

T
F
A
R
D

HIMLEY VILLAGE
BICESTER
DESIGN
CODE

Prepared by Pegasus Group on behalf of Countryside Properties plc
May 2021 | P20-3215 Revision A

CONTENTS

PAGE 4	1	PAGE 8	2	PAGE 16	3
INTRODUCTION		SUSTAINABILITY STRATEGY		PLANNING POLICY	
PAGE 22	4	PAGE 52	5	PAGE 56	6
CONTEXTUAL ANALYSIS		DESIGN PRINCIPLES		DESIGN CODING	
		PAGE 137	7		
		SUMMARY AND CONCLUSIONS			

Revision A: Amendments following pre-application submission (28.05.21)



Pegasus Group Ltd
5 The Priory
Old London Road
Canwell
Sutton Coldfield
B75 5SH
www.pegasusgroup.co.uk | T 0121 308 9570 | F 0121 323 2215

Prepared by Pegasus Design
Pegasus Design is part of Pegasus Group Ltd
Prepared on behalf of Countryside Properties Plc
May 2021 Project code P20-3215. Document Ref: P20-2315_27
Contact: Stuart Ward

COPYRIGHT The contents of this document must not be copied or reproduced in whole or in part without the written consent of Pegasus Planning Group Ltd. Crown copyright. All rights reserved. Licence number 100042093.

THIS DOCUMENT IS DESIGNED TO BE VIEWED AS A3 DOUBLE SIDED

1

INTRODUCTION

PURPOSE OF THE DOCUMENT

- 1.1 This Design Code has been prepared by Pegasus Design (part of the Pegasus Group) on behalf of Countryside Properties Plc.
- 1.2 This document has been produced in pursuant of the Outline Planning Permission ref. 14/02121/OUT for the Proposed Himley Village North West Bicester, Middleton Stoney Road, Bicester, Oxfordshire.
- 1.3 The proposals include:
 - Development to provide up to 1,700 residential dwellings (Class C3);
 - Retirement village (Class C2);
 - Flexible commercial floorspace (Classes A1, A2, A3, A4, A5, B1, C1 and D1),
 - Social and community facilities (Class D1),
 - Land to accommodate one energy centre; and
 - Land to accommodate one new primary school (up to 2FE) (Class D1).

- 1.4 This statement has been prepared in accordance with Condition 8 of the Planning Permission, which states:

“Prior to the submission of the first reserved matters application (other than on the area annotated as ‘Other Uses’ on Land Use Parameter Plan 4 drawing number 592-PL-103 Rev K where a Masterplan has been approved for that area pursuant to condition 9), a site wide Masterplan and Design Code shall be submitted to and approved in writing by the Local Planning Authority...”

DOCUMENT FORMAT

- 1.5 In response this document shall set out the urban design approach for the site to include a regulating plan and supporting information to include:
 - Details to provide continuity with adjacent development;
 - A detailed masterplan for the area fronting the Middleton Stoney Road annotated as ‘Other Uses’ on Land Use Parameter Plan 4 drawing number 592-PL-103 Rev K showing the location of each of the land uses;
 - Key approaches to deliver sustainable development that as a minimum meets the Eco Town PPS standards;
 - The identification of Character areas and for each, the built form and green spaces to include their key features, density, block layout and principles, structure and permeability;
 - Movement network and principles of streetscape including access locations, hierarchy, street type, form and design, cross sections, surface materials and landscaping, cycleways, footways, crossing points, street furniture, bus routes and stop locations;
 - Parking strategy including car and cycle parking standards and approach for residential and non-residential uses
 - Public realm;
 - Building heights, scale, form, design features materials, architectural details and frontages;
 - Boundary treatments;
 - Key views, vistas, landmarks;
 - Landscape character, landscape types, green infrastructure, amenity spaces, public open space, play areas including their distribution, existing trees and retained hedges and biodiversity measures
 - Provision and details of buffers to retained hedgerows and dark corridors for biodiversity;
 - Legibility and diversity of built form and landscape
 - Landscape and boundary treatment principles for the buffer surrounding Himley Farm;
 - Drainage including sustainable urban drainage features; and
 - Adaptability.

- 1.6 In order to meet the general requirements of Design Code writing, this document is structured as follows:

Section 1: INTRODUCTION - outlines the purpose of the document.

Section 2: SUSTAINABILITY STRATEGY - sets out the key approaches to deliver sustainable development that (as a minimum) meets the PPS standards;

Section 3: PLANNING POLICY - sets out some of the key planning policies that directly affect the development of the site.

Section 4: CONTEXTUAL ANALYSIS - considers the site and its surroundings in terms of the physical, social and economic context and identifies the site’s constraints and opportunities.

Section 5: DESIGN PRINCIPLES - sets out a series of key design principles that will shape the form of development.

Section 6: DESIGN CODING - sets out the parameters for development, including: uses and amount of development proposed; the location of built character areas taking design cues from the local context; the scale, height and massing of buildings; the layout and location of key buildings and vistas; access arrangements and movement network; and the landscape, ecology and drainage proposals.

Section 7: SUMMARY AND CONCLUSIONS - provides a summary of the Design Code.

THE PROPOSALS

- 1.7 The proposals comprise of:

- Residential development comprising of up to 1700 dwellings;
- a retirement village;
- flexible commercial floorspace;
- social and community facilities;
- land to accommodate one energy centre;
- land to accommodate one new primary school;
- landscaped public open space incorporating sustainable drainage features and areas of play;
- provision for affordable housing;
- provision of new vehicular, cycle and pedestrian access routes, infrastructure and other operations; and
- new access points from the Middleton Stoney Road.

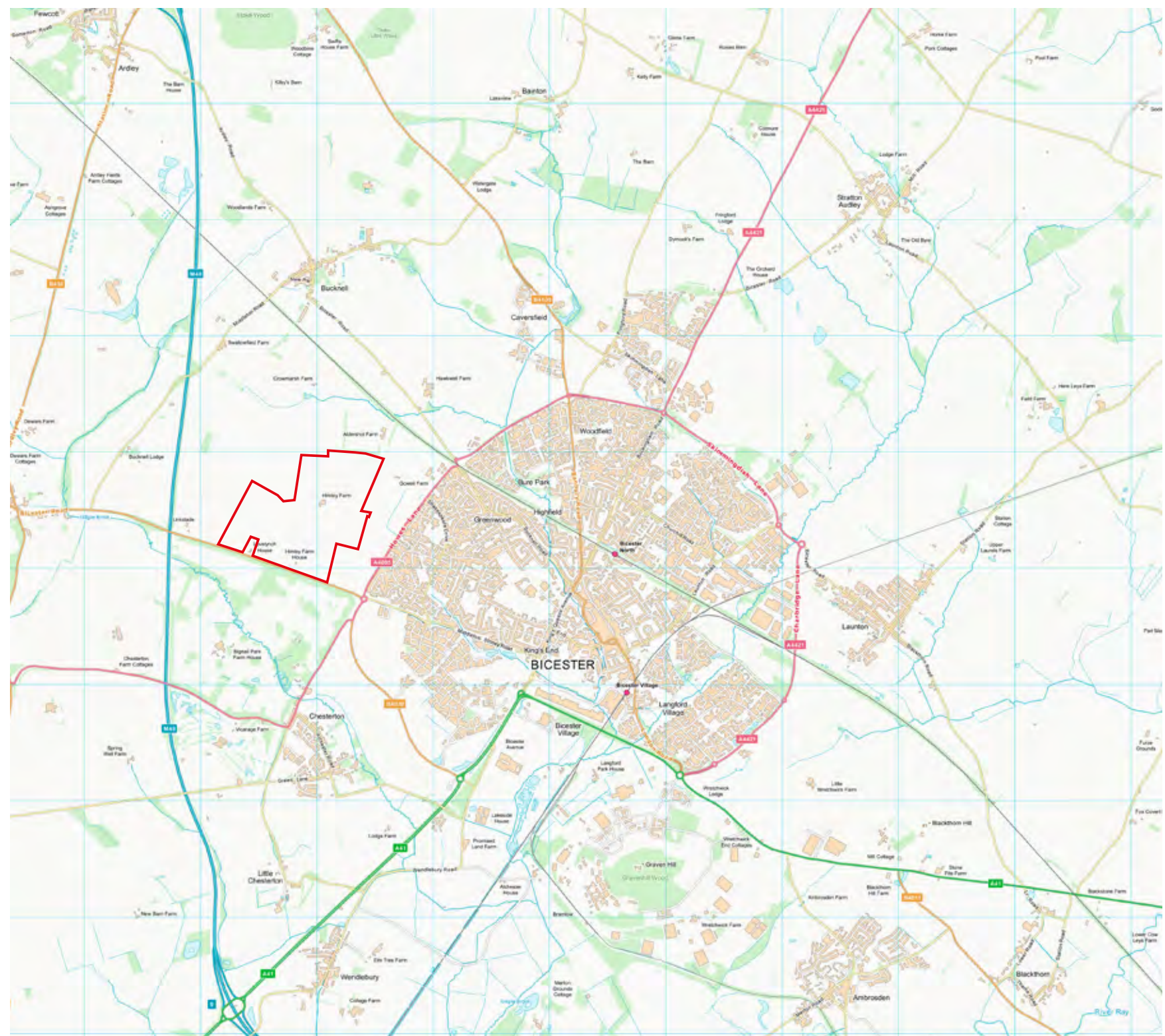
Design Vision

To create a place where people choose to live, work and to spend their time in sustainable ways...Taking a ‘fabric first’ approach to building design; maximising the performance of the components and materials; embracing green technologies; and ensuring green infrastructure, biodiversity, water, flood and waste issues are managed in an environmentally sustainable way...Helping to lead the way in achieving a true zero carbon development.

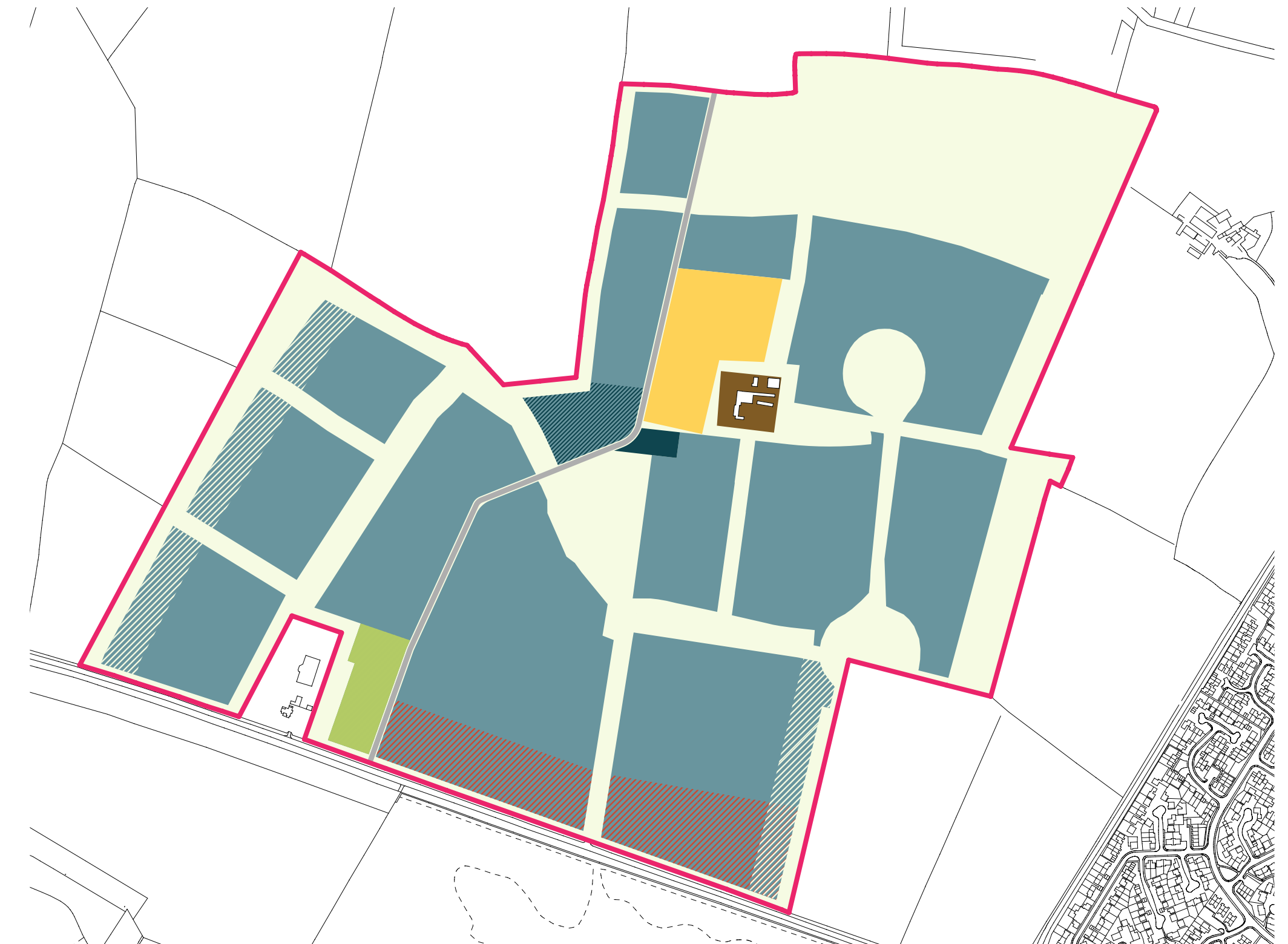
SITE SETTING AND LOCATION

- 1.8 The site is located approximately 1.4 mile / 2.3 km north west of Bicester town centre. The site is formed of open arable land/ fields separated by linked hedgerows.
- 1.9 The site to east boundary is bounded two strips of woodland planting. To the south there is an area of mature dense woodland fronting onto Middleton Stoney Road, which forms part of the Bignell Park estate.
- 1.10 The site has a central location within the North West Bicester Masterplan produced by Cherwell District Council.

