



## Crown Lane, Ixworth

### Masterplan

Adopted December 2010

**BIDWELLS**

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## QUALITY ASSURANCE

**Site name:** Crown Lane, Ixworth

**Client name:** Persimmon Homes - Anglia Region

**Type of report:** Masterplan

**Prepared by:** James Dee PG Dip BA Hons

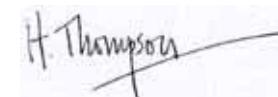
**Signed:**



**Date** 29th October 2010

**Reviewed by:** Helen Thompson MLI MRTPI MPhil MSc BSc

**Signed:**



**Date** 29th October 2010

## 1.1 INTRODUCTION

The Replacement St Edmundsbury Local Plan 2016 was adopted in 2006. Under Policy RA2(b) 2.5 ha of land at Crown Lane, Ixworth is allocated for housing development.

The Local Plan allocates the land for the development of around 70 houses. Key requirements of the development are the construction of an access road to the allocation from the A143/Walsham Road roundabout.

The allocation requires the amount of land available for development, location of uses, access arrangements, design and landscaping to be informed a Masterplan for the site. Applications for planning permission will only be considered once the Masterplan has been agreed by the local planning authority. The Masterplan should be prepared in accordance with the Concept Statement.

The Concept Statement, approved by the Borough Council, sets out the Council's requirements for the allocated site, and provides a basis for the approval of the ensuing Masterplan.

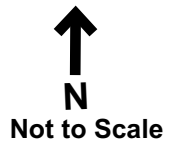
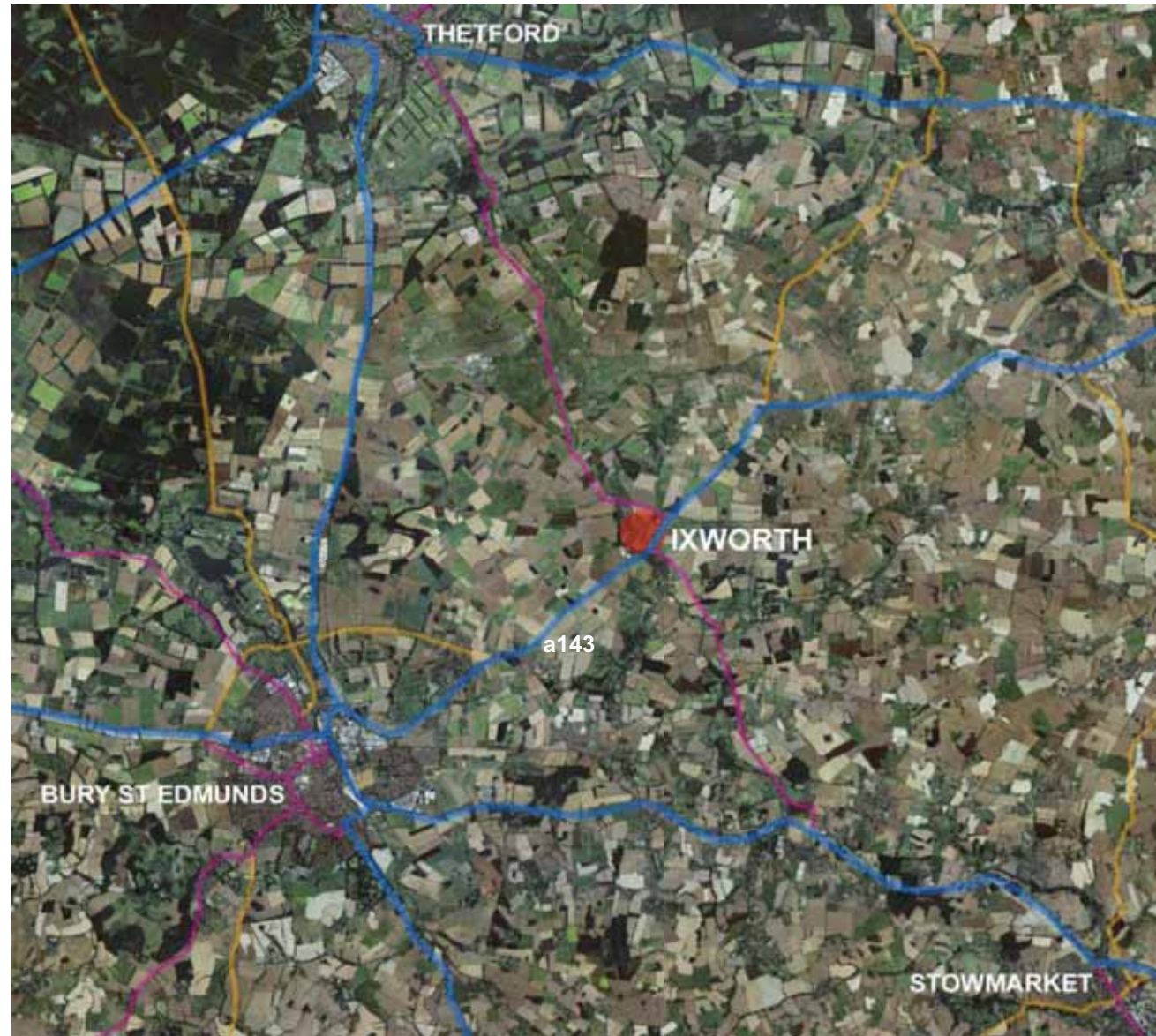
This Masterplan closely follows the principles and requirements of the Concept Statement. The Masterplan demonstrates how a new access road from the A143 Walsham may be delivered along with a sustainable development which makes most effective use of the land. Other policies of particular relevance are:

- Policy DS3: Development Design and Impact
- Policy H3: Affordable Housing
- Policy H4: Housing Density
- Policy H5: Mix of Housing
- Policy L4: Standards of Open Space and Recreation Provision

**1.2 LOCATION**

Ixworth lies approximately 8 miles north east of Bury st Edmunds, 8 miles south of Thetford, 24 miles north west of Ipswich and 34 miles west of Cambridge.

The site is situated adjacent to the A143 from Great Yarmouth and Bury St Edmunds on the south east side of Ixworth. The site covers approximately 2.5 hectares.



● Site Location

### 1.3 CHARACTER OF THE LOCALITY

#### 1.3.1 Countryside Character

The allocated site lies within the Joint Character Area 83: South Norfolk and High Suffolk Claylands as defined in the Character of England Map produced by the former Countryside Commission and English Nature as well as English Heritage.

The Suffolk Character Assessment describes the Ixworth area as 'Plateau Estates Farmland'. An assessment of the local area identified the following characteristics, some held jointly with the national and regional assessments as:

- generally rolling topography;
- wooded shallow valleys;
- small villages;
- woodland blocks, perhaps reflecting sporting interest;
- generally good hedgerow cover but with some loss apparent; and
- vernacular buildings generally 'timber framed' and rendered.



**1.3.2 Townscape Character**

The centre of Ixworth appears to date from around the 17th century. The early buildings are mostly timber framed and rendered. Some flint building occurs but these are less common.

Roof materials are generally pantile with also some thatch. Traditional roof pitches are high, possible reflecting thatch roofs, which were taller and steeper to increase water shed.

Much of the remainder of Ixworth consists of post-war development. These developments are generally in the form of cul-de-sac layouts.

More recent developments in Ixworth have reflected the vernacular architecture and grain.



Saddlers Yard, Ixworth

**1.3.3 Designations**

There are no known designations within the site although there are a number of listed buildings within Ixworth. These are not impacted by the proposals.



