

# North West Bicester Supplementary Planning Document

**FINAL DRAFT**  
November 2015





# Foreword

North West Bicester will be a neighbourhood unlike any other in Bicester - a development that demonstrates the highest levels of sustainability. Residents who move to North West Bicester will be making a lifestyle choice to live in efficient modern homes built to the highest environmental standards with excellent access to the town centre, public transport and adjoining countryside. The site offers a unique opportunity to bring about a sustainable large scale development as part of the extension of the existing town with a comprehensive mixed use scheme designed and constructed to the highest environmental standards, bringing a mix of homes, offices, shops and easily accessible open space.

The development at North West Bicester will make a significant contribution to meeting the District’s need for more homes and jobs as set out in the Cherwell Local Plan, including the delivery of affordable housing. A series of new places will be created, adding to the quality of and integrating with the existing town. The layout of the development will be based on the landscape framework of existing field boundaries defined by hedgerows.

The proposals will take at least 20 years to complete and will help trigger the transition to a low carbon community across the town. They present an exciting opportunity to build a new form of sustainable community within Cherwell District and to extend the benefits of this community to the existing town of Bicester.

**Councillor Michael Gibbard**

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## Explanatory Text

Following the Cherwell District Council Executive meeting on 1 June 2015 it was agreed that the Interim Draft North West Bicester Supplementary Planning Document (SPD) would be used for development management purposes. It was also agreed that the Head of Strategic Planning and the Economy be authorized to make any necessary amendments to the SPD in consultation with the Lead Member for Planning in the light of the Cherwell Local Plan Inspector's Report and the expected withdrawal of the Eco-towns Planning Policy Statement (PPS).

Since the Executive's decision, the Cherwell Local Plan 2011-2031 has been adopted and the following minor amendments have been made to the Interim Draft SPD:

The references to the Eco-towns PPS and Cherwell Local Plan have been updated;

The North West Bicester Masterplan Framework drawings have been included in the body of the SPD;

The Spatial Framework Plans have been

removed and replaced with the North West Bicester Masterplan framework drawings;

The hedgerow buffers appendix supporting Development Principle 9 (c) and Development Requirement 9 (c) has been removed to reflect the inclusion of the North West Bicester Masterplan - Green Infrastructure Framework;

The Cultural Wellbeing Strategy has been updated;

The references to the Code for Sustainable Homes in terms of daylighting and water have been updated;

The summary of consultation responses have been included in the Statement of Consultation and

Other minor amendments to the appearance of the SPD including the deletion of some headings, deletion of the Figures used to illustrate the SPD and page layouts.

The Final SPD has been published to support the consultation on the Statement of Consultation and there are no significant changes to the Interim Draft SPD.

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# 1.0 Introduction

This Supplementary Planning Document (SPD) expands upon Policy Bicester 1 of the adopted Cherwell Local Plan 2011-2031. A copy of Policy Bicester 1 is set out in full in Appendix I. The SPD provides further detail to the policy and a means of implementing the strategic allocation at North West Bicester.

In summary, when fully delivered, North West Bicester will provide:

- Up to 6,000 “true” zero carbon homes;
- Employment opportunities providing at least 4,600 new jobs;
- Up to four primary schools and one secondary school;
- Forty per cent green space, half of which will be public open space;
- Pedestrian and cycle routes;
- New links under the railway line and to the existing town;
- Local centres to serve the new and existing communities and
- Integration with existing communities.

## Background

In 2009, the site at North West Bicester was identified as having potential as an eco-town location in the Planning Policy Statement (PPS): Eco-towns a supplement to PPS1. It has subsequently been included in the Council’s development Strategy as Policy Bicester 1 of the adopted Cherwell Local Plan. Cherwell District Council is working with Oxfordshire County Council, Bicester Town Council and external partners (including the private sector, Government departments and agencies) to develop the proposals for large-scale development. In April 2014, the Government published its “Locally-led Garden City Prospectus” (Department of Communities and Local Government) which led to Bicester being awarded Garden Town status. On 5th March 2015, the Minister for Housing and Planning announced in a ministerial written statement that the Eco-towns PPS Supplement was cancelled for all areas except North

West Bicester. As it expected that the PPS Supplement will in time be cancelled in its entirety, the Eco-Town standards have now been brought into this SPD (Appendix II).

Planning permission for the first phase known as “The Exemplar” was approved in July 2012 and construction commenced in April 2014 (planning application reference: 10/01780/HYBRID). This phase will provide 393 homes, green space, a local centre and primary school. In March 2014, a masterplan and supporting vision documents was submitted to Cherwell District Council by developers A2Dominion setting out the spatial land uses for up to 6,000 homes on approximately 400 hectares of land at North West Bicester. The masterplan submission was supported by the following strategies, plans and documents:

- Access and Travel Strategy
- Community involvement and Governance strategy
- Energy Strategy
- Flood Risk Assessment
- Economic Strategy
- Economic Baseline
- North West Bicester Masterplan Framework (Drawing No. BIMP6 01 Rev. B)
- North West Bicester Green Infrastructure Masterplan Framework (Drawing Number: BIMP6 02 Rev A)
- North West Bicester Masterplan Movement and Access Framework (Drawing Number: BIMP6 03 Rev B)
- Green Infrastructure and Landscape Strategy
- Residential Strategy
- Statement of community involvement
- Strategic environmental report
- Social and community facilities and services strategy
- Transport strategy
- Water strategy
- Vision and objectives document

The above documents are available as background information on the Cherwell District Council website at [www.cherwell.gov.uk](http://www.cherwell.gov.uk).

A second application was resolved to be approved in March 2015 subject to completion of a Section 106 agreement (application reference 14/01384/OUT). The proposals comprise 2,600 homes, employment land, retail, social and community facilities including a new primary school and expansion of the exemplar phase school. A third application relating to the land south of the railway line provides for 900 new homes, together with land for a secondary and primary school, local services and facilities (planning application reference: 14/01641/OUT), also has a resolution to approve. A fourth application (reference: 14/01968/OUT) was submitted in November 2014 for the realignment of the A4095 North West Bicester strategic link road and is currently being considered by Cherwell District Council.

Further land within the masterplan area to attain the 6,000 homes identified is in the control of other developers and promoters. An outline planning application (reference 14/01675/OUT) for employment uses on land at the junction of Middleton Stoney Road and Howes Lane was submitted by Albion Land in October 2014. This application seeks permission for up to 53,000 sq. metres of general industrial and storage and distribution uses within Use Class B2 and B8 respectively with ancillary office and light industrial uses with Use Class B1. An outline application (reference 14/02121/OUT) was submitted in December 2014 for up to 1,700 dwellings, a retirement village, social and community facilities, an energy centre, primary school and supporting infrastructure and is currently being considered by Cherwell District Council.

### **Purpose of the SPD**

This SPD sets out the minimum standards to be achieved by the proposed development. Developers will be encouraged to exceed these standards where possible and will be expected to apply new higher standards that arise during the life of the document and reflect up to date best practice and design principles.

The key elements of the SPD are:

- The masterplan;
- Development and design principles aimed at delivering a high quality scheme;
- Requirements for addressing sustainable design;
- Requirements relating to the scheme's delivery and implementation; and
- Requirements which should be met at the detailed planning application stage and beyond to ensure adequate and consistent approaches to quality and delivery.

The SPD will be a material consideration in determining planning applications on the North West Bicester site. In addition, it will aid the submission of successful planning applications and infrastructure delivery.

The SPD should be read in conjunction with the National Planning Guidance including the National Planning Policy Framework, the adopted Cherwell Local Plan and other guidance relating to large-scale sustainable development. It is expected the Urban Design Framework currently being developed and design codes will be developed as part of the planning process to guide development proposals

### **Strategic Environmental Assessment and Sustainability Appraisal**

The Cherwell Local Plan 2011-2031 Sustainability Appraisal (SA) and Strategic Environmental Appraisal (SEA) process was carried out in line with the requirements of European and national law and provide an assessment of its environmental effects of the policies and proposals.

The Final SA report sets out the results of the SA process, outlines why alternatives were selected, reports on the assessment of the Local Plan and outlines a programme for monitoring the environmental and sustainability effects of the plan. The full SA report, including the assessment of the North West Bicester site, is available on the Council's web site at: [www.cherwell.gov.uk](http://www.cherwell.gov.uk). A Screening Statement to determine the need for a Strategic Environmental Assessment for the North West Bicester SPD concluded that an SEA was not required as it

did not introduce new elements that would have significant environmental effects that had not been considered as part of the Local Plan SA. The Environment Agency, Natural England and Historic England as the three statutory consultation bodies on the Screening Statement did not raise any objections.

## Planning Policy

### National Planning Policy and Guidance

#### National Planning Policy Framework (NPPF) March 2012

The National Planning Policy Framework (NPPF) sets out the Government's planning policies. It provides a framework within which local people and their accountable councils can produce their own distinctive local and neighbourhood plans. The NPPF must be taken into account in the preparation of such plans and is a material consideration in planning decisions.

At the heart of the NPPF is a presumption in favour of sustainable development which should be seen as a golden thread running through both plan-making and decision-making. The advice in the NPPF has been taken into account in the drafting of this SPD.

#### Planning Policy Statement: eco-towns a supplement to Planning Policy Statement 1

The Eco-towns Planning Policy Statement (PPS) sets out objectives for sustainable development in the form of large-scale development providing more homes while responding to the impact of climate change. It set out a wide range of standards for the delivery of zero carbon development, homes, transport, jobs, local services and other components of an eco-town.

## Local Planning Policy

### Cherwell Local Plan, 2011-2031

The Cherwell Local Plan (CLP) 2011-2031 sets out district-wide strategic objectives and policies. Proposals maps showing the strategic development sites are contained in the Local Plan. Policy Bicester 1 sets out the Council's strategic policy and development standards

for the eco town development at North West Bicester. The Local Plan includes other relevant policies, for example those on sustainable development (PSD1, ESD1-13), open space and local standards (BSC10 and BSC11) and infrastructure (INF1). The SPD should be read in conjunction with the Local Plan policies.

The Local Plan sets out the housing trajectory for 2011 and 2031 including the projected delivery of new homes at North West Bicester. The delivery of the development will go beyond the plan period and is expected to take up to 30 years to complete.

### Oxfordshire Local Transport Plan 4 (LTP4)

Since Local Transport Plan 3 was adopted in 2011, much has changed, especially the way in which transport improvements can be funded. To ensure that the county's transport systems are fit to support population and economic growth, Oxfordshire County Council has developed a new Local Transport Plan. Connecting Oxfordshire, the Local Transport Plan for Oxfordshire was adopted in September 2015. It sets out the transport vision, goals and objectives, to ensure that they support the Local Enterprise Partnership's Strategic Economic Plan as well as District Council Local Plans and other council strategies.

### Other relevant policy and guidance

The SPD should be read in conjunction with the Cherwell Local Plan 2011-2031 and other Government policy documents relating to large-scale development, sustainability and design, in particular:

- The National Planning Policy Framework (NPPF), (Department of Communities and Local Government – DCLG);
- National Planning Practice Guidance, (DCLG)
- By Design: Urban Design in the Planning System - Towards Better Practice, (Department of Environment, Transport and Regions - DETR and Commission for Architecture and the Built Environment - CABE);
- The Urban Design Compendium (editions 1 & 2) (Homes and Communities Agency);

- Places Streets and Movement: Better Places to Live by Design (CABE);
- Manual for Streets (2007) Department for Transport - DfT
- Manual for Streets 2 (2010) Chartered Institution of Highways & Transportation; and
- Car parking: What works where (Design for Homes, English Partnerships).
- Eco-towns worksheets – advice to promoters and planners (Town and Country Planning Association, DCLG)
- Sustrans Design Manual, Sustrans (November 2014).
- What makes an eco-town? BioRegional and CABE

These documents collectively promote a consensus view of good design principles. The SPD should also be read in conjunction with the North West Bicester masterplan supporting documents and strategies dated March 2014 and May 2014 which have informed the preparation of the SPD and should be used in preparing planning applications.

## 2.0 Site context

This section provides a summary of the site location, local context, features and opportunities.

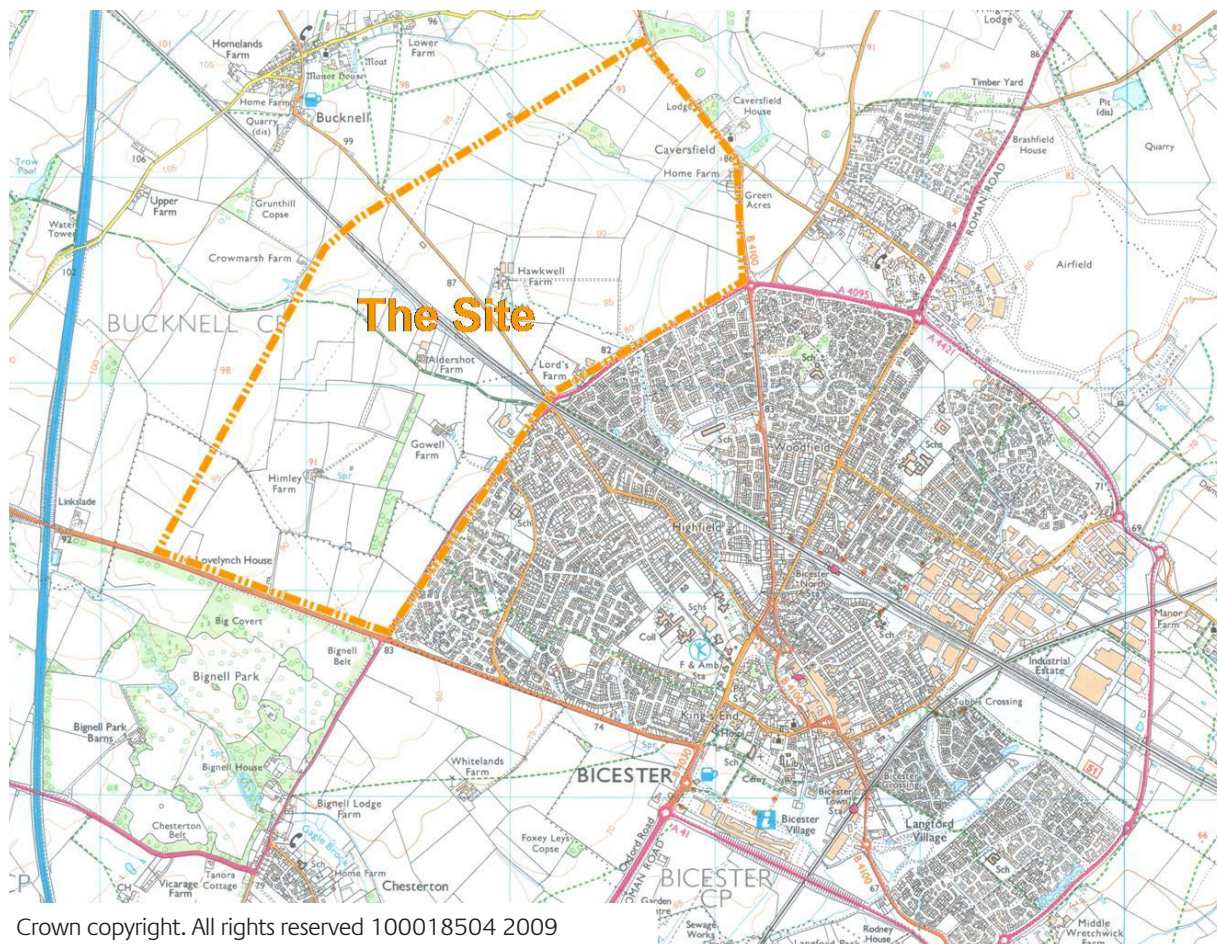
### Site location

The site is located north of Howes Lane and Lords Lane (A4095) to the north west of the town of Bicester. Figure 4 shows the site location. It is located approximately 1.5 kilometres from the town centre with the villages of Bucknell and Caversfield located to the north and east of the site respectively. To the south east, the area is predominantly residential and characterised by modern housing estates. The land to the south west is within the historic parkland of Bignell Park with land further to the south proposed

for development as part of the South West Bicester strategic development site identified in the Cherwell Local Plan and marketed as “Kingsmere”.

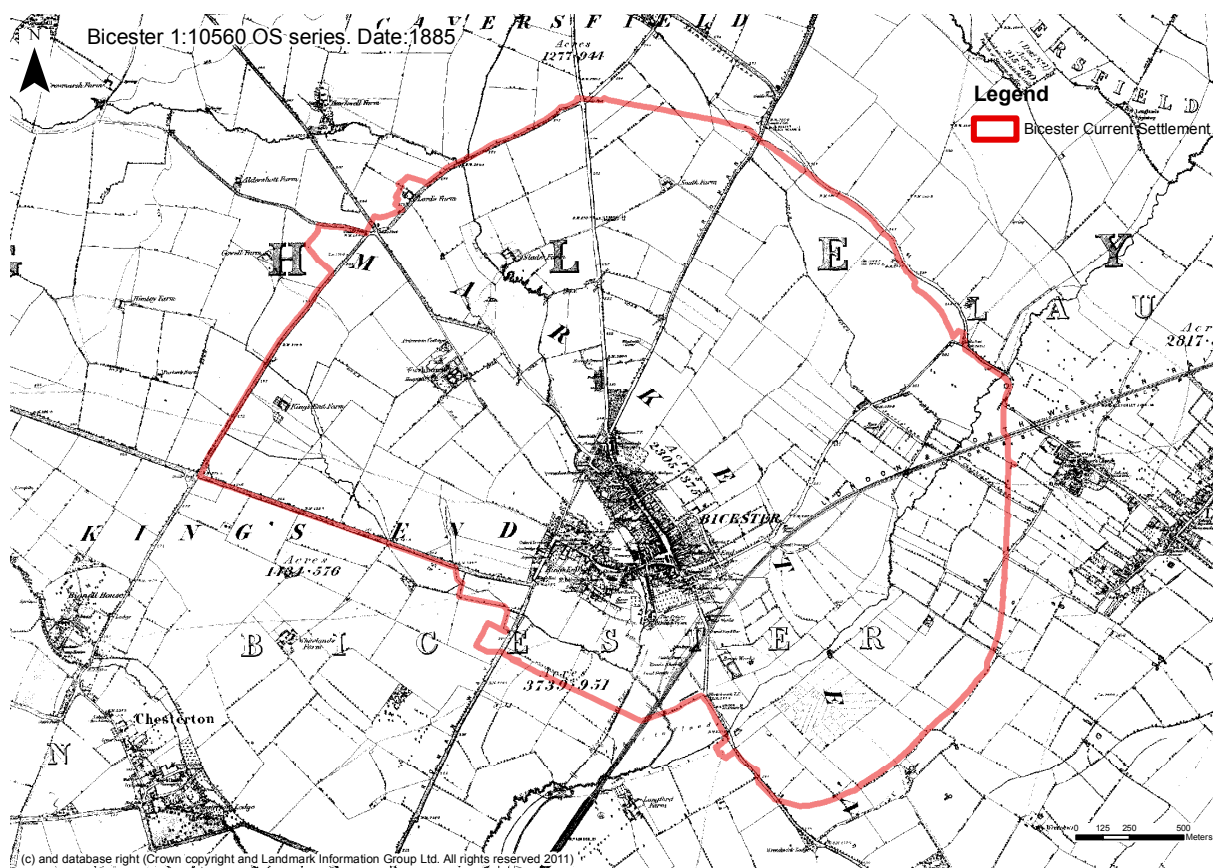
The three radial routes out of Bicester to the north west provide access to the site and links to Banbury, Bucknell and Middleton Stony. Banbury Road (B4100) provides access to the M40 motorway via junction 10 and the A43. An access to the first phase of the eco-town development is being constructed from the Banbury Road. Middleton Stony Road is a fast rural road linking Bicester and Middleton Stony. Bignell Park, a historic parkland landscape, lies to the south west of Middleton Stony Road. The Bucknell Road lies to the north of the railway line and divides the site.

**Fig. 1** Site location plan



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**Fig. 2** Historical map of Bicester 1885

### Site boundary and site area

The site boundary is defined by Banbury Road (B4100) to the east, Howes Lane and Lords Lane (B4095) to the south, Middleton Stoney Road (B4030) to the west and open countryside to the north. The Local Plan Policies Map and the inset map for Bicester 1: North West Bicester Eco-Town identify the location and the area of the eco-town proposals. The site area is 390 hectares (approximately 965 acres).