Site Location | Not To Scale



Land Use Parameter Plan | Not to scale



SUSTAINABILITY STRATEGY

A holistically sustainable, futureproofed, resilient, net zero carbon development that will achieve the highest levels of building performance. This will include buildings designed utilising passive design principles and low/zero carbon heating and power, on-site generation and storage of electricity, and the wide spread use of electric vehicle charging.

ENERGY AND CARBON EMISSIONS

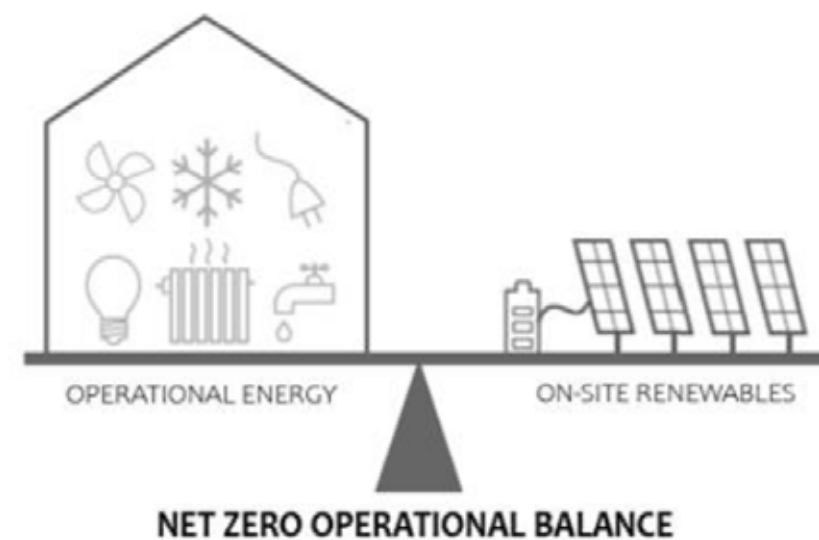
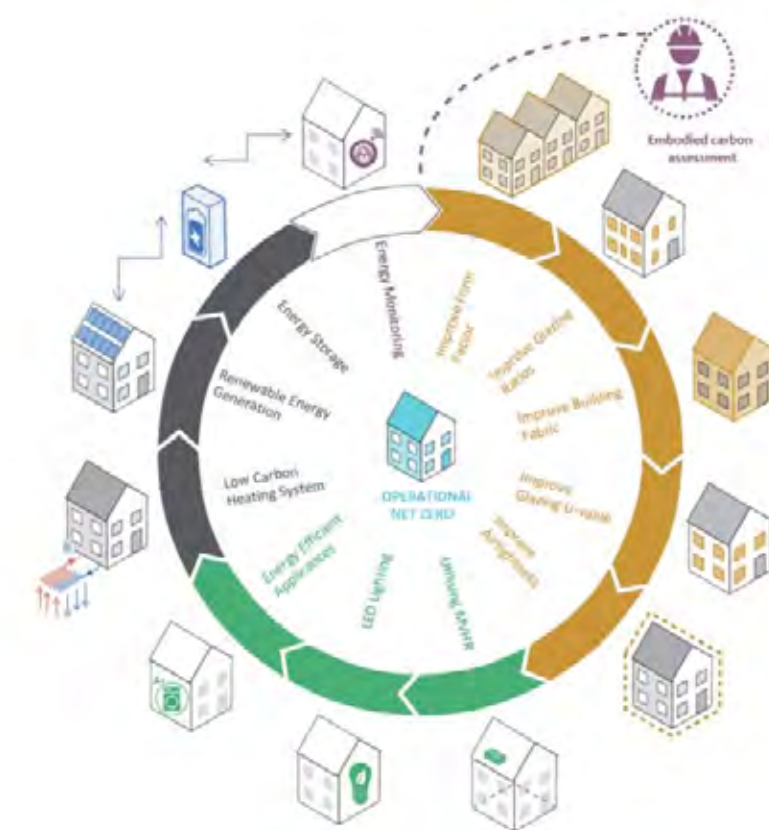
- The site will be designed to be 'net zero carbon' as defined in Policy Bicester 1 of the Cherwell Local Plan and the Eco Towns Planning Policy Statement (PPS). The definition of zero carbon in eco-towns is that over a year the net carbon dioxide emissions from all energy use within the building on the eco-town development as a whole are zero or below.
- The development will take a hierarchal approach to the reduction of carbon emissions as follows:
 - Be lean – reducing the demand for energy use through passive design
 - Be clean – supply energy efficiently through efficient building services, or heat networks (where powered by renewable or low carbon sources)
 - Be green – use renewable energy.

- All plot developers should work to the guidelines provided by LETI (London Energy Transformation Initiative) and UKGBC (UK Green Building Council) to achieve operational net zero balance:
 - This includes the use of low carbon heating systems from the outset of the design;
 - Individual heat pumps and/or communal energy centres (powered from renewable and/or low carbon technology not CHP);
 - Maximise on-site renewable electricity generation;
 - All development plots should utilise extensive roof mounted PV
 - Explore the use of site wide power infrastructure (microgrid)
 - Including energy (battery) storage to provide demand side response and power resilience.

To achieve net zero operational carbon, and to align itself with future Government policy, the development will be all-electric to benefit from the future renewables market and rapid decarbonisation of the national grid.

Building Design Standards for Achieving 'Net Zero'

- All buildings on site should be designed to be compatible with a 'net zero carbon' development, in order to achieve this, the following design standard should be adhered to. Aligning the residential parts of the development with the guidelines from LETI will also provide alignment with the UK Governments Future Homes Standard and interim Part L 2021.



Commercial offices

Operational energy

Implement the following indicative design measures:

Fabric U-values (W/m².K)

Walls	0.12 - 0.15
Floor	0.10 - 0.12
Roof	0.10 - 0.12
Windows	1.0 (triple glazing) - 1.2 (double glazing)
Doors	1.2

Fabric efficiency measures

Air tightness	<1 (m³/h.m²@50Pa)
Thermal bridging	0.04 (y-value)
G-value of glass	0.4 - 0.3

Power efficiency measures

Lighting power density	4.5 (W/m² peak NIA)
Lighting out of hours	0.5 (W/m² peak NIA)
Tenant power density	8 (W/m² peak NIA)
ICT loads	0.5 (W/m² peak NIA)
Small power out of hours 2	(W/m² peak NIA)

System efficiency measures

MVHR	90% (efficiency)
Heat pump SCoP	≥ 2.8
Chiller SEER	≥ 5.5
Central AHU SFP	1.5 - 1.2 W/s
A/C set points	20-26°C

Window areas guide (% of wall area)

North	25-40%
East	25-40%
South	25-40%
West	25-40%

Reduce energy consumption to:

Energy Use Intensity (EUI) in GJA, excluding renewable energy contribution

55 kWh/m².yr

Reduce space heating demand to:

15 kWh/m².yr

Balance daylight and overheating

Include external shading

Include operable windows and cross ventilation

Maximise renewables to generate the annual energy requirement for at least two floors of the development on-site

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Form factor of 1 - 2

Schools

Operational energy

Implement the following indicative design measures:

Fabric U-values (W/m².K)

Walls	0.13 - 0.15
Floor	0.09 - 0.12
Roof	0.10 - 0.12
Windows	1.0 (triple glazing)
Doors	1.2

Fabric efficiency measures

Air tightness	<1 (m³/h.m²@50Pa)
Thermal bridging	0.04 (y-value)
G-value of glass	0.5 - 0.4

Power efficiency measures

Lighting power density	4.5 (W/m² peak NIA)
Lighting out of hours	0.5 (W/m² peak NIA)
Small power out of hours 2	(W/m² peak NIA)

System efficiency measures

MVHR	90% (efficiency)
Heat pump SCoP	≥ 2.8
Central AHU SFP	1.5 - 1.2 W/s

Window areas guide (% of wall area)

North	15-25%
East	15-25%
South	15-25%
West	15-25%

Reduce energy consumption to:

Energy Use Intensity (EUI) in GJA, excluding renewable energy contribution

65 kWh/m².yr

Reduce space heating demand to:

15 kWh/m².yr

Balance daylight and overheating

Include external shading

Include operable windows and cross ventilation

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Form factor of 1 - 3

Medium and large scale housing

Operational energy

Implement the following indicative design measures:

Fabric U-values (W/m².K)

Walls	0.13 - 0.15
Floor	0.08 - 0.10
Roof	0.10 - 0.12
Exposed ceilings/floors	0.13 - 0.18
Windows	1.0 (triple glazing)
Doors	1.00

Efficiency measures

Air tightness	<1 (m³/h.m²@50Pa)
Thermal bridging	0.04 (y-value)
G-value of glass	0.6 - 0.5
MVHR	90% (efficiency) ≤2m (duct length from unit to external wall)

Window areas guide (% of wall area)

North	10-20%
East	10-15%
South	20-25%
West	10-15%

Reduce energy consumption to:

Energy Use Intensity (EUI) in GJA, excluding renewable energy contribution

35 kWh/m².yr

Reduce space heating demand to:

15 kWh/m².yr

Balance daylight and overheating

Include external shading

Include operable windows and cross ventilation

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Form factor of <0.8 - 1.5

Small scale housing

Operational energy

Implement the following indicative design measures:

Fabric U-values (W/m².K)

Walls	0.13 - 0.15
Floor	0.08 -

Passive Design Strategies

- 2.6 Passive design strategies are those which utilise building form, massing and glazing ratios to exploit the natural surroundings of the site to help reduce energy demand. The following should be implemented where possible:
- Optimising daylight through higher floor to ceiling heights or dual aspect buildings;
 - Control of solar gain to benefit from heat when required without causing overheating in summer via the size and depth of windows on different elevations [See Table 1];
 - Increased efficiency of building fabric, particularly the roof and walls to reduce heat loss;
 - Maximising air tightness to minimise the impacts of uncontrolled air infiltration; and
 - Strategic planting of trees to shelter lower level buildings from high winds and provide shading from the sun.

Heating and Power Infrastructure

- 2.7 As the development is to be all-electric, a site wide district heating system is not proposed and the heating strategy will be developed at an individual plot level to promote innovative design solutions. This could include the following:
- Air source heat pumps (ASHPs);
 - Ground source heat pumps (boreholes or slinky);
 - Direct electric heating powered by renewable sources;
 - Localised (dwelling level) or communal systems; and
 - Fifth generation ambient loop systems.
- 2.8 Where ASHPs are proposed, space should be allocated for these to be sited externally. Dwellings with pitched roofs will require designated space to the rear or side of the property to install the external heat pump units. This will need to provide sufficient space to allow air flow to the units. Acoustic shrouding can be included if required, however this should be designed in accordance with a specialist to ensure the performance of the heat pump is retained.

