



Gloucestershire
COUNTY COUNCIL



WISLOE

Masterplan Report - Part 2 (Appendices)

Stroud Local Plan – Regulation 19 Submission | JULY 2021



'A sustainable garden community between the Cotswolds and the Severn Estuary'



lhc design



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Contents

Appendix A. Site and Context Appraisal	2
A.1. Strategic Location and Context.....	3
A.2. Access and Connectivity.....	3
A.3. Landscape and Visual Assessment.....	4
A.4. Agricultural Land Classification.....	5
A.5. Topography.....	5
A.6. Surface Water Drainage and Flooding.....	5
A.7. Ecology.....	7
A.8. Trees and Hedgerows.....	9
A.9. Historic Environment.....	9
A.10. Noise and Air Quality.....	10
A.11. High Pressure Gas Main.....	10
A.12. Foul Sewerage.....	12
A.13. Existing Land Uses.....	12
A.14. Existing Communities and Facilities.....	12
A.15. Local Character.....	12
Appendix B. Masterplan Development	14
B.1. Core Concept Principles.....	14
B.2. Concept Options Appraisal.....	16
B.3. Consultation and Stakeholder Engagement.....	16
B.4. Design Review Panel – April 2021.....	18
Appendix C. Garden City Principles	20

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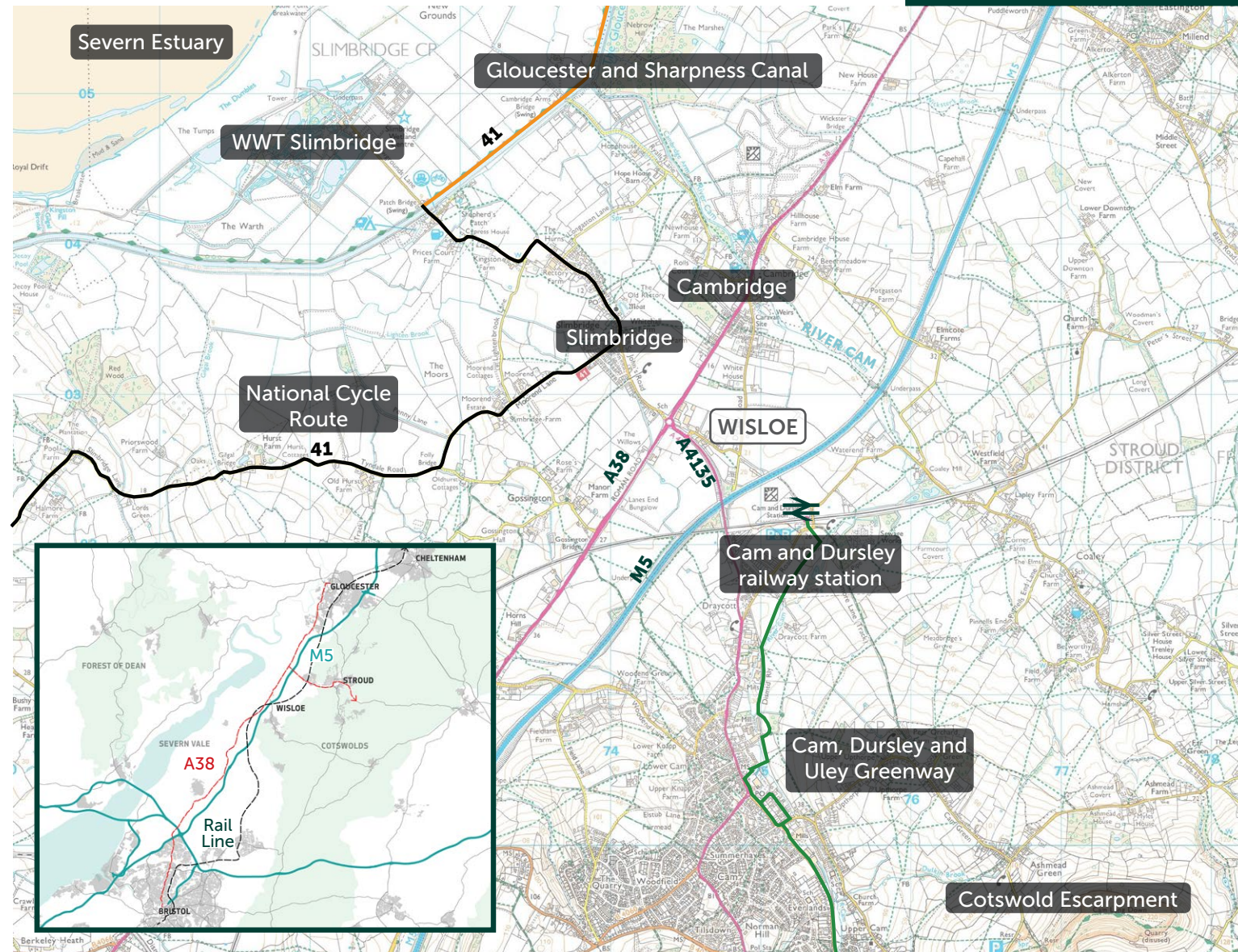


A. Site and Context Appraisal

The site and the wider landscape setting of Cambridge and Slimbridge offers future residents the potential for an excellent quality of life.

The site is largely level, with attractive views to the wider landscape to the east and west; good access to the Cotswolds and Severn Estuary, and in particular WWT Slimbridge and the Gloucester and Sharpness Canal. The site has potential to create links to its wider context, the wider farming community and utilise the River Cam corridor to the north of the site.

The site itself has a number of valuable features including notable hedgerows and trees, drainage features and the adjacent River Cam. There is the opportunity to create a new landscape structure that enhances links to the wider landscape, mitigates the noise and visual impact of the M5 and A38 on the site and existing properties, and creates a positive setting for the new community.