### Site history

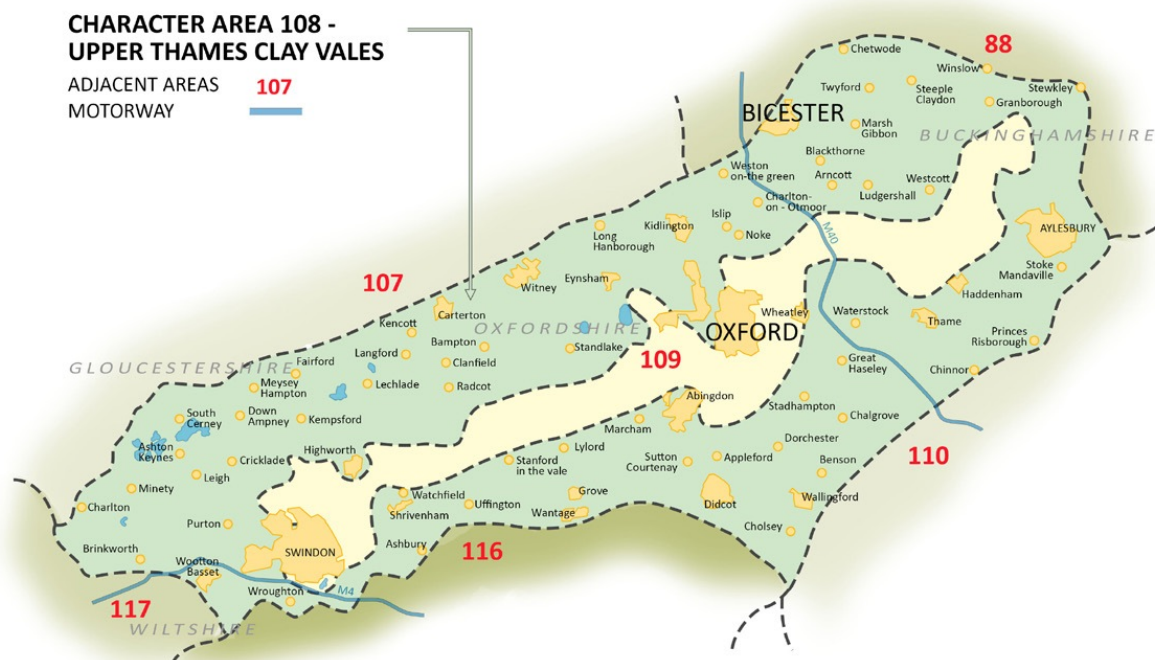
Understanding the history of the site can help inform an understanding of some of the current site key site features. The Oxfordshire Historic Landscape Assessment forms an important component of the evidence base for the masterplan. Until the late 18th century the land was likely to have been open fields. Historic maps show that the field patterns and boundaries have changed little since the mid 1800's. Fig. 5 shows a map of the site in 1885 showing the field boundaries within the site have achieved their present day layout. By

1885, Home Farm, Lords Farm, Himley Farm, Aldershot Farm, Gowell Farm and Hawkwell Farm are all shown on the map of the area and by 1910 the railway line is completed. By the 1950s Lovelynch House is shown on local maps.

The Thames Valley Police Headquarters and Avonbury Business Park were developed in the 1990s and the A4095 realigned. By 1999 two small strips of plantation were added. Land at Middleton Stoney Road and Howes Lane was identified in the Cherwell Non-Statutory Local Plan 2011 as suitable for playing fields but never used for such use.

Land north of Howes Lane and Lords Lane was considered as part of the Cherwell Local Plan Options for Growth consultation in 2008 and was subsequently extended to accommodate an eco-town proposal as part of the Government's programme. Following the announcement of North West Bicester as a potential eco-town location in 2009 a planning application for a first phase was submitted in November 2010.

**Fig. 3** Landscape character area



### Site features

The predominant land use is agriculture with fields either bounded by post and wire fences or by hedges with some large trees, woodland and plantation. The agricultural land is classified as good to moderate value (primarily Grade 3) under the Agricultural Land Classification.

The site is relatively flat rising gradually to the North West. The London to Birmingham railway line runs through the site from south east to North West on an embankment before entering a cutting.

Bucknell Road also passes through the site to the north of the railway line and leads to the village of Bucknell approximately 300 metres from the site search area boundary.

Six farms, each with its own character, are located on the site, three north of the railway (Home, Lords and Hawkwell), and three south of it (Himley Farm, Aldershot Farm, and Gowell Farm).

### Landscape character

The North West Bicester Masterplan Green Infrastructure and Landscape Report, March 2014 sets out the landscape character sets out an assessment of the landscape character

and context. It cross refers to Volume 1 of the North West Bicester Strategic Environmental Report (SER) considers the landscape and visual implications of the proposed development in Section 5. A copy of these documents is available online at: [www.cherwell.gov.uk](http://www.cherwell.gov.uk).

There are no major landscape constraints present on the site and no landscape designations within the area. North West Bicester is within National Character Areas 107, the “Cotwolds”.

The Oxfordshire Wildlife and Landscape Study defines the site as being within the Wooded Estates landscape type. The Cherwell District Landscape Assessment (CDLA) 1995 identifies the site as within the Oxfordshire Estate Farmlands character area.

As part of the local landscape impact assessment process for the North West Bicester development project, a landscape character assessment has been prepared based on the principles set out in “Landscape Character Assessment Guidance for England and Scotland”.

### Landscape framework

The existing landscape provides the framework for the masterplanning of the site. It is typical of

rural agricultural land in this area of Oxfordshire and is characterised by a mix of pasture and arable fields. Existing field boundaries form a strong framework of hedgerows. The Masterplan green infrastructure and landscape strategy provides further information.

## Ecology

Section 6 of the SER (Volume 1) refers to ecology. A copy is available on the Cherwell District Council website. Existing hedgerows and woodland, together with the streams crossing the site, are important habitats which form the basis of wildlife corridors in the North West Bicester masterplan. These features and habitats, together with ponds, farmland and grassland provide many benefits to foraging and commuting bats, butterflies, common species of reptile, protected species such as great crested newts and badgers and many important breeding farmland and woodland birds.

## Development edges

Howes Lane and Lords Lane form the urban edge to the site and the interface with the existing town.

**Fig. 4** Homes South of Lords Lane



Middleton Stoney Road forms the western edge and the interface with Bignell Park, historic parkland in private ownership. Banbury Road forms the eastern edge to the proposed development with Caversfield House and the Church of St Lawrence beyond. The northern edge of the site area is rural and cuts through existing field boundaries. This edge requires sensitive treatment in order to lessen the impact on the surrounding countryside.

## Archaeology and heritage

An archaeological assessment concluded that the site is located within an area that has remained undeveloped since the nineteenth century and possibly before. The site has known potential for remains dating from the prehistoric period with records of a prehistoric ring ditch located approximately 350 metres to the north of Himley Farm, a possible curvilinear enclosure to the north west of Hawkwell Farm and other evidence of prehistoric activity suggesting a general potential for remains from this period to be present. The Oxfordshire Historic Environment Record provides a useful resource and reference to guide further development of the masterplan. The site is located in an area of archaeological interest identified by a desk based assessment, aerial photographic survey and a trenched evaluation. These are summarised in Chapter 10 of the Strategic Environmental Report (SER).

The archaeological evaluation recorded a number of archaeological features across the site including a Neolithic pit, a Bronze Age “Burnt Mound” as well as Iron Age and Roman settlement evidence. The archaeological features recorded during the evaluation are not considered to be of such significance to require physical preservation but will require further investigation ahead of any development. There will be a need for a further scheme of investigation.

Three Grade II listed buildings are located within the site (Home Farm farmhouse and Himley Farm Barns). The farmhouse at Hawkwell Farm is a traditional building but not listed. In the surrounding area, St Lawrence’s Church in the grounds of Caversfield House is an important local landmark building (Grade 2\* listed). Its setting is important in the local landscape. Section 10 of the SER Volume 1 provides further detail.

## Visual context

The flat topography means that extensive views may be had into and out of the site. Views into the site from all directions are curtailed by the railway embankment meaning that the site as a whole can only be viewed from the embankment itself. A number of large

trees and farm buildings are also visible on various parts of the site.

Views out from the site include those to existing dwellings and other buildings in Bucknell to the north, and to trees lining the B4100 to the east with Caversfield Church visible beyond these. To the east of the site, existing dwellings on the eastern side of Howes Lane/Lords Lane are visible. To the south a line of trees and parkland along the B4030 is visible which screens views from Bignell Park.

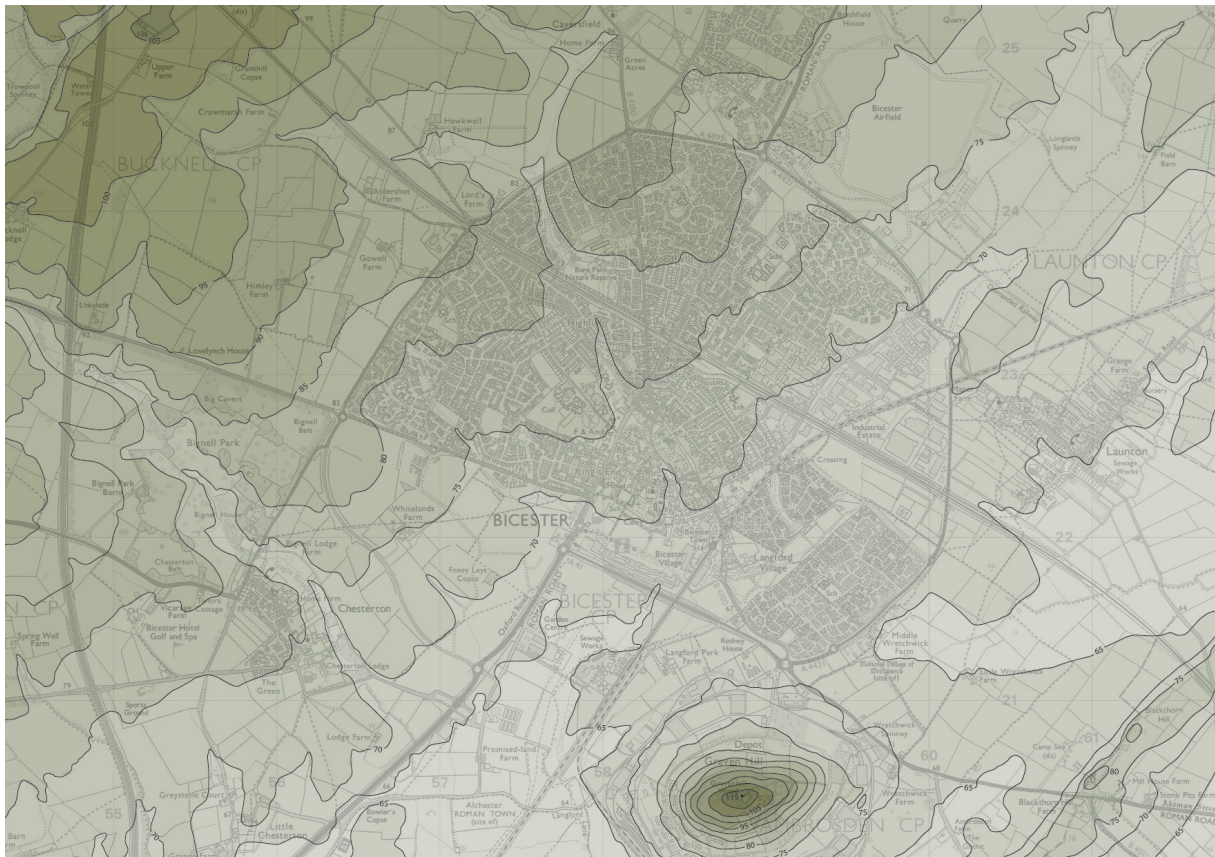
The immediate surrounding area shows a strong contrast between town and country. To the east of the site the outer limits of Bicester built in the late twentieth century, end abruptly at the A4095. To the west is open countryside, containing the village of Bucknell. To the south is the B4030 and beyond it the Bignell Park historic parkland and privately owned estate.

## Topography and hydrology

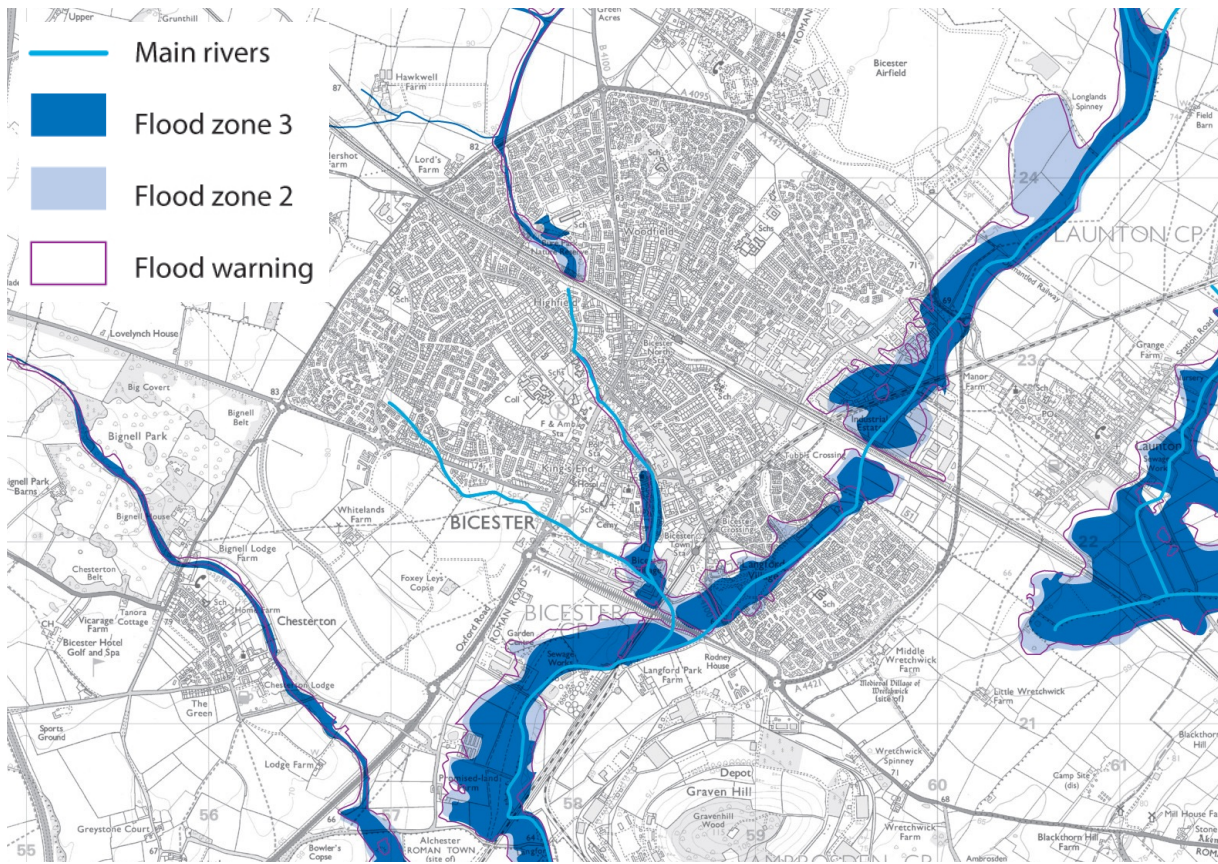
The topography of the site slopes gently upwards from south-east to north-west with elevations ranging from around 97m AOD to 80m AOD.

The main watercourses on site drain to the River Bure which leaves the site via a culvert under the A4095 flowing towards the town centre. Within the masterplan boundary there are several water features including the Bure and its tributaries, field drains, ponds and springs. One of these streams passes below the railway line. In addition, five water wells and three groundwater abstraction sites have been identified within the site area and a minor aquifer with intermediate groundwater vulnerability is present beneath the site. Section 7 of the SER (Volume 1) refers to flood risk and hydrology.

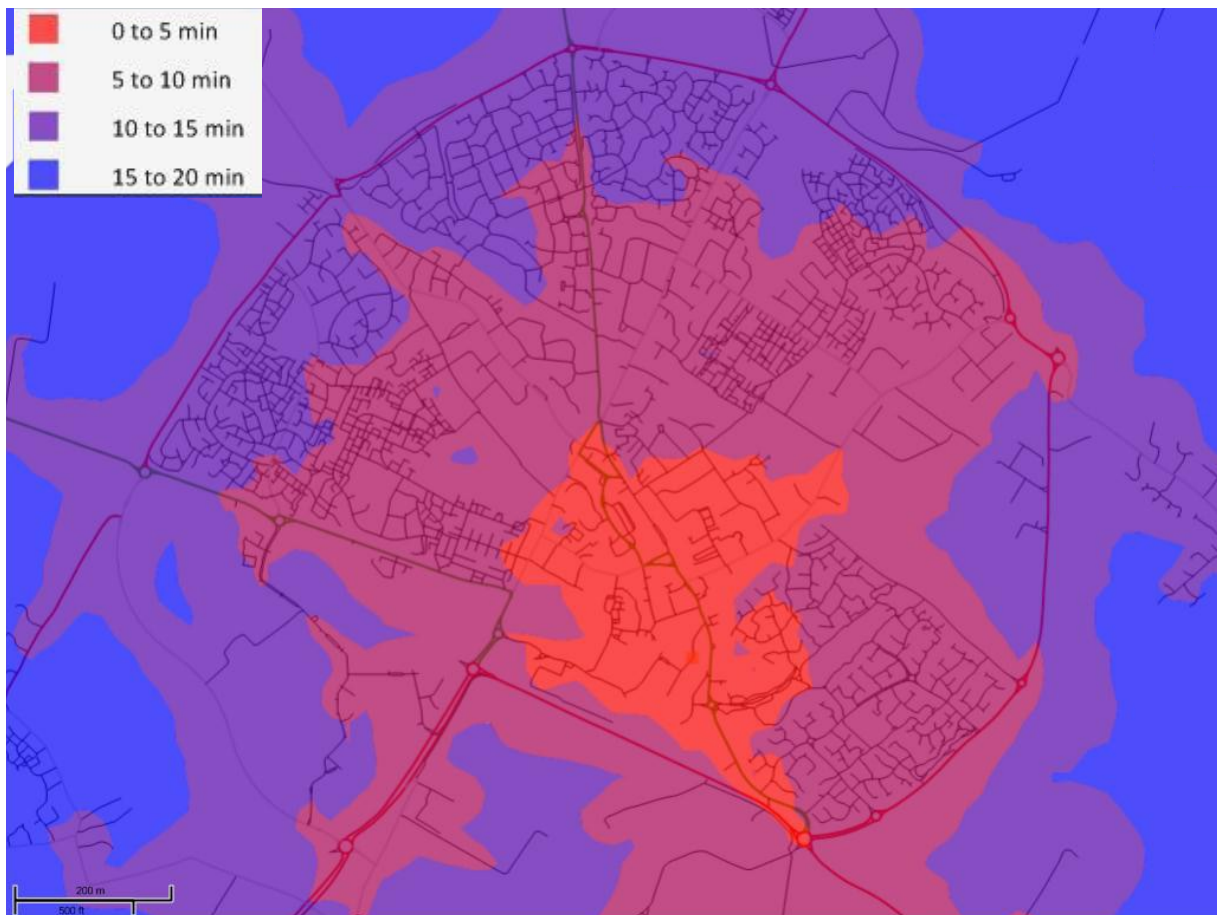
**Fig. 5** Topography



**Fig. 6** Flood risk



**Fig. 7** Walking accessibility from Bicester town station



## Site constraints and opportunities

The site provides a unique opportunity for large-scale development in Bicester. It is in multiple ownerships and will require a comprehensive approach to land assembly and phasing of development. Existing landscape features such as the hedgerows and watercourse corridors provide the structure to the masterplan and will be retained. In terms of the capacity for residential development, the Bicester Landscape assessment states that consideration should be given to the landscape and visual separation between the site and satellite villages including Bucknell. It states that employment uses would be best located adjacent to the railway line.

The railway line divides the site into two distinct areas which will have to be connected.

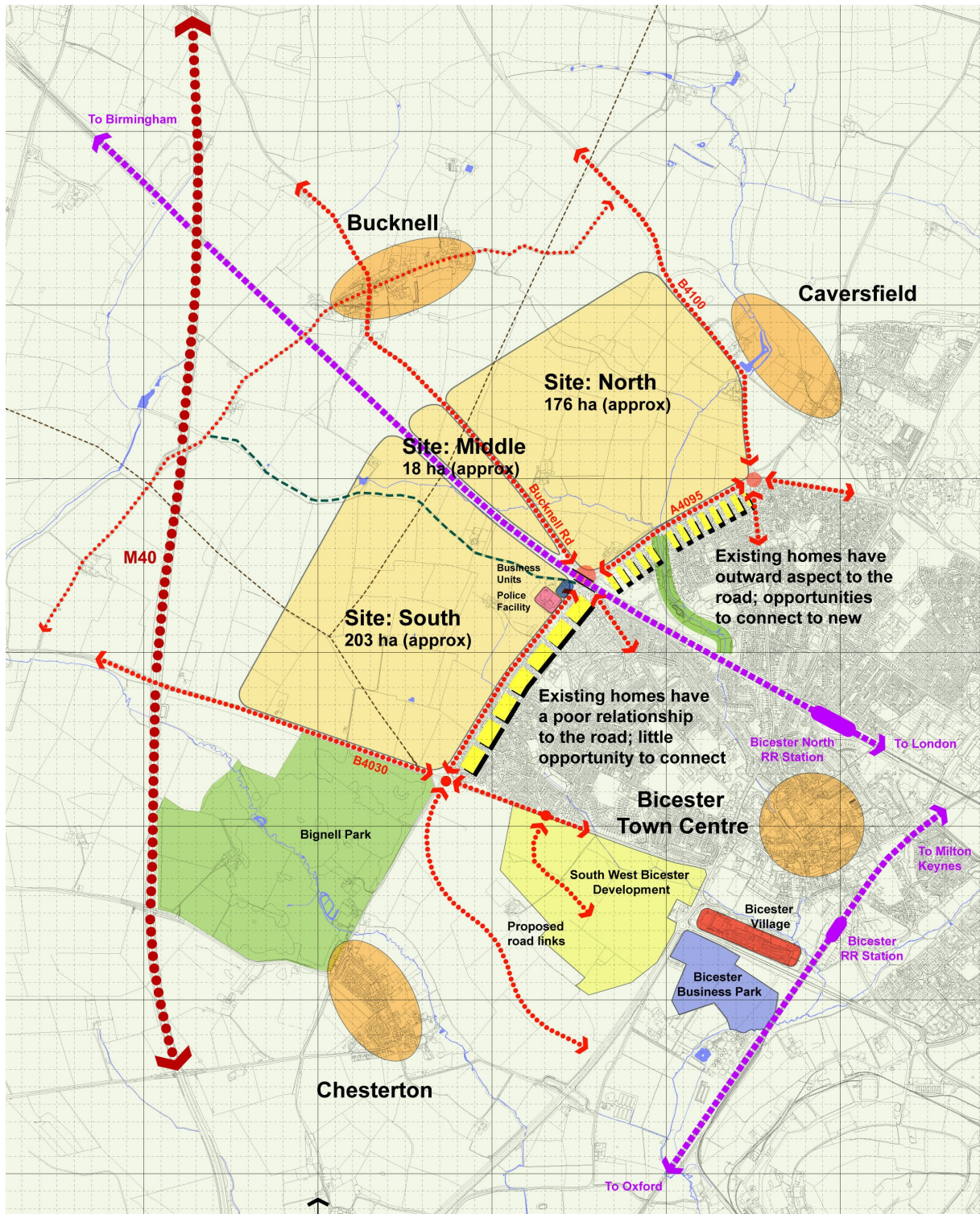
The junction of the Howes Lane, Lords Lane and Bucknell Road will need to be reconfigured to improve A4095 strategic route along Howes Lane and Lords to accommodate the forecast growth in traffic arising from the proposed developments in the town.