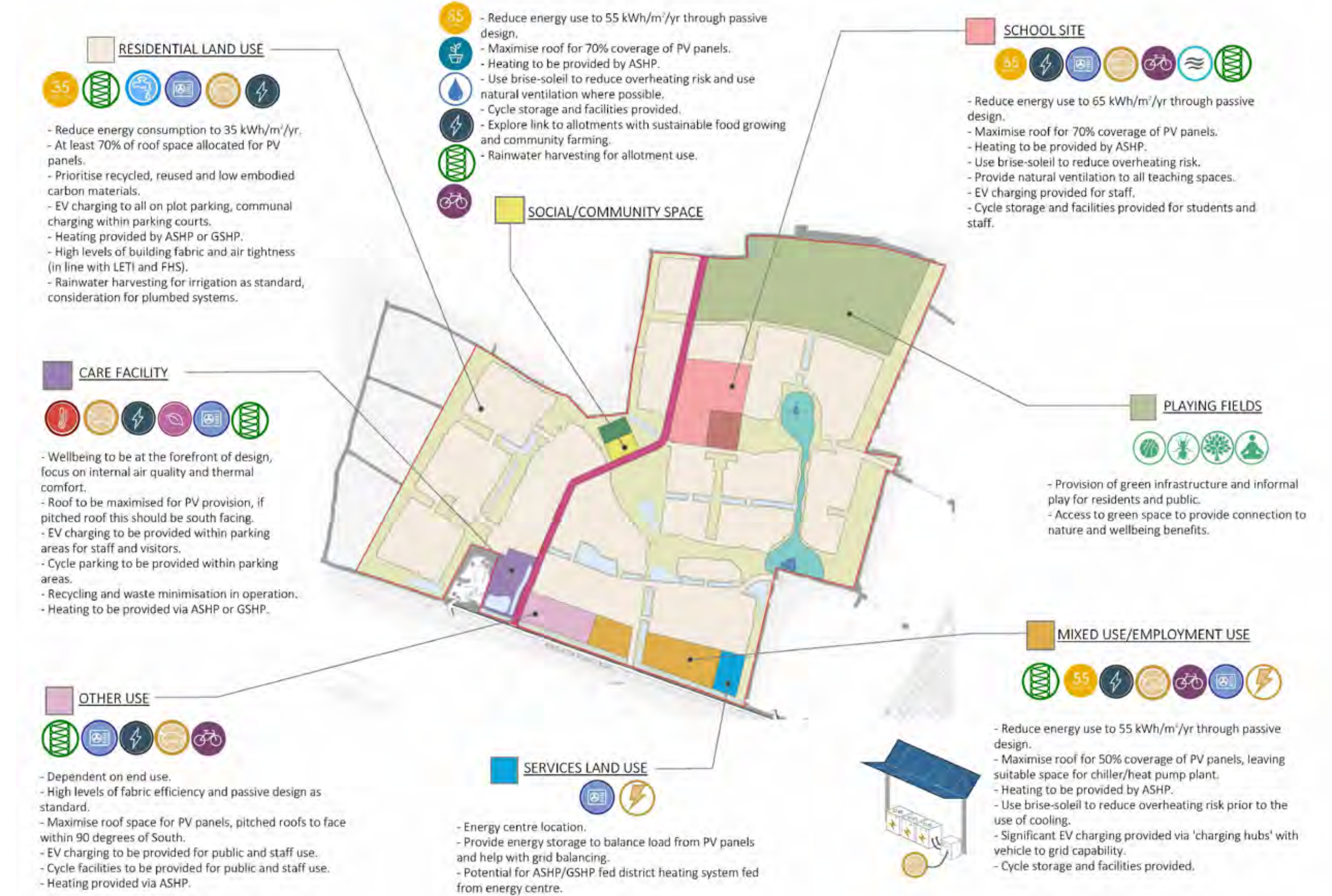


- 2.9 An Energy Storage and Generation centre is proposed to be included within the employment area of the masterplan. This will include battery storage linked to roof mounted PV panels to provide smart active network management, ensuring cost and carbon savings and a resilient power supply. This should be positioned within the Employment area and should incorporate green walls where possible to reduce visual impact. This could be incorporated to form part of one of the larger buildings within the employment use if necessary.
- 2.10 Electric vehicle (EV) charging points are to be included to all dwellings that have on-plot parking and garages. Residential parking spaces within parking courts and basement car parks are to include provision for 40% active charging spaces, with the remainder provided with passive provision for installation at a future date.
- 2.11 The car parks within the employment centre are to be provided with 'charging hubs' where EV charging can be connected to PV panels. EV charging centres will be equipped with demand side response such as 'turn down' and vehicle to grid capability.

Renewable Energy Infrastructure

- 2.12 Unless justified as part of a reserved matters application, roof mounted PV panels are to be maximised across the site. The following should be included:
- Flat roof PV target of at least 70% of their area;
 - Pitched roofs oriented southeast/south/southwest and fully covered in PV;
 - Garage and parking structures to also be included where structure allows.
- 2.13 To facilitate the installation of PV panels across the site, pitched roofs should have a pitch of 35 degrees to maximise electricity generation. Pitched roofs should be oriented within 90 degrees of due South (i.e South, Southwest or Southeast facing slopes). Flat roofs shall be designed with minimum parapet heights to reduce overshadowing and maximise suitable area for panel installation. Any deviation from the above will result in reduced PV output in line with the below:
- 2.14 Whilst roofs that are south, south-east and south-west facing should be given preference, PV panels should also be installed on east and west facing slopes where these cannot be avoided.

Tilt	Orientation from North						
	W 270°	240°	210°	S 180°	150°	120°	E 90°
0°	84	84	84	84	84	84	84
10°	84	87	90	91	90	87	84
20°	82	89	94	96	94	89	82
30°	81	90	97	100	97	90	81
40°	78	89	97	100	97	89	78
50°	74	87	95	98	95	87	74
60°	69	82	92	95	92	82	69
70°	64	77	86	89	86	77	64
80°	57	69	78	81	78	69	57
90°	50	61	68	71	68	61	50



Embodied Carbon

2.15 The embodied carbon of construction materials and processes should be considered at the outset of development to ensure a low embodied carbon development. Throughout the design process, consideration should be given to the following to reduce embodied carbon:

- Material efficiency review – are all materials that are proposed necessary and can the amount of materials used be rationalised;
- Reducing the weight of dead loads and reducing long spans to reduce material use;
- Minimising slab depths where possible;
- Identify highest contributor to embodied carbon (i.e. structure and envelope) and seek to make improvements rather than focussing on 'quick wins';
- Give consideration to modern methods of construction (MMC) and off-site, pre-fabricated elements;
- Consider reuse of existing structures where feasible;
- Use recycled aggregate and hardcore within hard landscaping and infrastructure where feasible; and
- Use locally sourced materials where possible to reduce emissions associated with transport and stimulate local economy.

2.16 Each building archetype should target the LETI 2020 target for embodied carbon emissions (a 40% improvement over the 'business as usual' case):

	Business as usual	2020 target
Residential	800 kgCO ₂ e/m ²	400-500 kgCO ₂ e/m ²
Commercial office	1000 kgCO ₂ e/m ²	500-600 kgCO ₂ e/m ²
School	1000 kgCO ₂ e/m ²	500-600 kgCO ₂ e/m ²

Transport and Mobility

2.17 The development will contribute to the modal shift in behaviour change by promoting the use of sustainable transport. Electric vehicle charging points will be widely deployed throughout the site (See Energy and Carbon section for further details). Electric vehicle (EV) charging points are to be included to all dwellings that have on-plot parking and garages. Residential parking spaces within parking courts and basement car parks are to include provision for 40% active charging spaces, with the remainder provided with passive provision for installation at a future date.

2.18 Plots which include non-residential uses are to investigate the implementation of car clubs to reduce trips by private car. The development will link into the wider public transport network within Bicester and the wider Eco Town, bus stops within the site should be provided with live updates to encourage public transport use.

2.19 The masterplan shows a number of off-road footpaths, plot developers should look to incorporate these into fitness trails or running loops to promote an active lifestyle.

Green Infrastructure and Biodiversity

2.20 Green and blue infrastructure provides many sustainability benefits - for full details of the Green Infrastructure and Biodiversity strategy see specific chapter.



Green Infrastructure and Biodiversity

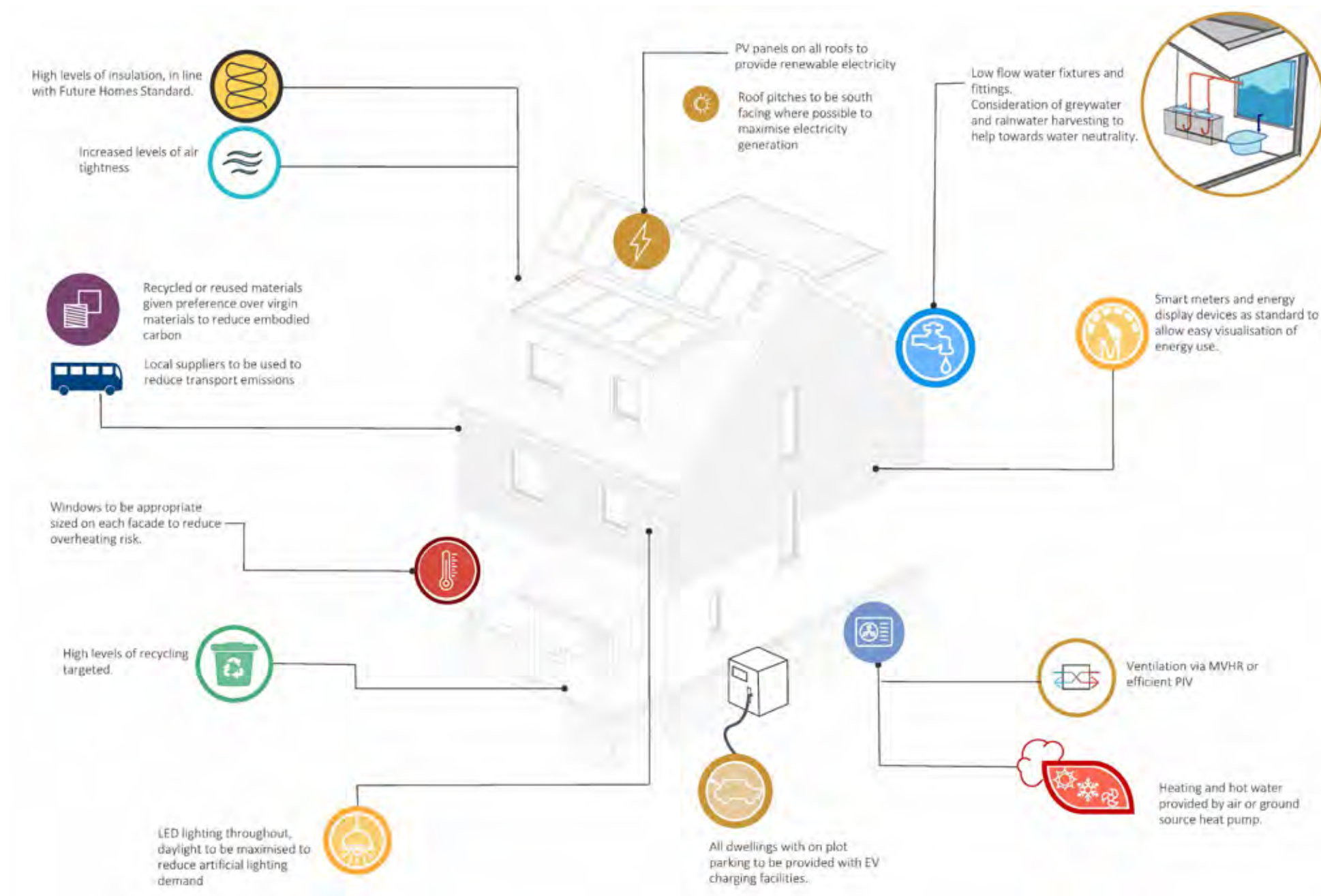
Climate Resilience

1.21 The development will be designed to be resilient to and appropriate for climate change. The design will seek to minimise future vulnerability in a changing climate, and with both mitigation and adaptation in mind.

