CONCEPTUAL MASTERPLAN FOR SOHAM
FINAL REPORT

JANUARY 2011

LDĀDESIGN

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CONTENTS

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This document has been prepared and checked in accordance with ISO 9001:2000.

STUDY AREA LOCATION

1.0 INTRODUCTION

1.1 INTRODUCTION

LDA Design has been commissioned by East Cambridgeshire District Council (ECDC) to prepare a conceptual masterplan for the Soham Eastern Gateway. Funding for this work is coming from CLG and DEFRA and being project managed by HCA. The conceptual plan is to be prepared on behalf of the District Council and a consortium of landowners on the site. This report represents the final stage of the masterplan process and follows on from the baseline report produced in September 2010 and the options report produced in November 2010. It sets out a broad framework for the Eastern Gateway to guide development over the coming years.

This work follows endorsement of the Options Report by East Cambridgeshire District Council Growth Subcommittee on 3rd December 2010.

It is the intention of ECDC to adopt the Concept Masterplan Report as Council policy to guide future planning applications for the site.

1.2 BACKGROUND

Soham is an historic market town located between Ely and Newmarket and is the second largest town in East Cambridgeshire District. It has a population of around 10000 people and has excellent schools and a range of employment opportunities. A vision for the development of Soham up to the year 2025 is identified in the Core Strategy (October 2009).

This vision identifies the need to make Soham a vibrant and thriving community, with a wide range of employment opportunities, a healthy and attractive town centre, and better infrastructure and facilities.

The Core Strategy describes how the vision will be realised. It proposes a large new employment area to the east of the bypass, and identifies broad areas of housing growth in accessible areas close to the town centre. Soham has an elongated north-south form and therefore growth is proposed to the west and east of the town to try and increase the use of the town centre and encourage walking and cycling and to try and create a more balanced urban form. The Core Strategy also identifies the need for additional housing, around 480 dwellings, to be provided somewhere on the edge of Soham or Ely.

ECDC is in the process of carrying out a focussed review of the Core Strategy to address strategic growth issues and to incorporate strategic land allocations.

The Eastern Gateway is also identified in the Soham Masterplan Vision as an area which is critical for the future development of Soham, and which could potentially provide additional access to Soham and help to support the regeneration of the town centre.

1.3 PUBLIC CONSULTATION

PUBLIC CONSULTATION REVIEW

A public consultation on the Options Report took place between 6th and 15th December 2010 with a Consultation Event at The Pavilion on the 6th December. The Options Report and Questionnaire were also available on line via the Council's web site.

The Options Report exhibition had 70 visitors and there were 39 online questionnaire responses. There was a mix of comments, with the key issues comprising:

- The majority of respondents agreed with the 9 development objectives for the Eastern Gateway set out in the options report.
- The majority of respondents agreed with the principle of connecting the existing two commons across the Eastern Gateway.
- Option 2 was the preferred option.

There was some debate about whether a shop should be included within the Eastern Gateway development and whether this would result in compromising the viability of the existing town centre. It was felt, on balance that a small, local shop within the new development would help to create a neighbourhood focus and should be included within the masterplan.

The consultation exercise also asked for feedback on any businesses that would like to expand or relocate to the Eastern Gateway. There were 3 respondents concerning existing businesses in Soham. These opportunities should be explored during the next stages of the masterplanning process.

SUMMARY OF PREFERRED OPTION

3 options were presented during the consultation process and Option 2 has been taken forward as the preferred option. As a summary, the principle advantages and disadvantages of each option are set out in the adjacent table. They are primarily concerned with issues of both overall and early phases viability; place making, in terms of how well each option can fit with the urban grain of the existing town and with its surrounding landscape, and thirdly, how well each option is likely to receive support from the existing allotment holders on site.

MASTERPLAN OPTION 1: ALLOTMENTS RETAINED AT HEART OF TOWN CENTRE

MASTERPLAN OPTION 2: URBAN DEVELOPMENT AT HEART OF TOWN CENTRE

MASTERPLAN OPTION 3: ALLOTMENTS AT HEART OF TOWN CENTRE WITH SOME EARLY PHASE DEVELOPMENT

MASTERPLAN OPTIONS

OPTION 1

- Less viable in early phases due to limited opportunities for early phase development to help pay for early phase infrastructure.
- Poor opportunities for place making close to town centre as the masterplan is dominated by allotments which limits opportunities for urban development close to the town centre.
- Low risk of likely opposition from allotment holders.

OPTION 2

- Most viable in early phases due to greatest opportunities for early phase development to help pay for early phase infrastructure.
- Good opportunities for place making through a more mixed distribution of uses within the masterplan and more urban development created close to the town centre.
- Highest risk of likely opposition from allotment holders.