The site's aspect provides the potential for large-scale renewable energy generation from roof-mounted solar photovoltaic panels with the option to use sustainable heat from the Ardley energy from recovery plant.

The site's proximity to the existing town centre and employment opportunities should also strengthen the local economy and integrate the development with the existing community.

The town centre is accessible on foot within 20 minutes from most areas in the town. Bicester is very accessible by bike with most places within 10 minutes of the town centre. Bicester Town and Bicester North Railway stations are also accessible by bike.

**Fig. 8** Site analysis plan



## 3.0 Vision and objectives

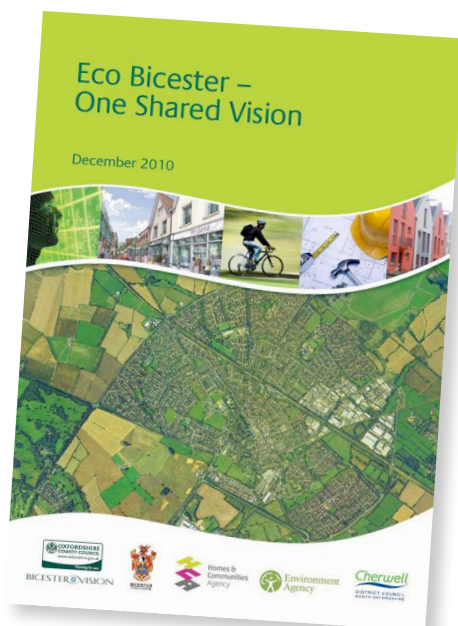
The vision for North West Bicester has been guided to a large extent by the Eco-towns Planning Policy Statement (PPS). It has been taken forward in the adopted Cherwell Local Plan and the Bicester Masterplan.

The Cherwell Local Plan sets out the vision for Bicester in 2031 and the Council's strategy for delivering Bicester's vision. It includes bringing about a pioneering eco-development which will establish a new sustainable community, integrated with, and for the benefit of, the whole of Bicester.

The SPD vision reflects the Council's vision for Bicester and the Eco Bicester One Shared Vision of the Bicester Strategic Delivery Board which sets out to create a place where people choose to live, work and spend their leisure time in sustainable ways.

The Eco Bicester One Shared Vision is for the whole town and North West Bicester will act as the trigger for the transition to a more sustainable community. By ensuring that households and individuals are able to reduce their carbon footprint to a low level and achieve a more sustainable way of living the proposals for North West Bicester will deliver the One Shared Vision.

**Fig. 9** Eco Bicester Vision



In this SPD, the vision for North West Bicester is for a high quality development, well integrated with the existing town, which provides homes, jobs and local services in an attractive landscape setting, increases biodiversity and addresses the impact of climate change. It is based on the principles of sustainable zero carbon development designed to meet the effects of future climate change including extreme weather events and reduced energy and water use.

The SPD will ensure that the vision for the site will be delivered successfully. It includes the major components that make up an eco-town meeting the challenges that such development poses.

The SPD has taken key elements from the North West Bicester masterplan and vision documents submitted by developers, A2Dominion in 2014.

The vision documents supporting the North West Bicester Masterplan and SPD are set out in Appendix III and available in full on the Council's website ([www.cherwell.gov.uk](http://www.cherwell.gov.uk)). The masterplan was prepared in collaboration with officers of the Eco Bicester Project team comprising representatives from Cherwell District Council, Bicester Town Council and Oxfordshire County Council together with government bodies including the Environment Agency, Natural England, Highways England and Homes and Communities Agency. Local organisations such as the Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust (BBOWT), Bicester Vision and the Chamber of Commerce were also involved as stakeholders.

The Masterplan illustrates the key components of the development strategy for the site. It includes the landscape framework that underpins the masterplanning providing connectivity and structure to the site.

The eco-town development will utilise the site's natural features and opportunities to provide a place that encourages a more sustainable way of living in homes that are



well designed, energy efficient, accessible to jobs, local facilities and within easy reach of the town centre and countryside. In doing so, it will meet, and wherever possible exceed, Eco-town standards and Local Plan policies, creating an exemplar of truly sustainable development.

Infrastructure requirements will be future-proofed so that the development can adapt to change. Renewable energy generation from on-site sources will be the key to delivering zero carbon emissions from energy used in buildings on the site. The provision of utilities' infrastructure should be coordinated and support the overarching objective for zero carbon development.

## 4.0 Development principles and requirements

This section sets out the key development principles for the site. It considers the Eco-town standards, the principles set out in Policy Bicester 1 and North West Bicester Masterplan exploring them further and breaking them down into component parts each of which is used to inform the principles that will be used to guide developers, landowners and applicants when preparing development proposals.

As such it provides an understanding of how masterplanning principles should be incorporated into the preparation of planning applications.

Applicants are expected to consider the principles and parameters set out in this section, in the preparation of planning applications (in outline and detail) and Design and Access Statements. The principles should be applied to the development as a whole, as well as individual sites.

In delivering the vision for North West Bicester, applicants are required to respond directly to these principles in Design and Access Statements and demonstrate how they have been taken into account.

### Masterplanning and Comprehensive Development

The masterplan indicates the key development components. It will be used to guide the preparation of development proposals and deliver key components of the masterplan. The masterplan is supported by surveys and technical information and shows:

- The site boundary;
- Proposed land uses;
- Existing woodlands and hedgerows, watercourses and ponds;
- Proposed woodlands and hedgerow buffers;
- Water corridor buffer zones;
- A nature reserve and country park;
- A burial ground
- Site access points from the highway network; indicative primary and secondary routes (roads and street layout); and
- The proposed realignment of Howes Lane.

### Development Principle 1 – Masterplanning and comprehensive development

Cherwell District Council is committed to ensuring comprehensive development through masterplanning. In order to ensure a comprehensive development, all planning applications will be required to be in accordance with the SPD masterplan below.

#### BREEAM Communities

The BREEAM Communities assessment methodology will be used to assess the sustainability of the proposals. CEEQUAL assessment methodology will also be used to deliver improved project specification, design and construction of civil engineering works.

#### CABE Design Review

CABE Design Review will be encouraged of all schemes to ensure high quality design. Design Review has been used in preparing the masterplan and Phase 1 exemplar proposals. Design Review will be continued throughout the preparation of detailed development proposals.

Figure 10: North West Bicester Masterplan – Masterplan Framework



- Masterplan Site Area
- Proposed NW Bicester Land Use**
  - Green Infrastructure
  - Existing Woodlands and hedgerows
  - Existing Water Corridor and Ponds
  - Proposed Woodlands and Hedgerows Buffer
  - Proposed Water Corridor Buffer Zone
  - Housing
  - Primary School
  - Secondary School
  - Secondary School Sports Pitches
  - Existing Business (including green space tbc)
  - Existing Farm Use (including green space tbc)
  - Commercial/ Business
  - Social/Community
  - Retail
  - Care Home/Hotel/Other
  - Extra Care Housing (including green space tbc)
  - Energy Centre
  - Water Treatment
  - Proposed Retention Basins and Attenuation Ponds
  - Proposed Swales
  - Existing Herbage
  - Play
  - Proposed groups of allotments
- Proposed Connectivity**
  - Strategic Roads with segregated footpath/cycleway
  - Primary Roads with segregated footpath/cycleway
  - Secondary Roads including footpath/cycleway
  - Off road footpath/cycleways
  - Crossing under railway
  - Existing Bridle Path

## Development Requirement 1 - Delivering the masterplan.

The masterplan should achieve BREEAM Communities “Excellent”. For more information go to [www.breeam.org](http://www.breeam.org)

In order to ensure comprehensive development, planning applications should be consistent with, and mindful of, the masterplan requirements set out below.

Planning applications will be:

- Determined in accordance with the masterplan adopted as part of the SPD;
- Supported by a masterplan to show the “fit” with the overarching masterplan;
- Required to demonstrate the principles and vision set out in the site wide masterplan, and the SPD;
- Required to progress design work (see design principles in section 5) in the preparation of detailed proposals. For example, details to the level of the block and the street should be provided to explore issues related to building typologies and solar orientation.
- Required to meet the requirements as set out in the Local Validation Checklist and advice on making an application (for more information go to: [www.cherwell.gov.uk/planning](http://www.cherwell.gov.uk/planning))

## “True” zero carbon development

The concept of zero carbon development has been embedded into Council strategies and policy since it appeared in the eco-town standards. Local Plan Policy Bicester 1 requires the provision of infrastructure to allow for zero carbon development on the site.

The 2008 Climate Change Act established the world’s first legally binding climate change target with the aim to reduce the UK’s greenhouse gas emissions by at least 80% (from the 1990 baseline) by 2050. Reduction in the use of fossil fuels will not only contribute to reaching this target but also help protect against fuel price rises.

Work to date indicates a mixture of low carbon district heating and photovoltaic energy would achieve zero carbon. The site’s orientation and aspect creates the opportunity for roof mounted solar panels to generate renewable energy and will go a significant way to achieving the zero carbon targets.

The approach to energy and carbon dioxide reduction is set out in the Masterplan Energy Strategy and summarised below:

- A large scale solar array on all roofs;
- Energy efficient buildings and
- A network of energy centres providing gas and biomass combined heat and power (CHP) which will require a district heating network.

## Zero carbon energy

Renewable energy generation from on-site sources will be the key to delivering zero carbon emissions from energy used in buildings. Photovoltaic panels currently appear to provide the most viable solution as set out in the Energy Strategy supporting the Masterplan.

Orientation and design of buildings will be expected to take account of the potential to install solar panels.

The Council will encourage:

- Roof mounted arrays to avoid use of large tracts of land for a single purpose.
- Exploration of technologies that will assist building occupiers in maximising the use of any renewable energy generated on the site.

Design of the proposed development should enable solar power generation by supporting:

- Orientation - For pitched roofs, all roofs should have at least one pitch facing within 45 degrees of due south. Mono-pitch or flat roofs should be used to increase PV provision. A mix of orientations ranging from +45 degrees to -45 degrees of south will reduce the peak export and contribute to meeting peak demands.
- Avoiding overshadowing/overshadowing - Buildings should avoid or at least minimise shading to roofs. Shading of south facing roofs by trees or other buildings should be avoided.
- Built form, density and massing that optimises the potential for solar gain to generate energy.

Solar masterplanning software use at early design stages (e.g. using SketchUp design software [www.sketchup.com](http://www.sketchup.com)) to check for best use of solar resources on a site.

### Energy Centres – Combined Heat and Power

Low carbon energy centres, providing combined heat and power to the development are proposed within the site boundary as part of the masterplan energy strategy. Energy centres are shown on the Masterplan and have been located to maximise the potential for combined heat and power while also allowing the potential for the site to fit a future heat network for Bicester. The design and siting of energy centres should allow for the space requirements including the need for biomass deliveries and ensure that there is no nuisance to adjoining uses.

### Local Heat Network

The feasibility of a local heat network for Bicester as a whole is being investigated by the Council and BioRegional supported by the Department for Energy and Climate Change (DECC) Heat Network Delivery Unit (HNDU) funding. The importance of a heat network should be recognised and opportunities included in proposals for the eco-town. The aspiration is for waste heat from the energy recovery facility at Ardley to connect to proposed developments, if feasible.

### Smartgrids

The use of smartgrids and low carbon energy storage solutions provide an opportunity to manage demand and supply of renewable and zero carbon energy technologies. Such solutions should be explored further in the energy strategies to support planning applications and masterplanning delivery.

### Development Principle 2 – “True” zero carbon development

In accordance with the Local Plan the definition of true zero carbon is that over a year the net carbon dioxide emissions from all energy use within buildings on the eco-town development as a whole are zero or below. It excludes embodied carbon and emissions from transport but includes all buildings – not just houses but also commercial and public sector buildings.

### Development Requirement 2 - “True” zero carbon development

Development at North West Bicester must achieve zero carbon emissions as defined the Local Plan and this SPD.

Each full and outline application will need to be supported by an energy strategy and comply with the definition of true zero carbon development.

Energy strategies should identify how the proposed development will achieve the zero carbon targets and set out the phasing.

Use of heat and low carbon energy from the energy recovery facility at Ardley should be explored in the energy strategy. Smartgrid and storage technology should also be investigated.

Applicants will be encouraged to maximise the fabric energy efficiency of buildings.

Provision of utilities’ infrastructure should be coordinated and support the overarching objective of true zero carbon development.

Where an approach is proposed that does not include a heat network it will have to be demonstrated that it is a robust long term solution and that connection to any heat network should be explored.

## Climate Change Adaptation

There is increasing recognition that reducing carbon emissions is important in reducing and adapting to the impacts of climate change.

It is anticipated that overheating in buildings will be an issue in future climate change scenarios requiring an innovative approach in the design of new buildings. At present there is no rigorous definition of what constitutes overheating in dwellings. However there is documented evidence that temperatures being reached in some existing dwellings are harmful to occupant health and well-being.

The factors that contribute to overheating in dwellings include:

- Urbanisation;
- Occupant behaviour and interventions;
- Orientation;
- Aspect;
- Glazing;
- Internal gains;
- Thermal mass;
- Changes in building design (including the drive for energy efficiency, leading to highly insulated and airtight dwellings);
- Pollution;
- Noise and
- Security.

The Council requires development to be designed to take account of future climate scenarios. The 2009 UK Climate Projections (UKCP09) set out the key projections of climate change across the UK over the 21st century. Projected changes by the 2080s based on a 50% probability level include increases in summer mean temperatures of 3.9 degrees in southern England and 23% decrease in summer precipitation.

Local Plan Policy ESD1 provides more detail on the anticipated effect of climate change in the District.

A Local Climate Impacts Profile (LCIP) has been undertaken to better understand the impact of extreme weather in Cherwell. The LCIP reviewed extreme weather events over the period 2003 to 2008. If heatwaves were to recur on the scale of 2003 it would have a significant impact on health, biodiversity and

infrastructure (including damage to buildings by tree and drought related subsidence, roads, drainage systems and business closures).

The Local Plan refers to climate change adaptation and mitigation measures and sets out clear requirements to be met by proposals for development in planning applications. The SPD masterplan sets out the framework for implementing the climate change measures required to deliver the eco-town objectives. A comprehensive approach to climate change adaptation will be required with every planning application.

Research with Oxford Brookes University has modelled the climate Bicester is likely to experience. It shows the biggest risks are overheating and water stress. The worst case scenarios for overheating in homes occur in terraces or detached properties with both east and west facing glazing. These homes get morning and evening sunshine when the sun is lower in the sky whereas south facing glazing can be shaded easily from midday summer sun.

## Development Principle 3 - Climate Change Adaptation

Green space and green infrastructure will contribute to an urban cooling effect and Sustainable Urban Drainage Systems (SUDS) will be designed to respond to future extreme weather events including water neutrality measures as set out in a Water Cycle Study and SUDS as part of a Water Cycle Strategy. Buildings will be designed to be warm in winter and cool in summer employing sustainable construction techniques and passive management systems wherever possible to avoid the use of air conditioning plant and machinery. The principles of sustainable development should contribute to the character of the area by influencing form of development for example, to maximise passive energy gain, support PhotoVoltaics, wind power and grey water.

## Development Requirement 3 - Climate Change Adaptation

Planning applications will be required to incorporate best practice on tackling overheating.

Planning applications will also be required to incorporate best practice on:

- tackling the impacts of climate change on the built and natural environment including:
- Urban cooling through Green Infrastructure (for example, the use of green space and the incorporation of green streets);
- Orientation and passive design principles;
- Include water neutrality measures as set out in a Water Cycle Study;
- Meet Minimum Fabric Energy Efficiency Standards (FEES)
- Achieve Code for Sustainable Homes Level 5 (CSH5).

Planning applications should include designs and layouts that run east-west to avoid worst case overheating. Layouts and designs that run north-south should pay extra attention to risk of overheating.

Planning applications should:

- Provide evidence to show consideration of climate change adaptation.
- Demonstrate how risks will be reduced through win-win situations (BREEAM Communities SE10) - such as:
- Reducing more than one impact of climate change (for example reduce effect of urban heat island whilst also reducing flood risk);
- Reducing the contribution of the development to climate change (e.g. reducing the need for electric cooling and therefore reducing carbon emissions)
- Providing additional sustainability, economic or wellbeing benefits (e.g. rainwater harvesting using drainage techniques that increase biodiversity or improve water quality)
- Design and Access Statements should address the issue of climate change adaptation. Detailed designs will be required to demonstrate they are resilient to the impacts of climate change with reference to the work carried out by Oxford Brookes University (OBU), Hyder and BioRegional.
- Design for Future Climate Change – Adapting Buildings Programme – North West Bicester Eco development (Hyder Consulting Limited).

## Homes

### Development Principle 4 - Homes

As part of the zero carbon performance, new homes will need to meet high standards of fabric energy efficiency, (see section on zero carbon). The proposed development includes up to 6,000 new homes of which at least 30 per cent will be affordable.

Homes will be designed to high environmental and space standards using sustainable methods of construction to maximise energy efficiency, reduce carbon emissions and achieve zero carbon development targets across the site.

Homes are a fundamental element of the walkable neighbourhoods principle and delivery of the masterplan will need to ensure that local facilities, services including schools and jobs are easily accessible on foot and bicycle.

The density of residential development will reflect its location within the site with higher density residential development along public transport corridors and adjacent to local centres.

The development will provide a range of house types and sizes to meet local needs and create a sustainable community.

As well as providing attractive places for people to live, the new homes will also be adaptable and provide flexibility for residents to work from home. This will allow the need to travel to be reduced leading to a reduction in carbon emissions from transport and require local services and facilities to support homeworkers.

Neighbourhood water recycling should be implemented as a means to achieve Code for Sustainable Homes Level 5 water consumption requirements, rather than house by house scale water recycling which may be expensive.

The masterplan identifies the areas of residential development within the site and sets out to create sustainable neighbourhoods.

Housing areas are in accessible locations in terms of local services and jobs.

Detailed layouts should ensure homes are located within 800 metres along the shortest walking route of primary schools.

Homes should be set in a strong landscape framework.

Proposals should develop the work carried out by Oxford Brookes University, Hyder, BioRegional and A2Dominion on designing homes for future climate change.

The concept of community streets (also referred to as “homezones”) has been established by the exemplar. The concept should be carried through into subsequent phases of development. Implementation of the concept should create safe, accessible neighbourhood streets and facilitate the creation of a successful community.

Home designs will encourage more sustainable ways of living for example through:

- Space for recycling facilities and composting facilities;
- Gardens and food production and biodiversity (for example, fruit trees, wildflower meadows and log piles);
- Easily accessible cycle storage areas
- Connectivity of rainwater harvesting systems to residential gardens and adjacent green street features;
- Greywater use,
- Passive heating and cooling;
- Provision for electric vehicle charging points and
- Smart home design that uses technology to manage appliances and energy use.

#### **Development Requirement 4 - Homes**

Proposals will include details of 30% affordable housing of a type and tenure to meet local housing needs. Assistance in identifying needs will be provided by the Council’s Strategic Housing Officer.

Proposals for new residential development will be expected to incorporate sustainable design and construction technology to achieve zero carbon development through a combination of fabric energy efficiency, carbon compliance and local renewable energy generation.

Design principles will be set out and include

the use of local materials, flexibility in house design and size including the potential for additions to the building to adapt to changing circumstances.

Design and Access Statements should respond to the eco-town principles and set out how homes will contribute to meet design criteria for the development.

In summary, all homes should:

- Achieve Building for Life 12 ([www.designcouncil.org.uk](http://www.designcouncil.org.uk))
- Use energy efficient materials as part of the building fabric and innovative approaches to sustainable construction
- Optimise the site’s potential for solar energy gain and passive house techniques for ventilation and cooling
- Address the issue of overheating and respond to the orientation of the site
- Meet a minimum of Level 5 of the Code for Sustainable homes
- Meet lifetime homes minimum space standards ([www.lifetimehomes.org.uk](http://www.lifetimehomes.org.uk))
- Provide flexible space to facilitate homeworking and be “smart” - incorporating real time energy monitoring systems, technology that provides up to date real time community information including travel, superfast broadband (speeds in excess of 100 MBps) to facilitate use of homes as offices and small businesses
- Provide gardens for food production and biodiversity

Daylighting parameters for all residential properties should achieve Average Daylight Factor (ADF) 1.5%. Kitchens must achieve a minimum Average Daylight Factor of at least 2%. All living rooms, dining rooms and studies including any home office must achieve a minimum Average Daylight Factor of at least 1.5%”



## Development Principle 4(a) - Homes – Homeworking

Homeworking will play an important role in creating employment opportunities on the site. It will be encouraged and facilitated by the design of the new homes and superfast broadband provision.

The ability of homes to provide flexible space for residents to work from home is a requirement of the phase 1 exemplar development. This will reduce the need to travel allowing residents who work elsewhere to spend time doing their job at home. It will also provide the opportunity to facilitate the provision of small businesses, sole traders and local businesses to use their homes for work and employment. Within homes there should be space provided to allow use as an office or small scale ancillary business use.

The masterplan economic strategy is expected to deliver homeworking targets for the site. The economic strategy will require further detailed work in terms of developing the proposals for homeworking to ensure the creation of the jobs indicated on the site.

