



prepared for: P3 Eco (Bicester) Limited & A2Dominion Group

NW Bicester Eco Development Masterplan Report

prepared by: Farrells

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1 INTRODUCTION

- 1 Design Statement
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Design Statement 1.1

The masterplan has been progressed in parallel with the exemplar development and has taken account feedback from consultations and regular reviews between the designers and key stakeholders. The aspects covered include: design and sustainable construction, green infrastructure, transport and access, energy, water and waste, employment, training and local community facilities.

The proposed masterplan creates four new local centres or villages, each created around a distinctive landscaped open green space. Each village provides housing and non residential uses, which includes: village shops and pubs, eco business centres, schools, nurseries and community facilities. The villages are surrounded and integrated with green infrastructure which comprises 40% of the land area and will provide open sports pitches, parks and recreation areas, play spaces, allotments, a woodland cemetery, SUDS and natural landscape. The masterplan takes into account the constraints and opportunities of natural features and ecology. The green infrastructure incorporates existing species rich hedgerows, woodlands and watercourses which will be linked to larger green areas such as proposed village greens and other amenity space. The masterplan will create habitats of benefit to biodiversity within the green infrastructure. There is potential to create significant areas of wetland and rough grassland for farmyard birds. The ongoing development of the masterplan will be in the context of the full ecological surveys and a biodiversity strategy that defines form the beginning how net biodiversity gain will be achieved.

The exemplar development provides approximately a third of the houses in the first village, grouped around the first local centre, which provides appropriate facilities and employment. The existing good quality farm buildings will be retained to provide a diversity of uses and character. The exemplar will have a bus service and offsite pedestrian and cycle routes linking to the town centre along Banbury Road. In further phases the masterplan will provide additional local services and employment uses to extend the village centre, with further footpath and cycle routes to link to Bure Park and to the later phases of the NW Bicester development. The exemplar is designed to enable these facilities to extend and achieve a balanced and cohesive development with adjacent phases.

The total approximate masterplan accommodates 5000 houses in four villages, each of approximately 1250 homes, with

half of the homes north of the railway and half south of the railway. New footpath and cycle networks are provided which will link all four parts of the development together and equally important to link to the existing town centre and adjacent residential neighbourhoods and facilities. The proposed new access points to the development on Howes Lane and Lords Lane include crossing points to humanise the ring road, with cyclist and pedestrian connections between new and existing residential areas, employment and community uses. A cyclist and pedestrian crossing of the rail line is to be provided, as a bridge or tunnel to link the northern and southern parts of the development.

The layout ensures that all homes are within close walking distance of local centres (800m) and bus stops (400m). Good links for pedestrians and cyclists will support modal shift away from car based transport. Public transport will be provided throughout the development and bus routes will link with and complement existing bus routes to improve services with stronger connections to the town centre and railway stations.

The land for non residential and employment use has been distributed throughout all phases. The masterplan identifies suitable areas for a potential factory for the timber frame production and other innovative manufacturing businesses, supported by a proposed learning and innovation centre with links to Oxford and Cherwell Valley College.

Bicester History 1.2

Bicester History

Roman settlement mid 1st to 5th Century

A north-south Roman route, known as the Stratton (Audley) Road, from Dorchester to Towcester, passed through the area which later became the town of Bicester. Akeman Street, an east-west Roman road from Cirencester to St. Albans lies 2 miles (3.2 km) south. The ruins of the Roman settlement of Alchester lie 2 miles (3 km) southwest of the town

Crossroad town – 6th Century onwards

The West Saxons established a settlement in the 6th century at the crossing of a series of ancient routes on each side of the Bure stream. The name Bicester, which has been in use since the mid 17th century, derives from earlier forms including Berncestre, Burencestre, Burcester, Biciter and Bissiter. The Domesday Book survey of 1086 recorded Berencestra, with two manors of Bicester and Wretchwick.. The town became established as twin settlements on opposite banks of the River Bure, a tributary of the Ray, Cherwell and ultimately the Thames.

Market town – middle ages to 19th Century

Bicester' developed as a trading centre, with a market and fair established by the mid 13th century with two further manors, Bury End and Nuns Place, later known as Market End to the west and King's End to the east of the River Bure.

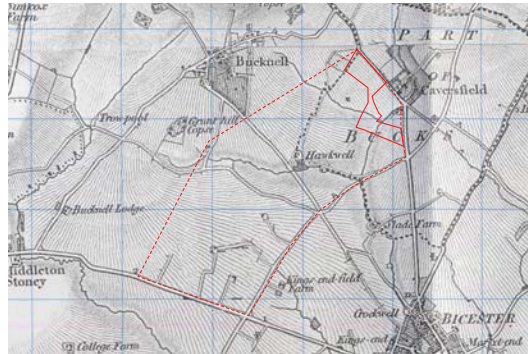
The two townships of King's End and Market End evolved distinct spatial characteristics. Inns, shops and high status houses clustered around the triangular market place as commercial activity was increasingly concentrated in Market End. King's End had a lower population and less commerce on the east side of the Bure. The manorial lords, the Cokers, lived in the manor house since 1584. The house had been rebuilt in the early 18th century remodelled in the 1780s. The park was enlarged surrounded by a wall after 1753

Garrison town 17th to 20th century

The town has a long-standing connection with the military and there are opportunities to provide a cultural link and memorial for peace within the eco development. During the Civil War (1642–49) Bicester was used as the headquarters of parliamentary forces. During the First World War an airfield was established north of the town for the Royal Flying Corps. This became a Royal Air Force station, but is now Bicester Airfield, the home of Windrushers Gliding Club,. The British Army's largest ordnance depot - the Central Ordnance Depot of the Royal Logistic Corps- was located just outside the town

Connected town - 1850 to present day

The Buckinghamshire Railway company completed the railway between Bletchley and Oxford in 1851, with a station in Bicester now called Bicester Town. In 1910 the Great Western Railway completed a new fast route between London and Birmingham, and opened a large station on Buckingham Road to serve Bicester now called Bicester North. Chiltern