▲ Strategic Location Plan



A number of technical studies have been undertaken to support the development of the masterplan and demonstrate deliverability. Key outcomes and how they have informed the development of the masterplan are summarised below:

A.1 Strategic Location and Context

The site is located between the M5 and A38 to the south-east of Slimbridge and south of Cambridge in Gloucestershire. The larger settlement of Draycott, Cam and Dursley is located to the south of the site, and is accessed via the A4135 (which runs through the centre of the site). A number of community facilities and services are provided in the existing settlements around the site.

The site is approximately 9 miles from Stroud, 14 miles from Gloucester and 24 miles from Bristol. Cam and Dursley railway station is situated adjacent to the site. It provides regular services to Bristol (35 minutes) and Gloucester (20 minutes) and the wider rail network, but is separated from the site (and the existing communities of Slimbridge and Cambridge) by the M5 motorway.

The communities of Cam and Dursley (c15,000 residents) are located a mile to the south of the site, on the edge of the Cotswolds AONB. To the north-west, the Gloucester and Sharpness Canal (1.5 miles) and WWT Slimbridge (2 miles) are popular leisure destinations.

A.2 Access and Connectivity

The accessibility and connectivity of the site was appraised at the outset in order to gain an initial understanding of the highway and transport related constraints and opportunities. This exercise considered vehicular and non-car modes of transport provisions with a strong focus on the quality of existing walking and cycling linkages, in particular given the emphasis within the Draft Local Plan on Garden City principles being adopted and the need to create a sustainable and well-connected community.

The connectivity to the surrounding villages of Gossington, Cambridge and Slimbridge, including that of the National Cycle Network (NCN) Route 41 which runs through the latter, were considered with a focus on existing pedestrian and cycling facilities. This indicated that the A38 currently inhibits pedestrian and cycling movement across it as there are no formal crossing provisions in the vicinity of the site with only limited off-road cycle facilities available.

This review indicated the potential to reduce the existing speed limit, provide excellent pedestrian and cycle provisions along the A38 and to provide new and greatly enhanced crossing facilities given it only generally takes the form of a single lane in each direction. It was deemed that the combination of these improvements would also provide wider benefits as the current form of the

A38 also currently effects the accessibility of the surrounding villages to Cam and Dursley railway station and the associated settlements to the south.

The connectivity of the site to Cam and Dursley along with its railway station was therefore also considered. Due to the presence of the M5 the only vehicular and pedestrian connection across in the vicinity of the site is afforded by the A4135 which passes over it via a bridge along with another that then extends over the adjacent railway line. This results in an indirect route having to be taken via Box Road to the railway station by pedestrians. In addition, the quality of the pedestrian route itself was found to be diminished by the restricted width of the rail bridge and a gap in the footway provision immediately to the south of it with no formal cycling facilities available.

Opportunities to address all these issues have therefore been considered in the development of the masterplan and supporting sustainable access strategy along with the ability to connect with the Cam, Dursley and Uley (CDU) Greenway pedestrian/cycle scheme and provide the 'missing link' between the CDU Greenway and NCN41. In addition, the ability to improve the accessibility of the site by bus has been considered along with locations as to where vehicular, pedestrian and cycle connections can be formed between the site and the local highway network.

A. Site and Context Appraisal (continued)

A.3 Landscape and Visual Assessment

The site comprises an area of land located between the A38 and M5 corridors, and is dissected by roads including the A4135, Dursley Road and Wisloe Road. It currently comprises small to medium scale agricultural fields. There are a number of hedgerow field boundaries within the Site, and which include hedgerow trees. The River Cam is located to the north of the site, but beyond the northern site boundary.

The site lies within a settled landscape character of the Severn Vale and has a medium landscape sensitivity and a medium to low visual sensitivity.

The Cotswolds AONB lies approximately 3.8km to the east of the site. The site can be seen in long-distance views from elevated views on the Cotswold Escarpment, as part of the low-lying settled landscape.

The almost flat and low-lying landform, combined with the visual effect of overlapping layers of hedgerows with hedgerow trees, and areas of small copses in the landscape, effectively limit people's views into the site from locations other than the site boundaries. There are few locations that enable views of the full area of the site from any one location. There are attractive views from within the site to the wider landscape including the Cotswold Escarpment, the spire of St John the Evangelist Church, Slimbridge, and distant views to the Forest of Dean across the Severn Estuary to the west.



Proposed development at the site is recommended to be set around an integrated green and blue infrastructure framework, which would be 'in keeping' with the existing landscape and settlement character and would help to break up the mass of new built form when seen from the wider landscape and long-distance views.

It is therefore considered that sensitively designed mixed-use development could be successfully accommodated without causing undue harm to landscape features, landscape character, people's views and visual amenity, or to people's long distance views from the Cotswolds AONB.

A.4 Agricultural Land Classification

The majority of the land is identified as ALC Grade 2. This defines the land as *'very good quality agricultural land with minor limitations which affect crop yield, cultivations or harvesting'*.

The land is classified as 'best and most versatile' and further work will be undertaken, including consultation with Natural England and consideration of DEFRA Guidance (Construction Code of Practice for the Use of Soils on Construction Sites), to ensure the masterplan investigates the opportunities to use better quality soils in the landscape where possible. For example, we are exploring using the best soils for the gardens, playing fields, allotments, community orchards and parks that will define the new community at Wisloe.

A.5 Topography

The site is generally level, with levels falling gently from a low ridge at Gossington Bridge to the south-western site boundary to the River Cam to the north and does not pose any constraint to development.

The low ridge to the south and gently rising land to the north of the River Cam limit views of the site from the wider landscape.

