard. Regard will need to be given to any new energy efficiency standards which may be introduced in this fast-moving sector. Commercial buildings will need to achieve 'zero carbon' rating by 2019.

The sustainability of a scheme stems from the approach taken at the design and layout stage. Developers could consider adopting the Passivhaus 'fabric first' approach: www.passivhaus.org.uk/ - this has proven to be a cost effective means of delivering higher levels of the Code.

Adaptable Spaces

North Ely should be designed with the capacity to accommodate change, including:

- Use of materials that allow for ease of reuse and maintenance
- Use of frame construction techniques that allow for easier internal alterations
- Flexibility in ducting, pipe work and cabling to accommodate future technology e.g. charge points for electric vehicles
- Appropriate levels of insulation, providing energy savings and noise reduction.

Examples of schemes in a variety of architectural styles which are already meeting Levels 5 and 6 Code for Sustainable Homes – www.zerocarbonhub.org
Clockwise from top left: Astling Green, Blackpool: Level 5; The CUB Modular Home, Watford: Level 5; Miller Homes Miller Zero Housing Project, Basingstoke: Level 6; Brookwood Farm, Woking: Level 5.

Energy Strategy

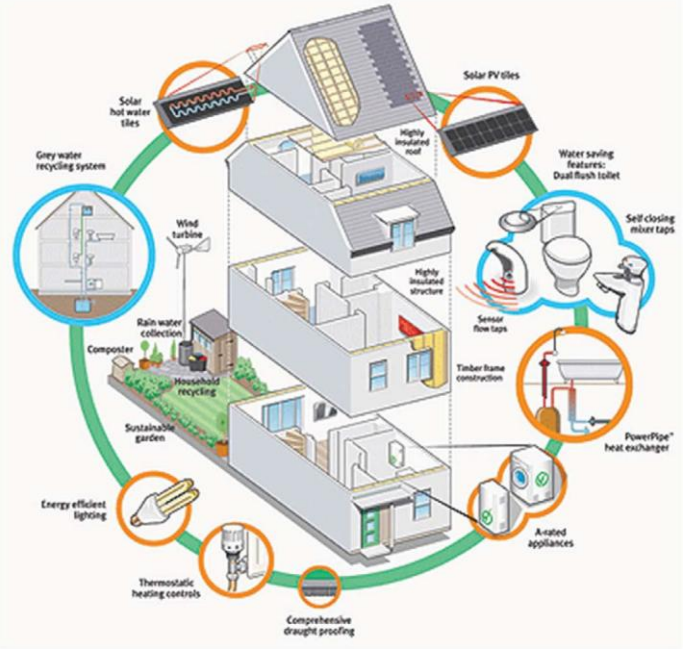
An Outline Energy Strategy should be included with any outline planning application demonstrating how the proposed development area as a whole will meet the required standards. This should consider the following building design and technology solutions and the potential for strategic approaches to compliance, such as site wide communal renewable and low carbon energy infrastructure.