OPTION 3

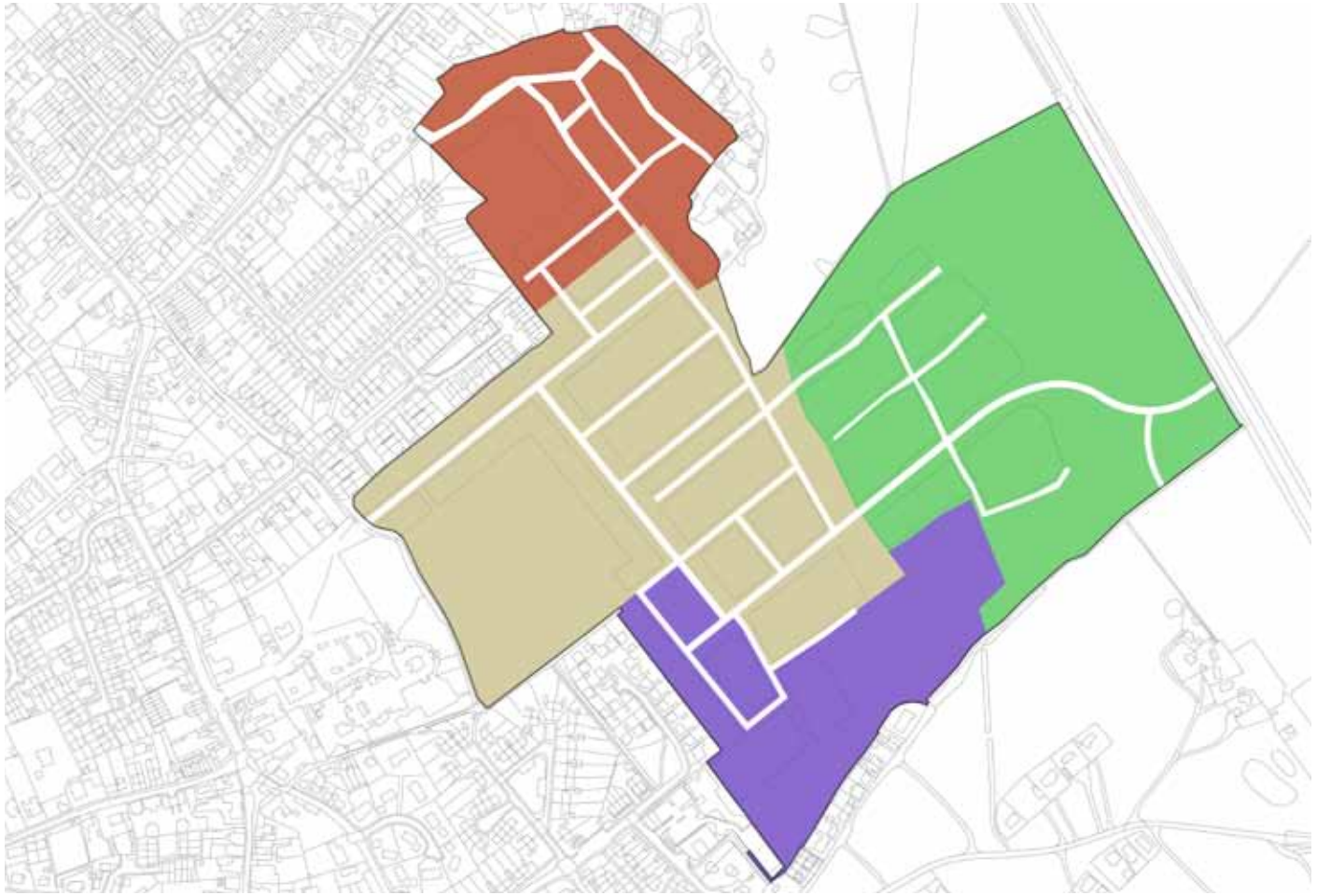
- Less viable in early phases due to limited opportunities for early phase development to help pay for early phase infrastructure.
- Better opportunities for place making through a degree of distribution of uses within the masterplan and some urban development created close to the town centre.
- Some risk of likely opposition from allotment holders.

NEIGHBOURHOOD SQUARE

MARKET PLACE

NEW "COMMONS-LINK"

NEIGHBOURHOOD GREEN



CHARACTER AREAS

2.0 FRAMEWORK PLANS

This section sets out a series of framework plans to guide development of the masterplan. Each of the framework plans seek to contribute to the delivery of the vision and objectives set out in the options report. The framework plans are brought together into an illustrative masterplan that demonstrates one way that these frameworks can be delivered.

The framework plans are:

- Character and Land Use;
- Urban Framework;
- Movement Framework;
- Green Infrastructure Framework;

2.1 CHARACTER AND LANDUSE

The masterplan can be divided into a number of broad character areas, each with a distinct character and identity. Each character area is a response to its surrounding landscape and existing built character and to its proposed uses.

- Neighbourhood Square;
- Market Hub;
- New Commons;
- Neighbourhood Green.

NEIGHBOURHOOD SQUARE

Vision & Uses

This area will comprise the highest density residential area with a tight urban form and excellent links to the town centre and wider green spaces. It will be set within a strong geometry of streets and spaces, reflecting the linear Fens landscape. Housing form will principally be terraced plus some town houses, ensuring efficient use of land, and helping to define the public streets and spaces through overlooking and uniform building setbacks. Street tree planting will help to reinforce the linear form and provide links to the wider landscape. This area will form the main arrival image into the town centre.

Density and Height

Densities will be predominantly 40-50dph reflecting the proximity to the town centre, with densities reducing eastwards, towards the commons. Buildings heights will be principally 2 storey, with some 3 storey buildings.






MARKET PLACE

Vision & Uses

This area will form both a neighbourhood function to the new development, and a new destination for Soham. Growing from the idea of using the floodplain for productive uses such as allotments and potentially a community orchard, along with close connections to the potential expansion of the medical centre, this area will become a focus for community interchange, meeting and exchange of ideas. Business uses and a local shop will also be focused here, along with a small town square that could be used for a range of events. The character of this area will be one of innovation and ideas with contemporary buildings set within a tight urban form.

Heights

Buildings will generally be 2 – 2.5 stories.

NEW COMMONS

Vision & Uses

This area will comprise a lower density residential development which responds to the surrounding commons and wider Fens landscape. It will have a leafy, village character with a mix of shorter terraces, detached and semi-detached properties following a loose grid of narrow lanes that link between the wider green infrastructure elements. Boundary treatments will be important to create a naturalistic and informal setting. This area will form the first arrival image into Soham from the bypass and create the link between the wider rural Fen landscape and the town centre.

Density and Height

Densities will be predominantly 30-40dph with mainly 2 storey dwellings.

NEIGHBOURHOOD GREEN

Vision & Uses

This area will comprise a leafy, medium density residential neighbourhood focused around an informal network of pedestrian friendly streets with excellent links to the heart of the development, the surrounding established residential neighbourhoods and the wider green infrastructure and commons. This area will become the focus for aspirations of alternative approaches to community living, with opportunities for shared community space, self-build projects and local food growing.

Density and Height

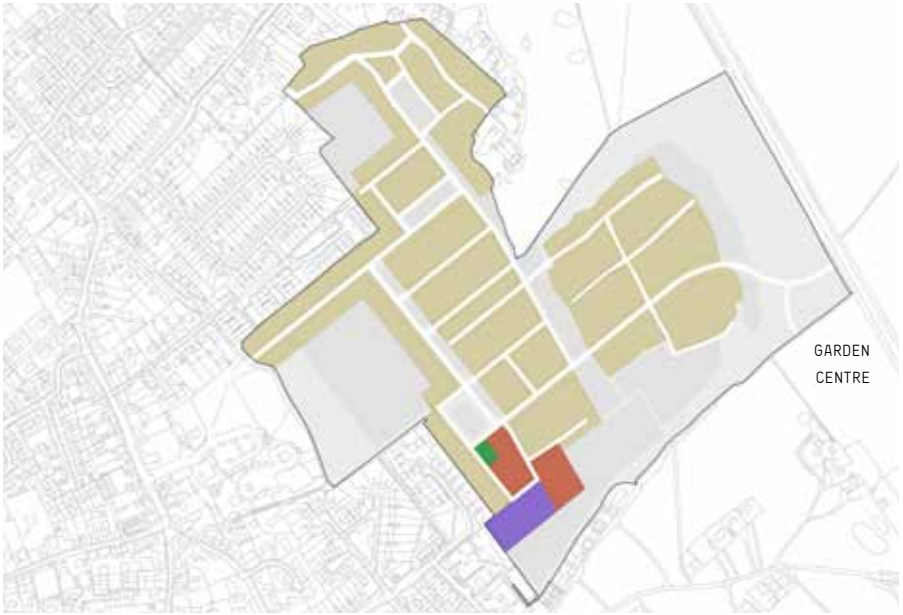
Densities will be predominantly 30 -40 dph with 2 -3 storey buildings.