The A4135 rises on wooded embankments through the middle of the site to access the bridge over the M5, separating the main parcels of land to the north and south.

The railway and M5 are prominent features in the landscape, with the railway forming the south-western site boundary and the M5 bounding the site to the south east. Some existing planting to the motorway corridor screens views of vehicles, but there are open views of traffic from many parts of the site and the wider area. The A38 (Bristol Road) runs along the eastern edge of the site and is generally at a similar level to the site itself, separated by hedge banks.

Within and immediately adjacent to the site, Dursley Road and Wisloe Road, and associated dwellings and buildings, are all at grade with the gently sloping landform.

A.6 Surface Water Drainage and Flooding

The majority of the site is shown by the Environment Agency's (EA) 'Flood Map for Planning' to lie within Flood Zone 1 'Low

probability'. The northern boundary lies within Flood Zones 2 and 3, with this risk associated with the River Cam (designated a Main River by the EA). The Strategic Flood Risk Assessment (SFRA) contains additional Flood Zone mapping which differentiates the Flood Zone 3 into Flood Zones 3a and 3b. Flood Zone 3b is the "functional floodplain" and should be kept clear of any development. The SFRA mapping indicates that all of the Flood Zone 3 extents are considered Flood Zone 3b.

It should be noted that as the watercourse crossing the southern parcels is considered an Ordinary Watercourse by the EA, and appears that it has not been subject to hydraulic modelling by the EA.

The EA's 'Flood Risk from Surface Water' mapping indicates that the majority of the site lies within an area of 'Very Low' risk. There are limited areas across the site with risk ranging from 'Low to High'. A review of Ordnance Survey mapping and LiDAR suggests that these are associated with the Ordinary Watercourse, existing field boundaries and localised low lying areas across the site.

The 'Flood Risk from Reservoirs Mapping' present extents, depths and velocities of flooding for simulated, hypothetical 'credible worst case' dam breaches for reservoirs with a capacity of 25,000m³ or greater. These reservoirs fall under the Reservoir Act 1975. The mapping indicates that the part of the northern parcel, including the northern boundary, of the site lies within the modelled extents of reservoir flooding.

A. Site and Context Appraisal (continued)



We have been made aware of flooding that occurred in Wisloe, and nearby Cambridge and Slimbridge over Winter 2020/21. Based on the information provided to Stantec (engineering and technical consultants), large areas of standing water were reported on the site itself, whilst the A38 had to be closed temporarily. Currently, Stantec are in the process of liaising with the Lead Local Flood Authority and other flood risk management authorities in the area to better understand this flood event and the mechanisms which brought it about.

Where possible, the development proposals will seek to alleviate the existing flood risk on site and in the vicinity, but the degree to which this can be achieved depends on specific causes of the flood risk.

Given the existing flood risk in the area, the development proposals will implement best-practice Sustainable Drainage Systems (SUDs) to provide a Management Train and reduce run-off from the site post development to below the existing situation (allowing for the impact of climate change). This approach will seek to mimic existing drainage processes by intercepting and managing rainwater close to source and within naturalised drainage features.

In addition, it is proposed that post-development discharge rates are limited beyond the existing greenfield condition. To meet planning policy requirements, the proposed development will need to match existing greenfield run-off rates and volumes up to the 1 in 100 year storm event (1% chance of occurring each year or Annual Exceedance Probability (AEP)) for all events up to the 1 in 100 year event plus an allowance for climate change. Doing this would represent maintaining the status-

quo. However, it is proposed that discharge rates are reduced to match the existing greenfield QBAR run-off rate for the same design storms. The QBAR rate represents the Mean Annual Maximum run-off rate i.e. on average the maximum greenfield run-off rate from the site each year, and is approximately equivalent to the run-off generated by the 1 in 2.3 year storm event (43.8% AEP). This will reduce peak run-off rates and volumes discharged from the site post-development and seeks to contribute to the reduction of flood risk downstream.

It is inevitable that development of the site will introduce large areas of impermeable surfacing when compared to its current condition. To manage run-off and meet the proposed peak run-off rate restriction, surface water will be managed in a number of SuDS measures as a Management Train.

Initially, rainfall will be managed at source, in measures referred to as Source Control. These will intercept rainfall and treat water quality. At this early stage, it is not possible to specify exactly what Source Control measures will be located and where but, for information purposes, examples which will be explored as the proposals develop include permeable pavements, rain gardens (also referred to as bioretention) and tree pits. These features will be fully integrated into the design layout to provide holistic storm-water management.

From these Source Control features, runoff will be transported across the site (preferably via open channels, such as swales) to strategic ponds. These

ponds will balance the inflow of storm-water runoff with the restricted outflow to existing watercourses on site. These ponds will contain permanent water within them, contributing to overall amenity and biodiversity aspirations on site, whilst again further improving the water quality prior to discharge. The intention is that these ponds become key features within the site and landscape, forming part of the overall green and blue infrastructure provided.

A.7 Ecology

The site comprises 10 fields, currently in arable or equestrian use, with some small areas of hard standing, woodland and buildings. The fields are connected and bound by a number of hedgerows, some with trees; ditches and running water. A small part of the site meets the River Cam.

The site is situated alongside the M5 and railway line to the north of Cam, and south of Slimbridge and Cambridge. The wider landscape is one of intensive agriculture, solar farms and small to medium size settlements. The nearest extensive areas of woodland are along the Cotswold escarpment approximately 4 km to the east; the Severn Estuary is almost 4 km to the north-west.

The site falls within 7.7 km of the Severn European Marine Site (EMS) and is therefore within the zone where any new residential development is likely to contribute to a significant effect on the EMS. The proposed development will be providing an integrated 30ha Green Infrastructure network which will help to reduce the impact on the Severn EMS



A. Site and Context Appraisal (continued)

by providing alternatives to existing and new residents for walking, dog walking etc. Subject to further assessment a financial contribution could be made on a per dwelling basis in order to fund the strategy (through the Stroud District Council's Severn Estuary Recreation and Mitigation Strategy).