1830



Bicester, 1898



Historic Sheep Street



Sheep Street today



1950

The Causeway and the Church



2009



Bicester Sheep Fair, Sheep Street, 1908

NW Bicester Site Context Development History 1.3

Railways trains runs between London Marylebone and Birmingham Snow Hill call at Bicester North.
Bicester also has local bus services to Oxford and Banbury, and is served by long-distance route X5 between Oxford and Cambridge.
Bicester's proximity to junction 9 of the M40 motorway provides good road links to London, Birmingham and Banbury. It also has good road links to Oxford, Kidlington, Brackley, Buckingham, Aylesbury and Witney.
The historic town centre, particularly Sheep Street and Market Square, have a wide range of local and national shops together with cafés, pubs and restaurants. Sheep Street is now pedestrianised with car parks nearby. Weekly markets take place on Fridays in the town centre along with farmers' markets and an occasional French market.
South of Bicester is Bicester Village Shopping Centre. Bicester has a population of 30,000 with two secondary schools: Bicester Community College (BCC) and the Cooper School. There are a number of primary schools including Langford Village Primary, Glory Farm Primary, Southwold, Brookside Primary School, St Edburg's, Five Acres, Longfields and Bure Park Primary

NW Bicester Site Context Development History

During the 1700s the common fields were enclosed as privately owned farms:

Market End farms – 1758

Bucknell farms – 1780

Caversfield – 1780

Bicester King's End farms – 1793

Caversfield Parish (previously a detached part of Buckinghamshire) became part of Oxfordshire in the 1830s and 1840s. Hawkwell and Crowmarsh Farms were bought from the Bucknell Manor estate in 1918

1. Roman / Medieval
2. Modern
3. Evolution



Bicester Current Development 1.4

Bicester Current Development

1. Sainsbury's Town Centre Development. Sainsbury's £70 million re-development of the town centre, originally planned to start in 2008, had been delayed by the onset of the credit crunch;
2. Kingsmere – 1585 houses and associated facilities at SW Bicester
3. Business Park – 12 office buildings and a hotel
4. Evergreen 3 – Improvements to Bicester Town Station and a new London-Oxford rail route



NW Bicester Site Context Today 1.5

NW Bicester Site Context Today

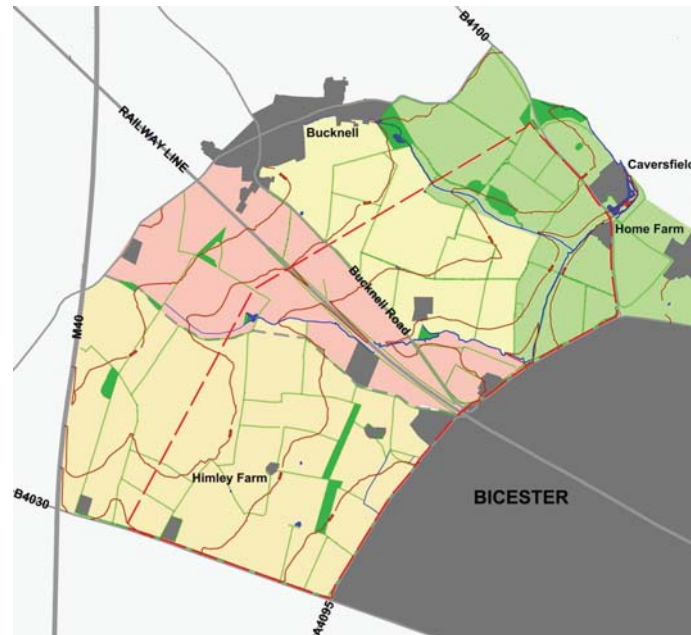
This is broadly described as having a rolling landform, with underlying limestone geology, characterised by a distinctive pattern of woodlands and mixed farmland - much of which is associated with 18th Century parkland. Most recently, the Oxfordshire Wildlife and Landscape Study (2004), places the site within 'Wooded Estatelands' Landscape Character Type, with the following key characteristics (Ref 1-4):

- 'Rolling topography with localised steep slopes.'
- Large blocks of ancient woodland and mixed plantations of variable sizes.
- Large parklands and mansion houses.
- A regularly shaped field pattern dominated by arable fields.
- Small villages with strong vernacular character.'

Geology, landform and drainage: The geology in the area around Bicester and further south is dominated by Oxford Clay. Landform is gently rolling, with the streams of local springs flowing through small valleys.

Landcover: Mixed farmland is the dominant landcover, with arable farming forming the principal use and pasture generally on the steeper slopes. This is a well-wooded landscape with blocks of woodland and corridors of trees bordering valley streams. Fields are generally enclosed by hedgerows, with established ash and oak hedgerow trees also contributing to the wooded character of the landscape.

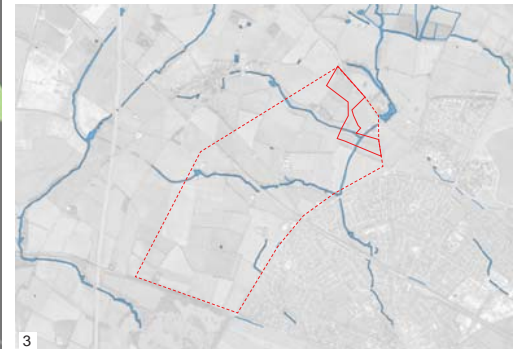
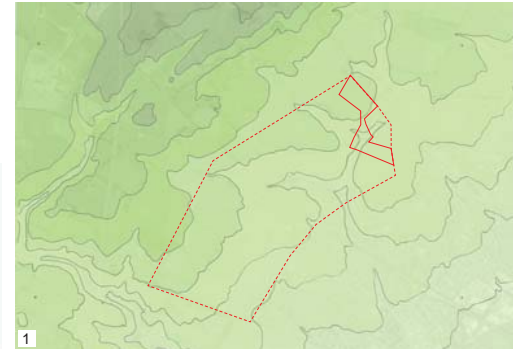
Settlement and communications: Settlement is characterised by scattered farmsteads generally with strong vernacular character, reinforced by features such as stone walls and stone buildings with stone or clay tiled roofs. The surrounding agricultural land is generally characterised by a geometric pattern of medium to large fields. Bucknell Road, a minor country lane, links Bicester with the village of Bucknell, to the north, and the A4095, B4030 and B4100 provide the wider transport/communications network at Bicester's northern edge. A bridleway runs through the centre of the site, connecting Bicester with open countryside to the north. Overhead power lines and a railway line, mostly on embankment, also traverse the area.