VIEW OF MARKET PLACE /
NEIGHBOURHOOD CENTRE

VIEW SOUTH THROUGH HEART OF
DEVELOPMENT

VIEW WEST ALONG APPROACH ROUTE
TOWARDS CHURCH

VIEW WEST ACROSS "COMMONS-
LINK" TO EASTERN GATEWAY



RETAIL

COMMUNITY (MEDICAL CENTRE EXPANSION)

EMPLOYMENT

RESIDENTIAL

LAND USES

SUMMARY OF USES

Residential

Much of the development will be for residential use, meeting housing needs and allowing more people within Soham to live close to the town centre, increasing catchment and footfall to local facilities therefore increasing vitality to the town centre. Housing will include a mix of sizes, types and tenures including 30% affordable housing which should be spread throughout the development.

The Eastern Gateway is likely to provide in the region of 500 - 600 new homes.

Employment

Although demand for conventional employment uses is relatively limited, it is vital to the town's future that Soham develops a range and diverse mix of employment opportunities ranging from business services for those who work mostly from home to business opportunities connected with local food production and horticulture.

Flexible work spaces will be provided close to the town centre, overlooking the greenspace / floodzone along the southern boundary. Getting a good setting for business is vital and locating the employment uses next to the extended Staploe Medical Centre, and close to the link road will ensure it is well connected and accessible.

2000 – 2500m2 of B1,B2,B8 employment space is proposed.

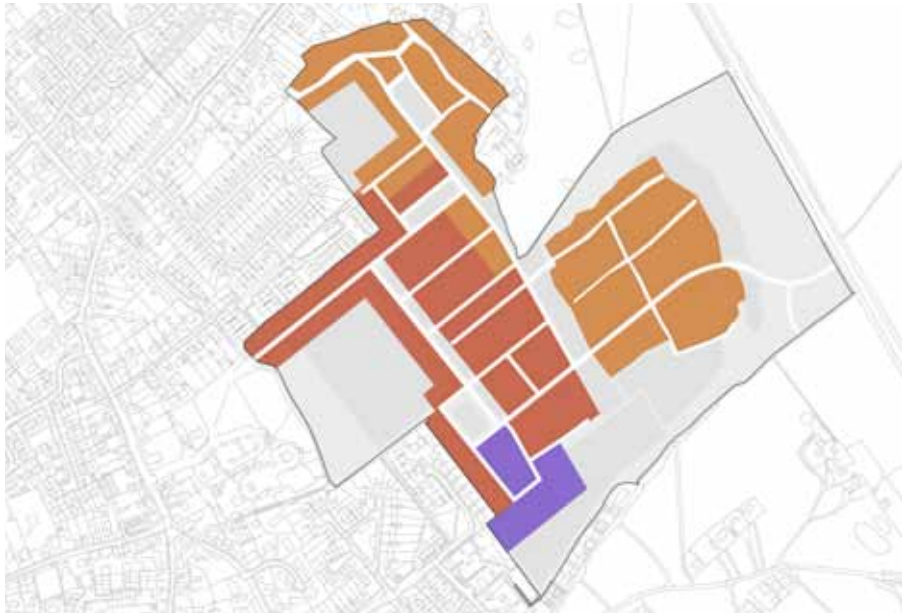
Retail

A small local shop will be provided within the mixed use hub.

Community (Medical Centre Expansion)

The Medical Centre is looking to expand and improve its facilities and the masterplan allows for the proposed expansion to be located within the mixed use area, close to the link road.

An allowance at this stage has been made for a doubling in size of the existing heath centre site (4400m2).



DENSITIES

SUMMARY OF DENSITIES

In order to achieve efficient use of land, densities across the site will be reasonably high, with higher densities focused on areas closest to the town centre, and lower densities towards the wider rural landscape and commons. Higher densities also mean facilities can be supported by a larger catchment population within shorter geographic area, thereby increasing sustainability of the development and vitality of the town centre.

AREAS

SUMMARY OF AREAS

The masterplan site area is 29.52ha and will comprise the following:

- 14.24ha Residential (including children's outdoor play space)
- 0.06ha Retail
- 0.52ha Employment
- 0.44ha Community Facilities (Medical Centre expansion)
- 1.45ha Primary road infrastructure
- 0.82ha Private Formal Recreation Space (School Playing Fields)
- 3.64ha Allotments
- 3.35ha Informal Open Space (based on 2.5ha per 1000 pop at 2.36 persons per dwelling) inc SUDS plus 5.00ha New "Commons-Link"

2.2 URBAN FRAMEWORK

The urban framework diagram illustrates the desired structure of the Eastern Gateway development. It sets out those elements which will create a strong image and identity and allow people to easily understand the place and to find their way around.

The urban framework identifies the proposed main streets and spaces that will form the basic skeleton of the masterplan area, and the landmarks, activity hubs and arrival points. The development of the masterplan should respond positively to these elements to create a development with image, identity and legibility.

In practice this means:

- Ensuring that buildings of an appropriate design, and scale address the key streets and spaces;
- Using local landmarks, features and street structure to emphasise and create key views and vistas and to reinforce important routes or spaces;
- Ensuring that arrival points are well designed, attractive and make it easy for people to orientate themselves.

STRUCTURING CONCEPT & KEY ROUTE

The design and layout of the masterplan has been primarily structured around a clear grid that provides a link between the town centre and the wider Commons and new "Commons-Link" to the east.

Development is focused to the west of the site, allowing close connections to the existing town centre and allowing the eastern edge of the development to be defined by a continuous sweep of a new "Commons-Link", providing a space between the town and the wider Fens landscape.

The link road connecting the bypass to the town centre responds to this grid, allowing the buildings and open space to define the built form, rather than built form being dictated by the primary road network.