Crown Lane, Ixworth



High Street, Ixworth



Commister Lane, Ixworth



St Mary's Church, Ixworth

## 1.4 SITE DESCRIPTION

The site occupies land in the corner of an arable field immediately to the north of Crown Lane. It lies between 41 and 48 m Ordinance Datum. Further east the land rises to a low ridge. The site is relatively tucked in from views on the lower slope of the ridge. The lowest part of the site is to the west, adjacent to the cemetery. This highest point is to the north east.

The boundaries are as follows:

- to the north lies the rest of the arable field;
- to the east the A143;
- Crown Lane forms a boundary on the south with a residential development immediately beyond Crown Lane; and
- to the west lies the cemetery.

### 1.4.1 Connectivity and Links

Crown Lane links the site to the centre of Ixworth and the local primary school. A network of footpaths to the surrounding countryside heading east are connected to Crown Lane.

Another footpath to the north of the proposal site links the Walsham Road roundabout to the secondary school and High Street.

### 1.4.2 Vegetation and Boundary Conditions

The site is currently used for arable farming consequently the only trees are located on the boundaries.

The cemetery, with its historic lych gate, is enclosed by mature trees which provide a positive edge to the west boundary.

A band of trees have been recently planted running parallel to the A143. These are a native mix of still immature saplings.

A band of mature trees bounds the recreation ground to the south of Ixworth Secondary School and contributes to the relatively enclosed west boundary within the wider context of the site.



North East site boundary hedge



Crown Lane



The entrance to the cemetery;



Existing roundabout linking A1088 and A143



The Cemetery.




South of Crown Lane;



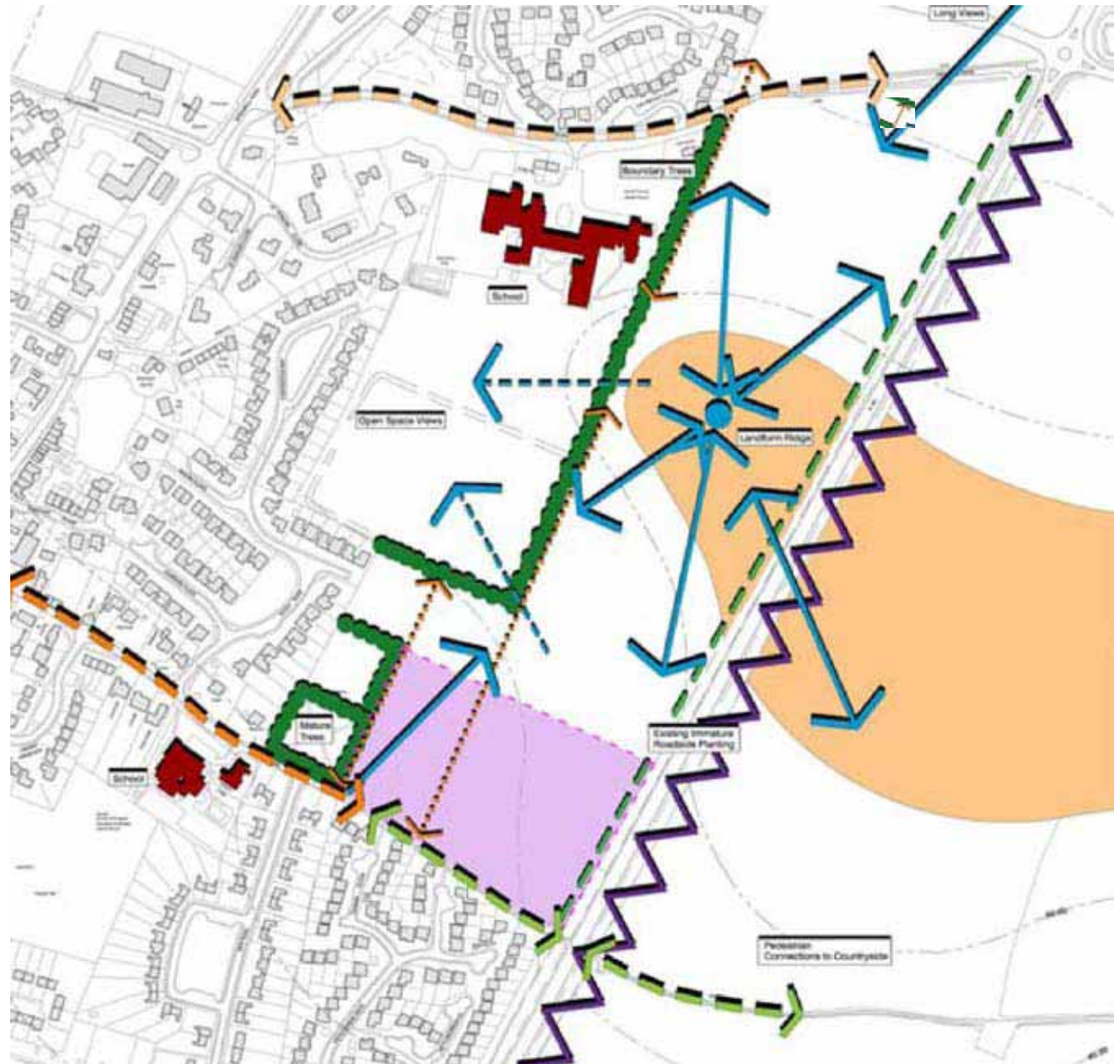
1.4.3 Existing Landscape Character Plan

Key:

-  Views
-  Broken Views
-  Proposal Site
-  Pedestrian Links
-  Vehicular Links
-  Local Amenities
-  Significant Vegetation
-  Negative barriers



Not to Scale



## 1.5 PLANNING BACKGROUND

### 1.5.1 Replacement St Edmundsbury Local Plan to 2016.

Through Policy HAV2, the adopted Local Plan allocates the land at Crown Lane, Ixworth for about 70 dwellings in the plan period up to 2016.

Paragraph 2.16 of the Local Plan states that 'The Borough Council will prepare a concept statement for each of the sites which require a Masterplan as set out in policy DS4 (Replacement St Edmundsbury Borough Local Plan 2016). Policy DS5 identifies Crown Lane, Ixworth as a site for which a Masterplan must be prepared and states that the Masterplan 'must be based on the concept statement,' (Replacement St Edmundsbury Borough Local Plan 2016).

Thus the allocation requires the development to be guided by a Masterplan (this document) which is to be prepared by the landowner/ developers and which is in turn guided by the Concept Statement.

### 1.5.2 Land at Crown Lane, Ixworth Concept Statement

The Concept Statement for the land at Crown Lane, Ixworth Concept Statement was prepared for St Edmundsbury Borough Council in accordance with the Concept Statement Preparation Protocol. It was adopted by the Council's Planning Policy Panel in the winter of 2008 as planning guidance to inform the preparation of the development proposals for the site.

### 1.5.3 Masterplan for Land at Crown Lane, Ixworth

The Masterplan is based on the principles set out in the Concept Statement and addresses issues raised by that document.

The Masterplan outlines the strategic framework and design solutions to inform and shape future development of the proposal site. It seeks to demonstrate how the principles set out in the Concept Statement can be applied 'on the ground' and to create an overall strategy to which detailed design proposals must accord.

The Masterplan does not prescribe exact details but sets out a vision for the creation of a development which will stitch into the local built framework and have a character of its own while complimenting surrounding built form and open spaces.

### 1.5.4 Planning Application

The next stage of the process will involve the submission of a detailed planning application to St Edmundsbury Borough Council for housing and associated development. As part of this planning application, full details of the access from the A143/ Walsham Road roundabout will be submitted.