Local vernacular and building materials

The earliest surviving buildings of the town are mainly grey oolitic limestone, from the Priory Quarry at Kirtlington, five miles (8 km) west on Akeman Street, some ginger lias (ironstone) comes from the area around Banbury and white and bluish grey cornbrash limestone was quarried in Crockwell and at Caversfield two miles (3 km) to the north. Timber framed structures used timber from the Bernwood Forest on the western slopes of the Chilterns five miles (8 km) east. Infilling of frames was of stud and lath with lime render and limewash. Others were of brick or local rubble stonework. The river valleys to the south and east of the town were the source of clay for widespread local production of brick and tile. Local roofing materials included longstraw thatch, heavy limestone roofs made with Stonesfield slate and local red clay plain tiles. 19th century bulk transport by canal and railway infrastructure allowed imports of blue slate from North Wales

- 1 Existing Topography
- 2 Water courses
- 3 Settlement pattern today



NW Bicester Site Context Today 1.5



Banbury Road



Bure Park - Pedestrian / Cycle Access



Goswell Farm



Howes Lane - Residential Area



Bicester Town Centre



Gowell Farm



Himley Farm



Lords Lane



Bucknell Road



St Lawrence Church, Caversfield



Home Farm



Railway embankment

2 DESIGN CONCEPTS

Design Concepts

The NW Bicester eco development masterplan will seek to:

- Extend the town with 5000 zero carbon homes.
- Provide a place where people can live with very low carbon footprints and within environmental limits, showcasing what a sustainable future can look like.
- Enable the countryside to infiltrate the development with green open spaces linked into Bicester town.
- Encourage the integration of new and existing communities with shared services and infrastructure.
- Create landscape as the primary infrastructure working with the laws of nature.
- Link communities with the sites history creating local centres around existing farmsteads.
- Create renewable energy production harnessed locally.
- Retain existing businesses.
- Create new employment with emphasis on innovation, training and eco business opportunities.
- Disperse employment and community facilities across new local centres.
- Provide integrated transport links throughout the site and into the existing town centre and rail stations.
- Ensure that all parts of the site are within 400m walking distance of a regular bus route.
- Humanise the ring road by creating crossing and frontage designed to the scale of people not cars.
- Distribute community and service facilities within close walking distances of all housing.

The Masterplan green infrastructure will seek to:

- Provide 40% of development site area as green infrastructure.
- Provide a series of linked open spaces between the 4 hub / villages.
- Create green linkages with the wider countryside and communities.
- Create connectivity for cyclists and pedestrians with strong links to the existing town and surroundings.
- Provide a strong framework for the green infrastructure with existing, topography, water courses and habitats.
- Retain existing hedgerows for habitats and amenity space integrated with the new green spaces.
- Engage with key stakeholders to determine how various GI uses are distributed.
- Provide a net increase in the biodiversity of the area.
- Create allotments to grow food locally.
- Provide a woodland cemetery: an essential requirement of Bicester Town.

The masterplan creates a social infrastructure in four new villages centres which will seek to:

- Provide 4 village centres with services located within walking range of 800m radius of residential areas.
- Locate all residential areas within 400m walking distance of a regular bus route.
- Provide a primary school, eco business centre, eco pub, village store, shops, nursery and community centre in each village centre.
- Provide a secondary school in the southern part of the development close to sports pitches.
- Co-locate a mix of land uses in the village centres allowing for shared use of facilities and parking.
- Focus local centres on village greens and market squares.
- Base the character of public open space in the new villages on similar size and scale of villages in the surrounding Oxfordshire area.
- Grow local centres around existing farmsteads.
- Vary scale and character of local centres according to location
- Distribute non residential uses throughout approx 15% of the development area.
- Disperse employment uses across all local centres.
- Identify an energy production area adjacent to the railway for further investigation as part of the energy strategy.
- Provide a 15 hectare area of green space suitable for sports recreation space close to Howes lane.
- Create a new crossing over / under the rail for foot and cyclists to link the northern and southern development.

The NW Bicester eco development will seek to be a catalyst for the wider regeneration of Bicester town

- Make the historic town centre into the 'heart' of the place
- Get local people to shop locally
- Develop a variety of related new activities
- Create a destination for the local communities
- Improve the quality of the public realm
- Make the most of Bicester's strategic position
- Create a sustainable transport plan for the town