## Development Requirement 4(a) - Homes – Homeworking

Detailed planning applications and Design and Access Statement should set out how the design of new homes will provide for homeworking. They should also refer to the economic strategy for employment opportunities provided by homeworking and the contribution to reducing unsustainable commuter trips set out in accompanying Transport Assessments and Travel Plans.

## Employment

The vision for employment is to deliver a mixed use development and ensure that unsustainable commuter trips are kept to a minimum.

An economic strategy based on baseline information and evidence to identify target sectors for economic growth and linkages with other economies in the area should be produced to accompany planning applications.

Other employment opportunities and facilities should be provided with links to the wider economy. These include service jobs, growth of the low carbon environmental goods and services sector (including energy, management, retail, community development role) and greener business such as the commercial uses in the local centres that choose sustainability practices. The end result should be to provide at least as many jobs as new dwellings on the site (within walking or cycling distance) or accessible by public transport within Bicester.

It is recognised that the proposed development will create demand for local services and facilities in the local area which will provide opportunities for some of the future residents of North West Bicester. However, the challenge will be to provide the estimated 4,600 jobs identified in the masterplan economic strategy.

Larger scale commercial development within the employment land shown on the masterplan provides business space for offices, workshops factories and warehousing (B1, B2 and B8 uses).

It is estimated in the North West Bicester masterplan economic strategy that over 2,000 jobs could be provided in the business park with the Local Plan policy anticipating the business park generating between 700 and 1,000 jobs early in the plan period. The development is expected to come forward in the early phases and its location reflects the accessibility of the site to the strategic highway network.

## Development Principle 5 – Employment

The masterplan identifies land for employment uses to facilitate the creation of on-site jobs. In addition, the masterplan economic strategy sets out the scale, type and location of jobs related to North West Bicester and an action plan.

Employment opportunities should be provided on-site and meet the skills of local residents.

Employment uses include a proposed business park on land at Middleton Stoney Road and Howes Lane. Larger scale commercial development in this area was identified in the masterplan economic strategy to provide employment space for target sectors including the high value logistics, manufacturing (including performance engineering) and low carbon companies. The buildings will be in a high quality landscape setting with high quality offices providing research and development facilities. Other business and financial services will be located in the town centre.

An estimated 1,000 jobs will be provided in the local centres comprising offices, retail/leisure, health facilities, community halls and community facilities possibly nurseries, care and extra care homes and a hotel. The local centres should also support the growth of the low carbon environmental goods and services sector and encourage sustainable lifestyles through commercial uses such as bike shops and organic cafes.

The existing Avonbury Business Park could be extended to create commercial use and frontage along the realigned Howes Lane.

Land between the realigned Bucknell Road and Lords Lane adjacent to the local centre is identified for commercial uses.

The existing farmsteads are identified in the masterplan for mixed use development including some commercial uses. Proposals for mixed use development at the existing farmsteads should retain and respect the listed barns at Himley Farm and the listed farmhouse at Home Farm. Landscape proposals including open spaces should be used to retain the setting of the listed buildings on the site.

The spatial framework identifies mixed use employment to the north east of Lords Farm and at Hawkwell Farm. The economic strategy does not include an indicative number of jobs created in this area.

Other employment opportunities will be created through the provision of facilities for homeworking in the design of new homes. Homeworking will play an important role in

creating employment opportunities on the site and will be encouraged, facilitated by the design of the new homes (Please refer to Development Principle 4(a)).

## **Development Requirement 5 - Employment**

Employment proposals will be required to address:

- Accessibility to homes and sustainable transport;
- Mixed use development;
- Relationship to neighbouring uses and
- The vitality of local centres

Planning applications should be:

- supported by an economic strategy
- Strategy;
- demonstrate access to at least one new opportunity per new home on-site and within Bicester;
- present an up to date summary of economic baseline information;
- set out the local economic context and economic links (with a specific focus on jobs and employment land);
- pursue target sectors of the high value logistics, manufacturing (including performance engineering) and low carbon companies
- refer to the Cherwell Local Plan evidence base;
- include an action plan to deliver jobs and homeworking, skills and training objectives;
- support local apprenticeship and training initiatives.

## Transport, Movement and Access

The Eco Bicester One Shared Vision encourages “walking and cycling as the first choice of travel within the town to improve health, reduce carbon emissions, and improve the quality of the environment”. The Sustainable Transport Strategy for Bicester sets out the transport ambition and vision for sustainable transport in the town. It will inform the preparation of transport policies and proposals for the existing town and new development proposals.

The Government has set out its ambition for cycling, for example in announcements made by the Prime Minister and the Cycling Delivery Plan published for consultation in November 2014. The development at Bicester should reflect this ambition. Targets have been set for trips originating from North West Bicester together with aims to tackle the carbon impact of transport from day one through the provision of transport choice messages, infrastructure and services. A key transport objective is to make it easy to get around on foot and/or cycle.

Strategic accesses and primary streets are shown on the Masterplan.

## Development Principle 6 – Transport, Movement and Access

Travel and mobility are part of our everyday lives, and proposals should support people’s desire for mobility whilst achieving the goal of low carbon living. Cycling and walking will be encouraged and supported to be the first choice of transport in new development and the wider town of Bicester. Improved linkages to the town’s stations must be provided and further linkages to Bicester town station should be investigated to provide improved connectivity to a wider range of destinations.

The principles in this SPD set out to demonstrate and achieve the benefits that flow from good design and assign a higher priority to pedestrians and cyclists, setting out an approach to residential streets that recognises their role in creating places that work for all members of the community.

Development should have a robust urban structure, with a network of well-designed, connected spaces and routes that prioritise the

movement of pedestrians, cyclists and public transport. It is critical that these spaces form well connected places which draw the existing and new communities together. Streets will form a major element of the public realm which will “stitch” the site together.

Principles of “walkable neighbourhoods” and “filtered permeability” have been applied in the masterplanning to determine the mix of uses and connections to predominantly daily facilities within the new community. These principles should continue to be used in the preparation of planning applications. The spatial framework plan in Appendix V shows the key connections within the site and surrounding area.

Development proposals must show an understanding of existing routes and provide a considered response that enhances existing access and connections and seeks to improve / remove barriers to movement on and off-site.

It is essential that the accessibility of the overall development internally and externally is designed to a high standard with attractive, direct and overlooked routes. Such routes will be expected to be designed to an adoptable standard.

It is crucial proposed developments integrate fully with existing developments and communities in Bicester by making new connections, while improving existing ones.

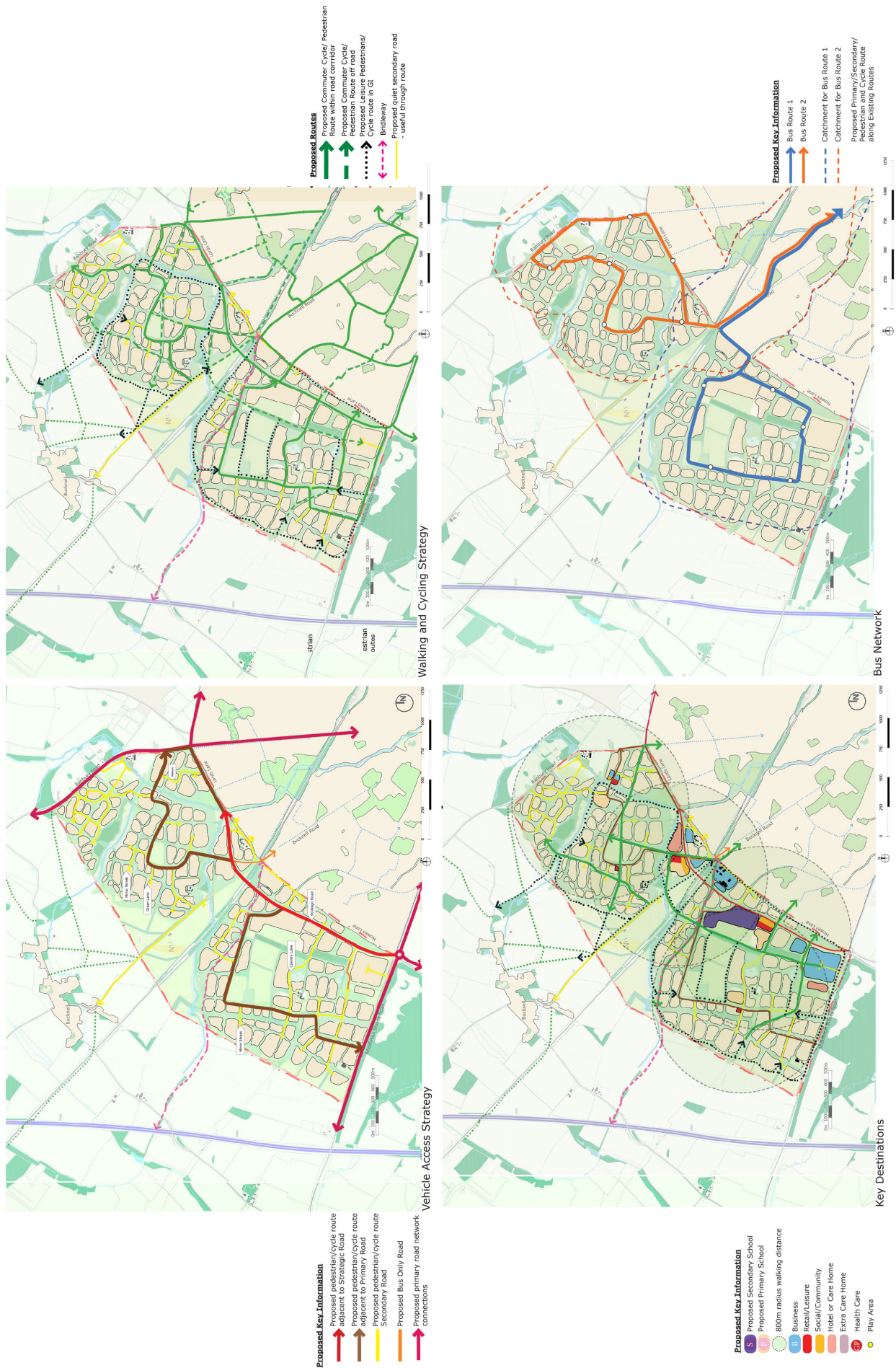
Rights of Way should be recognised as important links to the countryside, enhanced and reinforced through the implementation of the masterplan supported by individual planning applications.

The North West Bicester masterplan sets out a framework for movement and access within the site (Figure 11). It includes a street hierarchy and indicative layout of primary streets. This requires further work to ensure the street design and layout is legible.

The primary road layout within the site provides access to the strategic road network. The detailed layout should be designed to keep vehicle speeds low and discourage unnecessary journeys by private motor car.

The SPD masterplan seeks to employ principles

Figure 11: North West Bicester Masterplan – Access and Movement Framework



of filtered permeability and walkable neighbourhoods. These principles should be developed further in detailed planning proposals.

The Masterplan provides the opportunity to address the aspect of existing properties along Howes Lane and the potential for the new development to enhance the existing properties through good urban design and integration with the proposed development. The masterplan is based on the following movement hierarchy:

- A strong green space structure providing a network of footpaths and cycleways;
- Provision of a strategic route through the site, to realign Howe's Lane, cross the railway line and allow integration and connectivity between the new and existing community;
- Primary access roads into the site link employment, schools and community facilities;
- Controlled access roads through residential areas provide a route for public transport and maximise the public transport catchment;
- Minor roads and home zones/community streets to serve residential areas.

## **Development Requirement 6 - Transport, Movement and Access**

Key considerations for movement to be addressed in planning applications are as follows:

- Reducing car dependency;
- Prioritising walking and cycling;
- Generating activity and connectivity;
- Highway and transport improvements including Howes Lane and Bucknell Road
- Bus priority and links and infrastructure including RTI

At the outline planning applications stage it will be necessary to set out the indicative layout of lower hierarchy streets as part of a future design code. The secondary road network will provide other routes through the site. Below this level, further work in preparing planning applications is required to show how the routes will connect

and illustrate the permeability of the site.

There is scope for planning applications to reconsider key elements and provide further detail to explain how the movement principles will be realised in spatial and public realm terms.

Planning applications and proposals should:

- Demonstrate how Manual for Streets 1 and 2 have been incorporated into the design of roads and streets
- Demonstrate how Sustrans design manual guidance has been incorporated
- Address and ensure connectivity along the major routes.
- Include a Movement Strategy and designs to promote sustainable transport ensuring that all residential areas enjoy easy access to open space and are connected by a range of modes of transport to schools, community facilities and leisure/employment opportunities.
- Demonstrate that homes are within 5 minutes' walk (approximately 400 metres) of frequent public transport and 10 minutes' (approximately 800 metres) of neighbourhood services;

## **Sustainable Transport - Modal Share and Containment**

Baseline information on mode share of trips is available from the Bicester Household Travel Diary Data (2010). The results of the Travel Behaviour Survey carried out by OCC in late 2010 showed 69 % of total trips in Bicester were made by car and 31 % by non-car modes.

Mode share varies by distance with many of the shortest journeys in Bicester already made by non-car modes (78 %) whereas longer journey (more than three kilometres) are mostly by car (86 % including car passengers)

Containment refers to the number of trips generated by a development and the travel patterns within that development. A high rate of containment indicates a land use and transport conditions that enable residents to travel without the need for complex external journeys.

The SPD masterplan includes land use mixes that maximise the containment of trips within the North West Bicester development and limit the need for vehicular travel.

### **Development Principle 6(a) – Sustainable Transport - Modal Share and Containment.**

.Attractive routes and connections through the development should make the cycling and walking objective achievable. In order to achieve the amount of trips by walking and cycling, proposals in planning applications should be developed with strong connections to on and off-site destinations.

Walking routes should be designed to integrate with the existing public rights of way network. Opportunities for walking and cycling should be developed and enhanced through a network of sustainable, attractive and direct routes linking green spaces.

Primary routes for vehicles should allow access to the development but not dominate the layout or design of the scheme. This should be a place where people provide the vitality and vibrancy and walking and cycling become the first choice of travel.

The transport system should be planned to

ensure that all homes and key services have access to non-car modes of transport.

Car sharing and car clubs should be an important element in supporting reduced car ownership and use.

Streets and spaces should not be dominated by parking and innovative layouts and management should be used where appropriate.

Parking requirements will need to be sensitively addressed.

Masterplanning has sought to achieve an increased level of containment of trips within the development and in Bicester. Residential areas in the draft masterplan have been located so that they are within walking distance of schools and local facilities and accessible to the bus route through the site. Detailed proposals and further masterplanning should be designed in a way that supports children walking and cycling safely and easily to schools from homes.

Walking distances to schools should be measured by the shortest route along which a child may walk reasonably safely. For children under 11 there should be a maximum walking distance of 800 metres from homes to the nearest school.

The target level of containment is for at least 35% of trips to be within North West Bicester and 60% to be within Bicester as a whole, that is, 40% or less travelling outside of Bicester. This compares to an estimated 25% at present within neighbourhoods and 56% within Bicester as a whole. It aims at some increase in containment, recognising the complexities and limited influence over people's choices about where they live, work, shop and send their children to school.

The Masterplan incorporates the following sustainable transport principles:

- Comprehensive direct networks for walking, cycling and public transport;
- Limited or less convenient private vehicle access for homes and services;
- Good accessibility by sustainable modes to key services such as schools and local centres;
- Provision of bus infrastructure

- A compact layout – with medium densities, a mix of uses and a range of facilities within 10 minutes walking distance (around 800 metres);
- Community Streets (Home zones) – residential areas where streets design encourages drivers to travel at very low speeds;
- Shared space streets and squares – these are intended to reduce the dominance of motor vehicles and to improve the conditions for walkers, cyclists and pedestrians;

The Masterplan will facilitate the overall modal share by non-car modes. This varies by the length of trip. The aim is to achieve an overall modal share of not more than 50 per cent by car. The targets suggest an overall increase in walking trips from 22 per cent at present to 30 per cent for North West Bicester; increasing cycling trips from 4% to 10% and bus trips from 5% to 10%. Walking, cycling and bus trips also include journeys to the railway stations as part of longer journeys by public transport.

### **Development Requirement 6(a) – Sustainable Transport - Modal Share and Containment.**

Planning applications should include Travel Plans which demonstrate how the design will enable at least 50% of trips originating in the development to be made by non-car means with the potential to increase to 60% by 2020.

Planning applications should set out how they will deliver:

- High containment of trips within the town;
- Enhanced bus services from North West Bicester into and around Bicester;
- Additional bus priority measures;
- Street plans to discourage car movement;
- Travel awareness plans (personalised travel plans etc.);
- Real time travel information including access to train and train services;
- High quality walking and cycling links to and from the town and waymarking;
- Cycle storage within new homes;
- Be supported by a Walking and Cycling

Strategy and

- Transport Assessments addressing the guidance in this SPD.

Planning applications should also:

- Demonstrate options for ensuring key connections around the town do not become congested as a result of the development, for example, by extending some aspects of the travel plan beyond the immediate boundaries of the North West Bicester site
- Significantly more ambitious targets for modal share than the 50 per cent and for the use of sustainable transport.
- Demonstrate how the principles of filtered permeability have been employed in designing the layout of schemes.

### **Development Principle 6(b) – Electric and low emission vehicles**

To reduce carbon emissions from transport as part of a sustainable transport system, electric and low emission vehicles will be encouraged. Proposals should include ultra-low carbon vehicle options including electric vehicles, car share schemes and low emission public transport. The implications on energy demand should be considered. Proposals should not add so many additional private vehicles to the local road network that they cause congestion.

### **Development Requirement 6(b) – Electric and low emission vehicles**

Proposals should make provision for electric and low emission vehicles through infrastructure provision and support in Travel Plans.

### **Howes Lane realignment**

The vision is to maintain the strategic route to accommodate the predicted volumes of traffic while providing an environment that is safe and attractive to pedestrians, cyclists and any person that is using the services and facilities proposed. The requirement to upgrade the existing Howes Lane and Lords Lane corridor has long been a priority scheme in the local authorities' infrastructure delivery plans and programmes. It includes a scheme to improve the Bucknell Road Howes Lane and Lords Lane junction.

Similarly the crossing of the railway line was seen as a potential constraint in masterplanning the site; particularly its impact on connectivity between the land uses on either side of the railway embankment.

A number of options have been considered for the strategic road network in this area and are set out in the various planning documents and evidence in the form of transport studies/ modelling to support the Local Plan.

Howes Lane is characterised by dense planting, fencing and rear elevations. This results in limited opportunities to link with the eco-town site with the exception of a single greenway. Lords Lane presents a more positive aspect to the proposed development in terms of the orientation of new development (housing facing outwards towards the road from Bure Park). The Bure Stream and local nature reserve forms an important green link into the town from the site.

### **Bucknell Road**

To reduce the attractiveness of the existing Bucknell Road route for through traffic, other road users, including vehicular traffic travelling along Bucknell Road to and from the town centre, will be diverted to along the route of the existing Lords Lane. The proposed realigned route will enter the masterplan site approximately 100 metres east of the existing Lords Farm. It will then cross the extended boulevard.

Access to Bucknell from the south and town centre will use the primary street through the northern part of the site before rejoining Bucknell Road on its current alignment. Bucknell Road will be truncated from the north just before crossing the stream continuing as a walking and cycle route towards the southern boundary of the site and the Bucknell Road beyond to the town centre.

The masterplanning of the site provides an opportunity to improve Bucknell Road and address issues of road safety and local access to Bucknell village by realigning the section of highway immediately to the north of the junction with Lords Lane. The road currently has the character of a rural lane with tall hedges on either side and vehicles travelling fast (the national speed limit is 60 mph).

### **Development Principle 6 (c) – Proposed highways infrastructure - Strategic link road and proposed highway realignments**

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The proposals for improvement of Howes Lane should integrate the existing and new development. To provide this, the existing road is moved further from the existing properties to a new alignment. Development should provide an appropriate interface with Howes Lane by sensitively responding to the scale, massing and height of existing development.

The SPD masterplan shows the A4095 diverted through the site to provide a strategic route for the town and create an urban boulevard for the new development. This road will have the character of a bustling street and be a place of pedestrian activity and the focal point the new community. The speed of vehicles will be reduced to allow movement between the existing and new development. The creation of tree lined boulevard will be an attractive feature of the development.

The Howes Lane/ Bucknell Road/ Lords Lane junction arrangement will be replaced by an underpass under the railway line to ease the movement of traffic along the east-west route. Commercial uses will be concentrated in this area providing activity as the main street through the development. The Boulevard will be the primary access into the development connecting the initial phases of housing, community facilities and business park. The carriageway width should be restricted to ensure it does not present a barrier to crossing and movement. The character of the Boulevard should be developed further based on the character areas set out in this document.

The proposed strategic link will be designed as a tree lined street or boulevard. It provides the opportunity to enter the site by a series of “gateways” providing a sense of arrival into the eco-town development at the edges of the masterplan boundary.

This area should accommodate not only the highway but also trees, green space, segregated footways and cycleways with building fronting the new road. It should result in a vibrant area at all times of day for the community as well as people passing through.



The secondary school could provide activity and a focal point for the development in the southern area of the site. It could be flanked by mixed uses development comprising commercial uses, residential and new green infrastructure.

Vehicles should move through this area along the attractive street, perhaps stopping to use the local facilities or to allow school children or shoppers to cross. Crossing points should allow permeability for pedestrians and cyclists to conveniently access facilities on and off site.

The new route will be a highly accessible street in the new development with excellent links to the rest of the development and town. It will provide commercial opportunities, creating a viable and sustainable mix of uses serving local needs. In this location, and along the public transport corridors, higher density development will be encouraged.

Changes to the character and function of Bucknell Road are also required to allow connectivity between the proposed uses in the southern part of the masterplan areas. It will also have the benefit of discouraging through traffic from using the Bucknell Road to gain access to the M40 at Junction 10 and access other roads north of Bicester. It aims to discourage vehicular movement (“rat-running”) through the villages.