Habitats

The majority of the hedgerows on site are dominated by UK native species and qualify as Priority Habitat under the Natural Environment and Rural Communities Act (2006). The majority of hedges within the site are proposed to be retained within the Green Infrastructure framework of the site, with localised removal to form new entrances and connections. In order to mitigate localised loss of hedges, new species-rich hedges will be planted to deliver an overall net gain in habitat.

The fields within the site are largely arable or improved grassland, the majority of the grassland fields are heavily grazed and are therefore not priority habitats, but still have some biodiversity value. A large portion of the grassland will be lost to development of the site and therefore retained and new grassland areas should be seeded with appropriate wildflower meadows and appropriately managed.

The remaining habitats: arable fields and margins, small areas of woodland, standard trees, tall ruderal, dense scrub etc. do not qualify

as NERC Priority Habitats. Where possible these are retained within the proposed Green Infrastructure framework and will be enhanced and managed to secure biodiversity net gain.

Protected and Notable Species

The ecological scoping study identified potential for the site to be used by a number of protected species including Bats, Dormice, Birds, Reptiles and Great Crested Newts and further surveys will be undertaken to fully understand their presence on the site and ensure that their habitats are protected and enhanced within the proposed development and any potential harm is fully mitigated.

Additional opportunities to enhance the site for protected species have been identified and included in the development of the masterplan including provision of a connected Green Infrastructure network that provides habitats including wetland areas, woodlands, scrub, meadows, hedges, orchards and allotments and private gardens that will be managed to promote biodiversity. Additional measures will be integrated into the development including bat roosting spaces, bat and bird boxes, log piles and invertebrate habitat in garden walls and buildings, hedgehog passes plus mitigation during the construction period to avoid possible harm to wildlife such as nocturnal mammals.



Biodiversity Net Gain

As noted above, and described in more detail in section 3.1 of this report (p9), the proposed Green Infrastructure Strategy for the site integrates the creation of new habitats including woodland, scrub, orchards, meadows and wetlands and other biodiversity features with the aim of securing long term landscape enhancement and biodiversity net gain.



A.8 Trees and Hedgerows

The arboricultural assessment identified a number of existing hedgerows and a limited number of existing trees (largely within hedgerows) which are of value and should be retained within future development of the site.

There are significant areas of land where key trees and hedgerows do not act as material constraints and which can therefore be used for development, and significant potential for hedgerow enhancement and increased tree cover.

A.9 Historic Environment

A heritage assessment of the site has concluded that the site has potential for a number of buried archaeological remains. Whilst the proposed residential redevelopment of the site would likely result in the truncation and/or total removal of the anticipated archaeological resource within the site, none of these remains are anticipated to be of such significance that they would preclude development.

Prior to development, a programme of archaeological evaluation works will be required to establish the nature and extent of the potential archaeological deposits, and establish their significance, in order to design a programme of archaeological works which could mitigate for the harm of their removal (through preservation by record). It may also be possible, through

heritage-led design measures, to preserve some of the identified archaeological resource in-situ.

Hedgerows within the site can be considered 'important' under the archaeology and history criteria of the Hedgerow Regulations 1997. 'Important' hedgerows do not comprise designated heritage assets; the Regulations are essentially a notification mechanism, and the local planning authority would need to authorise the removal of such hedgerows.

The Heritage Assessment was undertaken on the basis of the development of the site for residential use of a traditional scale (as proposed in the current masterplan) and concluded that there would be no harm to any designated heritage assets as a result of changes to their setting.

A. Site and Context Appraisal (continued)

A.10 Noise and Air Quality

A baseline environmental sound survey has been undertaken on the site. Based on the results of the survey, an initial assessment of acoustic constraints has been undertaken for the proposed residential development.

The main source of environmental noise at the site is vehicular movements on the surrounding transportation links, particularly the M5.

In conjunction with the design team, the site layout has been designed so that garden areas are located behind homes, so that they are screened from the roads by the buildings they serve. Additional mitigation options will also be reviewed during the detailed design of the scheme.

Boundary treatment in the form of an acoustic bund and/or barrier is proposed to further reduce noise levels across the site. As part of the design development, the scale and scope of the acoustic boundary treatment will be reviewed to provide an optimum design to attenuate noise whilst also being sympathetic to landscape and visual impacts.

Internal noise levels are likely to be met through the specification of appropriate glazing and alternative ventilation schemes accounting for the final layout of housing, window sizes and internal layout.

Concentrations of NO₂, PM₁₀ and PM_{2.5} have been predicted in 2022 for a grid of 10m² receptors surrounding the site using the ADMS-Roads modelling software and presented in contoured

isopleth mapping. The assessment identified that the site is well suited for residential development as NO₂ pollutant concentrations across the majority of the site (over 95% of the site area) are below the relevant objective. The only area with pollutant concentrations which exceed or are close to the objective are within 12m of the boundary from the M5. There are no exceedances of the PM₁₀ or PM_{2.5} objective within the site boundary.

Whilst air quality is acceptable across the majority of the site, this should be subject to more detailed modelling which incorporates traffic produced by the development. Emissions are also expected to fall year on year and the areas not currently considered acceptable may become acceptable in the future.