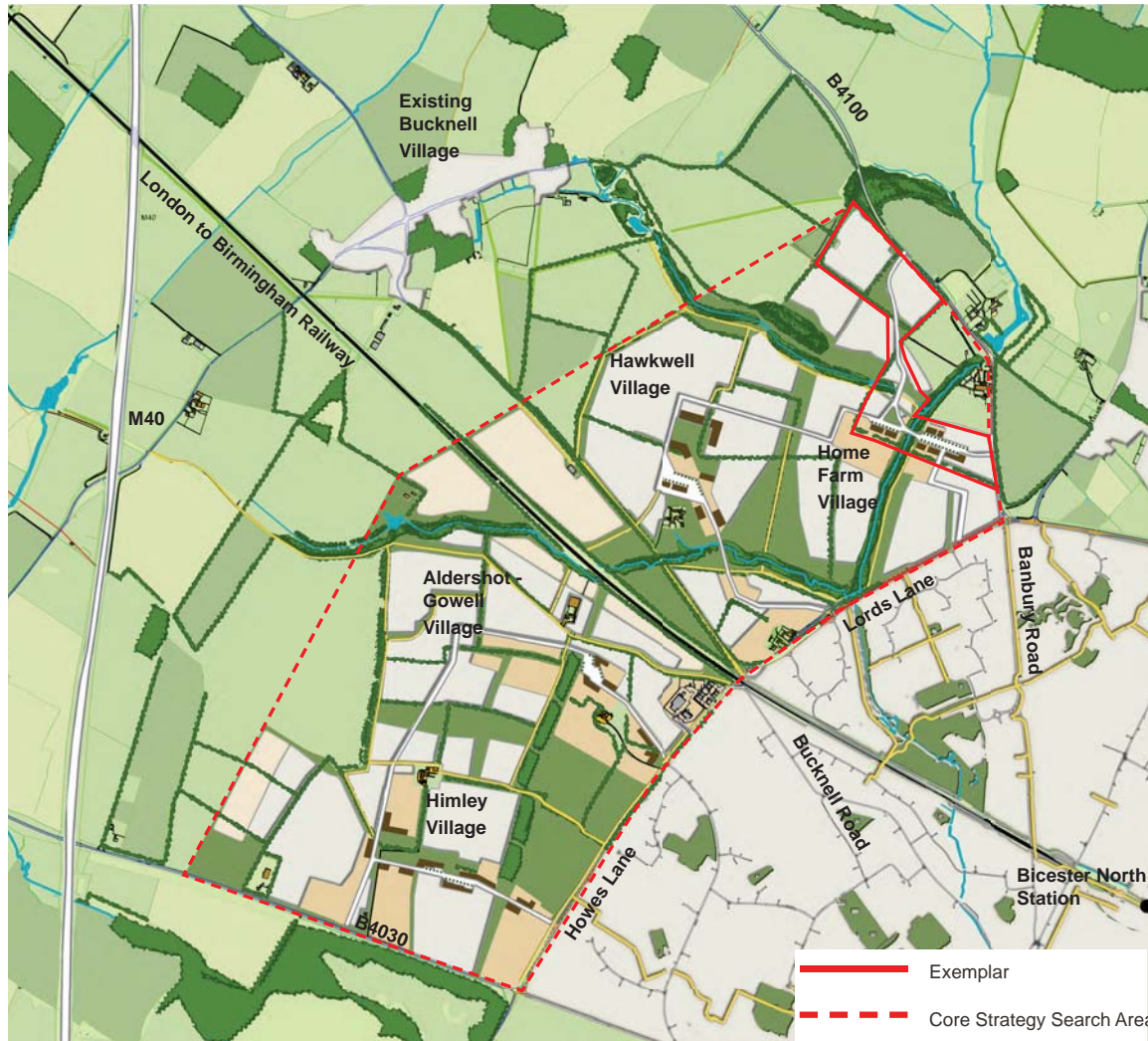
Building on existing transport

Infrastructure

- THE RING ROAD IS HUMANISED WITH NEW CROSSINGS, FRONTAGES, CYCLEWAYS AND ROAD ACCESS TO THE DEVELOPMENT FROM HOWES LANE LORDS LANE, MIDDLETON STONEY ROAD AND BANBURY ROAD
- A NEW CROSSING OVER/UNDER RAIL CREATES A NETWORK OF ROUTES FOR PEDESTRIANS AND CYCLISTS
- NEW SHARED USE OFF-ROAD FOOT AND CYCLE PATHS WILL MAKE BICESTER THE BEST PLACE ON TWO WHEELS
- EXISTING TRACKS AND FOOTPATHS BECOME NEW CONNECTORS TO SURROUNDINGS
- BUILD ON EXISTING BUS AND PUBLIC TRANSPORT INFRASTRUCTURE REDUCING THE RELIANCE ON THE PRIVATE CAR

Growing the social infrastructure

- A NEW ECO-DEVELOPMENT EXTENDING THE TOWN WITH 5000 ZERO CARBON HOMES GROWN AROUND EXISTING FARMSTEADS
- A NEW SECONDARY SCHOOL LOCATED TO MAXIMISE CATCHMENT AREA AND WITH PROXIMITY TO SPORT PITCHES AND SPORT AND FITNESS CENTRE
- A LEARNING AND INNOVATION CAMPUS LINKED TO OXFORD AND CHERWELL VALLEY COLLEGE LOCATED WITH GOOD ACCESSIBILITY TO BICESTER TOWN STATION
- SEVERAL POSSIBLE LOCATIONS ARE PROVIDED FOR WOODLAND CEMETERIES
- RENEWABLE ENERGY PRODUCTION IS HARNESSSED LOCALLY INCLUDING PV SOLAR ARRAY
- EXISTING BUSINESSES RETAINED AND NEW EMPLOYMENT CREATED AND DISPERSED ACROSS ALL LOCAL CENTRES



“Working with the laws of nature” - landscape as the primary infrastructure

- EXISTING HEDGEROW, STREAM, POND AND WOODLAND HABITATS CONSERVED, ENHANCED AND INTEGRATED INTO GREEN INFRASTRUCTURE AND THE NEW DEVELOPMENT
- 40% OF THE DEVELOPMENT WILL BE GREEN INFRASTRUCTURE INCREASING THE BIODIVERSITY OF THE AREA
- ALLOTMENTS WILL MAKE LOCALLY GROWN FOOD ACCESSIBLE TO LOCAL COMMUNITIES AND EDUCATE CHILDREN AND YOUNG PEOPLE ABOUT THEIR LOCAL ENVIRONMENT
- LANDSCAPE AMENITY SPACE, WILL PROVIDE OPEN RECREATION AREA TO ENSURE THAT EVERYONE HAS ACCESS TO THE NATURAL ENVIRONMENT

Four new villages become the focus for the social and cultural infrastructure

- EXISTING FARM BUILDINGS ARE RETAINED AND BECOME THE HEART AROUND WHICH THE NEW VILLAGE COMMUNITY CENTRES ARE GROWN
- LOCAL CENTRES ARE FOCUSED ON VILLAGE GREENS AND MARKET SQUARES WITH PRIMARY SCHOOLS, ECO BUSINESS CENTRES, ECO PUBS, VILLAGE STORES, SHOPS, NURSERIES AND HEALTH CENTRES
- COMMUNITY AND SHOPPING FACILITIES LOCATED CLOSE TO HOUSING WILL MAKE LOCAL CENTRES INTO THE DESTINATION FOR THE LOCAL COMMUNITIES
- THE CHARACTER OF THE LAYOUT AND PUBLIC OPEN SPACE IN THE NEW VILLAGES IS BASED ON SIMILAR SIZE AND SCALE OF VILLAGES IN THE SURROUNDING OXFORDSHIRE AREA

3 SITE CONSTRAINTS

Constraints

Location

The NW Bicester eco development site is farmland located on the north west of the town and outside the existing ring road A 4095. The site perimeters are approximately 1.5km from the town centre and 0.5km from the villages of Bucknell and Caversfield. The site is surrounded by roads on three sides and is crossed in the middle from north west to south east by the railway, Bucknell Road and a bridle path.

Site area

The search area identified for the NW Bicester eco development in the core strategy is 417 hectares. The proposed development area is 366 hectares which excludes an area identified as retained farmland

Parish Boundries

The site is located within four parish boundaries, Bucknell, Caversfield, Bicester and Chesterton

Boundaries and adjacent context

South east to Ring Road A4095

The south east site boundary of approximately 2.5km is formed by the A4095 Ring Road in part Howes Lane and part Lords Lane. The site is adjacent to existing residential areas and Bure Park. The existing residential areas have a mix of social and community facilities with connections to the town centre by foot and cycle paths.