Bucknell Road should provide a strong connection through the site and not be a barrier to movement. The existing highway arrangements along the Bucknell Road should be improved to allow a rapid bus-only link direct into the eco town site via Bucknell Road with associated walking and cycling infrastructure along it.

### **Development Requirement 6(c) – Proposed highways infrastructure - Strategic link road and proposed highway realignments**

Planning applications should demonstrate options for ensuring that key connections around the eco-town do not become congested as a result of the development.

- Highway requirements should not lead to a route which will in itself form a new barrier - albeit relocated within the site boundaries.
- Good permeability, frontage and crossing points combined by a reduced speed limit should deliver the vision for an urban boulevard.
- In terms of the design of this new section of road, the local highway authority recognises the continued strategic importance, nature and level and types of traffic carried on a daily basis by Howes Lane as part of the Bicester perimeter road network. OCC has provided an indicative Howes Lane carriageway dimension requirement of 7.3 metres. It has also indicated a requirement for off road footways and cycleways, verges (with trees) and two swales and a speed limit of 30 mph.
- Joint cycleway/footways should be at least four metres wide and segregated routes to provide attractive routes for pedestrian and cyclists.
- Applicants will need to work with OCC and CDC to find an acceptable design solution appropriate to the uses along the route. The existing Howes Lane will be the subject of a Stopping Up Order to allow potential alternative uses ranging from open space to foot/cycle ways.

## Public transport

The vision is to create a rapid and regular bus service from the site to key destinations in and around the town in order to be attractive to residents. The public transport service needs to be fast reliable, affordable and direct.

The Masterplan proposes a bus network through the site designed to transport passengers directly and efficiently to their destination and give the bus priority over other road vehicles. Bucknell Road is the preferred route for a bus link to the town centre and this will require some infrastructure to support the increased use by buses from the North West Bicester site. The bus route will use the primary street network for the most part.

The Masterplan includes three bus-only links (central, western and eastern). The delivery of bus-only links requires further investigation, for example, from the Bucknell Road to the north side of the development and from the new link to the west side of the development needs further consideration to ensure it can be delivered to achieve the goal of providing an efficient bus service.

## Development Principle 6(d) –Public transport

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North West Bicester should be an exemplar in the design and operation of its transport systems. The challenge this presents is significant and means that “business as usual” is not an option. Street and place design should give pedestrians and cyclists priority with limited and managed car access.

An indicative bus route has been submitted with the Draft masterplan. It includes bus only routes and bus priority measures. The final public transport solution must be attractive to all future residents and provide a viable and efficient alternative to car travel.

## Development Requirement 6(d) –Public transport

The location of the internal bus stops should be within 400 metres (walking distance) of homes and located in the site’s local centres where possible. Bus stops should be designed to provide Real Time Information infrastructure, shelters and cycle parking.

## Healthy Lifestyles

The built and natural environments are an important component in improving the health and well-being of people. Well designed development and good urban planning can also contribute to promoting healthier and more active living and reduce health inequalities. It is vital that the eco-towns work well as places. This means in social and economic terms as well as environmental. Healthy lifestyles are a key component of the development principles and proposals will need to address this issue.

## Development Principle 7 - Healthy lifestyles

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Development proposals should be designed and planned to support healthy and sustainable environments and enable residents to make healthy choices easily.

Development proposals should focus on social factors such as benefits of personal health and well-being as part of environmental and economic sustainability. Healthy lifestyles are a key component of the development principles and proposals will need to address this issue. Often these factors are interwoven.

For example, sustainable transport options such as cycling and walking reduce environmental impact but also bring benefits for personal health and well-being; walkable communities encourage social connection; car clubs are a new service industry that create sustainable jobs and reduce transport impacts.

Healthy lifestyles will also have the benefit of reducing demand on local health facilities and increased economic productivity with less absence from work due to health issues. Locally grown food can reduce carbon emissions from transport and storage and involves some physical activity in its production.

Residents should be encouraged and supported in growing their own fruit and vegetables and the green spaces used to provide sources of food including fruit trees. Replacing car journeys with walking and cycling trips can have many benefits in terms of health from reducing air pollution, encouraging exercise through active travel and increased interaction with friends and neighbours.

## Development Requirements 7 - Healthy lifestyles

The health and well-being benefits from the development principles set out in this SPD should be considered in the design of proposals.

Proposals should provide facilities which contribute to the well-being, enjoyment and health of people.

Planning applications should set out how the design of development will deliver healthy neighbourhoods and promote healthy lifestyles through active travel (walking and cycling) and sustainability.

The green spaces within the development should also provide the opportunity for healthy lifestyles including attractive areas for sport and recreation as well as local food production.

### Allotments

Allotments and play areas have similar functions for health and community cohesion. Some further benefits of healthy lifestyles are set out below:

- Exercise – just 30 minutes of gardening can burn around 150 calories;
- Home grown produce – If managed properly an allotment can produce enough food to supplement a family's weekly shop, with fresh fruit and vegetables over the year. This could be quite a substantial cost saving;
- Healthy lifestyles – spending as little as 15 minutes a day in the summer sunshine can build up vitamin D levels – this can help the body ward off some illnesses and raise serotonin levels, making plot holders happier and healthier;
- Reducing Obesity levels – reducing cholesterol – through healthier foods, cooking workshops, eating together and discussing food choices;
- Reducing stress levels;
- Access to fresh air;
- Mental illness – promoting interaction with the environment helps to build confidence and skill levels. The integration of allotments with communities means they have a great potential for occupational therapy and as mechanisms of social inclusion;
- Spending time with like-minded people – allotments are places to socialise and for the camaraderie. Allotments are now used by people of all ages, genders and ethnic backgrounds – this aids community cohesion and helps to limit isolation;

The Masterplan and in particular design of the neighbourhoods will be key to the delivery of the healthy lifestyles principle

Allotments are seen as an opportunity to learn from experienced gardeners as well as share knowledge with newcomers. Allotments can be seen as a social leveller – individuals are valued independently of their social –economic status – it is valued upon gardening skills and knowledge.

Being a plot holder provides a sense of being part of a community.

The National Allotment Society provides further information on allotments (<http://www.nsalg.org.uk/allotment-info/benefits-of-allotment-gardening/> )

## Local Services

Community facilities and local services are important in providing attractive places where people will want to meet and spend time providing a destination for local residents to visit with a strong community focus. Small scale retail serving the daily needs of local residents will be supported as part of the mix use local centres which should also include employment opportunities and commercial use of first floors. The Council will seek to ensure facilities are provided to meet the needs of local residents.

## Development Principle 8 - Local services

Planning applications should include a good level of provision of services within the North West Bicester eco-town site that is proportionate to the size of the development. This should include leisure, health and social care, education, retail, arts and culture

Local centres are proposed as part of the mixed use development including small retail units, offices, community facilities including a nursery, primary school, and public house. The energy centres and other infrastructure and facilities on the site will generate and support jobs within the site. It is important employment areas are easily accessible and well connected to other uses. The location of complementary uses such as cafes, bars and hotels should be convenient to employment facilities on the site to create a vibrant local economy as set out in the economic strategies.

The success of the commercial uses will be influenced by the mix of uses and quality of the built and natural environment in the masterplan and spatial framework plan. By locating commercial uses in close proximity to community and educational facilities it is envisaged the masterplan will promote viability and support local services. Community facilities and social infrastructure including schools will be provided in locations accessible to the new communities and sports and recreational facilities located in close proximity.

The distribution of community halls will be spread across the site and perform a different function to help build the new community.

Schools shall provide high quality educational facilities with a strong community and sustainability emphasis to embrace the whole community, with facilities for the benefit of whole community. It is important that the mix of uses does not undermine the role of the town centre.

## Development Requirement 8 - Local services

Planning applications should include a good level of provision of services within the North West Bicester eco-town site that is proportionate to the size of the development. This should include leisure, health and social care, education, retail, arts and culture while recognising that the existing town centre will continue to perform an important role as the service centre for the town and surrounding area including major large scale retail and community services such as the new library.

Local services should be located in accessible locations within walking distances (defined in this SPD) to homes and employment.

Following on from the “walkable neighbourhoods” principle the schools should be easily accessible on foot and other non-car sustainable modes. They should be set in an attractive landscape and where parents need to access the school by car should be carefully considered in order to avoid congestion and conflict with pedestrians and cyclists.

To encourage sustainable travel initiatives, schools should be accessible from at least two sides of the site see “typical example” from the educational requirement document. The local education authority’s preference is for three vehicular entrances located strategically around the perimeter. Noise generation around schools should be minimal. School dropping off/picking up points should be agreed with OCC and CDC. Oxfordshire County Council’s detailed design principles for primary and secondary school sites are contained in Appendix III.

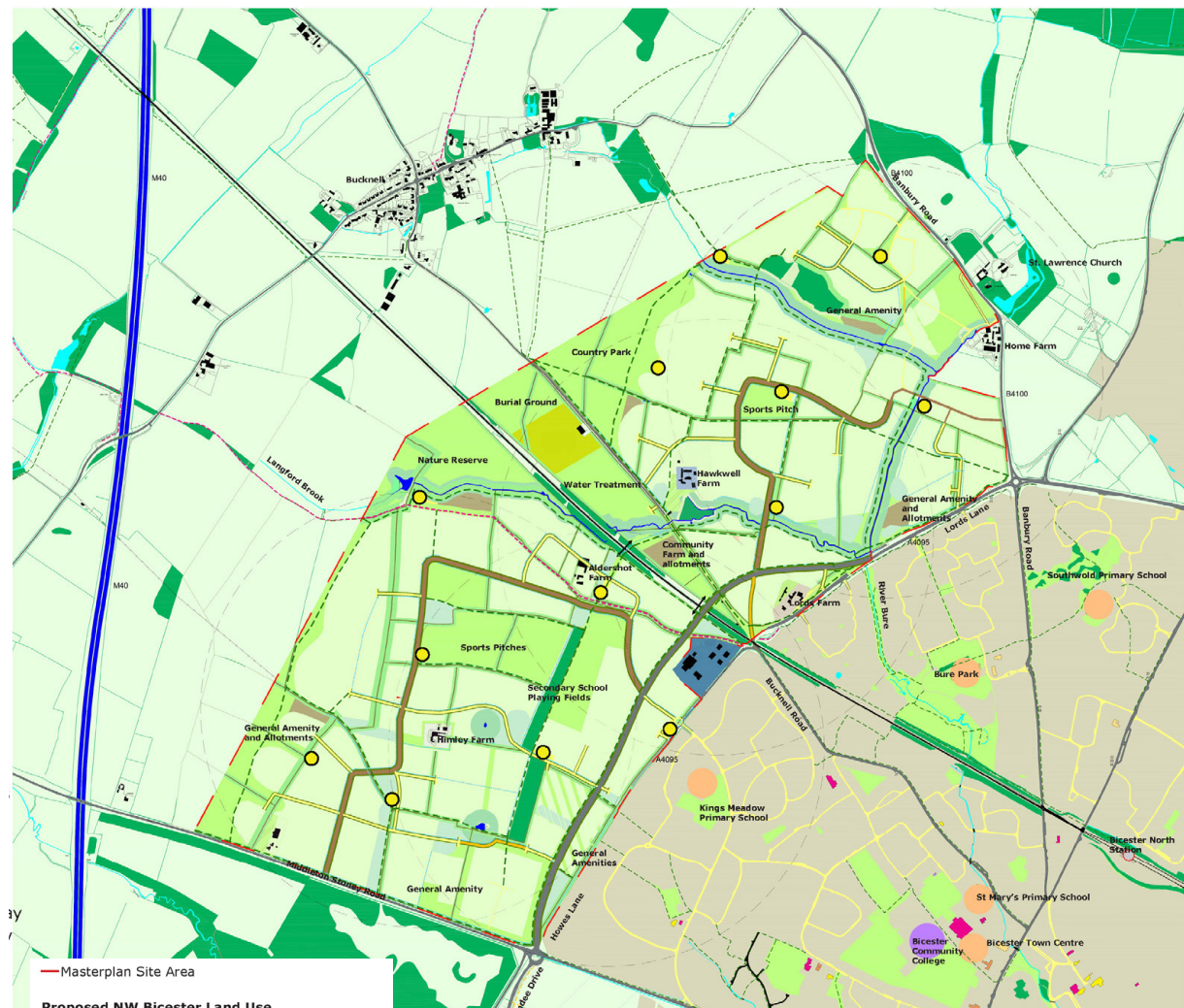
## Green Infrastructure

Green space and green infrastructure will be a distinguishing feature of the site making it an attractive place to live. It provides the landscape setting to the development and a range of opportunities for formal sports, play and informal recreation and the creation of a distinctive development. The eco-town presents an opportunity to create a distinctive and imaginative landscape and green infrastructure (SUDS, pedestrian routes, recreation space, habitat and bio fuel) focussed around existing watercourses and the stream corridors. These features are important and will influence the design of the development.

The majority of green space in the Masterplan is focussed on natural corridors and integrated with the existing hedgerows. The green space to the south of the railway line provides general amenity, sports and a nature reserve. To the north of the railway line the green space provides general amenity, a country park, water treatment facility, burial ground and community farm.

Other areas of green space provide the landscape framework for the master plan and opportunities to deliver green infrastructure. The Masterplan proposes a green infrastructure framework retaining existing landscape features such as trees, hedgerows and woodland as shown below in Figure 12.

**Figure 12:** North West Bicester – Green Infrastructure Framework



## **Development Principle 9 - Green infrastructure and landscape**

Proposals at North West Bicester should create new urban places connected by green space and green corridors utilising the existing landscape framework. A network of interconnected green cycle and walking routes should be created with a combination of direct links between green areas and key destinations allowing residents and local people to explore the wider landscape. The design and layout should provide short direct sustainable connections to the town centre, countryside and key destinations. The proposed developments should support cultural activity through the provision of high quality public open space.

The impact of development on the site should be minimised to avoid disturbance of existing natural features such as trees and hedges and retaining the links to the landscape and countryside beyond the masterplanning boundaries. Planting of trees should be used to reinforce existing trees and hedges and integrate development with the landscape. The interface with Bignell Park for example needs to be handled with sensitivity as does the relationship to the settlements of Bucknell and Caversfield including important views of buildings such as St Lawrence's church in Caversfield. The setting of listed buildings within the site should be considered carefully when preparing planning applications. Landscape proposals including open spaces should be used to retain the setting of listed buildings on the site.

Open space should be fronted to secure attractiveness. Green infrastructure should enhance and complement the structure of the urban form and the hierarchy between the two elements needs to be understood in order to understand how these areas might be developed in subsequent applications.

The space should be multi-functional, for example, accessible for play and recreation, walking or cycling safely, and support wildlife, urban cooling and flood management. Particular attention should be given to land to allow the production of food from community, allotment and/or commercial gardens.

Proposed landscape schemes and Green Infrastructure design should be used to provide external cooling and reduce heat islands.

The bridleway leading from the eastern end of Howes Lane past Aldershot Farm is an important link between the town and countryside and is identified as a green corridor in the masterplan.

## **Development requirement 9 - Green infrastructure and landscape**

Planning applications should demonstrate a range of types of green space, for example wetland areas and public space.

Development must meet the requirements of BSC11.

Green spaces should be multi-functional, for example accessible for play and recreation, local food production (important due to the high carbon footprint of food), walking or cycling safely and support wildlife, urban cooling and flood management, providing the policy principle is not compromised.

The expectation is for frontages to be designed onto the green spaces with design consideration towards natural surveillance and ensuring landscaping schemes are not compromised. The existing Howes Lane has the potential to be integrated into the green infrastructure and landscape setting of the masterplan.

All planning applications should demonstrate the provision of forty per cent green space and a range of types of green space. Particular attention should be given to land to allow the production of food from community, allotment and/or commercial gardens.

Proposed landscape schemes and Green Infrastructure design should be used to provide external cooling and reduce heat islands.

Green roofs should be used to assist with neighbourhood cooling but will not be included in the requirement for 40% green space.

Development should have a clear system of safe, accessible and attractive open and green spaces that respond to and enhance natural features across the site, and integrate with the existing settlement.

Play areas should be located where they are

accessible to children and overlooked.

There should be areas where biodiversity is the principal outcome, such as the nature reserve, parts of the country park, and wildlife corridors and buffers. In addition, opportunities to maximise biodiversity in other green spaces should be taken.

All development should be consistent with the Green Infrastructure and Landscape Strategy May 2014.

### **Development Principle 9 (a) - Tree planting**

To reflect the Biodiversity Strategy, native trees and shrubs should be planted on the site particularly within woodland, the country park, the nature reserve, and ecological buffers and corridors but also as a proportion of other plantings

Sufficient space should be allocated for tree planting in the planning applications to integrate with the streetscene and adjacent street furniture/ highways infrastructure/ buildings. Emphasis should be placed upon the planting of larger tree species (oak, plane, lime, hornbeam etc.) within the streetscene to ensure greater benefits are returned to the environment and community. Big trees provide big benefits, small trees provide small benefits.

Good communications and better understanding of all above/below ground requirements within the street scene at the earliest stage by the design team should ensure the appropriate integration of all street scene features including trees, SUD's, swales, rainwater harvesting, service routes (above & below) and CCTV.

Ensuring planting is in the correct locations and allows for the integration of the trees into water sensitive urban design avoids conflicts with adjacent features and services as the trees mature. It also allows for the trees to function efficiently and to their maximum capability within the street scene whilst contributing to installed environmental, ecological and engineered features.

### **Development Requirements 9 (a) - Tree planting**

Planning applications should allocate appropriate space for the root and crown development of trees.

Where planning applications include proposals for tree planting in or adjacent to hard surface areas the provision of engineered planting pits should be installed with either structured cells, raft system or structured soil. Engineered planting pits in hard surface areas are to be integrated within rainwater harvesting systems in order to assist with stormwater management, reduce maintenance costs and improve water efficiency.

Tree pits must be of the size and specification to support and allow for the individual tree to reach and maintain its mature, natural form and characteristics without the associated and predictable conflicts with urban features and residents.

The design and installation of all hard surface tree pits should be in accordance with BS8545:2014 'Trees from nursery to independence in the Landscape', 'Trees in Hard Landscapes - A guide for Delivery' - Tree Design & Action Group.

Planting pits within hard surface areas must be fit for purpose and capable of providing an aerated, uncompacted medium capable of containing an appropriate volume of soil which can support the tree through maturity. The planting pits must have appropriate engineering solutions installed to ensure that the maturing roots do not present any foreseeable level of risk to property and adjacent hard surfaces. Each hard-surface planting pit specification to be designed to suit the individual tree and its situation.

Tree planting should be considered in masterplanning the site with discussions with the relevant officers from the earliest stage in the design phase.

To improve the integration and practical installation of trees within hard surface areas, developers should adopt a standard practice whereby all engineering drawings include and identify the location and dimensions of all planting pits within the street scene.

## **Development Principle 9 (b) – Development edges**

Development edges made up of soft landscape proposals and sensitively designed built form have the potential to conserve and enhance the current setting of historic features.

Development edges should respond well to the existing tree and woodland cover. Development should be accommodated without resulting in disruption to the local landscape pattern.

The strong landscape structure and general sense of enclosure across the landscape are such that with careful consideration for retention and enhancement of local features they could provide the framework for green infrastructure.

## **Development Requirement 9 (b) – Development edges**

Development on the edge of the site is likely to be more informal and rural in character and this will be reflected in the nature of the green spaces to be provided whereas the formal open space and sports pitches will have a different character. The western edge should be defined by woodland areas and support the existing landscape character of the area.

## **Hedgerows and Stream corridors**

The alignment of some hedgerows also provides linkages / connections within the site and between the existing town and surrounding countryside for people and wildlife. A block of broadleaved semi-natural woodland west of Home Farm will be retained within a buffer zone of semi-natural habitat linked to the green space along the water courses. Key strategic hedges are identified on the North West Bicester Masterplan Green Infrastructure and Landscape framework plan in Figure 12.

The Bure and its tributaries are important local watercourses. The stream corridors and field boundaries provide further structure and detail to the masterplan having multi-functional roles in the provision of green space, habitat, biodiversity gain, sustainable drainage, recreation and health, movement and access. They are intrinsic to the site as a whole.

The Masterplan uses the existing field boundaries and hedgerows to give the layout of the proposed development structure. Hedgerows define the site layout recognising their landscape importance and contribution to biodiversity and habitat. They provide natural corridors throughout the site for wildlife but also for residents as part of the comprehensive cycling and walking network. The Landscape Strategy that supports the Masterplan includes the following key landscape elements:

- Green loops as part of a linear park
- Retained and reinforced hedgerows with a 20 metre buffer
- Riparian zones along the stream corridors
- Woodland copses
- Green “fingers” integrating green infrastructure into the development

The hedgerows would be managed in accordance with a LMHP to ensure that they provide habitat suitable for the fauna that were recorded on the site prior to development, in particular, nesting birds (non-farmland specialists), mammals and invertebrates, including the hair streak butterfly and other notable invertebrates. They would also provide wildlife corridors. The resilience of the ecosystems in and around North West Bicester depends on maintaining connectivity for the full range of wildlife and plants.



### **Development Principle 9 (c) – Hedgerows and Stream corridors**

Retaining and reinforcing the existing hedgerows, trees and woodland on the site is a key development principle. The field boundaries and hedgerows divide the site into parcels. The hedges are to be largely retained in the masterplan proposals and provide both a constraint and opportunity for development proposals. They are an important feature in the local landscape and form the basis of the site's green infrastructure.

In order to strengthen and enhance the value of the landscape, natural buffer zones will be created. Within these buffers a network of paths and cycleways will provide links between the various areas of the site providing safe and attractive routes to schools, shops and places of work as well as a link to the town and country beyond the natural site boundaries.

### **Development Requirement 9 (c) – Hedgerows, dark buffers and stream corridors**

Planning applications need to explain green infrastructure in relation to the way that it fits with the housing and commercial developments as these are critical to the success of the scheme. For instance, simple considerations such as whether development fronts onto landscape will make a huge difference in the way the area is perceived and functions.