The documents which accompany the planning application will address environmental issues in more detail. The Design and Access Statement for example will outline how the design has evolved in response to specific issues, especially context and consultation with the public and other stakeholders, to provide inclusive, high quality design of buildings and open spaces.

## 1.6 STRUCTURE OF THE DOCUMENT

This document will be set out as follows:

### **Section 2: The Vision**

This section outlines the vision for the development of the proposal site and includes the spatial Masterplan.

### **Section 3: Design Principles**

A detailed appraisal of how the design responds to both the opportunities and constraints offered by the proposal site. Any issues raised as part of public consultation will be included in the Design and Access Statement to be included as part of the Planning Application.

The Concept Statement includes a summary of key Design Principles and these cover opportunities and constraints raised by the proposal site. Section 3 includes a summary of these and how the Masterplan responds to each.

### **Section 4: Sustainability**

This section explores sustainability issues raised by the Concept Statement, as well as additional issues, and it outlines how the Masterplan responds to these. Greater detail will be included as part of the Design and Access Statement and other documents to be submitted as part of the planning applications.

### **Section 5: Ecology and Biodiversity**

This section explores and evaluates the effects the proposed development will have on the existing ecology and biodiversity of the site taken from the finding of the phase one habitat survey and the reptile survey. Section 5 includes a series of suggested implementations as mitigation to the negative effects of the proposed developments.

### **Appendices**

These will include a glossary of terms and references to the various documents used to inform the Masterplan.

## 2.1 INTRODUCTION

The Masterplan has evolved due to the assessment, evaluation and consideration of a number of issues raised at various parts of the process. These issues, and their contribution to the design evolution, will be explored in greater detail in the Design and Access Statement, to be submitted as part of the detailed planning application.

However, over arching all of these considerations, the Masterplan sets out to achieve an overall aim for the quality and delivery of the scheme.

## 2.2 THE VISION

The vision for Land off Crown Lane is to form an attractive and locally distinct neighbourhood within Ixworth. The new neighbourhood will display the following characteristics:

- a mixture of architecture in keeping with the local vernacular with positive frontages located along boundaries, helping create a strong dialogue with the centre of Ixworth;
- a series of well designed, mixed use public spaces linking the development to the surrounding countryside, adjacent neighborhoods, services and shops and the village centre;
- good movement connections for pedestrians and vehicles, providing strong legible links to established routes and facilities with minimal environmental and visual impact to local landscape;
- attractive and successful streets and outdoor areas to provide space where children can play and people can sit, talk and walk;
- environmentally, economically and socially sustainable;
- energy, waste and resource efficiency will be promoted in the overall design of the development;
- provide choice through a range of tenure of homes and housing types at appropriate densities encouraging interaction of a mixed demographic;
- utilise Sustainable Urban Drainage where appropriate;
- build safety into the design to help address crime prevention;
- retain the character of the landscape with the retention of the significant boundary vegetation and seek to improve amenity and biodiversity benefit through the design and implementation of a landscape strategy; and
- native screen planting to the boundary with the A143 to help reduce the potential adverse impacts of the development and encourage the increase of biodiversity.

2.3 THE SPATIAL MASTERPLAN



Not to Scale



### 3.1 INTRODUCTION

This section includes a summary of the principles outlined in the Concept Statement (shown opposite) and how the Masterplan is guided by the Concept Statement. The main principles which can be extrapolated from the Concept Statement are:

#### 1. Access

- Deliver an access road from the roundabout to the north east corner of the site.
- Provide emergency access from the development to Crown Lane.

#### 2. Landscape Corridor

- Retain a landscape corridor between the new housing and the cemetery in order to allow for a public footpath and cycleway as detailed in the concept statement.

#### 3. Frontages

- Provide a development which fronts out toward neighbouring areas.

#### 4. Public Square

- Create a formal public square marking the pedestrian entrance to the new housing development from Crown Lane.

#### 5. Emergency Access to Crown Lane

- Provide pedestrian/cycle and emergency vehicle access to Crown Lane.

#### 6. Crown Lane Frontage

- Design Crown Lane as an attractive 'green lane' along the site boundary, linking Ixworth with its countryside setting.

#### 7. Boundary to A143 and Crown Lane












- Provide vegetated boundary to A143 and 'Village Edge' to Crown Lane.

#### 8. Sustainable development

- Incorporate strategies to ensure that the development is as sustainable as possible.

3.2 CONCEPT STATEMENT

Key:

-  Proposal Site
-  Footpath Links
-  Access Road
-  'Shared Space' Access to Town Centre
-  'Green Lane' Access to Countryside
-  Vehicular & Pedestrian Access
-  Future Pedestrian Access
-  Trees and existing Native Woodland Planting
-  Trees and proposed Native Woodland Planting
-  Open Space
-  Protect the Ridge



Not to Scale



### 3.3 ACCESS AND LINKAGES

#### 3.3.1 Access Road - Concept Statement

The Allocation requires an access road from the Walsham Road roundabout to the north east corner of the site. The Concept Statement shows the main access crossing the arable field and entering the site in the east corner.

**Key:**

 Access Road



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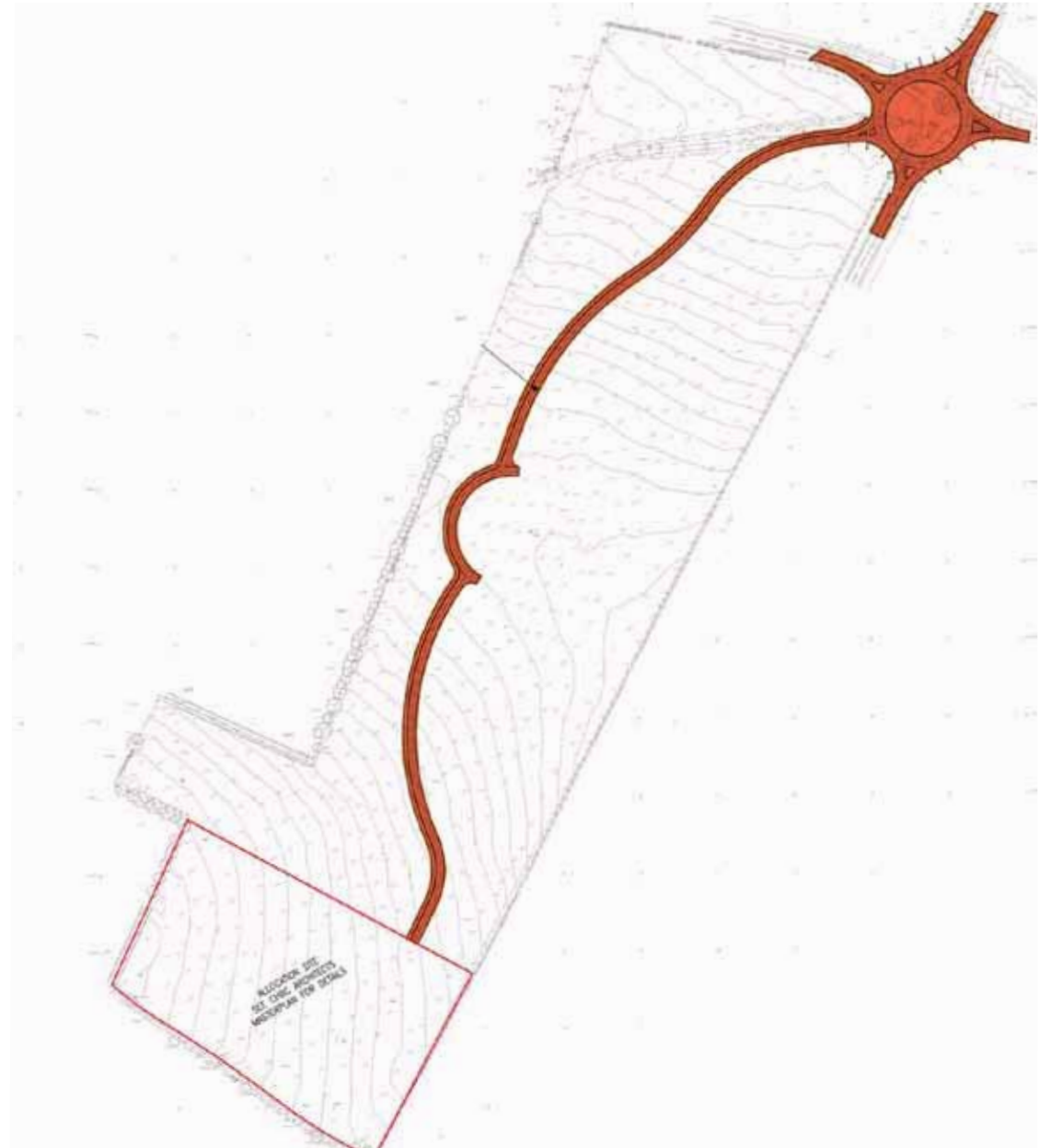
### 3.3.2 Access Road- Masterplan