South east to Lords Lane

The part of site facing Lords Lane extends for approximately 1km from the railway bridge crossing and Bucknell Road to the Banbury Road roundabout to the north. There are three existing access roads to the existing Bure Park residential area to the east of Lords Lane. A continuous footpath and cycle path is provided on the south east side of Lords Lane within landscape screening between the road and residential area. The west of Lords Lane are hedgerows concealing the existing farms and an existing access lane to Lords Farm.

South east to Howes Lane

The part of the site fronting Howes Lane extends for approximately 1.5km from the junction with Middleton Stoney Road in the south to the railway bridge crossing and Bucknell Road on the north. There is a single existing access road to the residential area to the south east and the majority of the existing housing has rear gardens facing the ring road. On the north west side of Howes Lane there are hedgerows screening the farmland and an existing industrial estate with an access to Howes Lane approximately south 200m from the junction with Bucknell Road. There is a bridle path crossing the site from west to east which is accessed from Howes Lane approximately 50m from the junction with Bucknell Road.

South west to Middleton Stoney Road

The southwestern boundary of the site is formed by the Middleton Stoney Road B 4010 which runs from west to east into Bicester town centre. On the south side of the road is estate woodland. Both sides of the road are enclosed with mature hedgerows. On the north side are the existing access lane to Himley Farm and--- house. An existing high level electricity cable crosses the site and runs approximately parallel to Middleton Stoney Road.

North East to Banbury Road and Caversfield

The northern eastern boundary of the site is formed by the Banbury Road B4100 which runs from north to south into Bicester town centre. On the north east side of the road the historic Caversfield Lodge and St Laurence Church are set within woodland estate landscape and bounded by stone walls. On the west of Banbury Road is located Home Farm with existing hedgerow and farm buildings fronting the road. To the north of the farm the site is open to view from the road with an existing farm access lane. Further north the existing hedgerows conceal the site and merge with the woodland to the north. Further east approximately 0.75km is the village of Caversfield linked with an existing lane adjacent to the Home Farm.

North West to open farmland

The north western boundary between Middleton Stoney Road and the railway is open farmland subdivided by existing field boundary and hedgerows and wherever possible these will define the proposed western extent of the development. The existing bridle path crosses into the site through the western boundary alongside a stream flowing from west to east. The existing Crowmarsh farm which is adjacent to the site to the north is accessed by a farm lane which crosses over the railway towards Bucknell Road. An existing high level electricity cable crosses the site and runs approximately parallel to the north west boundary 200m within the site. Further to the west is the M40 which run north south approximately 300m to 1200m from the site perimeter.

North to open farmland and Bucknell

The north boundary between the railway and Banbury Road is open farmland subdivided by existing hedgerows and wherever possible these will define the proposed northern extent of the development. Further to the north is the existing village of Bucknell sited along a village lane of 1km length running across a ridge running south west to north east approx and approximately 0.75km from the perimeter of the site. The north boundary is crossed by Bucknell Road running from north west to south east into the centre of Bicester. There is a stream crossing the boundary flowing towards the south east. Existing public footpaths from Bucknell cross the fields to the north of the site and join the surrounding roads without crossing the site.

Railway embankment

The existing railway between London and Birmingham crosses the site in a north west to south east direction and subdivides the site into approximately

two equal halves. The railway is on an embankment approximately 6m high on the south perimeter of the site as the railway crosses over Bucknell Road and Lords Lane with steel girder bridges. The railway embankment is landscaped with some trees on lower slopes. Midway across the width of the site the railway crosses an existing stream which has been diverted into a culvert. The railway changes from embankment to approximately level with the site at the north perimeter because of the sloping land and soon becomes a cutting as it crosses under the Bucknell village lane and M40.

Bucknell Road

Bucknell Road crosses the middle of the site from north west to south east into and is initially parallel to the railway, then converging to create a wedge shape piece of land and finally crossing the ring road and under the railway towards centre of Bicester. There is an access lane from Bucknell Road to the existing Hawkwell Farm in the middle of the site and the stream crossing under the road.

Topography and Natural features

Contours and Gradients

The site is sloping generally from north west to south east with a height above ordnance datum at the highest from approximately 95m AOD to the lowest at 75m AOD. The general slope of approx 20m in 2km creating average gradients of 1 in 100. There are streams which cross the site flowing from west to east to join the River Bure which crosses the eastern part of the site flowing south towards Bicester town centre. The increased slopes adjacent the streams create local gradients of up to 1 in 15.

Water Courses

The overlay of the streams subdividing the general slopes creates distinctive characters in different parts of the site. The northern part of the site is subdivided by streams into 4 distinct parts, the largest area is a regular shape of approximately half the area, whilst the remaining three areas are wedge shaped formed against the existing routes. The southern part of the site is more generally sloping to the south and less influenced by the stream topography with a stream crossing the north corner and a stream emerging in the east to flow south under Howes Lane. In the earliest strip field pattern of farming the streams were generally used to access the fields. The streams provide important habitats and are the location of most of the larger groupings of trees which add to the character of the site. The streams and associated habitat will therefore be a significant factor to be taken into account and a defining feature and opportunities to create character in the masterplan layouts.

Hedgerows

There are approximately 28km of existing hedgerows enclosing farming land in field sizes from approximately 3 to 10 hectares. The ecology and habitat survey has established that whilst there is a range of hedgerow quality from species rich and species poor, the hedgerows are the most significant contributor to the biodiversity of the site.

Woodlands

There are areas of existing species rich woodland in the masterplan site. In the north there is an area of 2 hectares adjacent to the stream and a disused quarry. In the centre of the site there is an area 0.5 hectare of woodland close to Hawkwell Farm and Bucknell Road. Both the above woodlands are large groups of trees adjacent the streams combining with additional trees in smaller grouped along their length. Because the streams were part of the historic routes to strip fields, these woods will both reflect the original settlement pattern and are established corridors of biodiversity. In the south of the site there is a woodland belt of approx 3.5 hectare which has been planted in recent years to screen Himley Farm. The woodland has some existing value and is an opportunity,

Adjacent the site there are areas of existing woodlands.

- Caversfield Lodge has a large area of woodland to the north east.
- Woodland To the south of B4030
- Woodland to the north adjacent to Bucknell

There are opportunities to create linkages between areas of woodland through landscape corridors in the masterplan.