Hedgerow loss should be minimised and mitigated for and existing hedges retained as part of the landscape framework and breaches of the hedges minimised in designing the layout of development- Retained hedgerows identified on the Draft masterplan and spatial framework will be enriched by semi-natural vegetation in buffer zones, a minimum of 10 metres either side of the hedgerow in accordance with the Green Infrastructure and Landscape Strategy.

The establishment of a minimum 60 metre corridor to the watercourses (30 metres each side of the centre line) shall be provided to create a strong landscape feature in the scheme and secure the opportunity for biodiversity gain from the development. The corridors will also have other purposes and capacity for

other functions. For example, they will provide the interface with development and may, recreational routes and play and as such long term management proposals will be required as part of any planning application.

Connectivity between habitats and ecosystems must be planned and protected. All planning applications should provide plans showing how wildlife corridors of all sorts will be maintained within the site and also connect with neighbouring sites in accordance with the North West Bicester masterplan and biodiversity strategy. A plan showing protected dark corridors across the site must be included.

A 20 metre buffer along either side of designated hedgerows recognised for their ecological value will be provided to create a "dark corridor" for nocturnal species such as bats. The hedgerow buffers should be provided in accordance with the Green Infrastructure and Landscape Strategy. The lighting scheme for the development will avoid disturbance to these dark areas.

## Sports Pitches

The SPD masterplan includes sports pitches and secondary school playing fields in a central position on the land to the south of the railway, and in proximity of each other where it may be possible to create a sports hub. Also a site for outdoor sport has been identified in a central position on the land to the north of the railway shown on the masterplan as a “Sports Pitch”.

### Development Principle 9 (d) - Sports pitches

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40% of the total gross site area will comprise green space and this should include sports pitches.

The Council will encourage partnership working to ensure that sufficient quantity and quality of, and convenient access to open space, sport and recreation provision is secured through ensuring that proposals for new development contribute to open space, outdoor sport and recreation provision commensurate to the need generated by the proposals.

### Development Requirement 9(d) - Sports pitches

The layout, design and type of provision requires further consideration to ensure that it provides a sustainable solution in the longer term. The suitable phasing of sports pitches will be secured through Section 106 Agreements and/or conditions as appropriate.

Any new facilities should be built in accordance with Sport England’s design guidance notes, copies of which can be found at: <http://www.sportengland.org/facilities-planning/tools-guidance/design-and-cost-guidance/>

## Biodiversity

Green space is critical to ensuring a net gain in biodiversity. The aim is to ensure greater Biodiversity across the site once the development is complete. Bat activity and badger corridors have also been incorporated into the masterplan landscape framework.

The Draft Masterplan proposals shall retain the most valuable habitats and ecological features on the site including protecting the majority of hedgerows and watercourses.

Policy ESD10 of the Local Plan requires preservation and enhancement of habitats and species

on site. The Council requires proposals to demonstrate a net gain in local biodiversity and a strategy for conserving and enhancing local biodiversity for planning applications.

### Development Principle 9 (e) – Biodiversity

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This development principle refers to the preservation and enhancement of habitats and species on site, particularly protected species and habitats. It also includes the creation and management of new habitats to achieve an overall net gain in biodiversity. The creation of a local nature reserve and linkages with existing BAP habitats is fundamental to this principle. Other elements of this development principle include:

Sensitive management of open space provision to secure recreation and health benefits alongside biodiversity gains

A landscape and Habitats Management Plan to be provided to manage habitats on site and to ensure this is integral to wider landscape management

### Development Requirement 9 (e) – Biodiversity

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Biodiversity mitigation and enhancement shall be incorporated into development proposals to provide a net biodiversity gain. As such it is not possible to mitigate for the Impact of farmland birds on the site, off site mitigation measures should be provided and all applications within the masterplan area should contribute to the provision of off site mitigation.

Proposals must demonstrate inclusion of biodiversity gains within the built environment for example through planting, bird, bat and insect boxes and the inclusion of green roofs

A biodiversity strategy which is part of an approved biodiversity strategy for the whole masterplan area, shall accompany all planning applications. It should include an accepted numerical metric to show that a net gain in biodiversity will be achieved.

All new development within the North West Bicester site must be in line with the North West Bicester masterplan green infrastructure and landscape strategy, May 2014 which forms part of the masterplan SPD.

A Biodiversity Strategy which builds on a biodiversity strategy for the masterplan shall accompany all planning applications.

A detailed Landscape and Habitats Management Plan including a comprehensive ecological monitoring programme will be required for all reserved matters and full planning applications.

## Water

Water neutrality is the concept where the total water used after a new development is no more than the total water used before the new development. This requires meeting the new demand through improving the efficiency of uses of the existing water resources. Water neutrality needs to be assessed within a defined area, normally the water company's water resource zone. Water neutrality is a demanding level of ambition which is only likely to be achieved through a combination of measures. A key component is to make the new development water efficient, through using the most efficient water products and where appropriate looking at water use options.

As Bicester is in an area of serious water stress, with Thames Water (the statutory water undertaker for the area) predicting supply demand deficits, proposals should aspire to water neutrality as achieving development without increasing overall water use across a wider area. Policy Bicester 1 sets out the infrastructure needs for North West Bicester and requires utilities and infrastructure which allow for zero carbon (see Development Principle 2) and water neutrality on the site.

The Masterplan is supported by a WCS confirming the proposed development shall incorporate a water efficiency design standard to limit average per capita consumption (PCC) to 105 litres per person per day (l/p/d) in all new homes. For residential properties, at least 25 l/p/d of potable water demand must be replaced with non-potable water to allow the target of 80 l/p/d to be achieved. Options for providing a non-potable supply to the dwellings on the North West Bicester development include:

- Rainwater harvesting at a property level;
- Rainwater harvesting at a wider neighbourhood level;
- Greywater recycling (GWR) at a property/ neighbourhood level and
- Local reclamation of treated wastewater.

In terms of on-site sewerage network capacity it is suggested in the WCS that gravity sewers are employed to collect the majority of the waste water to avoid the need for a multitude

of on-site sewage pumping stations. The design standard shall also require that water recycling technologies are used locally to supplement domestic supplies. It sets out options for the proposed development. It explores the proposed new potable demand from the development and the alternative methods to reduce the demand on the existing Thames Water Utilities network. In this way it seeks to move the development towards water neutrality to avoid the above mentioned supply demand deficits.

Reducing potable water demand also allows more water to be retained in the environment, which can have benefits for biodiversity, amenity and both the flow (additional dilution) and physiochemical elements of the Water Framework Directive (WFD). Water efficiency measures in residential and non-residential buildings are explored in the WCS and will need to be developed further in the implementation of the masterplan. They include variable flush toilet devices, reduced flow showers and taps and metering retrofits. Local reclamation of surface water will be required to increase water neutrality further. It is unlikely that local groundwater or surface water abstractions would be suitable substitutes to the utility company network.

### **Development Principle 10 – Water**

The Council requires development proposals to be ambitious in terms of water efficiency across the whole development and demonstrate efficient use and recycling of water to minimise additional water demand from new housing and new non-domestic buildings. In order to meet zero carbon targets for the development proposals will be required to meet the water efficiency target. The Water Cycle Strategy (WCS) sets out details of how this may be achieved as the design standard for all new development. The development should not make it more difficult for the water company to achieve its demand management strategy and ensure a supply demand surplus is maintained.

### **Development Requirement 10 – Water**

Planning applications should be accompanied by a water cycle strategy (WCS) that provides a plan for the necessary water services infrastructure improvements. The WCS should be prepared and developed in partnership with interested parties, including the local planning authority, the Environmental Agency (EA) and the relevant water and sewerage companies through a water cycle study. The strategy should:

- (a) Assess the impact the proposed development will have on the water demand within the framework of the water company's water resource management plans and set out the proposed measures which will limit additional water demand from both new housing and new non-domestic buildings and show how the scheme can address the aim of water neutrality
- (b) Demonstrate that the development will not result in any deterioration in the status of any surface waters or ground-waters affected by it
- (c) Set out proposed measures for improving water quality and avoiding surface water flooding from surface water, groundwater or local water courses.
- (d) Demonstrate that adequate sewerage Infrastructure capacity exists on and/or off the site to serve the development that would not lead to problems for existing users

Development proposals shall incorporate:

- Measures in the water cycle strategy for improving water quality and managing surface water, ground water and local watercourses to prevent surface water flooding from those sources and
- SUDS designed to maximise the opportunities for biodiversity.

### **Flood Risk Management**

To minimise the impact of new development on flood risk the NPPF requires that the surface water drainage arrangements for any development site are such that volumes and peak flow rates leaving the site post-development are no greater than those under existing conditions. As the North West Bicester site is predominantly greenfield in its predevelopment state, the drainage strategy should be based on the principle of attenuating any additional post development runoff to equivalent greenfield rates.

The aim is to provide a site-wide sustainable urban drainage system (SUDS) as part of the approach to flood risk management and climate change adaptation. In terms of design, the SUDS should not be treated simply as a drainage feature, but integrated into the wider landscape and ecology strategy. SUDS are a fundamental component of the proposed green infrastructure.

### **Development Principle 11 - Flood risk management**

Development proposals should demonstrate how sustainable urban drainage systems (SUDS) and other appropriate measures will be used to manage surface water, groundwater and local watercourses to prevent surface water flooding.

Natural drainage systems and runoff rates no higher than greenfield rates will be required to reduce the risk of flooding and maintain groundwater levels.

Maintenance of the surface water features on the site is critically important to maintain their long term functionality. Without maintenance in perpetuity, drainage features will not be able to provide the required surface water attenuation and restrict surface water runoff to the Greenfield runoff rate. This will increase the risk of flooding on and offsite.

### **Development Requirement 11 - Flood risk management**

Planning applications should demonstrate that the proposed development will not increase flood risk on and off the site.

They should demonstrate that the peak discharge rate for all events up to and including the 1 in 100 chance in any year critical storm event, including an appropriate allowance for climate change will not exceed that of existing site.

As the development includes proposed residential development with an assumed lifetime of 100 years, the surface water drainage strategy should include a 30 per cent allowance for climate change in accordance with guidance in the NPPF.

Planning applications must demonstrate in a surface water drainage strategy that the proposed development will not increase the risk of flooding from surface water on or off site

In preparing planning applications, the following guidance should be referred to:

“Preliminary rainfall runoff management for developments”, DEFRA, Environment Agency providing guidance on the preparation of surface water strategies;

NPPF National Planning Guidance on Climate Change allowances

“C635 Designing for exceedance in urban drainage – Good Practice”, CIRIA”

“Sustainable Drainage Systems – design manual for England and Wales CIRIA C522

SUDS manual, CIRIA C697

## Waste

Waste can cause harm to the environment through its treatment and disposal. The Waste Management Plan for England was published by the Department for Environment, Fisheries and Rural Affairs (DEFRA) in 2013 and sets out the Government's waste policies. The Government's aim is to reduce the amount of waste produced across the economy whilst promoting economic growth and prosperity.

In terms of recycling, the EU target is for 50% of waste to be recycled by 2020. Landfill or incineration without energy recovery should be the last resort. In 2012/13 22.6 million tonnes of household waste was generated in England but has been falling on average by 2% per year since 2007. More recently there has been a growth in waste in Oxfordshire which could be up to 2% in 2015.

### Bin Storage in Residential Development

Cherwell District Council has produced guidance on bin storage in residential developments. The Government's review of Housing Standards includes changes to guidance on external waste storage to ensure it is properly considered in new housing development.

## Development Principle 12 – Waste

Planning applications should include a sustainable waste and resources plan (SWRP) covering domestic and commercial waste and setting targets for residual waste, recycling and landfill diversion. A site waste management plan (SWMP) for North West Bicester supports the masterplanning of the site. The implementation of such plans remains best practice despite the Site Waste Management Plans Regulations 2008 being repealed in December 2013.

Between 2007 and 2014 the Oxfordshire Waste Partnership's (OWP) increased recycling and composting rates from 33% to 60% in Oxfordshire. In April 2014 OWP was replaced by an informal partnership, "Recycle for Oxfordshire" working to continuously improve waste management services for residents. OWP agreed the Oxfordshire Joint Municipal Waste Management Strategy (OJMWMS) in 2007

which was reviewed and updated in 2013. It sets out plans for dealing with municipal waste up to 2030. The main themes of the strategy are:

Reduce and reuse - provide advice, services and information to help householders, businesses and the community reduce and reuse materials and avoid waste. Also to set a good example by reducing its own waste. Recycling and composting - as a minimum, Oxfordshire will achieve a combined recycling and composting rate for household waste of at least 65% of by 2020 and 70% of household waste by 2025. The OJMWMS Policy 3 aims to help households and individuals reduce and manage their waste in order to ensure zero waste growth or better of municipal waste per person per annum. Applicants should be aware of this is developing their Sustainable Waste and Resources Plans and consider how they could help achieve the waste target reduction. Bicester already has a good basis for this that could be built on in the existing sustainability and reuse centre at Bicester Green. Proposals should achieve at least 70% reuse and recycling.

## Development Requirement 12 - Waste

Planning applications should include a sustainable waste and resources plan covering both domestic and non-domestic waste which:

- (a) sets targets for residual waste levels and landfill diversion
- (b) Establishes how all development will be designed so as to facilitate the achievement of the targets
- (c) Provides evidence that consideration has been given to the use of locally generated waste as a fuel source for CHP generation and
- (d) Sets out how developers will ensure that no construction, demolition and excavation waste will be sent to landfill.

The Sustainable Waste and Resources Plan (SWRP) should demonstrate that targets for residual waste levels and landfill diversion can be met

Proposals should incorporate the CDC Design Advice on waste management in establishing

how the development will be designed to facilitate the achievement of the targets set in the SWRP

The SWRP should also achieve zero waste to landfill from construction, demolition and excavation.

### Community and Governance

North West Bicester provides an opportunity to consider innovative and new approaches to community governance. The creation of a balanced and mixed community is a fundamental requirement of eco-towns and sustainable development.

### Development Principle 13 – Community and governance

A long term approach is necessary to ensure the new development retains its integrity and is able to manage change in a planned way.

Developers should seek to achieve a seamless approach across the site in terms of community led activities and facilities.

To promote integration with the existing community planning applications should include:

- Provision of a range of house types and tenures, potentially linked to incentives to local first time buyers and older households;
- Sensitive allocation and management policies for affordable housing which enable extended families and friendship networks (co-housing) to move together and help create a more diversified tenure mix;
- Provision of a range of community and leisure facilities which cater not just for North West Bicester but also give people from the existing community reasons to go there;
- Revenue support for provision of appropriate staffing and early staffing of community facilities;
- Good public transport links between North West Bicester and the wider town. Delivering a high quality scheme is only part of creating a successful place. Suitable management of

the different elements of the masterplan will be required to ensure facilities are maintained over the long term and to help to build social cohesion.

### Development Requirement 13 - Community and governance

Planning applications should be accompanied by long term governance structures for the development to ensure that:

- (a) Appropriate governance structures are in place to ensure that standards are met and maintained;
- (b) There is continued community involvement and engagement to develop social capital;
- (c) Sustainability metrics including those on zero carbon, water, transport and waste are agreed and monitored;
- (d) Future development continues to meet eco-town standards, and
- (e) Community assets are maintained.

Planning applications should show how they support the work to establish a Local Management Organisation (LMO) as the long term governance structure and seek to achieve a seamless approach across the site in terms of community led activities and facilities.

## Cultural Wellbeing

The NPPF recognises that cultural wellbeing is part of achieving sustainable development and includes cultural wellbeing within the twelve core planning principles which underpin both plan-making and decision-taking. The NPPF states that the planning system should, ‘take account of and support local strategies to improve...cultural wellbeing for all...’

The Planning Practice Guidance (PPG) complements the NPPF and provides advice on how to deliver its policies. The PPG states that, ‘public art and sculpture can play an important role in making interesting and exciting places that people enjoy using.’

The implementation of community facilities is linked to the policy objective of creating a culturally vibrant place, combining both artworks and appropriate community facilities which may include theatre/cultural uses. These community facilities would fit, harmoniously, with the objectives for mixed use development set out earlier in this document. The link between objectives and implementation is therefore reinforced and serves to further deliver the NPPF Core Principles on cultural wellbeing.

Policy Bicester 1 within the adopted Cherwell Local Plan 2011-2031 Part 1 provides the local planning policy context for the NW Bicester site and sets out key site specific design and place shaping principles. These include the provision of public art to enhance the quality of the place, legibility and identity. In terms of the infrastructure needs of the site, the Policy requires community facilities including those for arts and culture.

## Development Principle 14 - cultural wellbeing

A Cultural Wellbeing Strategy has been prepared that focusses on making North West Bicester a culturally vibrant place through a high quality design and community engagement. This includes the provision of public art across the site. Planning applications will be required to demonstrate how proposals to support cultural wellbeing will be incorporated into detailed development plans. A copy of the strategy is included in appendix III.

## Development Requirement 14 - cultural wellbeing

Cultural wellbeing projects should complement and support the vision and aims of the North West Bicester Eco Town development by:

- Exploring the use of sustainable materials – using recycled materials or locally sourced materials to reduce the carbon footprint and inventive ways to offset other resources used;
- Celebrating nature and the natural environment, by reflecting on natural and environmental issues;
- Interpreting nature, projects to inform people and raise awareness about nature and its processes, and/or about environmental issues;
- Encouraging environmentally sustainable behaviour – projects to encourage recycling, using sustainable routes through the development – artwork projects to encourage cycle and walking routes – and help with way finding and directing the flow of people through public areas;
- Encouraging local residents and visitors to think about and become environmentally aware in their everyday living;
- Create an identity for the development (as the first Eco Town in the UK), to both the residents and outside world;
- To use projects and provision of community and cultural facilities to assist in the creation of a distinctive, safe, vibrant, cohesive and socially sustainable community.



## 5.0 Design and character areas

This section relates to the specific design and place shaping principles. The Local Plan Policy Bicester 1 includes key site specific design and place shaping principles. The design of streets, green infrastructure, and public realm should follow these principles as the basis of further work in the preparation and submission of planning applications on the site. They are therefore the starting point for planning applications and should be used in developing proposals in accordance with the spatial framework. The masterplan sets out the land uses across the site and demonstrating the design principles to be used in guiding subsequent planning applications.

The following design principles should guide the preparation of proposals on the site:

- Sustainability – a key driver in the design of the eco-town and a fundamental principle in achieving a zero carbon development - the layout of the site and individual buildings should reduce the use of resources and carbon dioxide emissions;
- Character – somewhere with a sense of place and that responds positively to the area as a whole;
- Integration – within the site but also with the surrounding town and countryside;
- Legibility – a place which is easy to understand and navigate;
- Filtered Permeability – achieving a form of layout which makes for efficient movement for pedestrians, cyclists and public transport provision while accommodating vehicles, and ensuring good connections with its surroundings;
- Townscape – utilising building height, scale and massing, and design detail and
- Landscape and green infrastructure including green space – a place which responds to its landscape setting incorporates buildings in a quality landscape setting.

### Design principles

The following design principles should be incorporated into proposals submitted as planning applications:

Continuity and enclosure

- Buildings should relate to a common building line that defines the street and public spaces and establishes a clear hierarchy of streets and spaces.
- Development should provide active frontages to all public spaces.
- Private spaces should be clearly defined and enclosed at the rear of buildings.
- Streets and spaces including green infrastructure should be well-designed and demonstrate the use of high quality materials. They should be appropriately detailed with street furniture, lighting, trees and public art. Such details should be comprehensively designed into the public realm to give the proposals an identity and enhance the sense of place.

### Legibility

Development form should establish a street and/or space hierarchy that is focussed on important routes, landmarks and landscape features so as to enhance existing views and vistas, and create new ones to help people find their way around.

The design, location and function of buildings, along with the use of materials and landscape treatment, should reinforce the identity and character of routes and spaces they serve.

The gateways to the site and the local centres should be designed to create a sense of arrival within the development and improve legibility.

### Adaptability

Development and buildings should:

- Ensure flexibility and adaptability of buildings including provision for homeworking;

- Achieve the principles set out by Lifetime homes and Lifetime neighbourhoods;
- Allow buildings to change use, or serve a different function and
- Be brought forward with a mind to “future proofing” emerging sustainable technologies and infrastructure

All buildings should be fitted with Automatic Water Suppression Systems.

## Diversity

Development should:

- Provide a mix of compatible uses;
- Create vibrant local centres and communities;
- Allow people to live work and play in the same area;
- Establish a visual variety through a townscape-led approach
- Respond to the key conditions and character cues across the site.

## Climate change adaptation

Development should:

- Be designed in response to the latest predictions of future climate change with reference to UKCIP and the North West Bicester specific climate predictions prepared by Oxford Brookes University; and
- Show consideration of topography, water environment and water use, street layout, landscape, building mass and choice of materials to help avoid heat islands, modify summer peak temperatures and reduce energy load on buildings

Architectural responses across the development should demonstrate consideration of passive solar gain, risks of overheating thermal mass, albedo (materials) etc. whilst still engaging with the street and enhancing the public realm.

## Building Heights

Generally the development proposals will be suburban in scale reflecting the location of the site and the Bicester context with two-storey buildings with pitch roofs up to a height of 12 metres. In the local centres and along the strategic route through the site taller buildings

with up to four storeys (heights up to 20 metres) will be considered in the context of the masterplan to increase density and meet the requirements of occupiers in these locations.

The height of the proposed business park in south western part of the site should recognise the prominence of the location on the edge of the site and should relate to the residential neighbourhood to the south of Howes Lane.

Planning applications will need to consider heights and how these vary across different site conditions.

## Character and setting

Proposed development should be sensitive to the existing landscape and townscape character whilst creating a unique image for the eco-town. Development proposals should demonstrate a morphology and urban form that responds to the site’s topography, ecology, natural features and landscape character as well as responding to local patterns of development.

## Design and layout

Development should be outward facing, with attractive edges and perimeter blocks; and take advantage of passive overlooking

## Building design and Street Scene

Buildings should be designed to enliven the street scene through the creation of street frontages and entrances.