KEY ROUTE

KEY ENTRANCES

ACTIVITY HUB

LANDMARK

KEY VIEWS TO CHURCH

VIEWS ACROSS COMMONS & "COMMONS-LINK"

GREEN CONNECTOR

NEW COMMONS LINK

LEGIBILITY FRAMEWORK

KEY ENTRANCES

There are 2 main entrances to the development. Acccess from Pratt St to the west will be designed to form part of the urban town centre and should provide a welcoming approach to the new development as well as signaling the entrance to Weatheralls Primary School. The second access to the east from the bypass will comprise a new roundabout with the link road representing a simple, low key approach and be similar in character to the distinctive commons arrival points that exist across Qua Fen Common and East Fen Common to the north and east of the site. The new link road from the bypass will also allow access to the Garden Centre, and to the potential employment land to the east of the bypass.

ACTIVITY HUB

The activity hub will provide a particular focus and concentration of activity for the development, defined by a mix of uses. It will be located close to the key route through the development.

KEY VIEWS

The masterplan framework has been designed to encompass views to key features in the area. The grid layout will provide good visual links from the residential areas out towards the Commons and new “Commons-Link”, and the link road has been arranged to provide views to the tower of St Andrew’s church on the approach into the town centre.

LAND MARKS

Clear landmarks and distinct features contribute to the image and identity of a place, and help people identify and remember different areas and thereby orientate themselves. Local landmarks will comprise key feature buildings or local squares and will be located to emphasise key vistas, or the termination of a view, or as a focus to the residential areas.

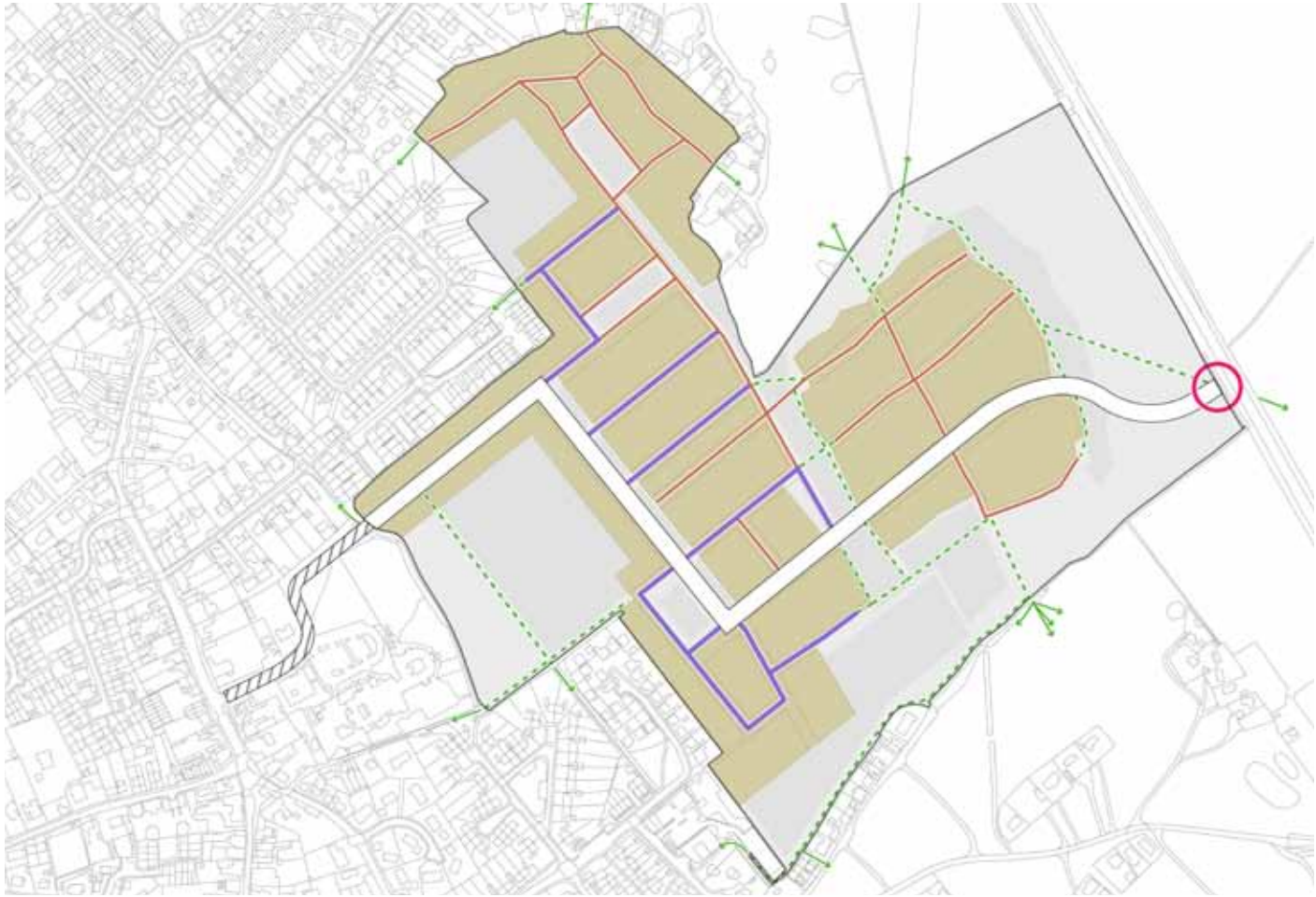
PRIMARY STREET

SECONDARY STREETS

TERTARY STREETS

FOOTPATHS

CONNECTIONS TO PUBLIC RIGHTS OF WAY



MOVEMENT FRAMEWORK

2.3 MOVEMENT FRAMEWORK

The primary objective of the movement framework is to promote and encourage walking, cycling and use of public transport and to discourage the use of the private vehicle. In order to achieve this there needs to be obvious advantages in using sustainable modes of movement over the car, including cost, ease of movement, speed. The movement framework seeks to achieve this objective through:

- Creating a permeable network of high quality pedestrian and cycle routes, allowing easy and safe movement between homes to desired destinations.
- Where possible, reducing permeability for cars and minimizing the ability for vehicular through-movement or rat runs .

PRIMARY STREET / LINK ROAD

The aim of the link road is to provide access to the town centre for the new development and for the allocated employment land (if developed) that is located to the east of the bypass. The link road will also provide an additional route to the town centre for visitors to Soham.

The character of the link road will be very much dictated by the character of the surrounding urban form, and will alter from a simple route through the Commons to a more formal, tree lined street at the heart of the development with building height and consistent frontages creating a strongly defined edge.

The link road will be designed to accommodate both cyclists and pedestrians.

The design of the link road will need to be carefully considered at the Pratt St entrance to ensure it fits with its town centre context and provides a safe environment for drop off to Weatheralls School.