Existing Farms

There are five existing farms in the site.

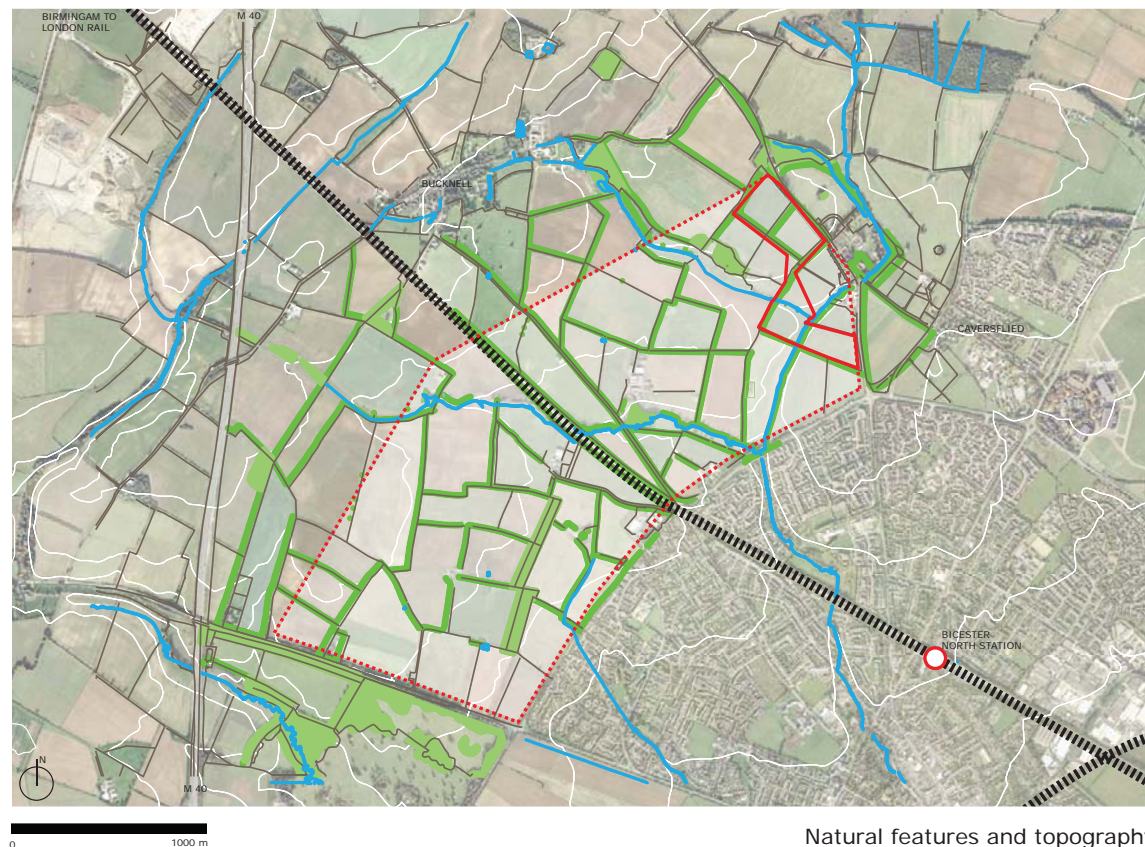
Home Farm
Hawkwell Farm
Lords Farm
Aldershoth Farm
Gowell Farm
Himley Farm

Existing Farm buildings

- The existing farm buildings will be retained to provide a major contribution to the diversity of the uses and character in the masterplan and will be subject of further landscape and design character assessment studies.
- Farm buildings provide existing employment e.g. Home Farm business units

Overhead Electrical Cable

The site is crossed by an overhead electrical cable.