The Masterplan proposal delivers this requirement and establishes the principle of a link from the Walsham Road roundabout across the arable field. The detailed design of the access road will come forward at the planning application stage.

**Key:**



Not to Scale






**3.3.3 Streets - Concept Statement**

The Concept Statement shows the main access entering the site in the east corner.



**Key:**

-  Access Road
-  Pedestrian and Cycle Way
-  Emergency Access



**Not to Scale**

### 3.3.4 Streets - Masterplan

The main vehicular access to the site is guided by requirements of the Concept Statement.

The Vision is to provide a main vehicular artery through the development in a two way road, linking into a series of 'Home Zone' streets.

A network of footpaths and cycle ways provide access through the development linking into the greater access network.



**Key:**



Access Road



Pedestrian and Cycle Way



Controlled Emergency Access






Shared Space Roads



Not to Scale

3.3.5 Main Artery Road

Key:

-  Main artery Road
-  Public footpath with upstand kerb
-  Private housing front



Not to Scale

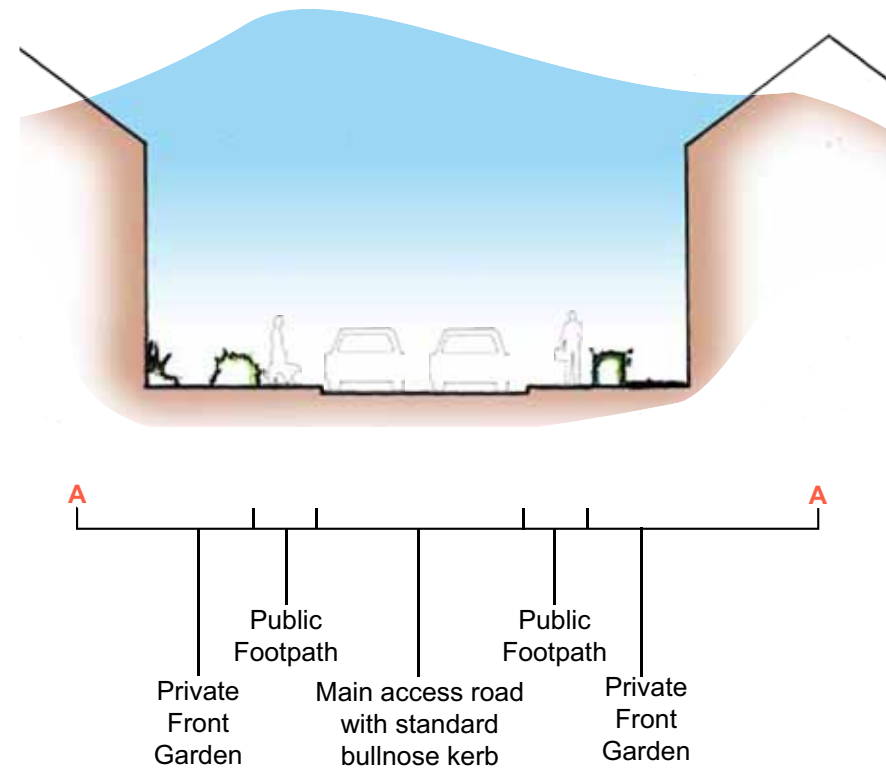
Plan of Main Artery Road

Concept sketch showing possible configuration of main artery road



The development of the Vision is for a 'low key' entrance to the site which gently curves away enticing the traveller in and giving the development a village character.




Concept of main artery road

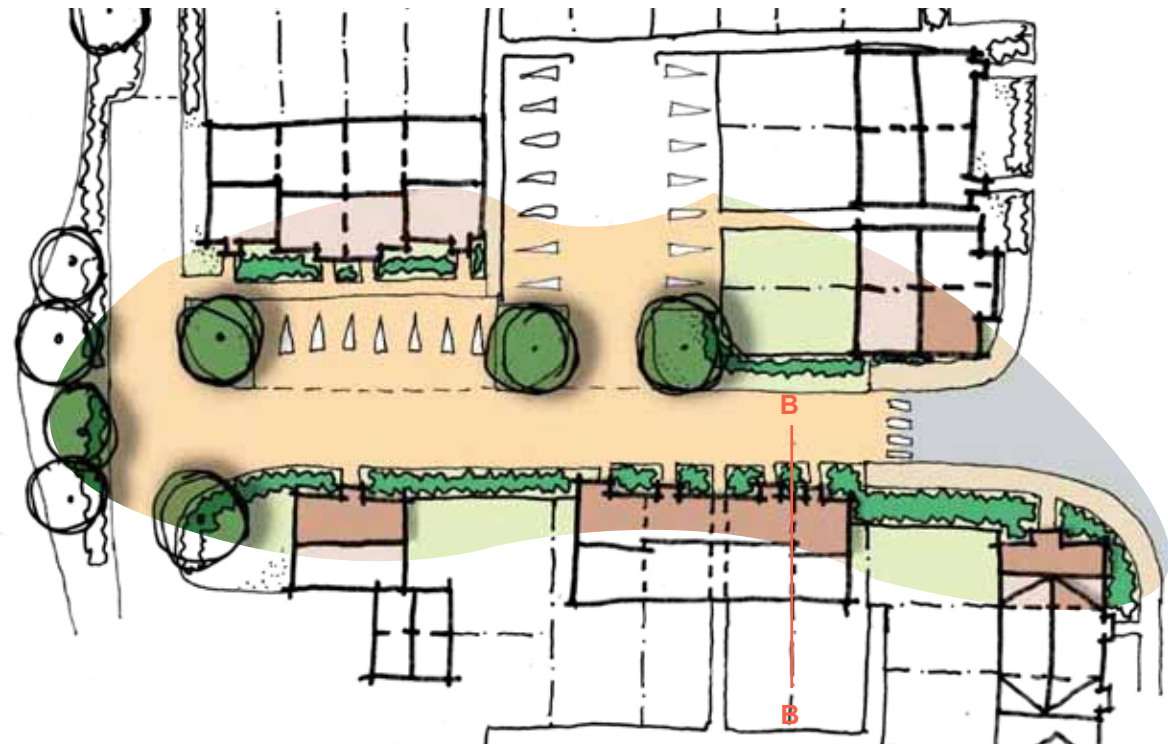


This concept section describes a typical instance along the access road. It is proposed that the road width will vary between 4.8 and 5.5m with a footpath minimum 1.8m wide. Small front gardens will help separate individual dwellings from the public realm and help reinforce village character.