Ground floor windows fronting onto the street should be employed to provide activity, at regular intervals.

## Development Principle - Commercial development – design

Non-residential buildings should be designed to be BREEAM very good with the capability of meeting BREEAM Excellent on occupation of 50% of development.

Further parameters including scale and massing, building heights and frontages, maximum floorspace areas will be required to define the nature of commercial development and how it is integrated within the masterplan.

The form and nature of commercial development in the proposed business park

should create a gateway with landmark buildings along Howes Lane as a prominent location within the development.

The BREEM Technical Manual SD5073 - 4.0: 2011 for new construction - non-domestic buildings, 2011 sets out Building Design Daylighting parameters for all non-residential buildings to achieve BREEM HEA 1 - Visual Comfort which states:

- All fluorescent and CFL lamps to be fitted with high frequency ballasts
- Relevant building area meets good practice

### Character areas

The natural features of the site combined with the proposed pattern and density of development suggest the site can be broken into distinct zones or character areas: proposed neighbourhoods north of the railway line bisected by watercourses; neighbourhoods bisected by the green network; the employment areas; higher density uses and other town-wide facilities such as a hotel or community facilities.

Within these character areas there are a number of more localised character types as follows:

- Strategic road (the Boulevard);
- Strong landscape edge;
- Green space frontage overlooking development set within the green space network;
- Education and employment zone – secondary school, business and general industrial located within strong landscape structure;
- Informal residential layout responding to alignment of watercourse and other landscape elements;
- Semi-formal residential development based on more formal layout of sports pitches/ playing fields, parkland, civic squares and amenity public space.

Character Areas set out in more detail the key components of the neighbourhoods that have been identified and provide an indication of the likely activity that each area will provide. For example, all buildings should be accessed from

the street to maximise on-street activity.

The setting of St Lawrence's Church, Himley Farm Barns and Home Farm are key considerations for any development in this area. This setting is currently defined by underdeveloped agricultural land with associated rural qualities, in turn allowing views from these areas to the Church tower such that built development without adequate buffers would be incongruous.

## 6.0 Delivery

This section sets out the key requirements relating to the scheme's delivery and the requirements which should be met at the detailed planning application stage and beyond. The aim is to ensure a comprehensive scheme and consistent approaches to quality and delivery.

The masterplan will be delivered through the preparation, submission and implementation of planning applications. The approach to developer contributions, infrastructure requirements, monitoring and review mechanisms and transition should follow the guidance in this section.

The following components should be taken into account in delivering the vision and when preparing proposals to deliver the masterplan through the submission of planning applications:

- Achievement of zero carbon;
- The transport, access and movement framework; infrastructure requirements, provision and delivery including highways, education and community facilities;
- Resource efficiency and low carbon solutions for example energy and water;
- Sustainable and healthy lifestyles – to reduce the carbon footprint of development by ensuring that households and individuals in the eco-town are able to reduce their carbon footprint to a low level and achieve a more sustainable way of living;

Employment opportunities and facilities to support job creation providing a mix of uses and access to job opportunities;

The landscape framework provided by the site's existing natural features to provide and enhance green space including multi-use Green Infrastructure;

A high quality design and layout as part of a comprehensive masterplan setting out the distribution of land uses within an attractive landscape setting and

A long term approach to community and governance through the establishment of a Local Management Organisation.

### Infrastructure provision

The Infrastructure Delivery Plan in the Cherwell Local Plan identifies infrastructure required to deliver the eco-town proposals. Infrastructure (transport, energy, water, waste and communications but also community infrastructure in education and health) requirements essential to meet the needs of residents include:

- School provision
- District Energy Network
- Green infrastructure as part of the forty per cent green space
- Local services and facilities
- Community facilities
- Railway crossing(s)
- Strategic highway improvements
- Sustainable transport provision

### Outline planning stage

Outline planning applications represent the first stage in the delivery of the masterplan. Outline planning applications can be made with some or all matters reserved for future determination. Guidance on the local requirements for outline planning applications is set out on the Council's website [www.cherwell.gov.uk](http://www.cherwell.gov.uk)

### Outline Planning Applications

Outline planning applications represent the first stage in the delivery of the Masterplan. Outline planning applications should be prepared in accordance with the Principles and Requirements set out in this Supplementary Planning Document (prepared in accordance with the PPS1 Supplement Eco-towns July 2009 and North West Bicester Masterplan documents as set out in Principle / Requirement 1

Outline planning applications can be made

with some or all reserved matters reserved for future determination. Guidance on the local requirements for planning applications is set out on the Council's website [www.cherwell.gov.uk](http://www.cherwell.gov.uk)

Each outline planning application must include:

Outline Application Forms, landownership certificates and agricultural holding certificate;

Planning application drawings (for approval and in support);

Description of development and parameters document;

Design and Access Statement;

Landscape Strategy;

Environmental Statement or for subsequent applications a statement identifying where impacts have been previously assessed;

Sustainability Framework;

Transport Assessment;

Framework Travel Plan;

Energy Strategy;

Water Cycle Strategy;

Utilities assessment;

Planning statement;

Draft Heads of Terms;

Statement of Community Involvement;

Affordable housing statement;

Economic Strategy;

Arboricultural report

Cultural Strategy;

Monitoring Plan

Indicative masterplan in accordance with the North West Bicester masterplan;

Information to assess site specific matters.

### **Pre-application Consultation**

During the preparation of outline planning applications, applicants should partake in pre-application consultation with statutory consultees, including Cherwell District Council and Oxfordshire County Council. In addition, genuine public consultation should take place. This should include planning for real exercises and best practice from community engagement techniques.

### **Consultation and engagement**

Planning applications should include a Statement of Community Involvement to show the genuine engagement of the public in preparing the proposals. This should include planning for real exercises and best practice from community engagement techniques. Previously stakeholder workshops have taken place and these should be developed as the basis of future consultation exercises.

### **Planning Performance Agreements**

Planning Performance Agreements will be sought. In order to facilitate effective processing of applications the Council will encourage pre-application engagement and the agreement of a Planning Performance Agreement with agreed timescales.

Planning applications will be required to include the following:

- Environmental statement or for subsequent applications a statement identifying where impacts have previously been assessed
- Description of development, parameter plans and environmental statement
- Supporting information including an illustrative masterplan, Design and Access Statement
- A strategy demonstrating how the proposals will meet the requirement for Zero Carbon buildings across the development
- Draft Heads of Terms setting out the developer contributions (See section on infrastructure delivery)
- Economic Strategy
- Transport Assessment
- Design and Access Statement
- Parameter plans for illustrative purposes only
- Cultural Strategy
- Landscape Strategy
- Biodiversity Strategy
- Green Infrastructure framework plan
- An indicative masterplan in accordance with the Draft masterplan and SPD spatial framework
- Information to address site specific requirements

## Reserved Matters applications

Reserved Matter applications should set out in detail the proposed development in the context of the wider masterplan in order to ensure a comprehensive development and compatibility with adjacent uses. Reserved matters should include the phasing and sequencing of development as set out in the Draft masterplan. Reserved Matters

Reserved Matters applications should set out in detail the proposed development in the context of the wider masterplan. Reserve matters may include:

1. Layout
2. Scale
3. Appearance
4. Access and
5. Landscaping

## Design and Access Statements and Design Codes Should be used to deliver the development principles.

### Planning Obligations and Developer Contributions

Cherwell Local Plan Policy INF1 is the basis for providing new infrastructure and facilities through new development. It is intended to reduce the time taken to negotiate individual planning obligations associated with development proposals.

It is anticipated that the developer contributions through legal agreements will include:

- Provision of affordable housing
- Contributions to educational facilities
- Community facilities
- Sports facilities
- Management and maintenance of open space
- A burial ground
- Governance
- Sustainable lifestyles requirements and
- Local employment, training and skills
- Sustainable transport measures including the

provision of bus services, off site highway schemes, pedestrian and cycle routes and

- Provision of SUDs

This list is not exhaustive and early discussion of requirements is encouraged.

## Draft Heads of Terms

Cherwell District Council continues to prepare evidence base for developer contributions. Applicants should agree the requirements of any section 106 and conditions with the local planning authority and County Council. The requirements of the planning obligations include the provision and/or contributions for the following:

- Community facilities (Libraries - Bicester Library and Library Link in the proposed large community Hall,
- Changing places toilet; Education - adult learning; social care - day care/resource centre for older persons;
- Health facilities - GPs surgery, neighbourhood police
- Fire station
- Early intervention centres
- Community Halls – including management and maintenance
- Community Development workers and fund
- Thames Valley Police - Neighbourhood policing and community safety

Skill and training

- Visitor facilities/ environmental education centre
- Places of worship
- Primary schools, Secondary school, Special Education Needs, Extended school, early years
- Sports Pitches and associated buffers
- Sports centre
- Amenity space (parks, gardens, natural/semi natural green space, allotments, LAPs, LEAPS and NEAPs
- Burial ground
- Biodiversity offset contribution
- Museum Resource Centre contribution

- Public art through cultural enrichment
- Waste collection
- Local Management Organisation
- Affordable Housing

## **Sustainable transport**

### **Bus service**

### **Monitoring and Review**

Planning submissions should set out a strategy and programme for monitoring and reviewing the proposals once implemented. This will ensure that the eco-town principles and standards are measured and the performance of the development can be managed effectively to provide feedback and potential improvements to later phases of the scheme. A monitoring plan should be prepared to support the planning applications.

### **Delivery – schools**

Development proposals will require: School site boundary plans with outline of surrounding roads and housing; topographical surveys across the school site and adjacent development; acoustic survey (existing and anticipated) across the development area should be provided to the local education authority

### **Developer contributions**

Developers will be expected to work collaboratively to deliver the infrastructure. Planning proposals should provide opportunities for the community to engage and participate in their environment, using temporary artist led interventions to assist in achieving high quality design and also as a catalyst for community growth.

# Appendix I

Schedule of documents supporting the North West Bicester SPD:

Masterplan Vision and Objectives

Masterplan Framework (Drawing No. BIMP6 01 Rev B)

Green infrastructure and landscape strategy

Economic Strategy and Baseline

Energy Strategy

Water Cycle Study

Flood Risk Assessment

Residential Strategy

Surface Water Drainage Strategy

Statement of community involvement

Strategic Environmental Report

Social and Community Infrastructure Strategy

Community involvement and governance



# Appendix II: Cherwell Local Plan Policy Bicester 1

Policy Bicester 1: North West Bicester Eco-Town  
Development Area: 390 hectares

Development Description: A new zero carbon (i) mixed use development including 6,000 homes will be developed on land identified at North West Bicester.

Planning permission will only be granted for development at North West Bicester in accordance with a comprehensive masterplan for the whole area to be approved by the Council as part of a North West Bicester Supplementary Planning Document. The Council will expect the Masterplan and applications for planning permission to meet the following requirements:

## Employment

- Land Area – a minimum of 10 ha, comprising business premises focused at Howes Lane and Middleton Stoney Road, employment space in the local centre hubs and as part of mixed used development
- Jobs created – At least 3,000 jobs (approximately 1,000 jobs on B use class land on the site) within the plan period
- Use classes – B1, with limited B2 and B8 uses
- It is anticipated that the business park at the South East corner of the allocation will generate between 700 and 1,000 jobs in use classes B1, B2 and B8 early in the Plan period
- A Carbon Management Plan shall be produced to support all applications for employment developments
- An economic strategy to be produced to support the planning applications for eco-town proposals demonstrating how access to work will be achieved and to deliver a minimum of one employment opportunity per new dwelling that is easily reached by walking, cycling and/or public transport
- Mixed use local centre hubs to include employment (B1(a), A1, A2, A3, A4, A5, C1, D1 and D2 )
- New non-residential buildings will be BREEAM Very Good with the capability of achieving BREEAM Excellent.

## Housing

- Number of homes – Up to 6,000 (3,293 to be delivered within the plan period)
- Affordable Housing – 30%
- Layout to achieve Building for Life 12 and Lifetime Homes standards
- Homes to be constructed to be capable of achieving a minimum of Level 5 of the Code for Sustainable Homes on completion of each phase of development, including being equipped to meet the water consumption requirement of Code Level 5
- The provision of extra care housing
- Have real time energy monitoring systems, real time public transport information and Superfast Broadband access, including next generation broadband where possible. Consideration should also be given to digital access to support assisted living and smart energy management systems.

## Infrastructure Needs

- Education – Sufficient secondary, primary and nursery school provision on site to meet projected needs. It is expected that four 2 Forms of Entry primary schools and one secondary school will be required. There should be a maximum walking distance of 800 metres from homes to the nearest primary school.
- Health – to provide for a 7 GP surgery to the south of the site and a dental surgery
- Burial Ground – to provide a site of a minimum of 4 ha for a burial ground which does not pose risks to water quality (this may contribute to the Green Infrastructure requirements)
- Green infrastructure – 40% of the total gross site area will comprise green space of which

at least half will be publicly accessible and consist of a network of well managed, high quality green/open spaces which are linked to the open countryside. This should include sports pitches, parks and recreation areas, play spaces, allotments, the required burial ground (possibly a woodland cemetery) and SUDS.

- Planning applications shall include a range of types of green space and meet the requirements of Policy BSC11
- Access and Movement – proposals to include appropriate crossings of the railway line to provide access and integration across the North West Bicester site. Changes and improvements to Howes Lane and Lords Lane to facilitate integration of new development with the town.
- Community facilities – to include facilities for leisure, health, social care, education, retail, arts, culture, library services, indoor and outdoor sport, play and voluntary services. The local centre hubs shall provide for a mix of uses that will include retail, employment, community and residential provision. Education, health care, community and indoor sports facilities will be encouraged to locate in local centres and opportunities for co-location will be welcomed. Provision will be proportionate to the size of the community they serve. Each neighbourhood of approximately 1,000 houses to include provision for community meeting space suitable for a range of community activities including provision for older people and young people. A site of 0.5 ha for a place of worship to be reserved for future use.
- The submission of proposals to support the setting up and operation of a financially viable Local Management Organisation by the new community to allow locally based long term ownership and management of facilities in perpetuity
- Utilities – Utilities and infrastructure which allow for zero carbon and water neutrality on the site and the consideration of sourcing waste heat from the Ardley Energy recovery facility. The approach shall be set out in an Energy Strategy and a Water Cycle Study. The Water Cycle Study shall cover water efficiency

and demand management, water quality and how it will be protected and improved, WFD compliance, surface water management to avoid increasing flood risk and water services infrastructure improvement requirements and their delivery, having regard to the Environment Agency's guidance on Water Cycle Studies. Zero Carbon (see PPS definition) water neutral development is sought. Development proposals will demonstrate how these requirements will be met.

- Waste Infrastructure – The provision of facilities to reduce waste to include at least 1 bring site per 1,000 dwellings positioned in accessible locations. Provision for sustainable management of waste both during construction and in occupation shall be provided. A waste strategy with targets above national standards and which facilitates waste reduction shall accompany planning applications.

### Monitoring

- Embodied impacts of construction to be monitored, managed and minimised (ET21)
- Sustainability metrics, including those on zero carbon, transport, water and waste to be agreed and monitored for learning, good governance and dissemination (ET22).

### Key site specific design and place shaping principles

- Proposals should comply with Policy ESD15.
- High quality exemplary development and design standards including zero carbon development, Code Level 5 for dwellings at a minimum and the use of low embodied carbon in construction materials, as well as promoting the use of locally sourced materials.
- All new buildings designed to incorporate best practice on tackling overheating, taking account of the latest UKCIP climate predictions.
- Proposals should enable residents to easily reduce their carbon footprint to a low level and live low carbon lifestyles.
- Layout of development that enables a high degree of integration and connectivity between new and existing communities.

- A layout that maximises the potential for walkable neighbourhoods.
- New footpaths and cycleways should be provided that link with existing networks, the wider urban area and community facilities with a legible hierarchy of routes to encourage sustainable modes of travel
- A layout which makes provision for and prioritises non-car modes and encourages a modal shift from car use to other forms of travel.
- Infrastructure to support sustainable modes of transport will be required including enhancement of footpath and cyclepath connectivity with the town centre, employment and rail stations. Measures to ensure the integration of the development with the remainder of the town including measures to address movement across Howes Lane and Lords Lane
- A well designed approach to the urban edge, which relates development at the periphery to its rural setting and affords good access to the countryside, minimising the impact of development when viewed from the surrounding countryside
- Development that respects the landscape setting and that demonstrates enhancement, restoration or creation of wildlife corridors to achieve a net gain in biodiversity
- Consideration should be given to maintaining visual separation with outlying settlements. Connections with the wider landscape should be reinforced and opportunities for recreational use of the open countryside identified. Development proposals to be accompanied and influenced by a landscape / visual and heritage impact assessment
- Careful consideration of open space and structural planting around the site to achieve an overall improvement in the landscape and visual impact of the site
- No development in areas of flood risk and development set back from watercourses which would provide opportunity for green buffers. Proposals should include a Flood Risk Assessment.
- Maximisation of the sustainable transport connectivity in and around the site
- Consideration and mitigation of any noise impacts of the railway line.
- Good accessibility to public transport services should be provided for, including the provision of a bus route through the site with buses stopping at the railway stations and at new bus stops on the site
- Contributions to improvements to the surrounding road networks, including mitigation measures for the local and strategic highway network, consistent with the requirement of the Eco-Towns PPS to reduce reliance on the private car, and to achieve a high level of accessibility to public transport services, improvements to facilities for pedestrians and cyclists and the provision and implementation of a Travel Plan to maximise connectivity with existing development
- Provision of a Transport Assessment
- Measures to prevent vehicular traffic adversely affecting surrounding communities.
- Significant green infrastructure provision, including new footpaths and cycleways, enhancing green modal accessibility beyond the site to the town centre and Bicester Village Railway Station, and adjoining developments. Public open space to form a well connected network of green areas suitable for formal and informal recreation
- Preservation and enhancement of habitats and species on site, particularly protected species and habitats and creation and management of new habitats to achieve an overall net gain in biodiversity including the creation of a local nature reserve and linkages with existing BAP habitats
- Sensitive management of open space provision to secure recreation and health benefits alongside biodiversity gains.
- A Landscape and Habitats Management Plan to be provided to manage habitats on site and to ensure this is integral to wider landscape management.
- Careful design of employment units on site to limit adverse visual impact and ensure compatibility with surrounding development
- The provision of public art to enhance the quality of the place, legibility and identity

- The retention and respect for important existing buildings and heritage assets with a layout to incorporate these and consideration of Grade II listed buildings outside the site
- Take account of the Council's Strategic Flood Risk Assessment for the site
- Provision of sustainable drainage in accordance with Policy ESD 7: Sustainable Drainage Systems (SuDS), taking account of the recommendations of the Council's Strategic Flood Risk Assessment
- Demonstration of climate change mitigation and adaptation measures including exemplary demonstration of compliance with the requirements of policies ESD 1 – 5
- An assessment of whether the site contains best and most versatile agricultural land, including a detailed survey where necessary.
- A soil management plan may be required to be submitted with planning applications.
- Undertake a staged programme of archaeological investigation.

\*The definition of zero carbon in eco-towns is that over a year the net carbon dioxide emissions from all energy use within the buildings on the eco-town development as a whole are zero or below.

# Appendix III: Eco town standards

The principles below are taken from the Eco towns PPS and are included as they are considered to be relevant to this SPD

## ET 6 Monitoring

ET 6.1 Eco-towns will need to be monitored through regional and local monitoring frameworks. Regional Planning Bodies and Local Planning Authorities will be required to monitor the implementation of their spatial policies as set out in the RSS and in development plan documents at the local level. Regional Planning Bodies and Local Planning Authorities should set out in their Annual Monitoring Reports indicators for monitoring the sustainability of eco-towns in their region/district.

Arrangements should be put in place for the long-term monitoring of the standards set out for eco-towns as part of the requirements for community governance.

ET 6.2 Where an eco-town is brought forward through a planning application, the monitoring requirements should be undertaken as if the proposal was brought forward through the plan making system, and subject to the monitoring of sustainability and any necessary mitigation.

## ET 7 Zero carbon in eco-towns

ET 7.1 The definition of zero carbon in eco-towns is that over a year the net carbon dioxide emissions from all energy use within the buildings on the eco-town development as a whole are zero or below<sup>6</sup>. The initial planning application and all subsequent planning applications for the development of the eco-town should demonstrate how this will be achieved.

ET 7.2 The health and social care needs of residents, and the resulting energy demand, should be taken into account when demonstrating how this standard will be met.

ET 7.3 This standard will take effect in accordance with a phased programme to be submitted with the planning application. It excludes embodied carbon<sup>7</sup> and emissions from transport but includes all buildings – not

just houses but also commercial and public sector buildings which are built as part of the eco-town development. The calculation of net emissions will take account of:

- (a) Emissions associated with the use of locally produced energy
- (b) emissions associated with production of energy imported from centralized energy networks, taking account of the carbon intensity of those imports as set out in the Government's Standard Assessment Procedure, and
- (c) Emissions displaced by exports of locally produced energy to centralized energy networks where that energy is produced from a plant (1) whose primary purpose is to support the needs of the eco town and (2) has a production capacity reasonably related to the overall energy requirement of the eco town.

ET 7.4 This standard attempts to ensure that energy emissions related to the built environment in eco-towns are zero or below. Standards applicable to individual homes are set out in policy ET 9.

## ET 8 Climate change adaptation

ET 8.1 Eco-towns should be sustainable communities that are resilient to and appropriate for the climate change now accepted as inevitable. They should be planned to minimise future vulnerability in a changing climate, and with both mitigation and adaptation in mind.<sup>8</sup>

### Eco-town standards

ET 8.2 Developments should be designed to take account of the climate they are likely to experience, using, for example, the most recent climate change scenarios available from the UK Climate Change Impacts Programme. Eco-towns should deliver a high quality local environment and meet the standards on water, flooding, green infrastructure and biodiversity set out in this PPS, taking into account a changing climate for these, as well

incorporating wider best practice on tackling overheating and impacts of a changing climate for the natural and built environment.