A.11 High Pressure Gas Main

The existing High Pressure Gas Pipeline runs north-south through the middle of the site. There are constraints to development within the consultation zones of the existing Gas Pipeline. HSE's advice on land use planning, in the majority of cases, is delivered through PADHI guidance – 'Planning Advice for Developments near Hazardous Installations' and is monitored by the Local Planning Authority with guidance by the HSE. In summary the HP Gas Pipeline Consultation Distances are as follows:

Inner Zone = 0m to 16m (either side of the main)

Middle Zone = 16m to 49m (either side of the main)

Outer Zone = 49m to 70m (either side of the main)

Based on the PADHI guidance, should the proposed development be for greater than 30 homes, then no residential development will be permitted within the inner or middle consultation zones. Homes will be permitted within the outer consultation zone. However, workplaces (employment buildings) providing for less than 100 occupants per building can be within the inner zone.

In all cases, any buildings with the easement associated with the gas main would not be permitted.

Should the gas main be re-laid (either in situ, or in a new location) in 'thick walled pipe' the Consultation Distances should be reduced to the following;

Inner Zone = 0m to 3m (either side of the main)

Middle Zone = 0m to 3m (either side of the main)

Outer Zone = 0m to 3m (either side of the main)

In this case, the easement and consultation zones would be coincident at 3m from the centreline of the gas pipeline.

At the junction between the new and existing pipeline, the original consultation zones will take precedence and the zones will resemble parallel half circles centred on the connection point (as shown on preferred concept option plan, p58).

A. Site and Context Appraisal (continued)

A.12 Foul Sewerage

Early discussions will be held with the strategic policy-making authority and water and sewerage company to ensure that proposed growth and any reinforcement / capacity improvements that are required (to the sewer network or receiving sewage treatment works) and environmental objectives are reflected in company business plans.

The sewerage undertaker has a legal obligation to include allocated sites within their plan making for future growth, and this will align with the proposed phasing of the development. Water company business plans align with the Asset Management Plan (AMP) periods, and their investment estimates are issued to Ofwat as part of the AMP process which details the water companies' capital and operation expenditure for the relevant five year plan period. The current plan period is AMP 6, which runs from 2020 to 2025, the next AMP (which planning is underway for between now and 2025) is AMP 7 which runs from 2025 to 2030.

Following the granting of detailed planning, the developer has a legal right to connect to the sewer network and any reinforcement / capacity improvements that are required would be the responsibility of and funded by the water company via received infrastructure charges.

A.13 Existing Land Uses

The existing site comprises 10 fields which are currently used for agriculture (pasture and arable fields) and equestrian uses. A small number of agricultural and equestrian sheds and barns are located within the site area.

A number of properties are located in close proximity to the site including Lanes End Bungalow and Rocket Rentals commercial unit adjacent to the A38 in the southern parcel. To the north of the A4135 there are a number of existing residential properties located on Wisloe Road and Dursley Road along with Wisloe Road Business Park, Slimbridge AFC and MD Collins Steel Buildings Ltd which immediately adjoin the development site. A farm house and associated buildings in private ownership is located within the northern parcel of land.

A.14 Existing Communities and Facilities

The area around the junction of the A4135 and Wisloe Road currently consists of an employment area and Slimbridge AFC. These facilities are supplemented by those in Slimbridge itself, which include a primary school (including pre-school), post office, church, village hall, sports field and playground. Cambridge has limited existing facilities, primarily The George public house.

To the south of the site along the A4135 are Draycott, Cam and Dursley with a combined population of c.15,000 which make them a significant conurbation and focus for the District, providing a significant centre for homes, jobs, retail, transport, services and facilities including community, health, leisure and secondary education. As a result, Cam and Dursley combined offer the best access to key services and facilities within the District, and have a role in providing strategic services and facilities to the surrounding area, particularly given they have a railway station to serve them.

A.15 Local Character

Wisloe lies within the Severn and Avon Vales Landscape Character Area, a predominantly low-lying open agricultural vale landscape. Woodland is sparse within the generally open landscape, however, traditional orchards are widespread across the area.

Much of the land consists of lowland meadow and floodplain grazing marsh which support a range of priority species including a wide range of waterfowl.

The M5 motorway cuts through the landscape, reducing its tranquillity, but linking Bristol with Gloucester and beyond.

The landscape rises in the east to form the Cotswolds limestone ridge which also offers exceptional views west across the landscape, to the Severn Estuary and beyond, reaching as far as the Forest of Dean.

The existing villages of Slimbridge and Cambridge, and residential properties at Wisloe Road, are predominantly brick and render with tile roofs and include traditional cottages and farm buildings, Georgian, Arts and Crafts and more modern buildings in a range of architectural styles. Distinctive landmarks include St John the Evangelist parish church in Slimbridge and a number of distinctive groups of historic buildings.

There are a number of metal clad commercial and industrial buildings located adjacent to the A38 which do not reflect the historic built character.



B. Masterplan Development

The masterplan has been developed through an iterative design process with detailed input from the technical design disciplines whilst building upon the emerging Local Plan policies and drawing upon key relevant guidance, including the Garden City Principles and National and Local Design Policies and Guidance.

The principles 'Building for a Healthy Life' and 'Building with Nature' have been used to inform the development of the emerging masterplan and ensure that opportunities to embed high quality design and placemaking are taken at this early design stage.