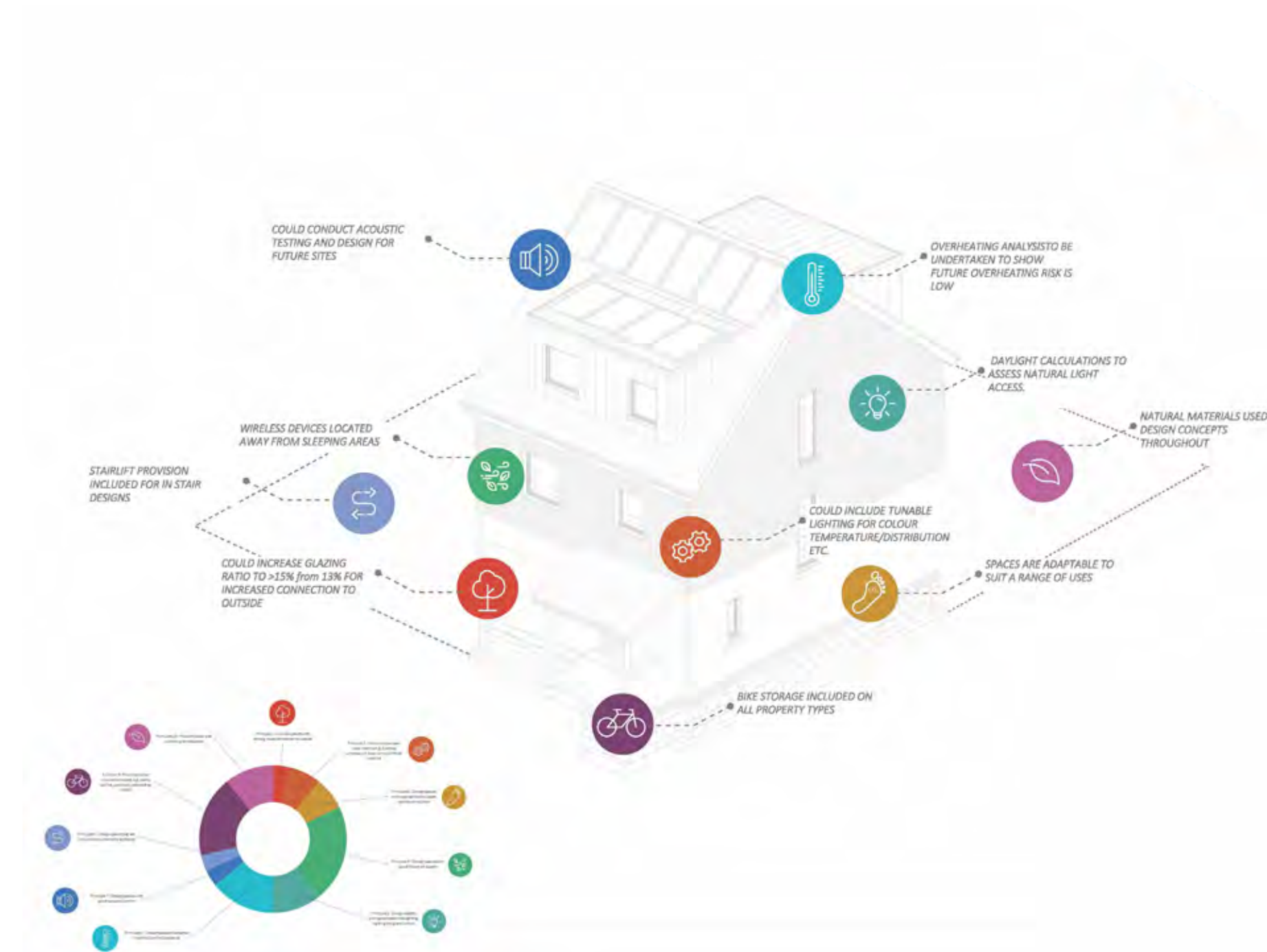
Overheating

2.22 To mitigate the risk of overheating, all residential buildings should be designed to meet the requirements of CIBSE TM59: Design Methodology for the Assessment of Overheating in Homes, including future climate scenarios. Overheating modelling for both domestic and non-domestic developments should be tested using the Design Summer Year weather file for 2020s, high emissions, 50% percentile scenario. Overheating should first be addressed via passive design solutions such as the use of external shading, enhanced ventilation (MVHR with summer bypass) and finally active cooling as a last resort. Where active cooling is required, this should be selected to be as energy efficient as possible, with consideration given to ambient loop systems which can provide both heating and cooling.

2.23 Where the requirements of CIBSE TM59 and TM52 cannot be achieved for future climate scenarios, detailed information should be provided to show how dwellings and non-residential premises can be easily adapted and retrofitted to result in a comfortable internal environment.



Climate Resilience



2.24 Whilst building level overheating strategies will be developed by each plot developer, dwellings should be designed in line with the glazing ratios recommended by LETI and Passivhaus to minimise overheating risk whilst also reducing energy demand. These are shown in the table below.

	South-West	North-West	North-East	South-West
Passivhaus	20-30%	10-20%	10-20%	10-20%
LETI	15-25%	10-20%	10-20%	10-15%

Passivhaus and LETI glazing ratio guidance

6.25 Where large expanses of glazing are proposed on facades that face within 90degrees of due south, the following strategies shall be implemented unless reasonable justification is provided:

- Brise soleil to reduce summer time solar gains; and
- Enhanced G-value glazing.

Sustainable Drainage and Water Use

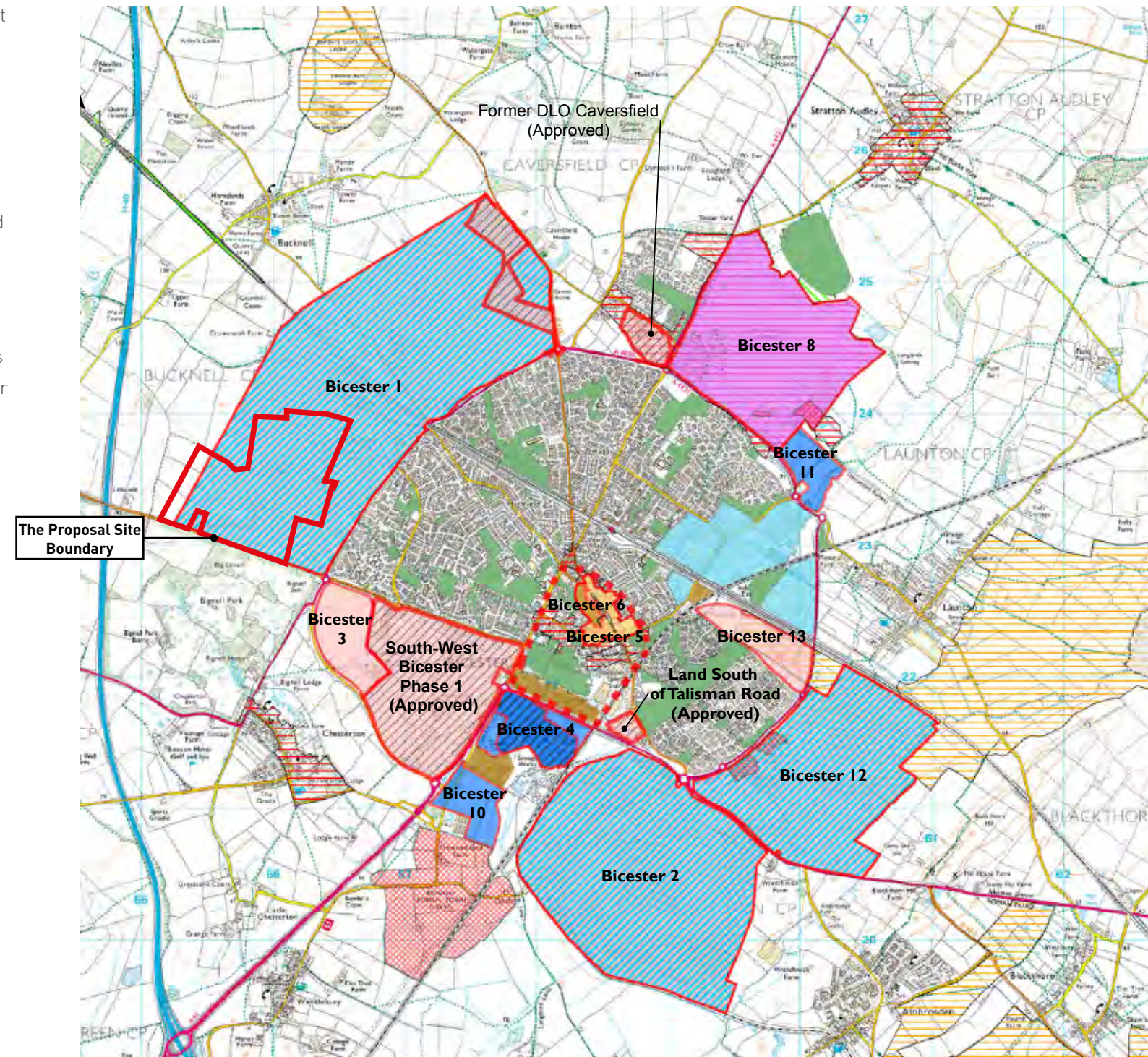
2.26 The development includes extensive Sustainable Urban Drainage (SUDS) and blue infrastructure, these should be enhanced within plot development. These will be integral to providing mitigation against the increased risk of surface water flooding associated with heavy rainfall events. SUDS and blue infrastructure will provide storage for surface water runoff, reducing the impact on local surface water drainage systems. To further enhance this, green roofs should be given consideration.

PLANNING POLICY

PLANNING POLICY CONTEXT

- 3.1 A full consideration of the planning policy context will be subject to detailing in a Planning Statement and approved by planning during the Reserved Matters application process.
- 3.2 The Adopted Cherwell Local Plan 2011-2031 sets out strategic priorities for the development of the area along with planning policies and proposals. It is accompanied by a Policies Map.
- 3.3 North West Bicester within Key Policies Map has been identified as one of the key areas in the Cherwell Local Plan, and as such the vitality and growth of this town contributes to the prosperity of the Borough as a whole.
- 3.4 The adjacent figure: Bicester 1 of 2.5 Key Policies Map identifies a number of Local Plan Strategy sites in and around Bicester for growth in the future. The Proposal Site is allocated as a Mixed Use (Housing and Employment) site.
- 3.5 A key part of the growth plan for the town the site will play a major role in delivering the strategic growth identified for Bicester during and beyond the plan period.
- 3.6 Other sites in Bicester will be required to meet the improving building standards set at national level and District-wide standards set out in policies.
- 3.7 A full account of the planning policy context is set out in the Planning Statement supporting this planning application.

5.2 Key Policies Map: Bicester | Not to scale



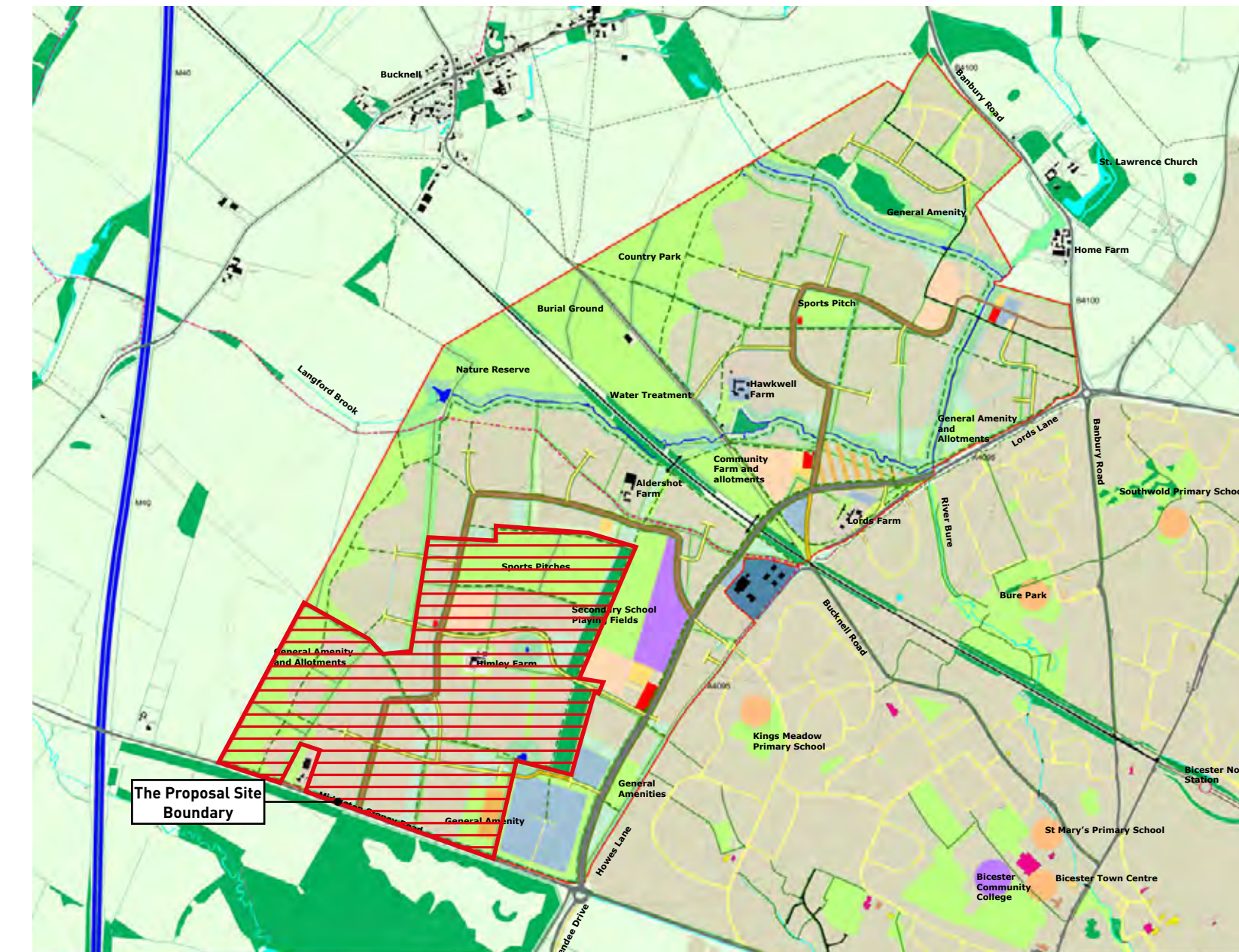
Key:

- Primary Shopping Frontage
- Tourism Development
- Bure Place Redevelopment
- Existing Town Centre
- Town Centre Extension (Area of Search)
- Existing Retail Parks (Indicative)
- Approved Housing Sites
- Mixed Use (Housing and Employment)
- Strategic Housing Sites
- Existing Strategic Employment Sites
- Approved Employment Sites
- New Employment Sites
- Existing Green Space
- Conservation Target Areas
- Conservation Areas
- Sites of Special Scientific Interest
- Scheduled Ancient Monument
- Neighbouring Authority

Strategic Developments:

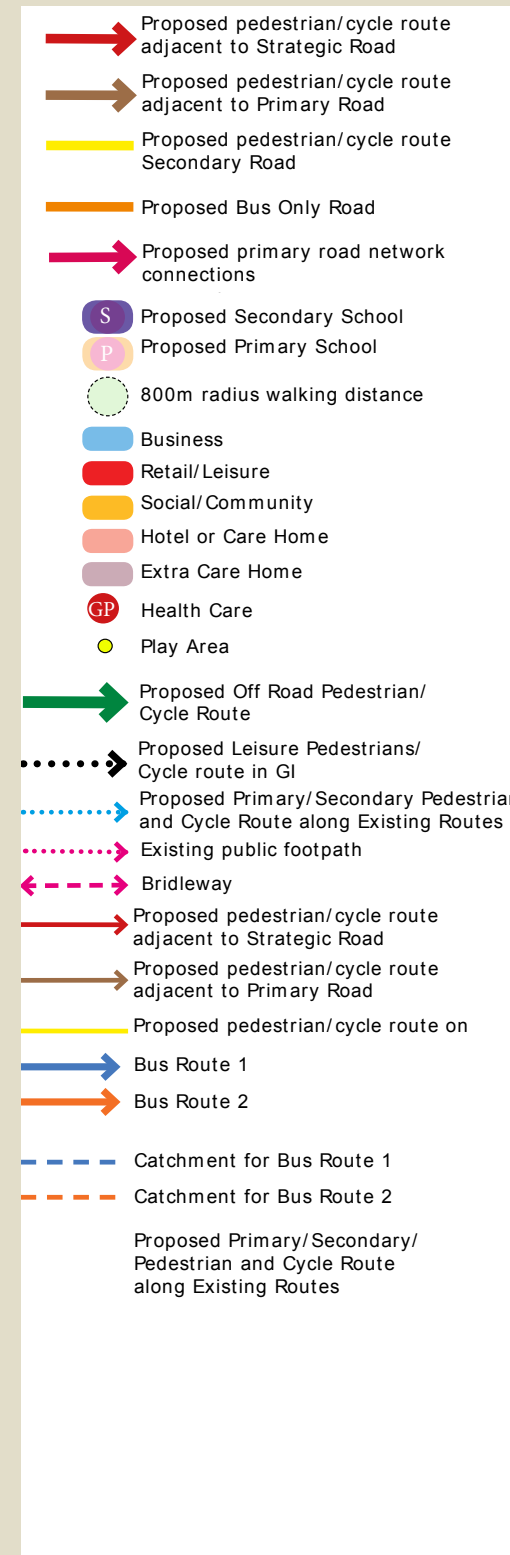
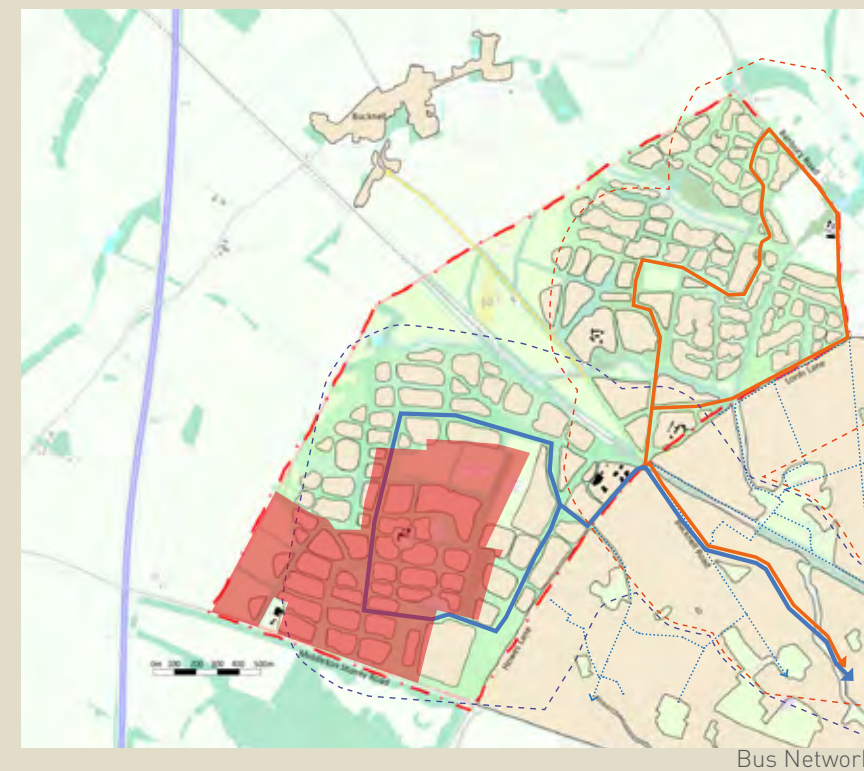
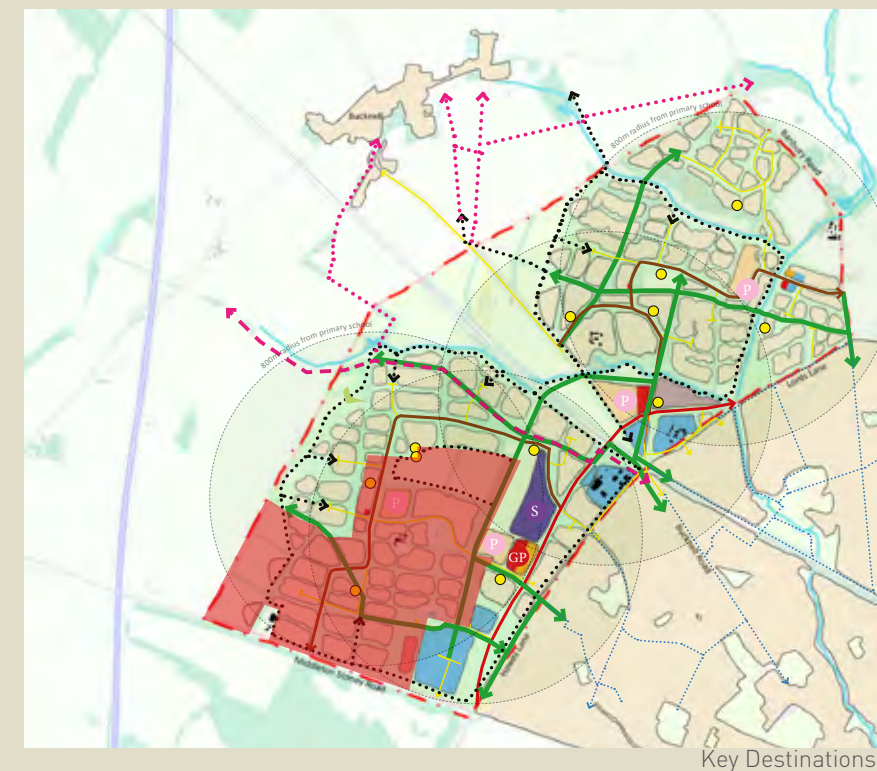
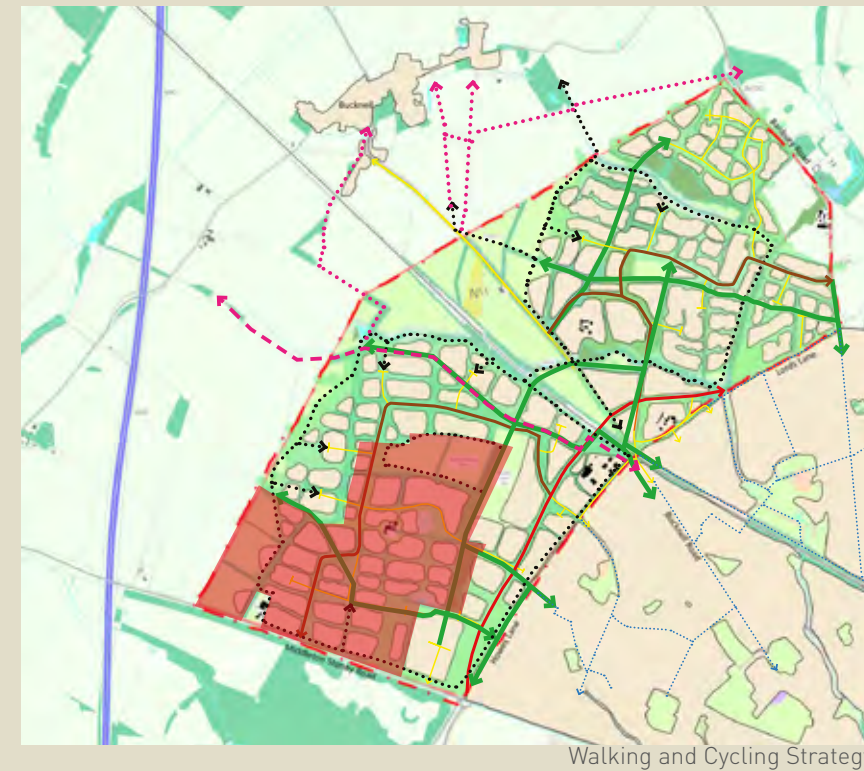
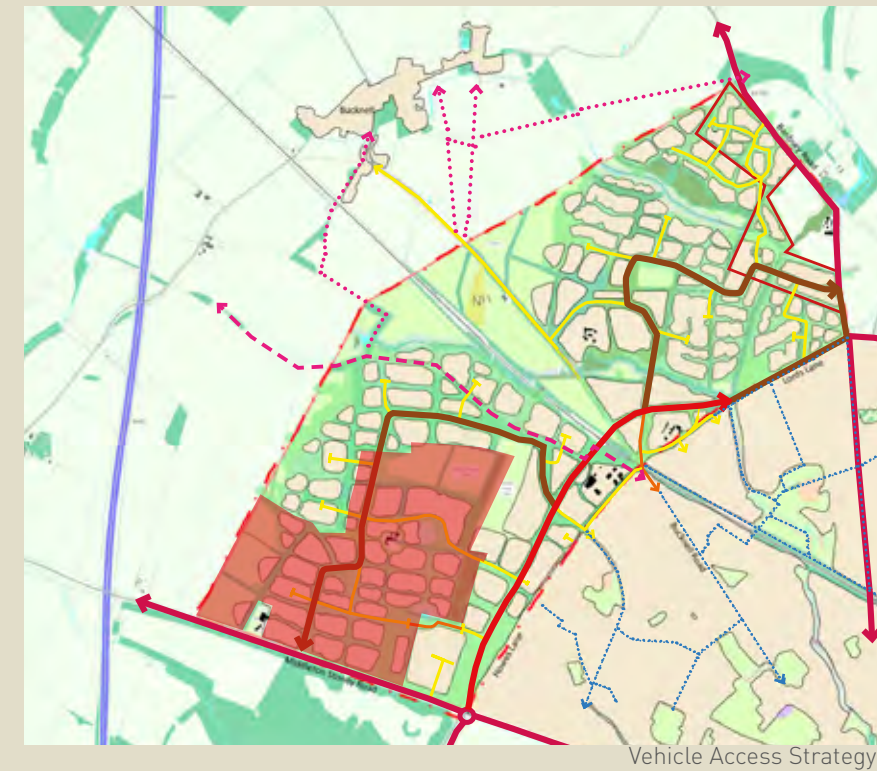
- 1 North-West Bicester: Eco-Town
- 2 Graven Hill
- 3 South-West Bicester Phase 2
- 4 Bicester Business Park
- 5 Strengthening Bicester Town Centre
- 6 Land at Bure Place Car Park
- 8 Former RAF Bicester
- 10 Bicester Gateway Business Park
- 11 Employment Land at North-East Bicester
- 12 South East Bicester
- 13 Gavray Drive

NW Bicester Masterplan Framework (BIMP6 01) | Not to scale



DESIGN GUIDANCE CONTEXT

- 3.8 The proposals have been developed in accordance with the principles set out in relevant design guidance including:
 - North West Bicester Masterplan documents;
 - The Cherwell Design Guide Supplementary Planning Document (SPD);
 - Cherwell Residential Design SPD Adopted July 2018; and
 - Residential Road Design Guide - Oxfordshire County Council.
- 3.9 The NW Bicester Masterplan Vision and Objectives also identifies broad parameters and character areas across the site by breaking the it down into areas which are complimentary to existing Bicester.
- 3.10 The approach to the outline planning application is defined and this Design Code is provided to create the framework and over arching principles - when it comes to submitting at the Reserved Matters planning application stage. This Design Code is to be supported by an Illustrative Masterplan and Regulating Plan, which may also be used in due course to assist in the consideration and determination of future applications.
- 3.11 The Design Code sets the framework and 'guiding principles', such as defining the hierarchy, form and layout of the movement and public realm network, the location and structure of development parcels, the general density, massing and layout of the built form and setting out the principles of Sustainability.
- 3.12 In response, this document presents the proposals as a Design Code supported by an Illustrative Masterplan and Regulating Plan setting out the urban design approach.