#### ET 9 Homes

ET 9.2 The intent of the energy efficiency and on-site carbon reduction standards is to ensure that, without being too prescriptive as to the means employed to achieve the overall zero carbon standard, reasonable opportunities for energy efficiency and on-site carbon mitigation (including directly connected heat systems) are utilised.

#### ET 10 Employment

ET 10.1 It is important to ensure that eco-towns are genuine mixed-use communities and that unsustainable commuter trips are kept to a minimum. An economic strategy should be produced to accompany planning applications for eco-towns that demonstrate how access to work will be achieved. The strategy should also set out facilities to support job creation in the town and as a minimum there should be access to one employment opportunity per new dwelling that is easily reached by walking, cycling and/or public transport.

#### ET 11 Transport

ET 11.1 Travel in eco-towns should support people's desire for mobility whilst achieving the goal of low carbon living. The town should be designed so that access to it and through it gives priority to options such as walking, cycling, public transport and other sustainable options, thereby reducing residents' reliance on private cars, including techniques such as filtered permeability. To achieve this, homes should be within ten minutes' walk of (a) frequent public transport and (b) neighbourhood services<sup>13</sup>. The provision of services within the eco-town may be co-located to reduce the need for individuals to travel by private car and encourage the efficient use of the sustainable transport options available.

ET 11.2 Planning applications should include travel plans which demonstrate:

(a) How the town's design will enable at least 50 per cent of trips originating in eco-towns to be made by non-car means, with the potential for this to increase over time to at least 60 per cent (b) good design principles, drawing from

Manual for Streets<sup>14</sup>, Building for Life<sup>15</sup>, and community travel planning principles<sup>16</sup>

(c) How transport choice messages, infrastructure and services will be provided from 'day one' of residential occupation, and be made following discussions with the Primary Care Trust.

(d) How the carbon impact of transport in the eco-town will be monitored, as part of embedding a long term low-carbon approach to travel within plans for community governance.

ET 11.4 Where eco-town plans intend to incorporate ultra low carbon vehicle options, including electric car schemes to help achieve a sustainable transport system, planning applications should demonstrate that:

(a) There will be sufficient energy headroom to meet the higher demand for electricity, and

(b) The scheme will not add so many additional private vehicles to the local road network that these will cause congestion.

ET 11.5 Eco-towns should be designed in a way that supports children walking or cycling to school safely and easily. There should be a maximum walking distance of 800m<sup>17</sup> from homes to the nearest school for children aged under 11, except where this is not a viable option due to natural water features or other physical landscape restrictions.

#### ET 12 Healthy lifestyles

ET 12.1 The built and natural environments are an important component in improving the health and well-being of people. Well designed development and good urban planning can also contribute to promoting and supporting healthier and more active living and reduce health inequalities<sup>18</sup>. Eco-towns should be designed and planned to support healthy and sustainable environments and enable residents to make healthy choices easily.

#### ET 13 Local services

ET 13.1 Building sustainable communities is about providing facilities which contribute to the well-being, enjoyment and health of people. Planning applications should include a good level of provision of services within the eco-town that is proportionate to the size of

the development. This should include leisure, health and social care, education, retail, arts and culture, library services, sport and play facilities and community and voluntary sector facilities.

#### ET 14 Green infrastructure

ET 14.1 Forty per cent of the eco-town's total area should be allocated to green space, of which at least half should be public and consist of a network of well managed, high quality green/open spaces which are linked to the wider countryside. Planning applications should demonstrate a range of types of green space, for example community forests, wetland areas and public parks. The space should be multifunctional, e.g. accessible for play and recreation, walking or cycling safely, and support wildlife, urban cooling and flood management.

ET 14.2 Particular attention should be given to land to allow the local production of food from community, allotment and/or commercial gardens.

#### ET 15 Landscape and historic environment

ET 15.1 Planning applications for eco-towns should demonstrate that they have adequately considered the implications for the local landscape and historic environment. This evidence, in particular that gained from landscape character assessments and historic landscape characterisation should be used to ensure that development complements and enhances the existing landscape character. Furthermore, evidence contained in relevant Historic Environment Records, should be used to assess the extent, significance and condition of known heritage assets (and the potential for the discovery of unknown heritage assets) and the contribution that they may make to the eco-town and surrounding area. Eco-town proposals should set out measures to conserve and, where appropriate, enhance heritage both assets and their settings through the proposed development.

#### ET 16 Biodiversity

ET 16.1 Eco-towns should demonstrate a net gain in local biodiversity and planning permission may not be granted for eco town proposals which have a significant adverse

effect on internationally designated nature conservation sites<sup>19</sup> or Sites of Special Scientific Interest.

ET 16.3 A strategy for conserving and enhancing local biodiversity should be produced to accompany planning applications for eco-towns. This should be based on up-to date information about the biodiversity of the area including proposals for the management of local ecosystems and where appropriate, the restoration of degraded habitats or the creation of replacement habitats. It should set out priority actions in line with the England Biodiversity Strategy and Local Biodiversity Action Plans, including appropriate mitigation and/or compensation measures, required to minimise adverse effects on individual species and habitats of principal importance and to enhance local biodiversity overall. Developers should seek the advice of Natural England and other relevant statutory advisers when developing their strategies and decision making authorities should also consult those bodies as to the adequacy of such strategies. Delivery bodies should be identified in the strategy and its implementation should proceed in parallel with the development.

#### ET 17 Water

ET 17.1 Eco-towns should be ambitious in terms of water efficiency across the whole development, particularly in areas of serious water stress<sup>20</sup>, and should contribute, where existing water quality leaves scope for further improvement, towards improving water quality in their localities.

ET 17.2 Planning applications for all eco-towns should be accompanied by a water cycle strategy that provides a plan for the necessary water services infrastructure improvements. The water cycle strategy should have been developed in partnership with interested parties, including the local planning authority, the Environment Agency<sup>21</sup>, and the relevant water and sewerage companies through a water cycle study. The strategy should:

(a) assess the impact that the proposed development will have on water demand within the framework of the water companies' water resource management plans and set out the proposed measures which will limit additional

water demand from both new housing and new non-domestic buildings

(b) demonstrate that the development will not result in a deterioration in the status<sup>22</sup> of any surface waters or ground-waters affected by the eco-town; and

(c) set out proposed measures for improving water quality and avoiding surface water flooding from surface water, groundwater and local watercourses.

ET 17.3 Eco-towns should:

(a) incorporate measures in the water cycle strategy for improving water quality and managing surface water, groundwater and local watercourses to prevent surface water flooding from those sources; and

(b) incorporate sustainable drainage systems (SUDS) and, except where this is not feasible, as identified within a relevant Surface Water Management Plan<sup>23</sup>, avoid connection of surface water run-off into sewers.

ET 17.4 Planning applications for all eco-towns should include a strategy for the long term maintenance, management and adoption of the SUDS.

ET 17.5 Eco-towns in areas of serious water stress should aspire to water neutrality, i.e. achieving development without increasing overall water use across a wider area<sup>24</sup> and this is further explained in Annex B of this PPS. In particular, the water cycle strategy should set out how:

(a) the development would be designed and delivered to limit the impact of the new development on water use, and any plans for additional measures, e.g. within the existing building stock of the wider designated area, that would contribute towards water neutrality

(c) new non-domestic buildings will be equipped to meet similar high standards of water efficiency with respect to their domestic water use.

ET 18 Flood risk management

ET 18.1 The location, layout and construction of eco-towns should reduce and avoid flood risk wherever practicable. Eco-towns should not increase the risk of flooding elsewhere and

should use opportunities to address and reduce existing flooding problems.

ET 18.2 There is a strong expectation that all of the built-up areas of an eco-town (including housing, other public buildings and infrastructure) will be fully within Flood Zone 1 – the lowest risk<sup>25</sup>. Flood Zone 2 (medium risk) should, as far as possible, be used for open spaces and informal recreational areas that can serve as multi-functional spaces, for example, those used for flood storage. There should be no built-up development in Flood Zone 3, with the exception of water-compatible development and, where absolutely necessary, essential infrastructure as defined in Table D.2 of PPS<sup>25</sup>: Development and Flood Risk.

ET 19 Waste

ET 19.1 Eco-town planning applications should include a sustainable waste and resources plan, covering both domestic and non-domestic waste<sup>26</sup>, which:

(a) sets targets for residual waste levels, recycling levels and landfill diversion, all of which should be substantially more ambitious than the 2007 national Waste Strategy targets for 2020<sup>27</sup>; it should be demonstrated how these targets will be achieved, monitored and maintained

(b) establishes how all development will be designed so as to facilitate the achievement of these targets, including the provision of waste storage arrangements which allow for the separate collection of each of the seven priority waste materials as identified in the Waste Strategy for England 2007

(c) provides evidence that consideration has been given to the use of locally generated waste as a fuel source for combined heat and power (CHP) generation for the eco-town, and

(d) sets out how developers will ensure that no construction, demolition and excavation waste is sent to landfill, except for those types of waste where landfill is the least environmentally damaging option.

ET 20 Master planning

ET 20.1 All eco-town planning applications should include an overall master plan and supporting documentation to demonstrate how



the eco-town standards set out above will be achieved and it is vital to the long-term success of eco-towns that the standards are sustained. Local Authorities should consider the use of design codes<sup>28</sup> to facilitate efficient delivery of high quality development. In developing the master plan, there should be a high level of engagement and consultation with prospective and neighbouring communities.

ET 20.2 There should be a presumption in favour of the original; that is the first permitted master-plan. Any subsequent planning applications that would materially alter and negatively impact on the integrity of the original master-plan should be refused consent.

- Residual waste reduction per person (amount left after reuse, recycling and composting) – from 370 kg in 2005 to 225 kg in 2020
- Household re-use, recycling and composting – from 27% in 2005 to 50% in 2020
- Residual waste recovery (recycling, composting and energy recovery) from 38% in 2005 to 75% in 2020.

#### ET 21 Transition

ET 21.1 To support the transition process, planning applications should set out:

- (a) the detailed timetable of delivery of neighbourhoods, employment and community facilities and services – such as public transport, schools, health and social care services, community centres, public spaces, parks and green spaces including biodiversity etc.
- (b) plans for operational delivery of priority core services to underpin the low level of carbon emissions, such as public transport infrastructure and services, for when the first residents move in
- (c) progress in and plans for working with Primary Care Trusts and Local Authorities to address the provision of health and social care
- (d) how developers will support the initial formation and growth of communities, through investment in community development and third-sector support, which enhance well-being and provide social structures through which issues can be addressed
- (e) how developers will provide information

and resources to encourage environmentally responsible behaviour, especially as new residents move in

(f) the specific metrics which will be collected and summarised annually to monitor, support and evaluate progress in low carbon living, including those on zero carbon, transport and waste

(g) a governance transition plan from developer to community, and

(h) how carbon emissions resulting from the construction of the development will be limited, managed and monitored.

#### ET 22 Community and governance

ET 22.1 A long term approach is necessary to ensure a new town retains its integrity as an eco-town, and is able to manage change in a planned way. Planning applications should be accompanied by long term governance structures for the development to ensure that:

- (a) appropriate governance structures are in place to ensure that standards are met, maintained and evolved to meet future needs
- (b) there is continued community involvement and engagement, to develop social capital
- (c) sustainability metrics, including those on zero carbon, transport, water and waste are agreed and monitored
- (d) future development continues to meet the eco-town standards, and
- (e) community assets are maintained.

<sup>3</sup>The development plan includes the Regional Spatial Strategy and Adopted Development Plan Documents (or any saved policies pursuant to section 38 and schedule 8 of the Planning and Compulsory Purchase Act 2004). Where there is a conflict between these documents, the most recent document takes precedence.

<sup>4</sup>An up-to-date plan is one that complies with PPS3 and the relevant RSS. For example, this means that 5 years of deliverable land has been allocated and a further 10 years of broad locations has been identified.

<sup>5</sup>An out-of-date plan is one that does not comply with PPS3 and the relevant RSS. For example it does not allocate enough land to meet RSS housing numbers.

6 This definition of zero carbon applies solely in the context of eco-towns, and applies to the whole development rather than to individual buildings.

7 i.e. carbon emissions resulting from the construction process – see ET19.1.

8 In line with Planning Policy Statement: Planning and Climate Change (supplement to PPS 1) and supporting practice guidance.

9 Building for Life – [www.buildingforlife.org/](http://www.buildingforlife.org/)

10 Code Level 4 contains within it standards to be achieved for: household waste recycling, construction waste, composting facilities, water efficiency measures, surface water management, use of materials, energy & CO<sub>2</sub>, pollution, health & wellbeing, ecology & ongoing management of the development.

11 Space standards refer to the Space Standards published by English Partnerships which are now encapsulated in the HCA's

Design Quality Standards.

12 See PPS 3 for definition and policy approach.

13 Specific proposals for the location of health and social care services should reflect the particular local circumstances and

14 Manual for Streets – Department of Transport – <http://www.dft.gov.uk/pgr/sustainable/manforstreets/>

15 Building for Life – <http://www.buildingforlife.org/>

16 See Building Sustainable Transport into New Developments (DfT 2008) and Good Practice Guidelines: Delivering Travel Plans through the Planning Process (DfT/CLG 2009)

17 The distance should be measured by the shortest route along which a child may walk in reasonable safety.

18 See also – Promoting and creating built or natural environments that encourage and support physical activity. – National Institute for Health and Clinical Excellence – Nice Public Health Guidance 8

19 These sites, which in Great Britain, are also referred to as European sites consist of Special Areas of Conservation (SACs) and European Offshore Marine Sites (EOMS) designated under

the EC Habitats Directive and Special Protection Areas (SPAs) classified under the Birds Directive. The Government expects public authorities to treat all Ramsar sites as if they are fully designated European Sites, for the purpose of considering development proposals that may affect them.

20 As designated by the Water Industry (Prescribed Conditions) Amendment Regulations 2007 (S.I. 2007/2457) – map to illustrate extent of water stress can be obtained from the Environment Agency.

21 See also Environment Agency guidance (January 09) on water cycle studies <http://publications.environment-agency.gov.uk/pdf/GEHO0109BPF-e-e.pdf>

22 Information on status can be obtained from the Environment Agency – in the case of water bodies, this information will be reported in the River Basin Management Plan.

23 All eco-towns must be covered by a Strategic Flood Risk Assessment (SFRA), as defined in PPS25, Development and Flood Risk, and the PPS25 Practice Guide. A Surface Water Management Plan for the eco-town should form part of the SFRA.

24 Wider area to be determined by water cycle study normally by reference to the water company water resource zone in

which the development is to be located

25 Flood Zones as described in PPS25, Development and Flood Risk

26 This standard does not apply to health and social care services' medium and high risk waste, such as clinical and hazardous waste; these are covered by national regulations.

27 The Waste strategy 2007 proposes national targets for waste for 2020 as follows:

28 Preparing Design Codes: A Practice Manual; DCLG/CABE (2006).

# Appendix IV: Design principles for primary and secondary school sites

## Primary School sites.

No dead end roads should be situated adjacent to schools and the road layout should allow for circular routes to prevent the need to reverse in the road.

To encourage sustainable travel initiatives, schools should be accessible from at least two sides of the school site. See the “Typical Example” at the end of the Educational Requirements doc.

Ideally there will be 3 vehicular entrances located strategically around the perimeter

Noise generation around school sites should be minimal. For example, proximity to the railway, major roads, energy centres etc. should be avoided. The noise level on the boundary of the school playing field should not exceed 40 dB LAeq, 30 min

Sites should be generally rectangular with the minimum site frontage being 110m. This may need to be increased, as might the site area, if the site is irregular in shape.

The design of school sites is bespoke such that the location of the buildings or proximity of buildings to the boundary cannot be unreasonably constrained.

Hedgerows/ditches across sites should be avoided as they have the potential to compromise the economical layout of the school site, restrict supervision, restrict long term site flexibility etc. Again, site area may need to be increased.

All existing buildings, foundations and underground obstructions are to be removed

No services are to cross the site and for overhead high voltage power lines [i.e. greater than 1000V they are not to be within 200metres of any school site.

School sites should be as level as possible to limit the need for abnormal cost.

## Secondary school sites

No dead end roads should be situated adjacent to schools and the road layout should allow for circular routes to prevent the need to reverse in the road.

To encourage sustainable travel initiatives, schools should be accessible from at least two sides of the school site. See the “Typical Example” at the end of the Educational Requirements doc.

Ideally there will be up to 6 vehicular entrances located strategically around the perimeter.

The road layout and the school site should allow for entrances that can facilitate an on-site coach drop off area. This will need to be strategically situated to enable the areas to double up for other functions once the school day commences. So it cannot be situated at the front of the school. NB this facility will not be used for parent drop off

Noise generation around school sites should be minimal. For example, proximity to the railway, major roads, energy centres etc. should be avoided. The noise level on the boundary of the school playing field should not exceed 40 dB LAeq, 30 min

Sites should be generally rectangular with the minimum site frontage being 110m. This may need to be increased, as might the site area, if the site is irregular in shape.

The design of school sites is bespoke such that the location of the buildings or proximity of buildings to the boundary cannot be unreasonably constrained.

Hedgerows/ditches across sites should be avoided as they have the potential to compromise the economical layout of the school site, restrict supervision, restrict long term site flexibility etc. Again, site area may need to be increased.

All existing buildings, foundations and underground obstructions are to be removed

No services are to cross the site and for overhead high voltage power lines [i.e. greater than 1000V they are not to be within 200metres of any school site.

School sites should be as level as possible to limit the need for abnormal cost.

# Appendix V: The North West Bicester Cultural Wellbeing Strategy

## Planning Policy Context:

### National Planning Policy

The National Planning Policy Framework (NPPF) recognises that cultural wellbeing is part of achieving sustainable development and includes cultural wellbeing within the twelve core planning principles which underpin both plan-making and decision-taking. The NPPF states that the planning system should:

- ‘take account of and support local strategies to improve...cultural wellbeing for all...’

The Planning Practice Guidance (PPG) complements the NPPF and provides advice on how to deliver its policies. The PPG states that:

- ‘Public art and sculpture can play an important role in making interesting and exciting places that people enjoy using.’

### Local Planning Policy

#### The adopted Cherwell Local Plan 2011-2031 Part 1

Policy Bicester 1 which provides the local planning policy context for the North West Bicester site sets out key site specific design and place shaping principles for the site. These include:

“The provision of public art to enhance the quality of the place, legibility and identity”.

In terms of the infrastructure needs of the site, the Policy requires community facilities including those for arts and culture.

### The Approach:

Cherwell District Council (CDC) will require all outline and full applications on the North West Bicester site to demonstrate how proposals to support cultural wellbeing will be incorporated into detailed development plans.

This Strategy sets out what applications should include by way of such proposals and how this will be secured by CDC through the planning process.

This Strategy’s focus is on making North West Bicester a culturally vibrant place through high quality design and community engagement. This includes the provision of public art across the site.

As such cultural wellbeing initiatives should cover 2 main areas of activity and focus:

- 1) Activities where artists positively influence physical form and function to secure high quality design - i.e. projects that have a physical, permanent outcome integrated into form, function, style or content of a place, space or building. These could range from projects where an artist has participated in the design or masterplanning of buildings, townscapes, or landscapes, to the design and making of individual physical elements within them.
- 2) Activities where artists engage with the emerging community - i.e. potentially a programme of projects that could range from creative consultation to festivals, ephemeral structures, film, web, recording the oral history of the emerging new community or other virtual projects that promote a clear sense of identity to those within the settlement and external to it, to regular activities like community choirs etc.

### Objectives:

Cultural well-being projects should complement and support the vision and aims of the North West Bicester Eco Town development by:

- Exploring the use of sustainable materials – using recycled materials or locally sourced materials to reduce the carbon footprint and inventive ways to offset other resources used;
- Celebrating nature and the natural environment, by reflecting on natural and environmental issues; interpreting nature, projects to inform people and raise awareness about nature and its processes, and/or about environmental issues;
- Encouraging environmentally friendly

behaviour – artwork as bins to encourage recycling, using sustainable routes through the development – artwork to encourage cycle and walking routes – and help with way finding and directing the flow of people through public areas;

- Encouraging local residents and visitors to think about and become environmentally aware in their everyday living;
- Create an identity for the development (as the first Eco Town in the UK), to both the residents and outside world;
- To use projects to assist in the creation of a distinctive, safe, vibrant, cohesive and socially sustainable community.

CDC is seeking developers to provide opportunities for the community to engage and participate in their environment, using temporary artist led interventions to assist in achieving high quality design and also as a catalyst for community growth.

### **Implementation:**

In general terms, CDC will require each outline or full planning application on the site to include a Cultural Wellbeing Statement covering the area coterminous to that of the application. Upon approval by CDC, the development and implementation of the projects described within the Statement will be secured within the application's S106 agreement.

A Cultural Wellbeing Statement should be prepared and implemented by a public art consultant/curator or artist and should contain detailed proposals to support the cultural enrichment of the site. Ideally, a Statement should include a mixture of projects where cultural elements are integrated into the form and function of the site to achieve high quality, distinctive design and projects where the focus is on community engagement - of course some projects will include both elements. A Statement should set out a clear route to how its proposals can be implemented throughout the site, and CDC will expect to see realistic and achievable proposals that can be funded as a necessary part of the site development costs. However in the case of particularly ambitious and / or innovative ideas being

put forward, some funding could come from private sponsorship and some from public arts funding streams. CDC will be happy to support any necessary bids and help seek out funding sources where they consider proposals are particularly innovative.

### **Further advice:**

For further information and advice on the Cultural Wellbeing Strategy and the development and implementation of a Cultural Wellbeing Statement, please contact Nicola Riley (Shared Interim Community Partnerships and Recreation Manager, Cherwell District Council) as follows:

Nicola.Riley@cherwell-dc.gov.uk Direct Line: 01295 221724





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