B.1 Core Concept Principles

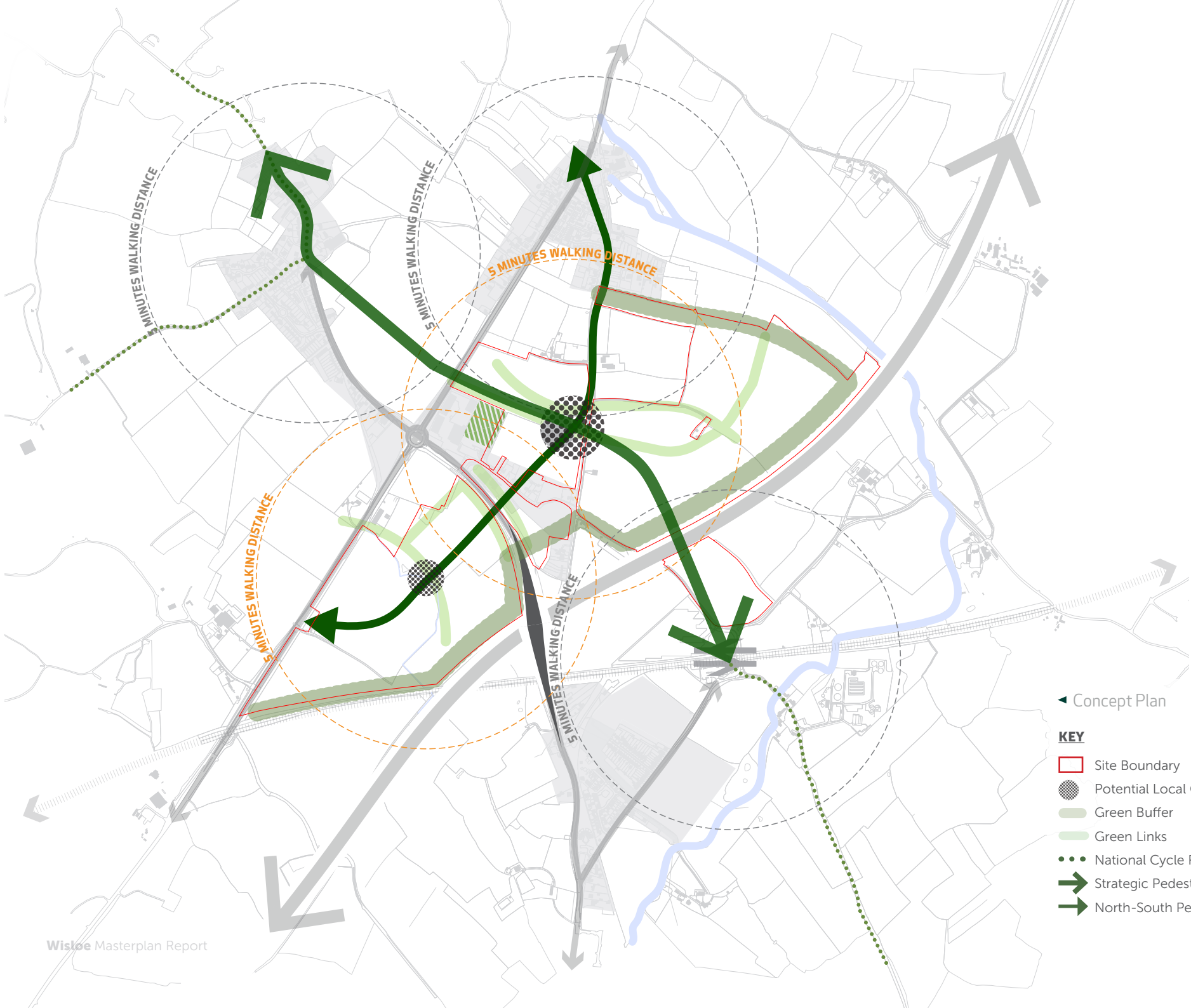
The concept layout for Wisloe proposes two new walkable neighbourhoods within the northern and southern areas of the site, set within a new multifunctional green and blue infrastructure framework that provides a buffer to the M5, makes connections to the wider area and provides separation between the new settlement and Cambridge and Slimbridge.

The proposed new mixed-use centres will form two neighbourhoods within a cluster of 'five villages' which include the existing settlements of Slimbridge, Cambridge and Lower Cam. This approach allows existing villages to retain their own separate identities, by creating new distinctive neighbourhood centres set within a strong landscape framework that prevents coalescence. The five villages are proposed to be linked by excellent sustainable transport and pedestrian/cycle connections, enabling good connectivity to facilities for both existing and new residents and other destinations.

A new strategic pedestrian/cycle link provides an accessible route east-west across the site, joining the gap between National Cycle Network Route 41 and the Cam, Dursley and Uley

Greenway - linking Slimbridge and destinations to the west of the A38 with Cam and Dursley railway station and the wider area to the east.

Two new access points provide vehicular access from the A38 and enable Dursley Road to become a public transport and cycle/pedestrian route, therefore preventing increased traffic in Cambridge. A further new access point links across the A4135 to provide a connected sustainable transport route linking all of the communities.



◀ Concept Plan

KEY

- Site Boundary
- Potential Local Centre
- Green Buffer
- Green Links
- National Cycle Route/Greenway
- Strategic Pedestrian Cycle Link
- North-South Pedestrian/Cycle Link

B. Masterplan Development (continued)

B.2 Concept Options Appraisal

Early masterplan proposals built upon our Vision for 'a sustainable garden community between the Cotswolds and the Severn Estuary', and the proposed development principles and core concept principles, and were used to engage with stakeholders and the local community and test the design principles and technical responses to the site.

A number of technical constraints and opportunities have informed the masterplan (summarised in Appendix B of this report). Two key issues are the diversion of the Gas Main (which runs northeast to southwest through the centre of the site), and provision of a new sustainable transport route linking across the M5 to connect with Cam and Dursley railway station and the strategic cycle and pedestrian network to the east and west of the site.

Two masterplan options were developed – one of which retained the Gas Main in its existing location, the other diverting the Gas Main to the eastern periphery of the site. Both options would enable development of approximately 1,500 homes, but the diversion of the Gas Main removes the constraint from key parcels of land. This would facilitate delivery, utilising the proposed green infrastructure and buffer zones around the edges of the site as an easement and creating a more efficient developable area.