NORTH WEST BICESTER MASTERPLAN

3.13 Cherwell District Council has produced the North West Bicester Masterplan Vision and Objectives a guide to all development sites with the overarching aim to create a scheme that incorporates green infrastructure and energy-efficient design whilst protecting and enhancing the existing landscape.

3.14 The document sets out key principles and proposals, including:

- **Spatial Structure and Form;**
- **Landscape and Green Infrastructure;**
- **Living and Working;**
- **Access and Movement;**
- **Energy, Water and Recycling; and**
- **Design.**

NATIONAL PLANNING POLICY FRAMEWORK 2019

3.15 Government guidance in the form of the National Planning Policy Framework (NPPF) sets out the Government's planning policies and how these should be applied. The NPPF states at Paragraph 8 that the planning system has 3 interdependent key objectives, which when pursued in a mutually supportive way, can achieve sustainable development. The three key objectives are:

- A **social** objective;
- An **economic** objective; and
- An **environmental** objective.

3.16 There is a presumption in favour of sustainable development, as set out at Paragraph 11. Section 9: Promoting sustainable transport (para. 102) of the NPPF points to the role that design has to play in ensuring that transport issues are considered at the earliest stages of development proposals, and the role that design can play to ensure that development maximises opportunities for sustainable transport options.

"...patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places."

[Para. 102(e) NPPF 2019]

3.17 The Government also continues to place a high emphasis on design and the NPPF expands on the principles of good design, to define what is expected of well-designed places. It also explains how policies and decision-making processes should support the inclusion of good design, providing detailed advice at Section 12: Achieving well-designed places. The contribution that good design makes to sustainable development is set out in paragraph 124, as follows:

"The creation of high-quality buildings and places is fundamental to what the planning and development process should achieve. Good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities..."

[Para. 124, NPPF 2019]

3.18 The NPPF is also clear at paragraphs 125 and 126 that Development Plans should set out a clear design vision to provide certainty to applicants, and that design policies should be prepared in conjunction with local communities to reflect local aspirations.

3.19 Paragraph 127 of the NPPF states that with regard to design planning policy and decision making should ensure that developments;

a) will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;

b) are visually attractive as a result of good architecture, layout and appropriate and effective landscaping;

c) are sympathetic to the local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities);

d) establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit;

e) optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks; and

f) create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users, and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience."

PLANNING PRACTICE GUIDANCE

3.20 The NPPF is accompanied by the on-line Government resource Planning Practice Guidance (PPG). The Design: Process and tools PPG provides guidance on the methods and processes available to both applicants and local authorities to ensure the delivery of well-designed and high-quality, long lasting places with considered design solutions, under the following headings:

- Planning for well-designed places;
- Making decisions about design;
- Tools for assessing and improving design quality; and
- Effective community engagement on design.

3.21 Paragraph 1 of the Design PPG reinforces the Government and NPPFs commitment to requiring the creation of well-designed places and the role that early engagement can play in this.

“Well-designed places can be achieved by taking a proactive and collaborative approach at all stages of the planning process, from policy and plan formulation through to the determination of planning applications and the post approval stage”

[Para. 001, PPG, ID: 26-001-20191001, October 2019]

NATIONAL DESIGN GUIDE

3.22 The National Design Guide (NDG) published by the Ministry of Housing, Communities and Local Government (MCHLG) in September 2019 further reinforces the way in which the design process can be used to ensure the delivery of quality places:

“In a well-designed place, an integrated design process brings the ten characteristics together in a mutually supporting way. They interact to create an overall character of place.”

[Para. 13, NDG 2019]

3.23 The NDG outlines and illustrates the Governments priorities for well-designed place in the form of ten characteristics, based on national planning policy, planning guidance and objectives for good design.

3.24 The ten characteristics contribute towards the cross-discipline themes for good design set out in the NPPF and fall under three broad aims:

- To create physical character;
- To help to nurture and sustain a sense of community; and
- To positively addresses environmental issues affecting climate.

3.25 Whilst the NPPF, PPG and NDG are the primary points of reference, there are other well-regarded design guidance documents that are still relevant to creating good design including:

- Manual for Streets 1 & 2 (Department of Transport/Department for Communities and Local Government, 2007/2010);
- Building for Life 12 (CABE at the Design Council, Design for Homes and the Home Builders Federation, 2012).

The ten characteristics of a well-designed place (National Design Guide)



SUMMARY

3.26 The proposals set out in this Design Code are in full alignment with Outline Planning Permission and the North West Bicester Masterplan and are well placed to make a positive contribution to the delivery of new homes and jobs.

3.27 The proposals deliver high quality design and are in full alignment with the Cherwell Design Guides - as set out in the following Chapters.

CONTEXTUAL ANALYSIS

OVERVIEW

- 4.1 This chapter looks at the application site and its immediate surroundings in more detail. In particular, it considers key points and influences from the approved Design and Access Statement that are to be considered in bringing forward proposals for development.
- 4.2 Four areas of influence have been identified:
- A. Ardley;
 - B. Elms Brook;
 - C. Kingsmere; and
 - D. Bicester Town Centre.



Approved Design and Access Statement

Site setting | Not to scale



Images courtesy of Google Earth

THE APPLICATION SITE

Topography

- 4.3 The topography character is one of gentle undulating slopes, falling from a high point on the north west edge of the Site (96.50 AOD) down to the south east corner towards the junction of Middleton Stoney Road and Howes Lane (approx 85.00 AOD) with an overall fall of 11m. To the north of the Application Site the topography continues to gently rise to the north west albeit with a more ridged landform due to the water courses associated with the River Bure.

Landscape & Ecology

- 4.4 Whilst the Site largely consists of agricultural land, the areas of hedgerows, woodland and ponds all play a significant role in supporting the biodiversity of the Site and provide a habitat for a variety of wildlife.

Hedgerows

- 4.5 These hedgerows, as well as supporting a variety of vegetation, are a major contributor to the biodiversity of the Site, providing habitat links across the Site. Ecology and Habitat surveys have identified 39 hedgerows across the Application Site, 26 of which were considered 'important' Wildlife and Landscape Criteria of the Hedgerows Regulations (1997).

Water

- 4.6 There are two ponds associated with the Application Site; a small pond to the east of Himley Farm and a larger pond to the south east of the Farm. The ponds contribute significantly to the biodiversity of the Site.

Woodland

- 4.7 The Site is bounded to the east by approximately 4ha of recently planted broad leaved planted woodland. Beyond the Site to the south there is more mature woodland, forming part of the Bignell Park estate.

Heritage and Archaeology

- 4.8 Two barns at Himley Farm have been designated as Grade II listed. The barns are dated to the mid 18th century to 19th century and constructed with coarse limestone and wooden lintels. Their setting is within an area of open farmland. This asset is considered to be of 'Medium' value.
- 4.9 There are no other listed structures within the application area.
- 4.10 A key feature of the historic landscape are the field boundaries, which inform the Site's historic use as farmland.
- 4.11 Whilst the overall historic landscape is valued as 'Low', the hedgerows do serve as a visual reminder of the character of the historic landscape.
- 4.12 Within the Application Site, evidence of a small area of early-middle Iron Age activity was uncovered. Just beyond the Site boundary to the north and west further evidence of early-middle Iron Age activity and Roman activity was discovered.

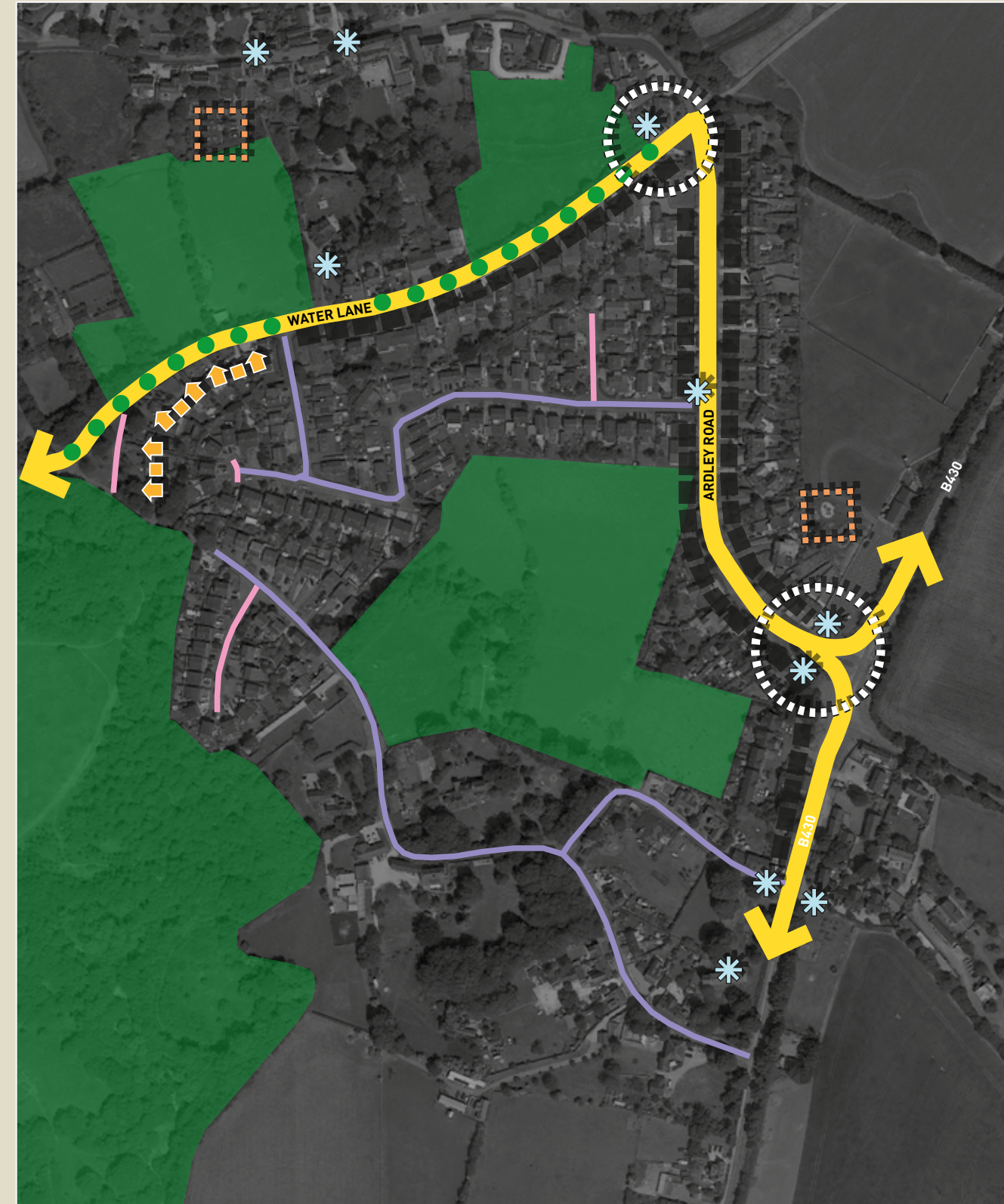
Movement and Access

- 4.13 The Site is bordered on its southern edge by Middleton Stoney Road (the B4030) which is subject to the National Speed limit (60mph) and has a carriageway width of approximately 7m. The road is straight in its alignment and rural in character with the northern edge comprising a thin hedge of variable height set back around 2m from the carriageway. The southern edge is formed by a more substantial belt of trees which are set back 2-3m from the carriageway.
- 4.14 Currently the only vehicle access point onto the Site is a gated track that connects with Middleton Stoney Road and serves Himley Farm. The gate to this access is set back some 15m from the edge of the carriageway.
- 4.15 There are no Public Rights of Way through the Site. There is a public footpath located to the north of the Himley Village development adjacent to the railway line connecting Bucknell to the A4095 and Buckingham Road. A public bridleway that runs between Bicester in the east and Ardley, Middleton Stoney and Upper Heyford in the west, is located north of the Site passing through the land south of the railway.
- 4.16 Middleton Stoney Road is not a designated cycle route. The nearest formal cycle facilities are to the south east on Vendee Drive which has a combined cycle/pedestrian path.
- 4.17 Bus service 25A that connects Bicester, Kirtlington and Oxford via Middleton Stoney and Heyford, uses Middleton Stoney Road. This service runs half hourly during the morning and evening peak and hourly for the rest of the day. Currently there are no bus stops in the vicinity of the Application Site as there is no demand for the service.

A ARDLEY

CONTEXT

4.18 Ardley is village located to the north-west of Bicester and approximately 7km from the development site. The historic core is located to the south of the village with buildings being generally sporadic and low in density. The village has expanded along Ardley Road and to the south of Water Lane with more recent higher density development.