Passive Design

- Solar Orientation
- Energy Efficient Building Envelope
- Air Infiltration

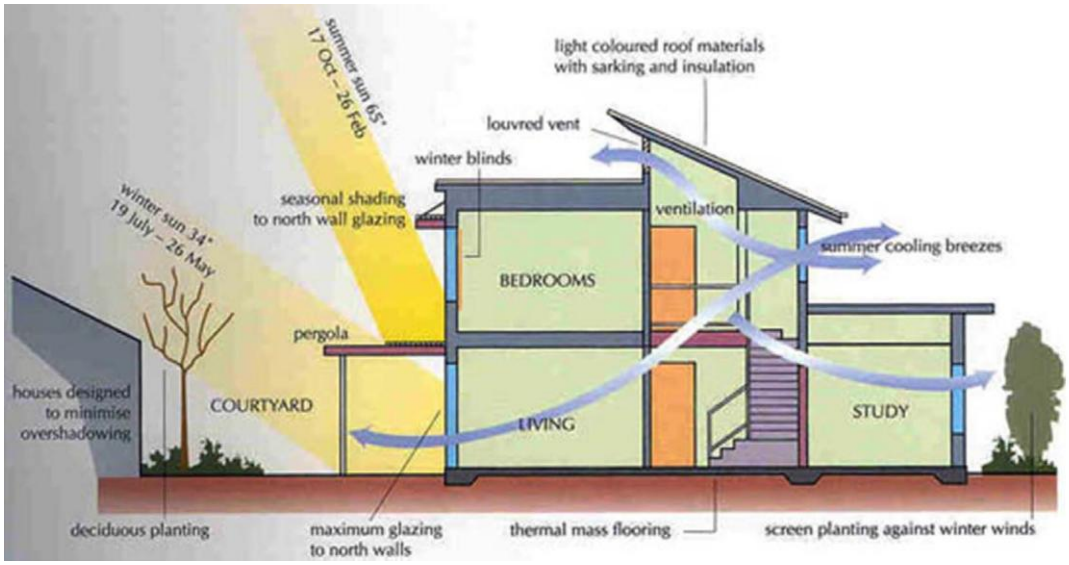
Energy Efficiency and Energy Savings

- Efficient Ventilation System
- Intelligent lighting controls with dimmable / passive infrared controls
- Energy efficient light fittings
- Efficient ventilation system
- Local heating control
- Energy metering
- Enhanced pipe work and duct work thermal insulation
- Variable speed pumps and fans
- Energy-efficient white goods



Left: Examples of energy efficiency measures for the home - http://www.telegraph.co.uk/finance/personal finance/consumertips/2953229/Here-at-British-Gas-were-packed-full-of-energy-and-money-saving-ideas.html

Below: Illustration of passive solar heating and cooling - http://inhabitat.com/green-building-101-energy-atmosphere-part-1/



Carbon Reduction from Passive Design and Energy Efficiency

It is estimated that the cumulative benefit of careful design and optimising the performance of building and engineering elements can result in between 15% and 20% reduction in CO2 emissions from new development.

Renewable or Low Carbon Energy

In the period up to 2016, CSH Level 4 stipulates a 44% reduction in carbon dioxide emissions. As outlined above, 15%-20% of this can be achieved through the design and energy efficiency measures. The remaining 24%-29% of carbon reduction will be reliant on renewable or low carbon energy generation. Post 2016, a 'Zero carbon' target will be sought.

Two main energy options could be considered to achieve immediate and longer term requirements:

- Individual building energy technology; and
- Site wide energy technology.

Individual building energy technology is more feasible to achieve compliance with the pre 2016 carbon requirements, whilst site wide energy technology offers a more viable route to achieving post 2016 'zero carbon' target.

As such, the current focus for the North Ely development is to deliver individual building energy technology. This approach will be reviewed and updated as the development is built-out, and in line with current guidance and standards.

Individual Building Energy Technology

Solar Photovoltaic (PV)

Solar PV panels can be installed on the roof of a building, on the side as a façade or mounted on the ground. They operate best when facing a southerly direction, and will operate effectively even when the sun is not shining, absorbing the sun's energy and converting it directly to electricity.

The benefits of solar PV include renewable and emission-free electricity generation, as well as revenue generation via the Feed-in-Tariff (FIT) and the avoided cost of imported electricity. The electricity generated from a solar PV array can be used to meet on-site demand or can be sold to the grid if generated at a time when there is insufficient on-site demand

Biomass Boilers

The biomass boiler is a conventional form of technology. Efficiency can be improved by the use of wood pellets rather than wood chips. The major issues that would need to be addressed for this alternative are movements for fuel deliveries and the need to secure guaranteed fuel supplies.

Ground Source Heat Pumps

Ground-source heat pumps are a relatively mature technology and utilise the energy in the ground through a refrigeration cycle. The ground source heat pump is an efficient way of producing economic heat and due to the efficiency of the operation and can save up to 20% carbon.

The pumps could be used for space heating and cooling of commercial and retail buildings, public community buildings and school. Dependant on ground conditions, ground source heat pumps could be used together with solar thermal or photovoltaic systems.

Small Scale Wind Turbines

Wind turbines are increasingly being used as a means of generating sustainable energy. The correct sitting of wind turbines is critical to maximize the availability of the prevailing wind and hence the power output. Further assessment of site specific conditions would need to be carried out to determine suitability of this alternative.

Solar Thermal

Solar thermal collectors convert the power from the sun into useful heat by heating a fluid flowing through the collectors, which is then used to heat water through a coil in a water tank. This water can then be used for hot water, space heating, preheat for boilers return flow.

A typical residential system in the UK produces 60% of the annual hot water requirement and requires two to three collectors. With a collector measuring between approximately $2m^2$ this is a relatively small requirement of roof area for mounting. Additional space requirements are for a gas or biomass boiler in each of the property along with a hot water storage cylinder.

If combined with a biomass boiler and/ or PVs, this could represent an effective means of meeting the CSH carbon reduction requirement.