3.3.6 Shared Space

Key:

-  Shared Space- change of surface material to indicate change of character.
-  Footpath to house- change of surface material to indicate change to private space.
-  Private housing front



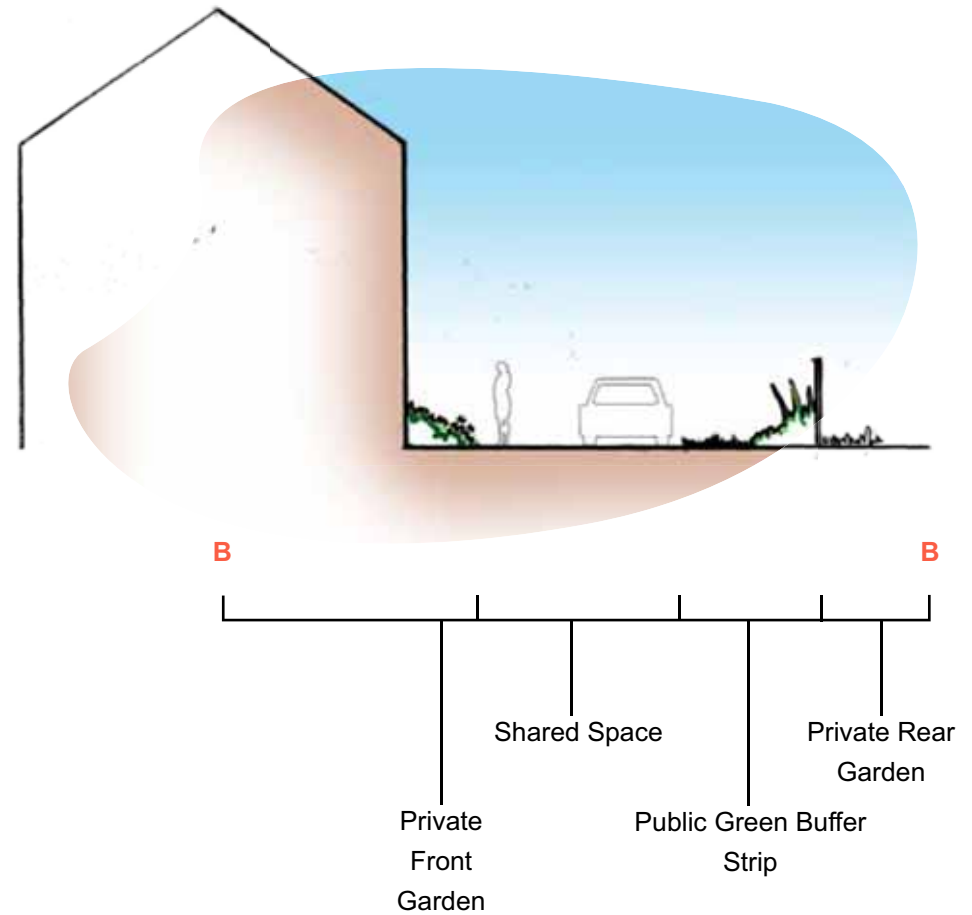
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Concept Plan of Shared Space

Concept of Shared Space Road



Concept of Shared Space Road






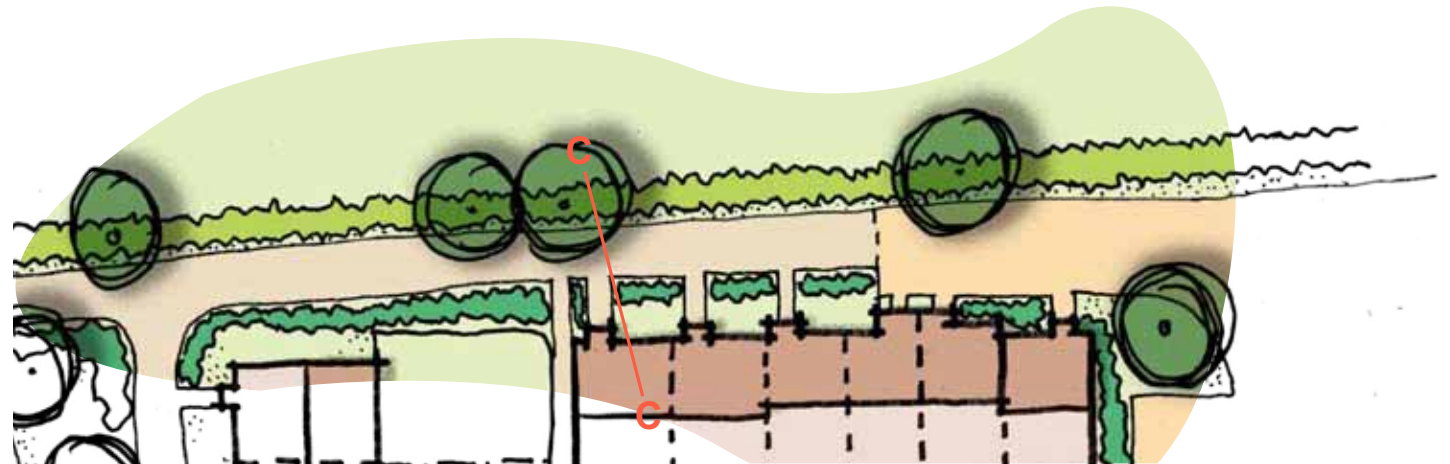
The design rationale for the shared space is to promote the multi-functional attributes of a 'home zone', by discouraging the over usage of vehicles. These spaces will accommodate many different users and become hubs to the development.

With little demarcation between the public and private realm, the shared spaces promote multi-use by the local residents.

3.3.7 Pedestrian and cyclist access route

Key:

-  Pedestrian and Cyclist Footpath
-  Private House Front
-  Site Boundary Native Hedge



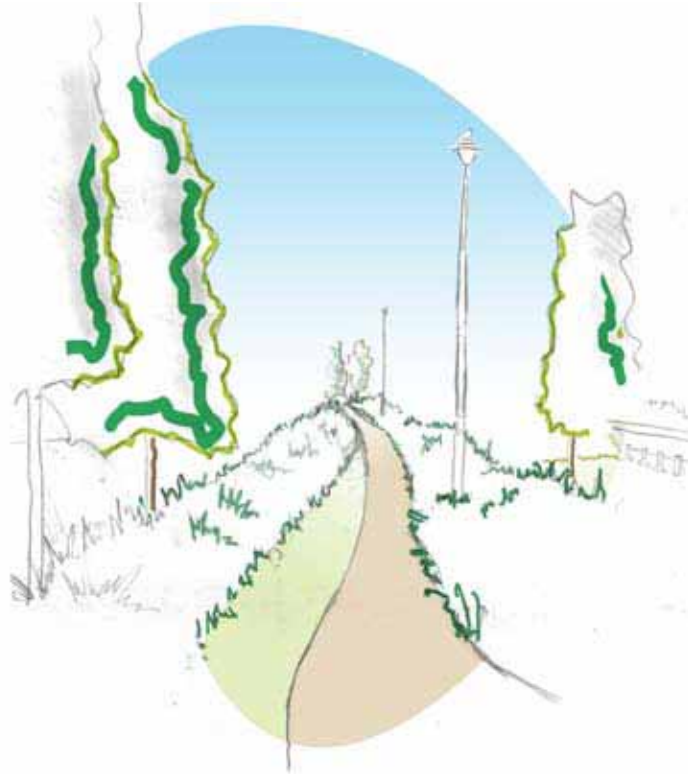
Plan of Pedestrian and Cyclist access route