LEGEND			
	Primary Street		Tree-lined Street
	Secondary Street		Green Space
	Private Drives		Green Corridor
	Key Buildings		Key Spaces
	Formal Build Line Predominantly 2 storey		Area of play
	Informal Build Line Overlooking Public Open Space		



LEGEND	
	Primary Street
	Private Driveways
	Parking Court
	Rear Parking
	On Street Parking

PARKING TYPOLOGIES

4.19 Predominantly private driveways and on-street parking with some examples of parking courts and rear parking courts.



ANALYSIS OF BUILT FORM

4.20 Ardley is split into two distinct areas. The historic core to the south and the more recent development to the north. The historic core is characterised by a narrow street with dwellings arranged informally close to the back of the highway. The dwellings are predominantly flat fronted cottages in either stone or render. Dwellings sit behind low stone walls together with a single sided footpath, provide a strong sense of enclosure. Architectural detailing is simple to reflect the rural character.

4.21 The more recent development to the north, in particular fronting Ardley Road, differs significantly to the historic core with dwellings set back from the street behind large front gardens and landscaped verges. Whilst building lines are formal, any sense of enclosure is provided by the landscape rather than the built form. Materials are predominantly render and stone cladding with architectural detailing typical of their time.

4.22 These distinctive characters are detailed in the following analysis.



URBAN FORM
Enclosure to the street provided by the built form with flat fronted dwellings set behind low stone walls and small front gardens. Narrow carriageway with single sided footpath.
Enclosure to the street provided by the wide landscape verges. More recent dwellings set behind larger front gardens and verge with footpath to both sides of carriageway.



BUILDING TYPOLOGY
Detached Semi-detached



BUILDING LINES
Generally informal building lines and varied set back distances.
Tertiary streets generally informal with building lines running parallel to the street.



HEIGHT/ENCLOSURE
Historic core are 1.5 to 2.5 storeys, buildings providing the enclosure.
More recent development are 1 - 2 storeys, enclosure provided by the landscape.



ROOFSCAPE
A varied roofscape is evident in Ardley with the historic core utilising traditional dormers and chimneys across a mix of 1.5 to 2.5 storey dwellings. The more recent development becomes more standardised with less chimneys and lower roof pitches particularly evident on bungalows.



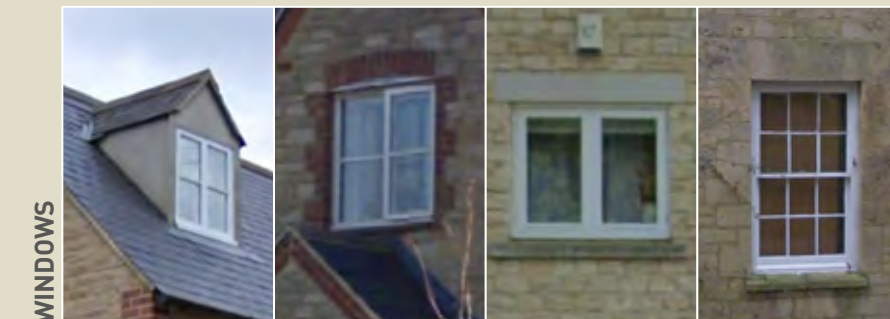
LANDSCAPE INTERFACE
The historic core follows a typically dispersed settlement pattern with sections of built form interspersed with landscape. The more recent development provides little green space other than verges and incidental green space around road junctions.

ANALYSIS OF ARCHITECTURAL FEATURES AND MATERIALS

4.23 The character of the older parts of Ardley are generally cottage style with influences of Georgian architecture, particularly in the fenestration and brick detailing. The mid-late 20th Century development is generally typical of this period with larger windows. The predominant material is stone within the historic core and a variation of render, brick and stone within the more recent development.



ARCHITECTURAL STYLE
Cottage style architecture with Georgian influences Mid to late 20th Century



WINDOWS
Dormer windows Arched brick header and brick quoins Reconstituted stone headers, cills and quoins



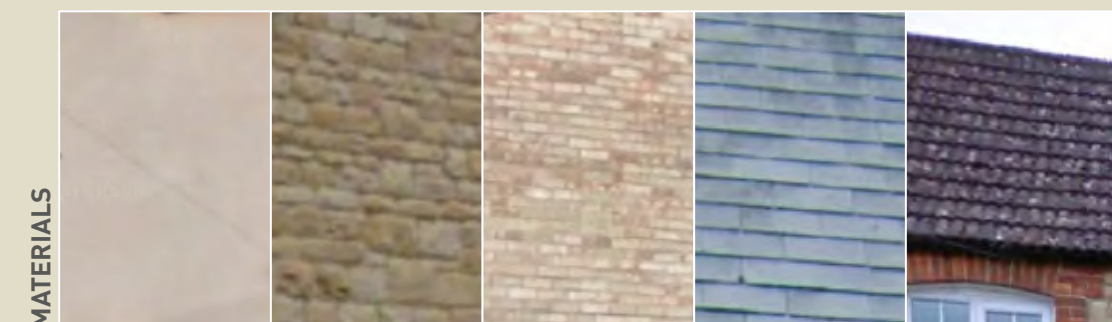
BOUNDARY TREATMENTS
Predominantly low walls to the older part of Ardley
Predominantly open with shrub planting and some use of hedgerows in the newer areas of Ardley



BUILDING ENTRANCES
Pitched door canopies Flat door canopies Arched brick header and quoins to door with no canopy

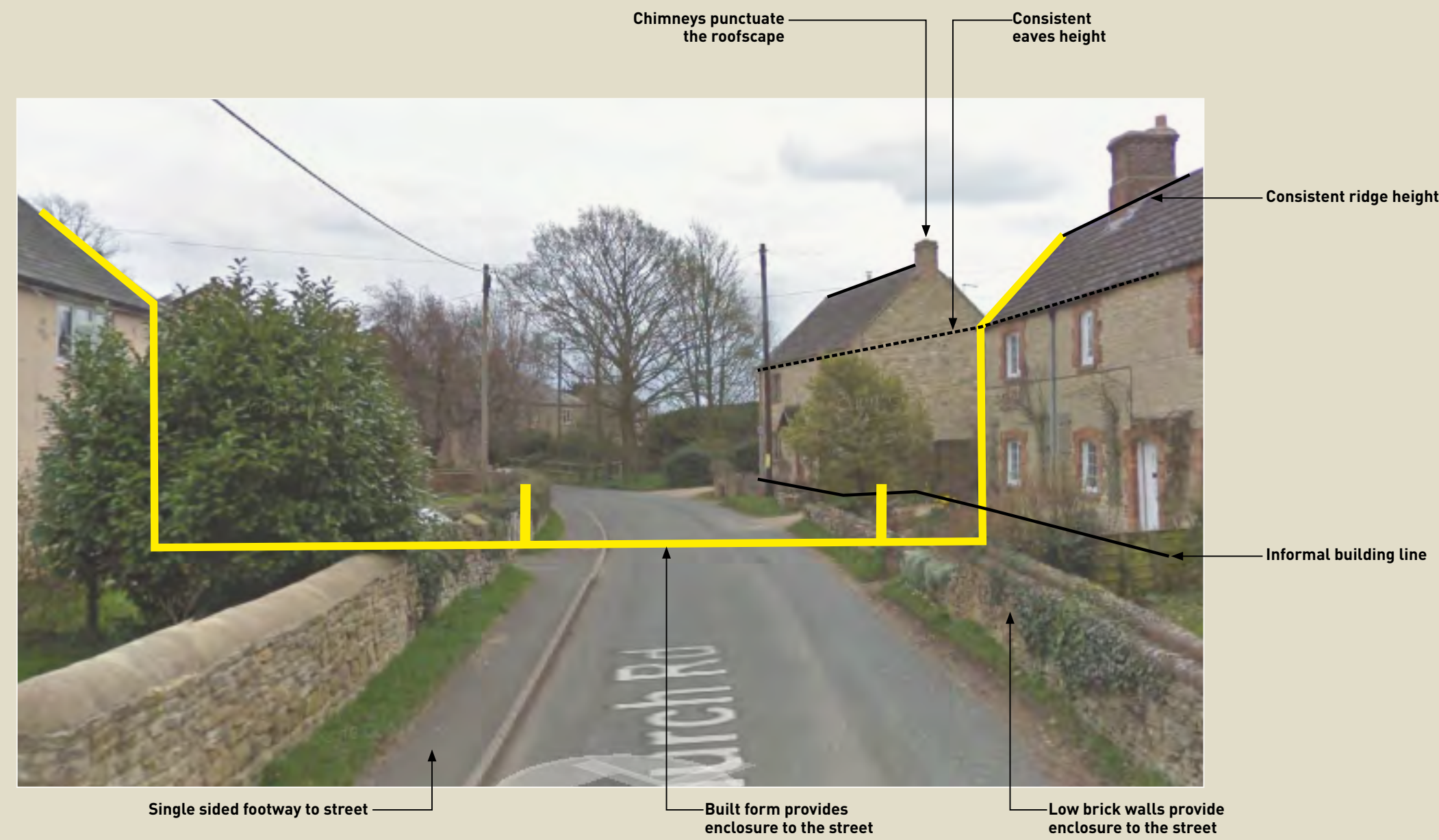


BUILDING DETAIL
Use of brick quoins is common



MATERIALS
Walls: Predominantly render and stone cladding; buff bricks; red bricks; and white/cream smooth render
Roof: Predominantly grey slate or clay tiles

SUMMARY



DESIGN CUES TO BE TAKEN FORWARD

- Dwellings have cottage style architecture with Georgian influences;
- Dwellings arranged informally close to the back of the highway;
- Main facing materials include stone and render;
- Use of brick detailing to frame elevations and / or openings;
- Use of low (stone) walls along main carriageway;
- Use of door canopies and window header and cills to add interest or define different characters;
- Little to no use of hipped roofs; and
- Predominately on-plot parking.