PRIMARY & SECONDARY STREETS




TERTIARY STREETS





FOOTPATHS & CYCLEWAYS

SECONDARY STREETS

These will comprise the key access routes to the residential areas, providing the main internal movement but with no wider strategic movement role. They will comprise, lively, active streets with overlooking houses. They will be designed for slow traffic speeds through on street parking, narrow road widths and street trees. Users will be private vehicles, service and emergency vehicles, bicycles and pedestrians. SUDS where required will form an integral part of the street cross section.

TERTIARY STREETS

These streets will comprise a key feature of the area. They will form quiet, shared surface residential streets, often with no through traffic, creating spaces for interaction and play as well as movement. Users will be private vehicles, service and emergency vehicles, bicycles and pedestrians. Street planting will be included where possible.

FOOTPATHS AND CYCLEWAYS

A network of footpaths and cycleways will connect the streets and spaces within the development to the town centre, the new green infrastructure and the existing network of public footpaths.

PRIMARY FOOTPATH/CYCLEWAY

SECONDARY FOOTPATH/CYCLEWAY

PRINCIPAL FOOTPATHS

CONNECTIONS TO PUBLIC RIGHTS OF WAY

PRIVATE FORMAL RECREATION SPACE

INFORMAL OPEN SPACE / SUDS / NEW "COMMONS-LINK"

ALLOTMENTS

GREEN INFRASTRUCTURE FRAMEWORK

2.4 GREEN INFRASTRUCTURE FRAMEWORK

Establishing multifunctional green space is a vital element of the masterplan and is based on the idea that each space can perform a range of compatible functions. The green infrastructure framework therefore seeks to :

- Encourage sustainable movement – through the creation of attractive walking and cycling routes;
- Reinforce local identity and distinctiveness through incorporating existing features and responding to local landscape patterns;
- Enhance biodiversity by protecting, enhancing and creating wildlife corridors;
- Promote health and wellbeing by creating an environment that allows a close connection between living areas and open spaces, promoting healthy living and a sense of well being;
- Strengthen community and cohesion – creating green spaces and movement networks encourage social interaction, and community facilities such as allotments and community orchard.
- As a learning resource for local schools and communities to learn about wildlife and food growing etc.
- Manage the environment – using the green infrastructure to manage flood risk and microclimate.

FORMAL OPEN SPACE

Formal sports provision to support this development will be located in more suitable locations elsewhere in Soham where it can form part of a wider sports provision. However new playing fields for the Weatheralls school will be located within the eastern gateway area forming an area of private formal open space.

Equipped play areas will be scattered throughout the masterplan area, located according to standards set by ECDC.

INFORMAL OPEN SPACE / SURFACE WATER DRAINAGE (SUDs)

Informal open space will provide a key element to the masterplan, connecting the surrounding areas of landscape into and through the development, providing a setting for development and a rich network of linked, biodiverse spaces.

A comprehensive site wide sustainable urban drainage strategy to control surface water at source will need to be prepared as soon as possible to further inform the masterplan and to establish the spatial requirements and technical requirements to accommodate water storage. These SUDs can form an integral part of the multifunctional open space strategy and could comprise swales and wet ditches. Each phase of development will need to include green space to accommodate suds.

NEW “COMMONS-LINK” OPEN SPACE

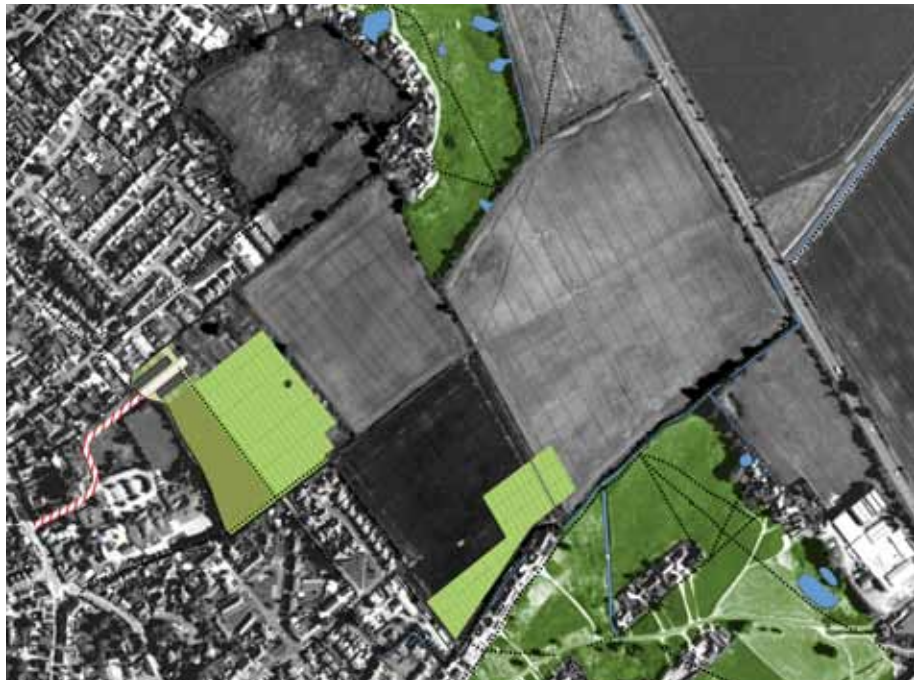
The new “commons-link” has been created from the opportunity to connect the existing commons whilst also providing the opportunity for an appropriate sense of arrival into Soham from the east. Use of the proposed commons-link should be limited to the prescribed functions of the current commons – for grazing and access and to enhance biodiversity in the area.

ALLOTMENTS

The allotments have been reprovided on an area like for like basis to replace the existing allotment provision on the site. Allotments should be seen as a key feature within the community promoting an emphasis on local food growing. This could be linked to the creation of a comunity orchard as part of the informal open space provision.

2.6 ILLUSTRATIVE FRAMEWORK

The illustrative masterplan shows one outcome of the application of the framework plans.