Allowable Solutions

The March 2011 UK Government Budget announcement included a revised definition of zero carbon to exclude emissions from unregulated energy use, in addition to the proposed use of "Allowable Solutions". "Allowable Solutions" are a mechanism which can be used to contribute to reducing emissions from newly developed homes and meeting the future Zero Carbon target. They can involve the following measures:

- on-site (e.g. home electric vehicle charging, installation of smart appliances);
- near-site (e.g. retrofitting of low/zero carbon technologies to local communal buildings, investment in local electric vehicle charging infrastructure); or
- off-site options (e.g. Investment in energy from waste plants or investment in retrofitting of low carbon technologies to communal buildings).

Waste Strategy

A strategic approach to waste management should be undertaken by developers, taking into account the adopted Cambridgeshire and Peterborough Minerals and Waste Development Plan (2011).

The approach to reducing, reusing and recycling waste should be included in a Sustainability Statement which should be submitted at the outline planning application stage. This should be based on a waste management audit and strategy setting out practicable measures to maximise waste minimisation, sorting, re-use, recovery and recycling of waste, for construction and operational phases, on all developments over the value of £300,000.

The RECAP Waste Management Design Guide SPD (2012) sets out waste management requirements for developments in terms of waste collection and waste disposal. This includes a requirement for one additional Bring Site facility for significant residential developments for every 800 residential dwellings. The guide is accompanied by the RECAP Waste Management Design Guide Toolkit which needs to be completed by the developer and submitted to the Local Planning Authority with all supporting plans and/or documents for all types of development.

At the detailed design stage, development should incorporate domestic recycling facilities e.g. home composting (below).

Water Strategy

A Detailed Water Cycle Strategy was prepared for ECDC in 2011. Developers should have regard to this document in relation to all aspects of the water environment:

- Flood risk management
- Water supply
- Drainage
- Waste water
- Ecology
- Sustainable water services Infrastructure

Captured rainfall can be used for watering plants and for non-potable water uses e.g. flushing toilets. This will lead to less need for surface drainage infrastructure, will assist in reducing flood risk and will reduce demand for mains water.

Flood Risk & Water Management

Sustainable Drainage Systems (SuDS) are systems designed to reduce the potential impact of development on surface water drainage. SuDS try to replicate natural drainage systems -draining away surface water run-off through collection, storage and cleaning before allowing it to be slowly released back into the environment.

Recent changes to legislation (Flood & Water Management Act (FWMA) 2010) have enabled SuDS to be more widely accepted. The Section 3 of the FWMA creating the SuDS Approval Bodies (SAB) has not come into force yet. The SAB (in this case Cambridgeshire County Council) would be responsible for the approval process for the design, adoption and maintenance of the SuDS features. The current estimated timescale for this enactment is 2013, which is well in advance of any construction on site.

The Environment Agency has produced guidance, presenting a wide range of case studies showcasing different techniques. A Surface Water Drainage and Flood Risk Strategy will be required to clarify how drainage and flood risk will be managed.

Such local water management features should encourage creation of areas with ecological value and reuse of water within the local community for irrigation.

Rain Gardens and Green Roofs

At the building scale, rain gardens and green roofs can be provided to help reduce run-off from the site. A rain garden is a planted depression that allows rainwater runoff to be absorbed. Rain gardens improve water quality by filtering run-off, provide localised flood control, are aesthetically pleasing, and encourage wildlife and biodiversity.

Green roofs are covered with vegetation and a growing medium and planted over a water proofing membrane. Green roofs serve several purposes including: absorbing rainwater, providing insulation and creating habitat. Green roofs are more suitable for public or commercial/ office buildings than for residential development due to onerous maintenance.

*Waste Wate*r

In the preparation of their applications the parties will need to liaise with Anglian Water with respect to how waste water will be treated from the site, developing suitable drainage strategies. Anglian Water has confirmed that there is currently capacity within the existing treatment facilities in the city to accommodate the whole North Ely development.

This is in line with the ECDC Water Cycle Study 2011 which has shown that several Wastewater Treatment Works (WwTWs) have capacity to accept wastewater flow from proposed growth without the need for improvements to treatment infrastructure.

Anglian Water has confirmed that its intention is to expand and upgrade existing sewage treatment facilities in order to serve new development at North Ely. Notwithstanding that, the Cambridgeshire & Peterborough Waste LDF Site Specifics DPD (adopted February 2012) identified an area of search for a possible new waste water treatment works to the north of the Ely-March railway line known as Site W6A. The DPD makes it clear that any new waste water treatment works should not be a compromising factor to the planned development of North Ely as set out in the adopted ECDC Core Strategy and Ely Masterplan. Therefore, while there are no current plans for a new waste water treatment works, if there were in the future, then any new works would have to take full account of both committed housing and that set out in emerging plans.