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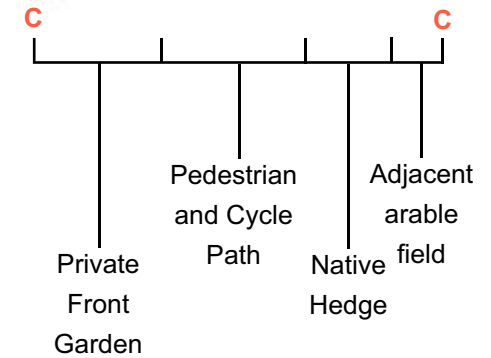
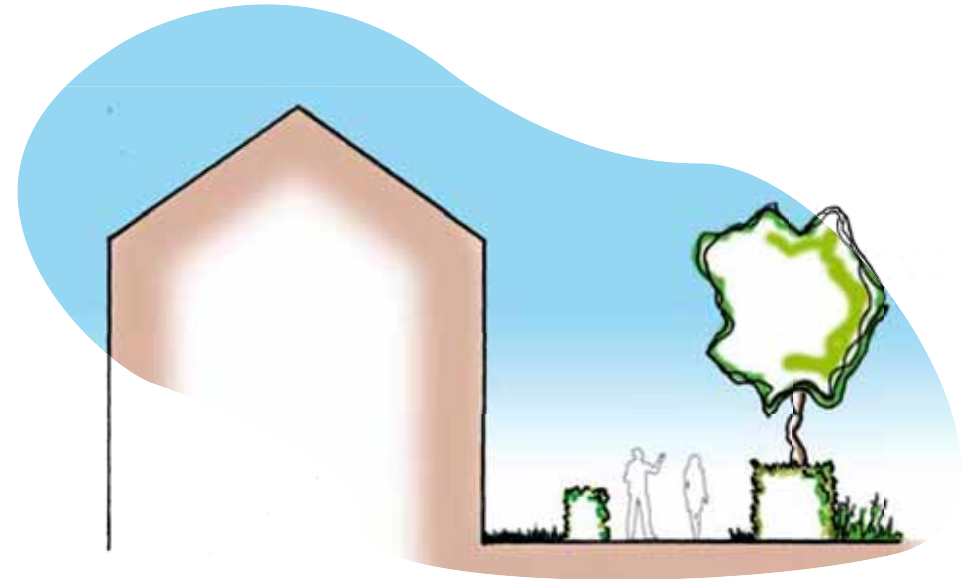


Concept of Pedestrian and Cycle path



A prominent and legible network of pedestrian and cycle paths throughout the development will help to achieve sustainable transport modes. It will also encourage integration to the surrounding community.

Concept cross section Pedestrian and Cycle path



The Vision for Ixworth is to promote sustainable modes of transport. Priority will be given to pedestrians, cyclists and car users in that order.

### 3.4 LANDSCAPE CORRIDOR

#### 3.4.1 Concept Statement

The Concept Statement Plan shows an area of green space located between the proposed development and the cemetery. This space allows access to pedestrians and cyclists from Crown Lane and the adjacent field.



Key:



Boundary to Cemetery



Not to Scale

**3.4.2 Masterplan**

The Masterplan complies with the Concept Statement in that a green space, located on the north western boundary of the site allows access to pedestrians and cyclists.

In addition to the space providing access it also acts a green corridor linking Crown Lane to the new 'Village Green'



Key:

 Boundary to Cemetery



Not to Scale

### 3.5 FRONTAGES

#### 3.5.1 Outward Facing Frontages - Concept Statement

The Concept Statement shows the frontages facing out to Crown Lane and the proposed landscape infrastructure, a 'green corridor' located between the proposed development and the cemetery. This space allows access to pedestrians and cyclists from Crown Lane to the site and the adjacent field with potential access to the north.



Key:

 Courtyard Space



Not to Scale

### 3.5.2 Outward Facing Frontages - Masterplan

The Masterplan complies with the principles established in the Concept Statement with frontages facing out to Crown Lane and to the proposed landscape infrastructure.

The houses to the boundary with the A143 back onto a landscaped belt.



Key:



Courtyard Space

Outward Facing Frontages



Not to Scale

### 3.6 PUBLIC SQUARE

#### 3.6.1 Concept Statement

The Concept Statement shows an area of green space located adjacent to the proposed development and Crown Lane.

This space allows access to pedestrians and cyclists from their properties to Crown Lane as well as emergency vehicle access.



Key:



Public Square



Not to Scale

**3.6.2 Masterplan**

The Masterplan complies with the Concept Statement in that a formal public square marks the pedestrian entrance to the new housing development.

The space allows pedestrian and cycle access between the new development and the centre of Ixworth and the local primary school.

Although the detailed design of this space is still emerging, it is likely that it will be in the form of a small 'village green', providing a green frontage to the development, encourage integration with the surrounding landscape and help promote biodiversity bringing biodiversity closer to where people live.



Key:

 Public Square



Not to Scale

**3.7 EMERGENCY ACCESS / SHARED SPACE**

**3.7.1 Concept Statement**

In addition to the Concept Statement requirement of a public square, there is a requirement to provide emergency access from the development to Crown Lane.



**Key:**

 Emergency Access shared space



**Not to Scale**





### 3.7.2 Emergency Access/Shared Space-Masterplan

The Masterplan complies with the Concept Statement in that a square, located in the north west corner of the site allows access to pedestrians cyclists and emergency service vehicles.

In addition, a series of shared spaces link the squares which help provide legibility and focal points with the urban grain.



Key:

-  Emergency Access shared space.
-  Shared Space 'Home Zones'



Not to Scale

### 3.8 BOUNDARY TREATMENT

#### 3.8.1 Boundary to the A143 - Concept Statement

The Concept Statement Plan shows an area of green space located between the proposed development and the A143.

This space provides a visual and sound buffer from the busy Highway, helping protect the proposed development from potential impacts associated with the road.

There is an existing plantation of immature stock adjacent to the road.



Key:



Boundary to the A143



Not to Scale


**3.8.2 Boundary to the A143 - Masterplan**

The Masterplan complies with the Concept Statement in that a green space, adjacent to the proposed development and the A143, has been located to provide sound protection and a visual barrier from the busy bypass.

It is proposed to augment the planting along the road with larger stock sizes than are current. The green buffer to the road will mainly consist of native and semi-native vegetation varying in maturity and density.



Key:

 Boundary to the A143




Not to Scale

**3.8.3 Green Lane - Concept Statement**

The concept statement shows an area of green space located adjacent to the proposed development and Crown Lane. This space allows access to pedestrians and cyclists from their properties to Crown Lane.



Key:

 Boundary to Crown Lane



Not to Scale

**Indicative elevation of proposed development adjacent to Crown Lane**




### 3.8.4 Green Lane - Masterplan

The Masterplan complies with the Concept Statement in that a green space 'village lane' is proposed along Crown Lane. It also provides access to pedestrians from the development to Crown Lane.

This 'village lane' will provide a green frontage to the development and encourage integration with the surrounding landscape.

Key:

 Boundary to Crown Lane

Not to Scale



### 3.9 HOUSING MIX

#### 3.9.1 Concept Statement

The Allocation allows for around 70 dwellings. This equates to a density of 28 dwellings per hectare (dph).

The Concept Statement requires the provision of a mix of housing types including the provision of 40% affordable.

The Concept Statement suggests that there should be higher densities towards the western and northern boundaries positively fronting on to the new landscape infrastructure.

Lower density housing could be located towards the eastern boundary enclosed with native woodland planting.