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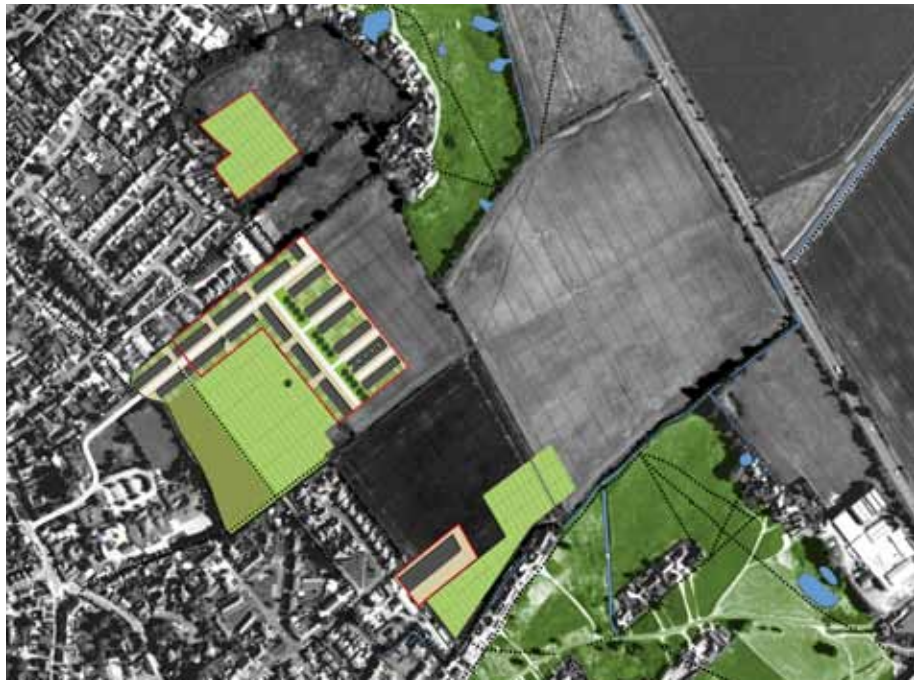
3.1 PHASING

The broad phases have been developed to ensure that development is taken forward in a coordinated and cohesive manner in line with the masterplan objectives, and to ensure that each phase represents a piece of urban development in its own right, that is well connected to the existing urban areas of Soham. The phasing has also been designed to balance infrastructure requirements throughout the development, ensuring in particular that the early infrastructure requirements are not overly onerous.

A new access to the Garden Centre from the bypass is likely to be delivered during the early phases of the Eastern Gateway development.

The phasing has been broken into 5 broad phases.



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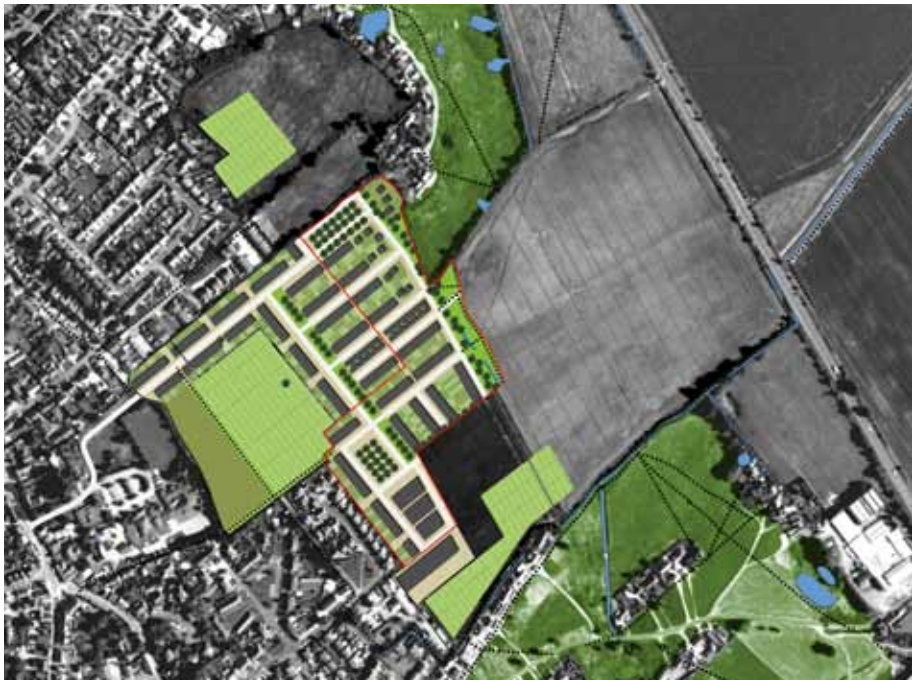

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PHASING DIAGRAMS

3.0 PHASING

PHASE 1
This preliminary phase shows the new school playing fields provided to the east of Weatheralls School along with a small section of housing and road infrastructure extending to the eastern extent of the allotments. This will require a section of the allotments to be relocated to new permanent locations, identified to areas to the north and south of the site. A new temporary vehicular access will need to be provided to both the new allotment sites, until longer term development provides permanent access.

This phase will require "off site" works to provide a link road between the western boundary of the site and Pratts St.

PHASE 2
Phase 2 allows for further residential development to provide a total of about 150 homes within the western area of the site. This will be developed along with a further section of the proposed link road.

It is likely that the Medical Centre will be developed at an early stage, with access in the early phases, retained off Brewhouse Lane.

This phase of the masterplan will require "off-site works" to create a new link route to Pratt St plus new junction improvements at Pratt St.

PHASE 3
This phase allows for an additional development of up to 150 homes along with 50% of the proposed employment provision. A small shop will also be provided at the stage.

PHASE 4
This phase of approximately 150 homes will trigger the requirement for a second main access point to the development, which will be provided from the bypass and link through to Pratt St. "Off site" highways improvements to the bypass will be required to create the new access.

PHASE 5
This represents the final phase of development.


4


5








GREEN INFRASTRUCTURE

4.0 ENERGY OPTIONS

2.5 ENERGY OPTIONS

INTRODUCTION

The Government has concluded that the market will not deliver carbon dioxide (CO_2) savings from new buildings alone in the timescale needed to contribute to avoiding dangerous climate change, so it has proposed regulating a zero carbons buildings standard to achieve this. The objective is to have zero net emissions of CO_2 from all energy use in new homes from 2016 and from non-domestic buildings by 2019. Due to current capacity issues at Soham's Waste Water Treatment Works, much of the Eastern Gateway Masterplan is likely to be developed post 2015 and it will therefore face challenging targets for CO_2 savings and energy efficiency. The opportunities for generating income from renewable and low carbon energy also make exploring the available options a useful exercise.

The most cost effective and efficient approach to energy and CO_2 reduction will be to consider the energy requirements of the Masterplan as a whole, rather than as separate development parcels and phases. The key issues are therefore how to deliver zero carbon development in the early phases of development and the most appropriate methods to achieve zero carbon within rural developments such as the Eastern Gateway.

One of the biggest difficulties in providing clear recommendations is that definitive national targets and criteria for achieving targets for CO_2 reduction have not yet been confirmed. While we know that the development will need to achieve zero carbon standards, the precise metrics have not been agreed. Therefore, although an energy strategy should be prepared as early as possible to inform the next stage of the masterplanning process, it is not be possible to determine at the moment, exactly what infrastructure would be appropriate and most cost effective at this stage.