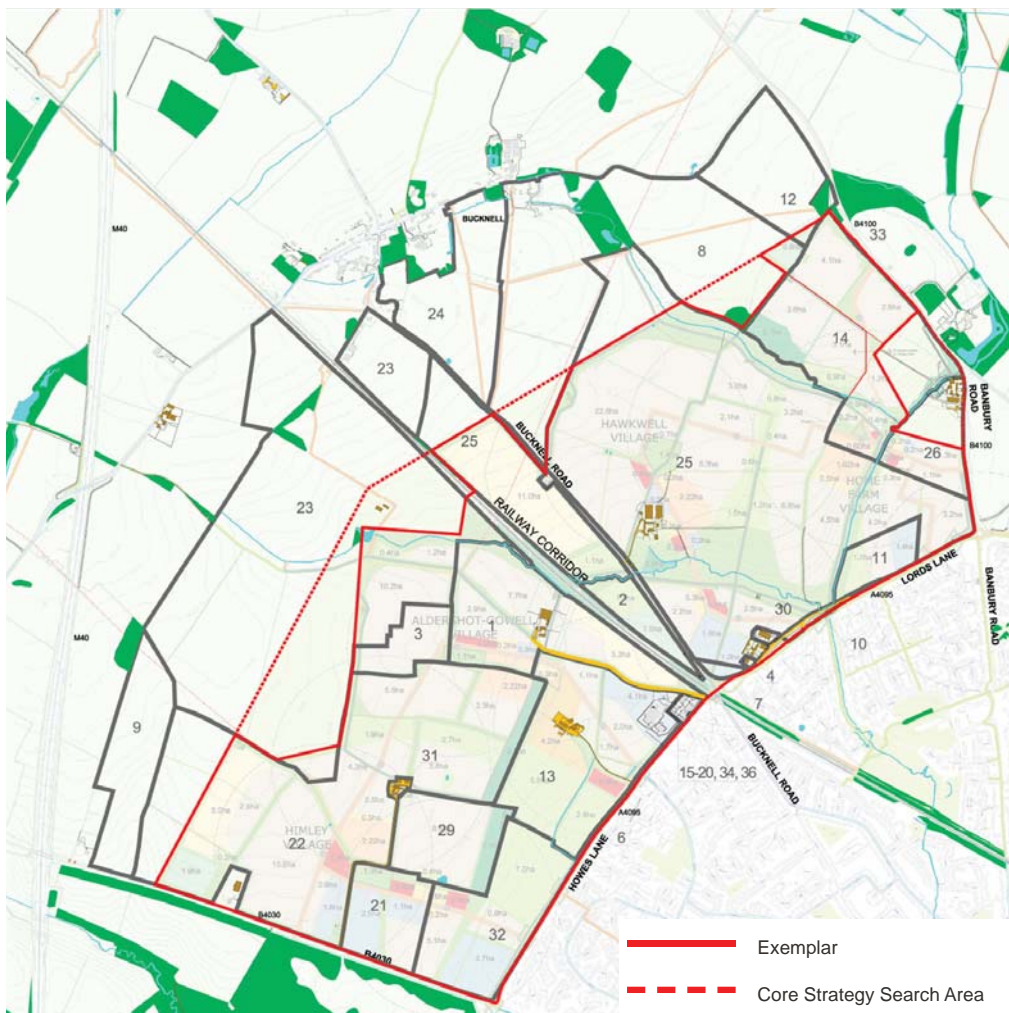
Natural features and topography

— Exemplar

- - - Core Strategy Search Area

NW Bicester Eco-development
Preliminary masterplan studies 27-08-10 Version 4

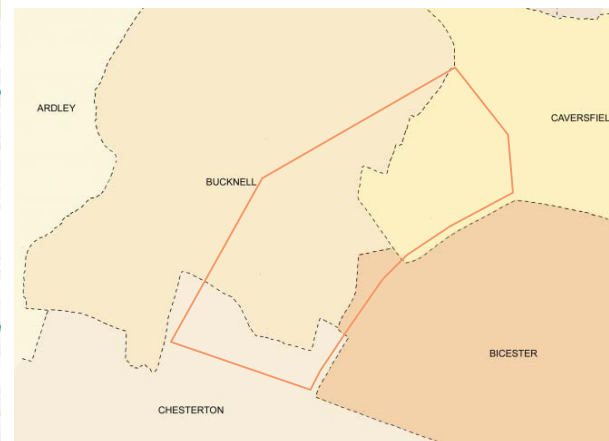
FARRELLS



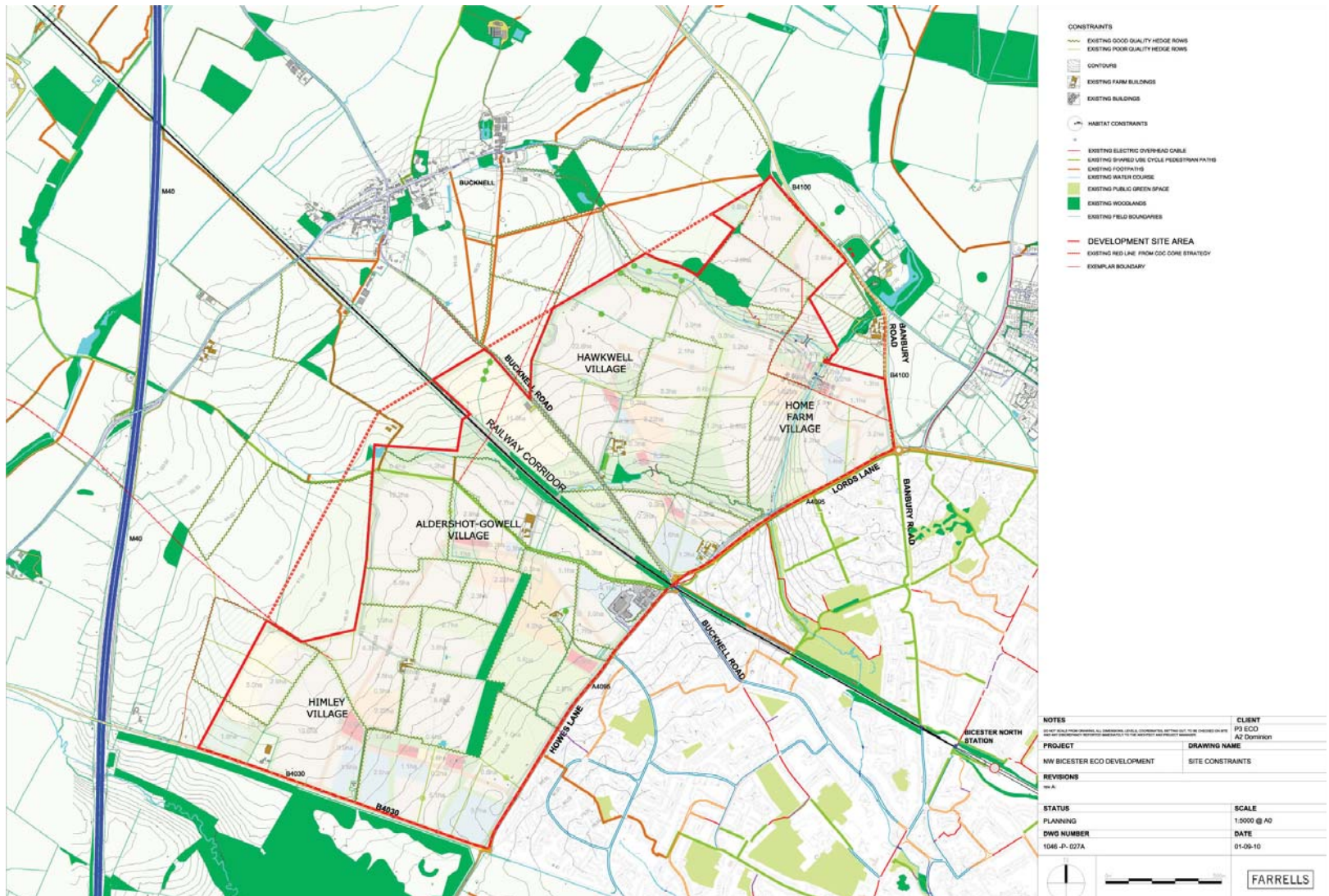
LAND OWNERSHIP



CORE STRATEGY SEARCH AREA



PARISH BOUNDARIES



4 DEVELOPMENT

Development

Housing

The total residential development area will accommodate 5000 homes

Population 2.6 People Per Home Average

Mix - 30% Affordable 70 % Private

Cycle storage in houses

It will be possible to store a bicycle (or several bikes) in a place that is totally convenient in all dwellings and with secure fixings if outside which helps to remove any perception barriers to cycling.

Modal shift from cars

The layout encourages modal shift by providing convenient, safe and well designed pedestrian and cycle infrastructure. The layout also increases the time it takes to get from the house into the car in order to increase the perception that it's simpler not to drive e.g. the car is parked and routed in the opposite direction to the most direct route to where they are going.