B ELMSBROOK

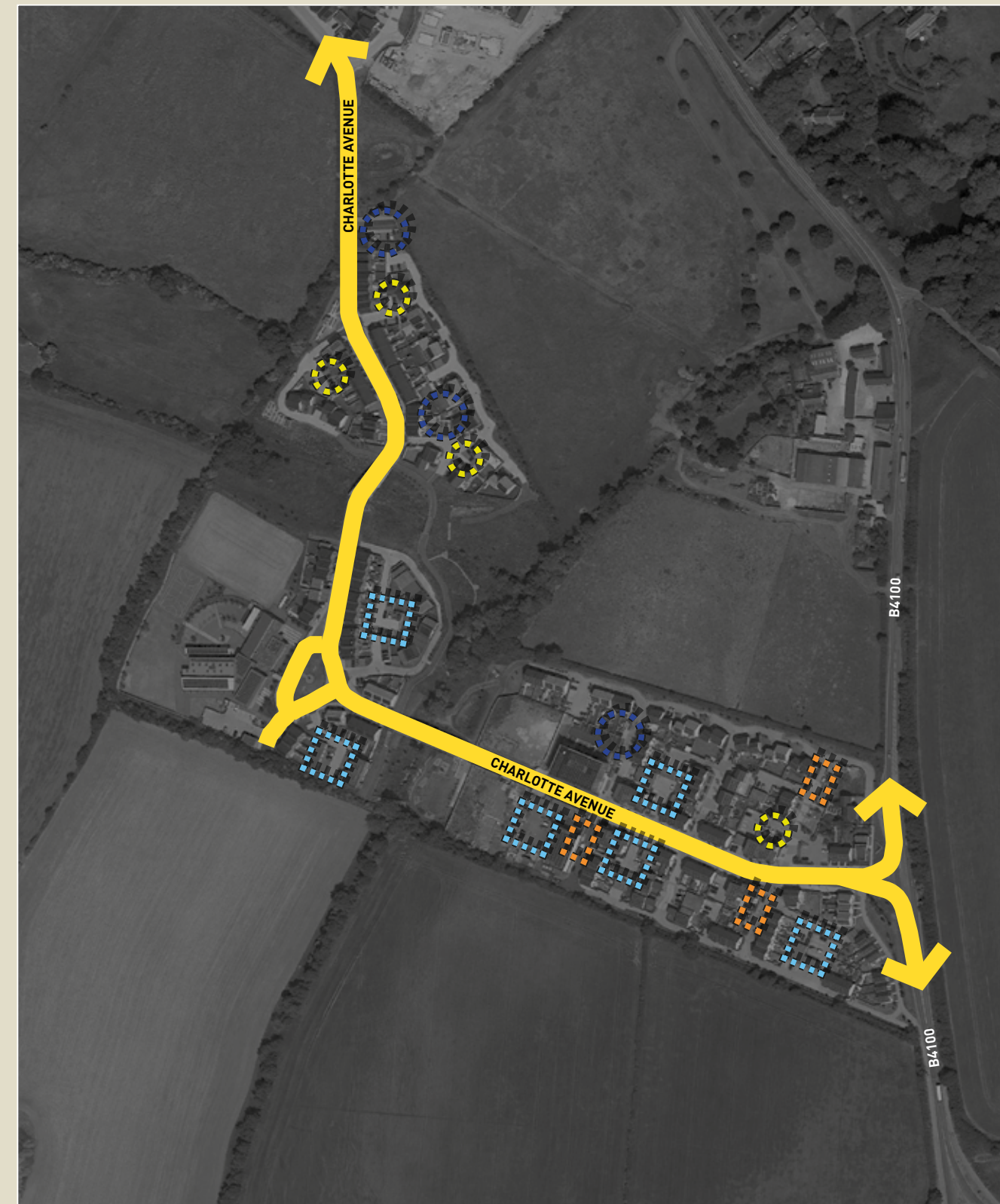
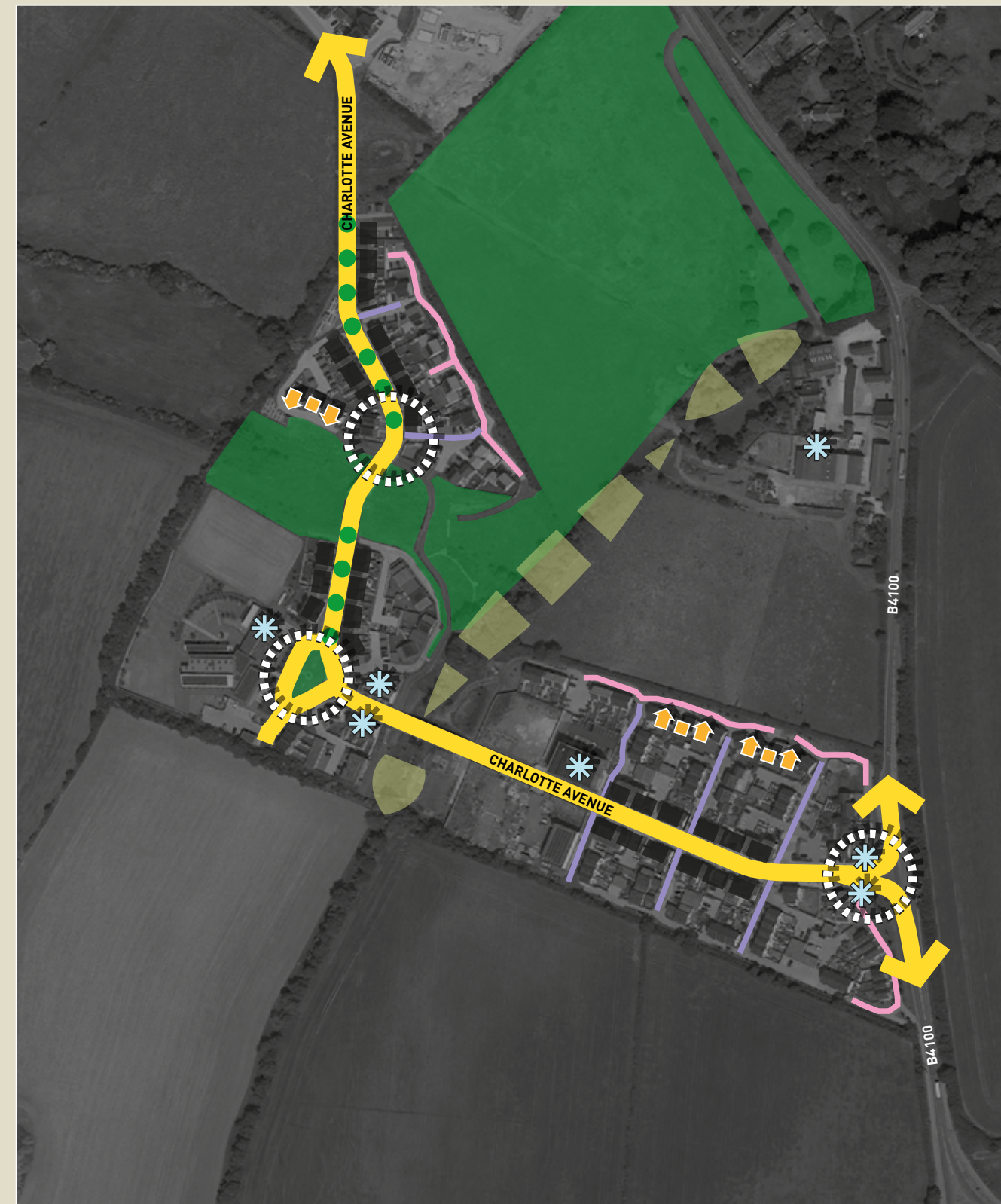
CONTEXT

- 4.24 Elmsbrook is located to the north of Bicester and approximately 2.5km to the development site. Elmsbrook markets itself as an eco-town which when complete will provide a sustainable community of 400 dwellings as part of the North West Bicester Masterplan. Each home has been designed to be true zero-carbon to minimise waste and improve efficiency by keeping homes naturally cool during the summer and warm during the winter. By using triple-glazed windows, high energy efficient doors and above standard cavity and roof insulation, heat loss is minimised.
- 4.25 Each home incorporates rooftop PV solar panels and the developments own heat and power system provides heat and hot water, rather than individual boilers.



LEGEND

Primary Street	Key Buildings	Tree-lined Street	Key Spaces
Secondary Street	Formal Build Line Predominantly 2 storey	Green Space	Area of play
Private Drives	Informal Build Line Overlooking Public Open Space	Green Corridor	



LEGEND

Primary Street
Private Driveways
Parking Court
Rear Parking
On Street Parking

PARKING TYPOLOGIES

- 4.26 Predominantly parking courts and rear parking.



ANALYSIS OF BUILT FORM

4.27 Elmsbrook is a modern eco-town development currently under construction. Development parcels are broken up by large swathes of green space. The development parcels follow an efficient grid pattern that demonstrate a clear street hierarchy. The primary street is a wide formal avenue incorporating landscape and a clear separation of vehicular and non-vehicular movement. Secondary streets are generally narrower shared surface streets with formal building lines, which connect to tertiary streets that are generally informal softer edges to the development overlooking open space.

URBAN FORM



Wide formal tree lined avenue with clear separation of vehicle and non-vehicular movement. Formal flat fronted dwellings align the narrower shared surfaced secondary street. Development parcels separated by large swathes of landscape.

BUILDING TYPOLOGY



Apartment blocks Semi-detached Terraced

BUILDING LINES



Strong and formal building lines provide a good sense of enclosure to the street. Informal building line to dwellings along tertiary streets to form a soft edge to the development.

HEIGHT/ENCLOSURE



2-3 storey to primary streets with taller buildings located at key junctions. 2 storey continuous frontage with minimal set back provides a strong sense of enclosure. Narrower carriageway and wider pavements with trees provide a more pedestrian friendly street. 2 storey dwellings close to the carriageway along shared surface secondary streets provide a good sense of enclosure.

ROOFSCAPE



Strong rhythm and uniformity to the roofscape is common within the development to form signature frontages. Roofs are orientated (wherever feasible) to maximise efficiency for PV solar panels. Generally simple pitched roofs with no evidence of dormers or chimneys. Flat roofs to apartment buildings.

LANDSCAPE INTERFACE



More informal arrangement of dwellings on the development edge overlooking rural context. Dwellings front onto the street rather than the landscape but secondary windows offer natural surveillance to landscape corridor.

ANALYSIS OF ARCHITECTURAL FEATURES AND MATERIALS

4.28 There overriding character and architectural style to Elmsbrook is contemporary. The modern development demonstrates a range of modern housebuilder dwellings that reference traditional British architecture but use materials and fenestration to provide a more contemporary style. These include: brick; stone; wooden cladding; and render. Streets and public realm areas use a range of materials to delineate hierarchy and separate vehicular and non-vehicular use.

ARCHITECTURAL STYLE



Contemporary architecture with a Georgian influence to windows. Standard traditional house builder types with bolt on features.

BUILDING ENTRANCES



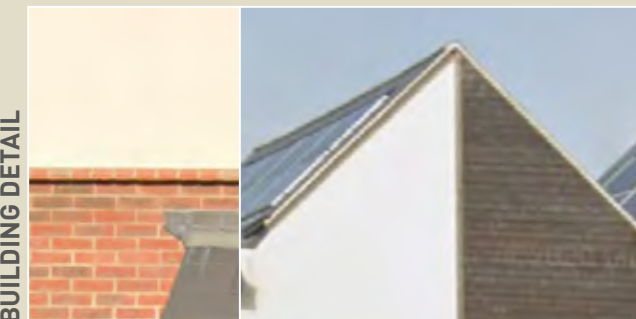
Pitched door canopies to the traditional style dwellings. Flat door canopies to more contemporary house types.

WINDOWS



Stone header and cills. Brick header and brick cills. Contemporary style with no header or cills.

BUILDING DETAIL



Building details are simple with changes in materials providing the architectural interest.

BOUNDARY TREATMENTS



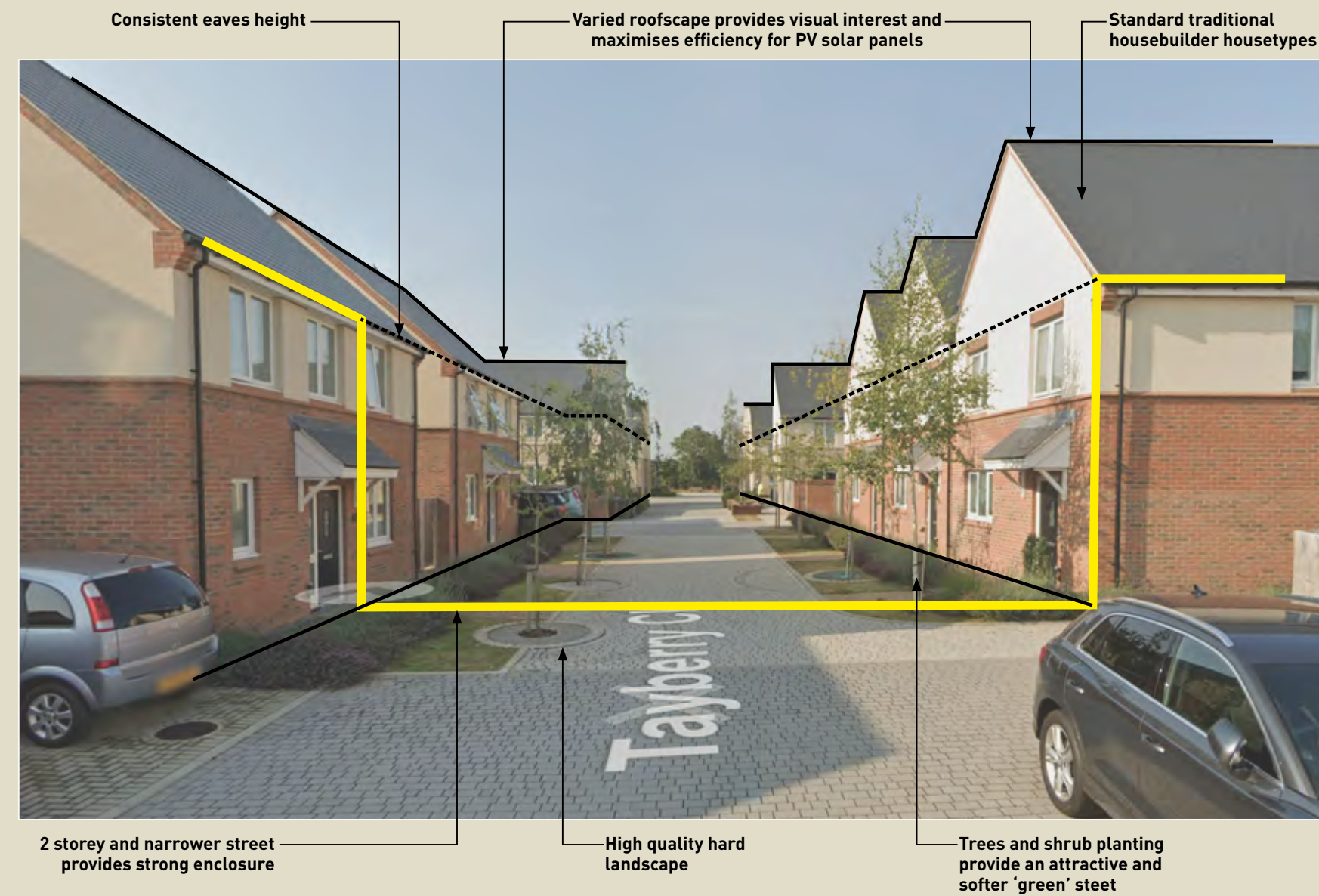
Railings and shrub planting to primary street. Low stone walls and shrub planting to parking court entrances. Low level shrub and hedge planting with some trees within the front gardens.

MATERIALS



Walls: Varied use of stone; red bricks; white/cream smooth render and wooden cladding. Public realm: Varied hard landscape materials and street furniture to separate uses and hierarchy. Roof: Predominantly grey slate with PV solar panels.

SUMMARY



DESIGN CUES TO BE TAKEN FORWARD

- Dwellings are contemporary in style with Georgian influences;
- Dwellings arranged formally along a wide formal avenue incorporating landscape;
- Strong and formal building lines provide a good sense of enclosure to the street;
- Main facing materials include brick, stone and render (timber clad is also apparent);
- Gable fronted elevations are common; and
- Parking courts and rear parking are also common.