What we do know is that the strategy will need to address improved energy efficiency of buildings, a renewable and low carbon energy supply and other measures equivalent to the remaining emissions (what the Government is terming 'allowable solutions', which may be in the form of a financial payment). Reducing emissions on site beyond minimum standards set by building regulations might be possible and may have the benefit of reducing the cost of allowable solutions. It is important to stress that considering energy at an early stage in the next stage of the masterplanning process may help to reduce the final cost of building regulations compliance.

BUILDING REGULATIONS

The main energy targets which are likely to be applicable to the site and may have implications for the masterplan are summarised in the following table. These are based on our current understanding of the proposals for the Building Regulations Part L.

Allowable solutions are likely to be in the form of a financial payment to be spent on offsite energy solutions. The final details probably won't be known until 2012, however, the balance between carbon compliance and allowable solutions will have significant financial implications for the site. For example, regardless of the carbon compliance level set, it may be cheaper to deliver higher CO_2 reductions on site, especially where an income or profit can be gained from energy installations.

FINANCIAL INCENTIVES

At present, feed in tariffs are paid to anyone (individuals, public and private sector organisations) who generate their own electricity from renewable energy. The scheme applies to micro-generators (generating less than 5MW) includes photovoltaics (PV), anaerobic digestion, wind and hydro. The renewable heat incentive, expected to be introduced in June 2011, provides incentives for heat generating technologies including solar thermal and heat pumps. Individuals and the community can benefit from the feed in tariff. Rates are set according to when a system is installed with higher payments for earlier installations, taking account of likely reductions in capital costs over time. The starting rates are expected to be fixed for 25 years. The rates will be reviewed in 2012 and are likely to significantly drop for certain types of system given popularity of uptake.

ENERGY EFFICIENCY OF BUILDINGS

Improvements to the fabric of buildings will deliver the biggest savings in energy use on site. Building Regs Part L 2016 for dwellings is currently proposed to include a 70% reduction in regulated emissions on site compared to Part L 2006 standards. It is important to note, however, that this figure has not yet been confirmed and may be subject to change.

Energy efficiency within the development can also be assisted by passive design methods. This includes consideration of solar access and shading, prevailing wind, green infrastructure and water use, density, layout and mix of uses.

Construction Start Date	Anticipated Building Regulations Part L Targets
2013 – 2015	Part L 2013, which is proposed to include: • 44% reduction in regulated carbon emissions on-site compared to dwellings compliant with Part L 2006 • Minimum fabric energy efficiency standard, ~43kWh/m²/year for apartments and mid-terrace houses and 52kWh/m²/year for other types of dwelling
2016 - 2022	Part L 2016, which is proposed to include: • 70% reduction in regulated emissions on-site ("carbon compliance") compared to dwellings compliant with Part L 2006 • Minimum fabric energy efficiency standard, ~43kWh/m²/year for apartments and mid-terrace houses and 52kWh/m²/year for other types of dwelling • Further measures to reduce the remaining 30% of regulated emissions and all unregulated emissions, or offset them through "allowable solutions".
2017	Part L 2016, which is proposed to include: • 49% reduction in regulated emissions from schools compared to schools built to Part L 2006 • 33% for speculative office developments • 49% for light industrial uses

BUILDING REGS PART L

LOW CARBON ENERGY SUPPLIES

The following summarises the main options and likely suitability to the development. Further work in the form of an energy strategy will need to be undertaken to assess their contribution to the energy strategy, including cost and delivery, and meeting building regulations.

CHP and district heating

Applicability to the development – likely to be limited site wide but may be opportunities for smaller networks serving part of the site. Significant implications for site layout, density and mix of uses, therefore essential to consider early on.

Biomass boilers

Applicability to the development – may be opportunities for individual boilers to serve buildings or parts of the site. Communal systems will have same restrictions as CHP and district heating.

Wind

Applicability to the development – minimum separation distances will mean large turbines are unlikely to be an option on site and even smaller turbines will have significant spatial implications. Opportunities for offsite turbines could be explored.

Solar

Applicability to the development – PV is a flexible technology offering significant CO_2 savings and potential for income generation with the feed-in tariff. Masterplan implications for roof based systems relate only to the need for south facing roofs. Ground based systems may be appropriate where land is not needed for other purposes. Availability of the feed-in tariff means that it is worth exploring opportunities to bring a ground based system forward in advance of other proposed development. Solar thermal may also play an important part but will compete for roof space with PV and delivers fewer CO_2 savings. It will not be compatible with other heat generating technologies.

Heat Pumps

Applicability to the development – heat pumps require electricity to drive the pump which, unless this is renewable, will reduce the CO_2 performance. They generally perform less well on cost grounds when compared to gas central heating and so may be less suited to sites with available gas connections.

CAPITAL AND OPERATIONAL COSTS

Consideration will need to be given to capital and operational costs. Capital funding for energy schemes through vehicles such as the Green Investment Bank is looking increasingly possible from 2013, but a range of other options exist. A key issue will be how the infrastructure can be delivered to meet the phasing requirements of the site. Whilst a community scale approach can be more cost effective in capital terms it can be more onerous in cash flow terms in the early phases due to outlay of infrastructure, and off site solutions or individual servicing methods may be favoured in these early phases. However this approach may then reduce the viability of a community scale approach being delivered in the later phases.

All heat and power supply options will have some degree of ongoing management and maintenance requirements. A private energy service company could be set up or contracted to install and manage the energy infrastructure. Alternative approaches should also be explored, including community interest companies, cooperatives involving residents and the local authority. The right management arrangements will be determined by the chosen technologies, different parties' willingness to retain or take an interest in the scheme once complete, and the financial benefits and risks at the time decisions are taken.

NEXT STEPS

It is recommended that an energy strategy be developed at an early stage to allow for full coordination with the next stages of the masterplan and, importantly, to give an indication of the likely cost and income potential from energy and CO_2 reduction.

VIEW WEST ACROSS "COMMONS-LINK" TO EASTERN GATEWAY

5.0 NEXT STEPS & DELIVERY

5.1 MASTERPLAN STATUS

Following endorsement of the Eastern Gateway Concept Masterplan by the Strategic Development Committee, it is intended that the Masterplan will be considered by Full Council and adopted as Council policy. This follows endorsement of the site by ECDC through consultation papers published in July 2010 which identified the Eastern Gateway site as the Council's preferred option for the location of about 500 additional homes identified as required within the Core Strategy.

This section sets out some of the next steps.