Building heights will not exceed that which is typical for the local vernacular architecture within Ixworth.

#### 3.9.2 Masterplan

In order to make the most effective and efficient use of land, the Masterplan proposes an overall increase to the density to 36 dph which equates to 90 dwellings. This density is typical of the local vernacular.

The housing will be a mixture of 2,3 and 4 bedroom houses with affordable housing provided in accordance with adopted policy.

### **3.10 PHASING, PUBLIC ART AND LIGHTING**

#### **3.10.1 Phasing**

The proposed phasing of the development will begin with the access road linking the site with the Walsham Road roundabout. In the initial stages this will be used as the haul road. It is expected that the development will be delivered as a unit with the work starting in the north east corner, closest to the site.

#### **3.10.2 Public Art**

Public Art can enhance development, and it is proposed that the provision of public art will be reviewed as the Masterplan evolves and the more detailed design comes through.

#### **3.10.3 Lighting**

Of particular relevance is local plan Policy DS3: Development Design and Impact. Further details will come through at the later, more detailed stages, but reference will be made to The Guidance Notes for the Reduction of Light Pollution, published by the Institution of Lighting Engineers. The guiding principle will be that lighting levels will be to the minimum required to ensure safety requirements are adhered to.

Highway lighting will comply with the Highway Authority requirements. Lanterns which minimise light spill and pollution will be chosen and directed downwards at an angle to ensure a good lighting effect without detriment to the surrounding area.

which is typical of local vernacular architecture within Ixworth.

#### 4.1 SUSTAINABILITY

The concept of sustainable communities has led the agenda for Planning Policy over the last ten years and more. PPS1 'Delivering Sustainable Development' (2005) sets out the overall context.

In developing the Masterplan, the Design Team has aimed to embed sustainability into the design, to respond not only to Government directives and local plan policy, but also to the aspirations outlined in the Concept Statement to help create a sustainable and ecologically sound development which will be an attractive place to live.

The East of England Regional Spatial Strategy sets out the main aspects of sustainable development as:

- Protect and enhance the natural environment, including its biodiversity and landscape character;
- Encourage good quality design and the use of sustainable construction methods for all new development;
- Reduce carbon intensive transport choices;
- Minimise the demand for use of resources, particularly water, energy supplies, minerals and other natural resources, whether finite or renewable,

by encouraging efficient use, re-use, or use of recycled alternatives, and try to meet needs with minimum impact;

- Minimise the risk of flooding; and
- Achieve sustainable lifestyles.

The most relevant policies to sustainability in the Replacement St Edmundsbury Local Plan 2016 are NE1, NE2, NE3, NE4 and NE5.

The Concept Plan requires the incorporation of strategies to ensure the development is as sustainable as possible, for example:

- Consider orientation to maximise opportunities for solar gain;
- Incorporate high standards of specification and construction to deliver high levels of insulation and air tightness to individual dwellings;
- Incorporate energy efficient heating systems;
- Incorporate opportunities for rain and possibly grey water harvesting;
- Allow for sustainable urban drainage (integrated as necessary within the landscape infrastructure as a positive feature); and
- Apply principles as set out in the Code for Sustainable Homes, Secured by Design, and CABI Buildings for Life.

The Code for Sustainable Homes is an environmental assessment method for rating and certifying the performance of new homes based on:

- Energy and CO2 emissions;
- Water;
- Materials;
- Waste;
- Pollution;
- Health and wellbeing;
- Management; and
- Ecology.

The development will achieve the mandatory requirements for achieving Code Levels. A Code for Sustainable Homes Statement and Renewable Energy statement will be submitted with the planning application.



### 4.2 PASSIVE SOLAR GAIN

One of the most easily achieved and effective sustainability 'gains' is partly achieved through the orientation of dwellings to achieve passive solar gain. It is found that the most effective orientation is within 30degrees of south. Houses orientated east of south will benefit more from morning sun, while those orientated west of south will catch late afternoon sun delaying the evening heating period.

The plan illustrates how this is achieved in the Masterplan's emerging proposals.



Key:



Optimum Position for Passive Solar Gain



Not to Scale

The following section deals with the opportunities for achieving sustainable development that can be addressed at the Masterplan stage. Further details will come through at the planning application stage.

TOPIC	SUB TOPIC	ACTIONS
ENERGY	Passive Solar Gain	The Masterplan has located residential blocks so that the majority of them are orientated within 30 degrees of south as per the plan illustrating orientation.
	Insulation	This will be considered in more detail as part of the detailed design.
	Energy efficiency	This will be considered in more detail as part of the detailed design.
	Lighting	External lighting will be the minimum required to ensure public safety. Highway lighting will be to the Highway Authority's standard. Lanterns which minimise light spill and pollution will be used.
	Renewable Energy	A Renewable Energy Statement will be submitted with the planning Application.
	Code for Sustainable Homes	The mandatory Code Levels will be achieved.
	Tree planting	Tree planting proposed will help ameliorate winds, which is a factor causing loss of heat.
TRANSPORT	Minimise reliance on the car	The site is situated close to facilities and to public transport which will help minimise reliance on the car. Pedestrian footways and cycle ways are being provided to help minimise reliance on the car.
	Inclusive access	The design will integrate the principles of inclusive design as set out in the best practice guidance. How this is achieved will be set out in the planning application's supporting documents.

TOPIC	SUB TOPIC	ACTIONS
WATER	Manage the risk of flooding	The Masterplan proposals integrate the principles of Sustainable Drainage Systems including swales, permeable paving materials and green roofs where possible. Currently infiltration are being undertaken to assess what is achievable in respect of installing Sustainable Drainage Systems.
	Replenish ground water reserve	If ground conditions are suitable, ground water should be allowed to percolate. Infiltration tests are currently being undertaken to ascertain whether this is achievable.
	Water conservation	This will be covered in Code for Sustainable Homes. However, it is the Developer's intention to use some form of rain water harvesting such as providing water butts. The Developer will also look at other provisions for conserving water, such as flow restrictors.
<b>ENVIRONMENT</b>	Ecology and biodiversity	This will be dealt with in more detail in the next chapter; however the aim will be to enhance biological diversity
	Townscape character	The emerging design is led by local character considerations so that the new development responds positively to its surroundings.
	Green space network	The green space provision complements the existing network. These spaces are multifunctional in that they also provide enhanced non vehicular access opportunities.
<b>WASTE AND RECYCLING</b>	Waste and recycling	These issues will be looked at in more detail with the emerging detail design.
	Cut and fill	Cut and fill will be balanced where possible, avoiding import or export.

## 5.1 INTRODUCTION

This section includes a summary of findings of the Extended Phase 1 Habitat Survey and the Reptile Report conducted on the proposal site in September 2009.

Included within this section are a series of mitigation measures that could be incorporated into the proposals to enhance the ecology and biodiversity.

## 5.2 SUMMARY OF THE FINDINGS

According to the Extended Phase 1 Habitat Survey, conducted by Landscape Planning Ltd on the 11th September 2009 the main findings are as follows:

- Relatively low ecological value;
- Minimal potential for protected species, restricted to presence of reptiles and nesting birds;
- Pond located outside the proposal site is a potential habitat for Great Crested Newts-consideration of this regarding roundabout realignment for access road to site; and
- Pakenham Meadow - a Site of Specific Interest is located 2km south of site. However the proposal site is considered unlikely to have adverse impact upon the SS1 in question.

According to the Reptile Survey, conducted by Landscape Planning Ltd following 8 visits between 11th September 2009 to the 28th the main findings are as follows:

No reptiles were found in the visits and therefore it is considered unlikely that any reptile population is present within the site.