Employment

The employment figures will be supported by the employment strategy which will demonstrate the potential for creating jobs in Bicester. This study is in progress and will be issued in due course.

Creation of employment is a core part of the NW Bicester Eco Development. Not only does it reduce the need for residents to commute it promotes a thriving local community and it is a chance to use the NW Bicester Eco Development to help Bicester re-position itself as an economic centre in its own right. Over the development of the Masterplan, we will aim to provide a minimum of one job per home and work to support a new eco economy for the town.

The Masterplan will provide a range of job opportunities including but not restricted to:

- Construction – niche training and skills in eco construction for NW Bicester and beyond
- Retail and catering
- Teaching and support staff
- Maintenance and other jobs to support the development
- Accommodation for new and existing businesses in an 'Eco Business Centre'
- By supporting home working and 'work hubs' which provide communal office facilities

To kick start the new 'Eco Economy' for Bicester and to position it as the place to go for eco technology and lifestyles, the masterplan will support:

- P3Eco's plans to establish a new Research and Innovation Centre in discussion with Oxford Brookes University, the Oxford Institute for Sustainable Development, Oxford Innovation and BioRegional
- New courses at Oxford and Cherwell Valley College in Bicester
- Requirements on contractors to prioritise local employment and local suppliers
- Networks for local businesses

B2 Industrial

Approx 7 hectares of the masterplan area are identified for B2 industrial use which will be suitable for a factory for timber frame production and other manufacturing businesses.

The land for B2 industrial use employment is evenly distributed across the masterplan. B2 industrial use is located south of the railway in Himley Village along the B4030, in Gowell Village adjacent to the existing business area. North of the railway B2 industrial use is located adjacent to Lords farm and Hawkwell village.

Social and Community

Primary schools

- The primary school sites are a maximum area of 2.22ha.
- School catchment areas maximized
- Ensure that through design no one is more than 800m distance from a primary schools or the neighbourhood centres

Balance of housing to primary schools

- The areas of housing have been adjusted to balance the number of houses to approx 2600 north of railway and 2400 south of the railway.

Co-location of community uses

- The primary school sites have community land use located adjacent to allow co-location of facilities.

Secondary school and further education

- A new secondary school is located to maximise catchment area and with proximity to sport pitches and sport and fitness centre
- A location for a learning and innovation campus is provided linked to Oxford and Cherwell Valley College located with good accessibility to Bicester Town station

Cemetery Provision

4ha site required for cemetery and green burial.
(10 07 06 Draft Core Strategy Strategic sites.doc)

Learning & Innovation centre

The learning centre is located to the south of the railway and would be linked to Oxford and Cherwell Valley Campus and will be described further in the employment strategy.

Information Technology

- Provide fibre optic network to the development, which will in the future enable broadband speeds of 100MB.
- Provide SMART metering relative to building performance
- Enable the integration of Real Time Passenger Information relative to public transport
- Create a Bicester network portal for use by the community, schools and business

Waste and Resources Plan

70% and 80% recycling targets

Reduce and Reuse

Community reuse centre repair, training and volunteering

Community composting area

Waste education / case studies on waste related behaviour change / educational resources on waste

Most effective reuse measures being internet based.

Energy Strategy

The energy strategy is in progress and Hyder will report on this separately. Increasing the PV on the roofs makes tremendous sense at this time. The energy strategy seeks to devote the majority of roofs to PV.

Alternatively a PV array on the ground could provide over 1,300 MWh/ha/year (assuming 50% of land is covered in panels, assuming 0.75kWh/m2/day)

Total electricity demand for all 5,000 homes will be in the order of 14,000 MWh/year (assuming 3 units/person/day)

Therefore residential electricity demand could be met with 11 hectares - no fuel deliveries, just some cleaning and security issues to be resolved. This represents a significant capital investment but good returns with Feed in Tariffs

Proposed Solar Array

The areas identified along the railway are considered an appropriate location for energy production - visual impacts on the farmed landscape are already constrained by the railway infrastructure and certain types of energy production such as solar array could provide a positive visual presence at the gateway to the eco development.

SUDS

The green infrastructure will include SUDS. Hyder surface water modelling is in progress and Hyder will report on this separately. SUDS be incorporated into the development and other measures to conserve and re-use water will be developed including grey water harvesting (re-using bath and shower water for example) and any other innovative and feasible approaches that are identified.

Proposed Masterplan - Land Uses

4

BICESTER ECO MASTERPLAN LAND USES

ALL ACCORDING TO MASERPLAN 1046(sk) 009 REV J

AREAS	EMPLOYMENT	NON RES GIA m2	Houses	SITE AREA (ha)	NOTES	TOTAL SITE AREA (ha)
housing			4999	147.70	(based on density 34/ha & population 2.6/house)	147.7
secondary school	75			4.20	2-3 CLASSES / YEAR	4.2
primary school	100			8.88	2 CLASSES / YEAR	8.9
eco business centre	560	14000.00		2.80	ASSUMED based on one job / 25m²	
existing business centre	300	15000.00		3.00	ASSUMED based on one job / 50m²	
learning/ Innovation campus	210	20000.00		3.50	REFER TO HIMLEY	
care home	318	16400.00		2.00	based on exemplar assumptions	
B2 industrial	680	34000.00		6.80		18.1
proposed energy centre	42			20.00	ASSUMED EMPLOYMENT 1 /10000m²	20.0
community hall/multi-faith centre	20	1940.00		0.49	250 people hall	
doctor	34	222.00		0.05	1800patients / g	
dentist	16	125.00		0.02	3000patients / dentist [based on UK statistics]	
other eg library, visitors centre	35	3500.00		1.57		
nursery	20	2000		0.55		2.7
retail	229	5733.33		1.72	based on co-op figures for exemplar	
public house	49	1751.33		0.68	based on exemplar	
sports centre	53	1333.33		0.40	excluding outdoor playing fields	
fitness centre	78	2475.00		0.90	excluding outdoor playing fields	
other retail	40	1000.00		0.30		4.0
Exsiting woodlands						
woodland cemetery				4.20		4.2
public amenity and recreation greenspace						
village centre						
perimeter buffer						
stream and habitat						
hedgerow buffer						
Existing Farms						
allotment						
outdoor sports provision						
private amenity and recreation greenspace						
THROUGH ROADS				14.00		14.0
EXISTING INFRASTRUCTURE				7.9		7.9
TOTAL	2860	119480		231.65		231.7