5.2 A COMPREHENSIVE MASTERPLAN

The Eastern Gateway area covered by the concept Masterplan is under the control of 4 landowners comprising Cambridgeshire County Council, Soham Town Council, Bishop Laney Charity and a strip of land under the control of a private landowner. Whilst the Masterplan broadly works with the landownership boundaries, it has been developed to create a good place that serves the wider community. This means that the distribution of housing, housing density and infrastructure has not necessarily been distributed equitably throughout the masterplan area and some landownerships and phases will bear a greater burden of delivery than others. The first clear message is that any development, however it is phased, must emerge from a comprehensive master plan that is agreed by all.

5.3 VIABILITY AND DELIVERY

Further work will be required by the landowners to discuss the details of delivery and viability of the Masterplan. Viability will be influenced by a number of factors when taking the project forward. These factors may include, but are not limited to:

- Residential land values;
- The attitude of the District Council to dealing with the affordable housing element flexibly;
- Whether the affordable element of the scheme delivers any value;
- The attitude of the District Council in assessing developer contributions;
- The potential for certain aspects of the infrastructure to be value engineered.
- The potential for certain aspects of the infrastructure (eg energy) to deliver an income;
- The approach to the provision of carbon compliance measures and investment in allowable solutions.

The scope for influencing viability and delivery will be enhanced by a joined up approach to a comprehensive Masterplan.

5.4 TIMESCALES

There are a number of issues that are likely to have an effect on the detail of phasing and delivery of the Masterplan.

YEARS 2011 - 2012

East Cambridgeshire District Council's review of their Core Strategy has already commenced and it provides an opportunity to allocate additional sites on the edge of Soham, including the Eastern Gateway. The indicative timetable for the review proposes production of a draft Plan by November 2011, with submission to Government in spring 2012. Once the Eastern Gateway site has been allocated, then an outline planning application can be submitted for the site.

As part of the expansion of Weatheralls Primary School, located adjacent to the western edge of the Eastern Gateway, temporary new playing fields will be created during 2011. An application for permanent playing fields for the school and associated works including the relocation of existing allotments, located within the Eastern Gateway, will be required. This is likely to be delivered in advance of the allocation of the wider Eastern Gateway site.

YEARS 2011 +

The Garden Centre, located adjacent to the south-eastern edge of the Masterplan site is likely to be developed early on. In addition, the allocated employment land to the east of the bypass may be delivered at any time during the delivery of the Eastern Gateway.

The success of each development will be enhanced if there is good coordination of design aspirations between different planning applications.

YEAR 2015

Anglian Water has advised that the Soham Waste Water Treatment Works (WwTW) is operating at full capacity and there is a requirement to extend the works to accommodate the full extent of the proposed allocations for the Soham catchment. The Core Strategy states that Anglian Water will seek to ensure that the upgrading works for the WwTW will be completed by 2015.

Anglian Water will endeavour to ensure that capacity at the WwTW for Soham will be made available to accommodate allocations planned in the short term and Anglian Water's current position is that Greenfield allocations should not come forward until this time.

5.5 PLANNING PROCESS

The optimal solution would be for the concept Masterplan to be taken forward through an Outline Planning Application for the entire Masterplan area. The Outline Planning Application would provide the planning context for subsequent reserved matters applications and provide planning certainty to individual developers.

Whilst the Concept Masterplan goes a long way to defining the character and form of the Eastern Gateway site, there are a number of further technical studies and masterplanning work that might be required to support an outline planning application. These might include:

- Design and Access Statement: A Design and Access Statement will be required to accompany the planning application. Its purpose is to explain the design thinking behind a planning application and to set out how everyone, including disabled people, older people and very young children, will be able to use the places they want to build. A statement need not be very long, but the amount of detail it contains should reflect how complex the application is.

- Masterplan Refinement: depending on the level of detail required for the Design and Access Statement, further work may be required on certain aspects of the Masterplan in order to demonstrate key issues. In addition, the conclusions of any technical work may have spatial implications for the Masterplan resulting in the requirement to refine the Masterplan and to demonstrate in more detail some of the key aspects of the Masterplan. This could include defining in more detail, the level of site wide green space, Suds, ecological mitigation and infrastructure. Design Coding may also be required to illustrate key aspects of the scheme including the desired character of the some of the key elements such as street cross sections.

- Statement of Community Involvement: Applications may need to be supported by a statement setting out how the applicant has complied with the requirements for pre-application consultation set out in the local planning authority's adopted statement of community involvement and demonstrating

that the views of the local community have been sought and taken into account in the formulation of development proposals.

- Planning Statement and Sustainability Statement: it is likely that a statement will be required to demonstrate compliance with planning policy.

- An Environmental Impact Assessment may be required. This involves the presentation, collection and assessment of information on the environmental effects of a project and a final judgement on this. The scope of any environmental statement will be agreed with ECDC at an early stage in the process. An EIA might encompass some of the following. In the event that no EIA is required, some of this survey work may still be required.

- Phase 1 ecology survey: this will involve the assessment of existing ecological data and a walk over of the site in order to assess the likely impact that the development may have on protected fauna and flora. A Phase 1 survey can be carried out at any time of year but it is best done in spring or summer, when the vegetation types that characterise a certain habitat are more readily identifiable. The conclusions of the Phase 1 report may result in further, more detailed habitat surveys, some of which will need to be carried out at particular times of the year. Desk study work completed to date based on a data search report from Cambridgeshire and Peterborough Biological Records Centre has not identified any ecological issues that are likely to constitute 'show-stoppers'. It notes that the clearest issue is the location of the site between the two County wildlife sites, potentially forming a barrier to movement for species that might otherwise disperse through the area. This has already been taken into consideration during the development of the Concept Masterplan.

- Archaeology Report: A desk based assessment has been carried out for the Eastern Gateway site which concludes that the site has a low to moderate level of archaeological potential and previous archaeological work has revealed predominantly agricultural mediaeval remains, mostly relating to agriculture. However the area around Soham and the Fens edges, close to settlements, have a known high archaeological potential

and further investigation work / trial ditches are likely to be required, subject to confirmation by Cambridgeshire County Council.

- Transport Assessment: Further transport assessment work may be required in order to determine if the development is likely to have significant transport implications. A TA is a systematic process that sets out transport issues related to the proposed development and identifies what measures will be taken to deal with any transport impacts of the scheme and to improve accessibility and safety for all modes of travel, particularly for alternatives to the car, such as walking, cycling and public transport.

- Flood Risk Assessment: An assessment of flood risk and run-off implications of the development that is appropriate to the scale and nature of the development, and the risks involved, must be submitted as a report with the planning application.

The full scope will be agreed with the local authority in due course.

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