However:

- Existing habitat has potential to support reptiles principally Slow Worm,

Common Lizard and Grass Snake/Adder.

- The National Biology Network Gateway data set for 10km grid containing proposal site has records for Adder and Grass snake from 1990-2000.

**5.3 RECOMMENDATIONS**

The findings of the Extended Phase 1 Habitat Survey and Reptile Survey conducted on the proposal site indicate there is limited ecological value and minimal biodiversity to the site. This is probably due to the fact that the site is an arable field and intensively farmed. The only significant vegetation located on the boundary to the site consists of:

- An immature tree belt planted adjacent to the A143;
- Lengths of native hedge row located along the northern boundary;
- A line of cherry trees and sycamores separates the north of the cemetery from the proposal site; and
- The boundary between the site and the adjacent Middle School is formed by a series of poplar trees interspersed by larch, oak, sycamore, cherry and beech.

Most of the vegetation is outside the site and will therefore be left untouched by the emerging proposals. The tree belt adjacent to the A143 will be augmented with native species.

The following section provides a series of suggestions that could be implemented within the proposals to increase the ecological value and maximise the biodiversity of the site.

**5.3.1 Bird Boxes**

Easily installed with minimal maintenance required. Depending on the type of box and location, the bird boxes could provide a habitat for many species of birds including Great Tits, Nuthatches, House Sparrows and Tree Sparrows, Robins, Wrens, House Martins, Starlings and Sparrows.



**5.3.2 Woodpile**

A pile of wood left undisturbed can become a complex micro-system in itself attracting wildlife such as Frogs, Newts, Toads, Ground and Rove Beetles, Centipedes and Stag Beetles (a globally threatened species and cited as a priority for UK and London Biodiversity Action Plans).



**5.3.3 Bat Boxes**

Must be placed in a sheltered location at least 2m above ground. There are many different types available attracting a range of bat species such as Pipistrelle, Barbastelle, Brown long-eared bat. Bats also require a steady supply of insects as food, hedge rows and ponds with varied planting are ideal for insects.

### 5.3.4 Habitat Creation

There will be opportunities to create incidental habitats both within public and private spaces.



Example of woodland underplanted with blue bells



Example of bogland planting



Example of wildflower meadow in summer



**6.1 GLOSSARY**

*This glossary is intended to provide general guidance, not authoritative definitions of terms which are sometimes controversial or used with different meanings in different contexts.*

<b>Accessibility</b>	The ability of people to move round an area and to reach places and facilities, including elderly and disabled people, those with young children and those encumbered with luggage or shopping.
<b>Adaptability</b>	The capacity of a building or space to be changed so as to respond to changing social, technological and economic conditions.
<b>Brief</b>	This guide refers to site-specific briefs as development briefs. Site-specific briefs are also called a variety of other names, including design briefs, planning briefs and development frameworks.
<b>Buffer zone</b>	
<b>Character assessment</b>	An area appraisal identifying distinguishing physical features and emphasising historical and cultural associations.
<b>Context</b>	The setting of a site or area, including factors such as traffic, activities and land uses as well as landscape and built form.
<b>Defensible space</b>	Public and semi-public space that is 'defensible' in the sense that it is surveyed, demarcated or maintained by somebody. Derived from Oscar Newman's 1973 study of the same name, and an important concept in securing public safety in urban areas, defensible space is also dependent upon the existence of escape routes and the level of anonymity which can be anticipated by the users of the space.
<b>Density</b>	The floorspace of a building or buildings or some other unit measure in relation to a given area of land. Built density can be expressed in terms of plot ratio (for commercial development); number of units or habitable rooms per hectare (for residential development); site coverage plus the number of floors or a maximum building height; or a combination of these.



<b>Design principle</b>	An expression of one of the basic design ideas at the heart of an urban design framework, design guide, development brief or a development.
<b>Desire line</b>	An imaginary line linking facilities or places which people would find it convenient to travel between easily.
<b>Elevation</b>	The facade of a building, or the drawing of a facade.
<b>Enclosure</b>	The use of buildings to create a sense of defined space.
<b>Energy efficiency</b>	The extent to which the use of energy is reduced through the way in which buildings are constructed and arranged on site.
<b>Feasibility</b>	The viability of development in relation to economic and market conditions.
<b>Form</b>	The layout (structure and urban grain), density, scale (height and massing), appearance (materials and details) and landscape of development.
<b>Height</b>	The height of a building can be expressed in terms of a maximum number of floors; a maximum height of parapet or ridge; a maximum overall height; any of these maximum heights in combination with a maximum number of floors; a ratio of building height to street or space width; height relative to particular landmarks or background buildings; or strategic views.
<b>Human scale</b>	The use within development of elements which relate well in size to an individual human being and their assembly in a way which makes people feel comfortable rather than overwhelmed.
<b>Landmark</b>	A building or structure that stands out from its background by virtue of height, size or some other aspect of design.
<b>Landscape</b>	The character and appearance of land, including its shape, form, ecology, natural features, colours and elements and the way these components combine. Landscape character can be expressed through landscape appraisal, and maps or plans. In towns 'townscape' describes the same concept.

<b>Legibility</b>	The degree to which a place can be easily understood and traversed.
<b>Mixed uses</b>	A mix of uses within a building, on a site or within a particular area. 'Horizontal' mixed uses are side by side, usually in different buildings. 'Vertical' mixed uses are on different floors of the same building.
<b>Movement</b>	People and vehicles going to and passing through buildings, places and spaces. The movement network can be shown on plans, by space syntax analysis, by highway designations, by figure and ground diagrams, through data on origins and destinations or pedestrian flows, by desire lines, by details of public transport services, by walk bands or by details of cycle routes.
<b>Node</b>	A place where activity and routes are concentrated often used as a synonym for junction.
<b>Permeability</b>	The degree to which an area has a variety of pleasant, convenient and safe routes through it.
<b>Planning Policy Statements (PPSs)</b>	Documents embodying Government guidance on general and specific aspects of planning policy to be taken into account in formulating development plan policies and in making planning decisions.
<b>Plot ratio</b>	A measurement of density generally expressed as gross floor area divided by the net site area.
<b>Public art</b>	Permanent or temporary physical works of art visible to the general public, whether part of the building or free-standing: can include sculpture, lighting effects, street furniture, paving, railings and signs.
<b>Public domain</b>	The parts of a village, town or city (whether publicly or privately owned) that are available, without charge, for everyone to use or see, including streets, squares and parks. Also called public realm.
<b>Public realm</b>	See 'public domain'

<b>Scale</b>	The impression of a building when seen in relation to its surroundings, or the size of parts of a building or its details, particularly as experienced in relation to the size of a person. Sometimes it is the total dimensions of a building which give it its sense of scale; at other times it is the size of the elements and the way they are combined. The concept is a difficult and ambiguous one; often the word is used simply as a synonym for 'size'.
<b>Section</b>	Drawing showing a slice through a building or site.
<b>Sustainable development</b>	Defined by the Brundtland Commission (1987, and quoted in PPG1) as 'Development which meets present needs without compromising the ability of future generations to achieve their own needs and aspirations'. The UK's strategy for sustainable development "A better quality of life" was published in May 1999 and highlights the need for environmental improvement, social justice and economic success to go hand-in-hand.
<b>Topography</b>	A description or representation of artificial or natural features on or of the ground.
<b>Urban grain</b>	The pattern of the arrangement and size of buildings and their plots in a settlement; and the degree to which an area's pattern of street-blocks and street junctions is respectively small and frequent, or large and infrequent.
<b>View</b>	What is visible from a particular point.

## 6.2 REFERENCES

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