Options to connect across the M5 included use of the existing A4135 bridge (across the M5 and railway), but the provision of a new bridge to provide a direct connection between the heart of the new development and Cam and Dursley railway station and full integration of the strategic pedestrian and cycle routes is considered to have significant benefits for the development and the wider community.

The preferred masterplan option therefore diverts the HP Gas Main around the eastern edges of the site, removing the constraint to uses and activity within the centre of the proposed development. This approach allows for a mix of uses within key locations, which will create more vibrant centres, of a more local scale and for the masterplan to be more flexible and assisting delivery. There is also the potential to benefit existing residents by diverting the Gas Main away from existing dwellings which currently sit within consultation zones.

A Technical and Viability appraisal of the preferred option (to relocate gas main) which included testing the deliverability of pedestrian/cycle bridge over the M5, was undertaken at this stage. Further information on Viability and the delivery model can be found in section 5 of this report.

B.3 Consultation and Stakeholder Engagement

As series of consultation events have been undertaken to inform and test the development of the masterplan, commencing in 2019 and with ongoing engagement with stakeholders and the community through 2020.

In January 2021 the landowners began a new stage of consultation and engagement with the launch of a consultation website at www.wisloe.co.uk, alongside the distribution of a newsletter to over 4,000 addresses. The website included interactive mapping, and a survey to obtain feedback.

Direct stakeholder engagement has also been undertaken, including discussions with community groups, local councillors, local parish councils, the local MP, businesses and other local organisations.

A number of key themes, priorities and concerns emerged from the responses which have been considered and integrated into the developing masterplan options.

The following were identified as key themes for the development:

- *Enhancing wildlife and biodiversity*
- *Protecting the identity of local villages*
- *A design that complements the surrounding area*
- *Improved walking and cycling connections*
- *Attractive green spaces*

Concept Masterplan (Preferred Option)

Uses	m2	Ha	No. Homes
Green Infrastructure	279000	27.90	
School	20000	2.00	
Playing Pitches	17000	1.70	
Infrastructure	40000	4.00	
Mixed Use/Employment	44000	4.40	
Potential Later Living (60 bed)	4250	0.43	
Residential Over Employment (45dph)	3800	3.80	152
Residential - 45 dph	75000	7.50	338
Residential - 35 dph	306000	30.60	1071
Residential - 25 dph	4500	0.45	11
		TOTAL	1572



Concept Masterplan (Alternative Option)

Gas main retains in-situ

Uses	m2	Ha	No. Homes
Green Infrastructure	295000	29.50	
School	25000	2.50	
Playing Pitches	0	0.00	
Infrastructure	40000	4.00	
Mixed Use/Employment	50000	5.00	
Residential Over Employment (45dph)	6500	0.65	29
Residential - 45 dph	165000	16.50	743
Residential - 35 dph	180000	18.00	630
Residential - 25 dph	2500	2.50	63
		TOTAL	1465



- Site Boundary
- Residential Area (45 dph)
- Residential Area (35 dph)
- Residential Area (>25 dph)
- Off-site Potential Residential Areas
- School
- ▨ Sports Pitches
- ▨ HP Gas Main
(Diverted along western edge in Preferred Option)
- Employment / Mixed Use Area
- Potential for later living
- ▨ GI / Noise Buffer Area
- ➔ Potential Access Points
- ➔ Public Transport Link
- ⋯ Existing PROW
- ➔ Potential Ped/Cycle Links
- National Cycle Route

B. Masterplan Development (continued)

The following were identified as highest priority in terms of features for the new settlement:

- *Trees and woodland*
- *Off road walking, running and cycling routes that connect to new and existing destinations*
- *Areas set aside for wildlife*
- *Informal open green space for play and exercise*
- *Wetland areas and ponds*

Key concerns raised by local residents which are being considered are:

- *Traffic*
- *Process – the landowners' role in proposing the development, communications and engagement and the delivery of the project*
- *Flooding/sewerage*
- *Pollution (noise and air quality)*
- *Gas pipe*
- *Coalescence with existing neighbouring communities*

B.4 Design Review Panel – April 2021

In April 2021 the emerging proposals were presented to the Design Review Panel (a group of independent, multi-disciplinary design professionals working in built environment). The Panel provides impartial expert advice to applicants and local authorities on design issues in relation to important new development schemes.

The Panel welcomed the opportunity to review the scheme at this early stage in the design process and noted that this is beneficial to securing good design and represents best practice. The Panel strongly supported the aspirations to provide a development of high-quality new homes as part of a sustainable community which takes place in accordance with the Garden City Principles, and provided some detailed feedback which has been addressed in the developed masterplan.

The key conclusions of the panel were:

- *Strong support for the sustainable design and low carbon principles presented*
- *Noted that the proposed dispersal of land uses appears to work well*
- *Welcomed the opportunity for mix of uses throughout the scheme and distribution of employment in key areas*

The panel determined that further consideration should be given to the following:

- *Consider the chronology of the development as it may impact upon the layout of the scheme (gas main diversion, bridge connection, drainage etc – further information on the potential phasing can be seen in section 5 of this report)*
- *Consider the central plot of land becoming a green wedge to maintain openness between the two new settlements*
- *Consider the opportunity to strengthen the concept of communal food production on site – including orchards which reflect historic land uses*
- *Consider benefit of capturing long range views out of the site to neighbouring landmarks and landscape*
- *Establish the proposed landscape character to be reflective of South Gloucestershire*
- *Ensure adequate pedestrian and cycle connectivity between northern and southern land parcels*
- *Proposals should incorporate flexibility in terms of both highways and landscape design to ensure the scheme is future-proofed*
- *Consider the opportunity for landmark trees to be incorporated within the development to ensure the design reflects historic landscape*

**Draft masterplan
presented to Design
Review Panel in April 2021**



C. Garden City Principles

This masterplan has been developed with reference to Garden City Principles which the Town and Country Planning Association (TCPA) defines as follows:

A Garden City is a holistically planned new settlement which enhances the natural environment and offers high-quality affordable housing and locally accessible work in beautiful, healthy and sociable communities. The Garden City Principles are an indivisible and interlocking framework for their delivery, and include:

- Land value capture for the benefit of the community.
- Strong vision, leadership and community engagement.
- Community ownership of land and long-term stewardship of assets.
- Mixed-tenure homes and housing types that are genuinely affordable.
- A wide range of local jobs in the Garden City within easy commuting distance of homes.
- Beautifully and imaginatively designed homes with gardens, combining the best of town and country to create healthy communities, and including opportunities to grow food.
- Development that enhances the natural environment, providing a comprehensive green infrastructure network and net biodiversity gains, and that uses zero-carbon and energy-positive technology to ensure climate resilience.
- Strong cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods.
- Integrated and accessible transport systems, with walking, cycling and public transport designed to be the most attractive forms of local transport.



The TCPA guidance sets out basic urban design principles which help to provide a framework for working within the Garden City Principles. The proposed masterplan for Wisloe will address these principles as follows:

Ease of movement and connectivity

Wisloe will provide an excellent range of facilities and infrastructure which allow for enhanced connectivity for new residents and people within existing neighbouring communities. Strategic pedestrian, cycle and bus links are integral to the proposed layout of the site, and there will be opportunities for community-led facilities at the heart of the new neighbourhood. The site's proximity to strategic travel corridors will ensure it is well connected with surrounding settlements and facilities, with access to public transport being made a desirable option for travel, and focus on walking and cycling links to the station being intrinsic to the framework of the masterplan.

Walkable Neighbourhoods

The mix of uses proposed within the new neighbourhood centres, will ensure that proposed and existing residents can meet the majority of their day to day needs without the need for vehicular travel to the wider area. The neighbouring communities of Slimbridge and Cambridge will benefit from the access to key local facilities.

Diversity of housing and employment opportunities

The new homes will provide a balanced mix of housing typologies to meet the needs of the new community. Provision of later living accommodation and potential self and custom build plots will be integrated within the plan at the earliest stage. All homes will meet national space standards, will allow for flexible living and home working, and will have access to private amenity space. The green and blue infrastructure will be fully integrated within the site layout, meaning all proposed residents will have excellent access to informal and formal open spaces on their doorsteps.

Designing for Art and Culture

The new settlement will be focused around a mixed-use centre which will house a new school and community facilities, along with potential shopping, working and employment opportunities. This central hub will allow for cultural vibrancy to develop, and will provide the opportunity for the community to grow into the new settlement and stewardship options where possible.



C. Garden City Principles (continued)

Healthy and Active communities

The new community will encourage walking and cycling, providing the missing link between key local facilities and strategic routes, and existing infrastructure and transport options. The green and blue infrastructure has been developed to provide a range of environments, from quiet, walking routes, to formal open spaces.

Multi-functional green infrastructure

The masterplan for the community has been developed using a landscape-led approach and will provide multi-functional spaces which act as biodiverse areas for wildlife, sustainable urban drainage features, and amenity spaces for the community. 50% of the site is allocated as green and blue infrastructure with the majority of this being easily accessible to the public.

This accessible green and blue infrastructure network will provide attractive and usable public spaces, generate net biodiversity gains and wider ecosystem services, and connect with existing landscape features such as the River Cam, the Gloucester and Sharpness Canal and the Cotswold escarpment. The landscape framework within and around the community will include places for food production, play, learning, activity and quiet reflection.

Human Scale

The new community has been designed around walkable neighbourhoods focused on an accessible local centre, with predominantly 2 to 3 storey homes which relate to the scale of the existing villages. A range of housing densities are proposed; with higher density centres and along key sustainable transport links and lower densities to the peripheries of the site.

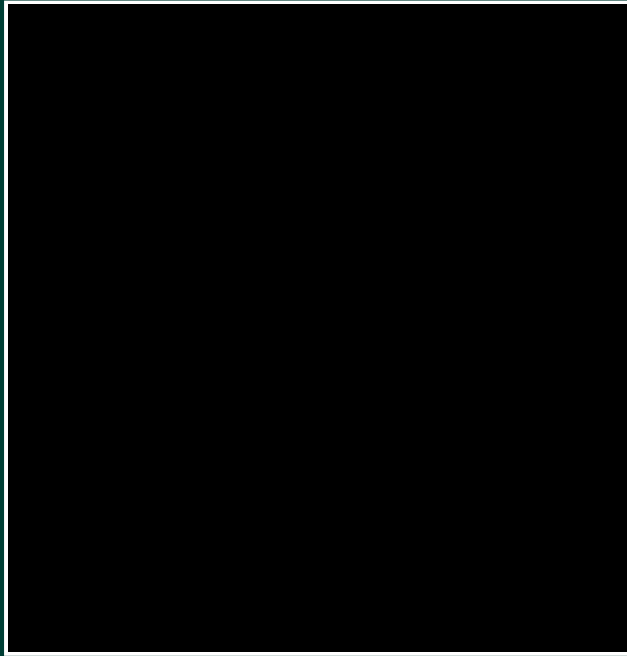
Designing for Climate Resilience

The new community will aim to meet Stroud District Council's Zero Carbon by 2030 target, functioning sustainably at all levels; regionally, locally and within the community and individual homes. It will provide facilities and support public transport networks which will assist the existing communities in reducing their carbon footprints. Wisloe will utilise a multifunctional green and blue infrastructure network to ensure climate resilience, prioritise the use of sustainable and low carbon modes of transport and built forms, and use zero-carbon and energy positive technology where possible.





□ lhc design



Social

