

# A Sketchbook of an Emerging Vision for Blenheim Estate



Emerging Vision for Blenheim Estate

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Our strategic vision aims  
to deliver development  
that addresses some of the  
most critical issues facing  
communities today.





# Executive Summary

Blenheim Estate's ambition is to support the creation of healthy, successful places where communities can thrive. We believe that there are opportunities within the communities around Blenheim for development to respond positively to the many socio-economic, health and wellbeing, environmental and design challenges we face in a post-COVID19 world.

West Oxfordshire District Council is working towards a new joint 2050 Plan for Oxfordshire. This strategic plan identifies the need for forward thinking in respect of how we can plan for the sustainable growth of our communities and it is within this context that Blenheim is seeking to present a strategy that meets future aims and aspirations. Blenheim's innovative approach, landholdings and strategic purpose founded upon enhancing the lives of local people places us in a unique and unparalleled position to promote new thinking aimed at delivering an exemplary approach to sustainable development.

The realisation of our ambition will rely upon the adoption of wide-ranging measures and innovations. The Emerging Vision for Blenheim 2050 begins to identify ideas and initiatives whereby a virtuous circle of investment into the creation and enhancement of beautiful places combines with direct reinvestment into social and physical infrastructure, to enhance people's lives.

Further to carrying out quantitative and qualitative assessments, we have met and held conversations with people who live and work in the area. This has led to the production of this document, to introduce ideas for a positive spatial vision for the future evolution of Blenheim and its surrounding communities.

We want to enhance village life, to address the climate emergency, to reduce traffic congestion and pollution and to improve connectivity. Our emerging Vision identifies opportunities for development to be supported by a comprehensive network of safe, high quality cycle and pedestrian routes - providing greater access and easier accessibility to the open countryside and enhancing connections between villages, towns and public transport links. It recognises the need to support this by investment into pedestrian, cycle and public transport infrastructure in order to encourage sustainable patterns of movement and reduce our reliance on cars.

We believe that we have a responsibility to look for ways to improve the quality of life today and into the future. Blenheim would like to share the content of our emerging Vision to 2050 with the communities that live and work all around us, and with our many public, private and voluntary sector partners - we want to hear what people have to say about our proposals.

**Blenheim Estate wants to share the content of this emerging vision with the communities that live and work within and around the Estate and Blenheim's many public and private sector partners to hear what people have to say about what is being proposed.**



# Context

**"We are the first generation to know we are destroying the planet and the last one that can do anything about it."**

*Tanya Steele  
Chief Executive of the World Wildlife Fund*



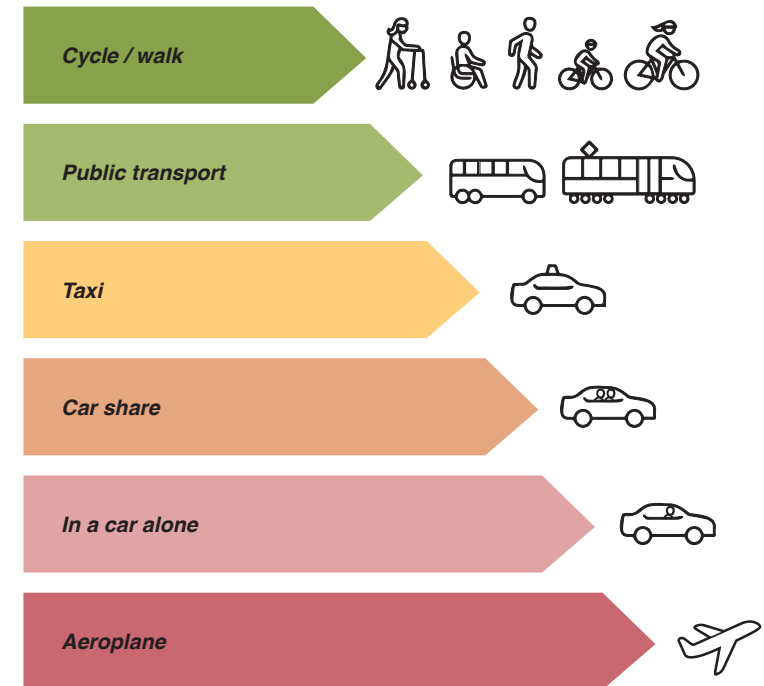
## Context

# Climate and biodiversity emergency

We are living beyond the earth's carrying capacity with devastating loss of precious habitats and climate change impacts. In the UK alone, 58% of all species have declined dramatically in the last 70 years and we have lost 97% of our wildflower meadows as a result of urbanisation and more intensive agricultural practices (Wildlife Trust). We also see the social consequences of economic growth through concentration of wealth in cities, growing inequality, social exclusion and the breakdown of social networks.

We are also experiencing increasing social and health inequality. In the UK, nearly one in three children leave primary school overweight (Cancer Research UK) and for the first time since the second world war life expectancy has stalled (ONS). Mental health issues are on the increase and intensive farming practices are having a significant impact on soils and the planet's ecosystems.

It is now quite clear that we all - individually and collectively - need to think and act differently, to live differently and to embrace new radical thinking and innovation in order to achieve the paradigm shifts necessary to sustain the environment.



*A comparison of the carbon emissions generated by various modes of travel (EAUC)*

## Context

# A place-based vision

In response to these social and environmental challenges, VeloCity, a multi-disciplinary team of built environment professionals, advanced a proposition as a direct response to the need to think differently about how we create new homes and places to work in the context of the destruction of the earth's ecosystems. It involved a holistic and layered approach to reinvigorating clusters of rural villages and their communities, while investing in great walking and cycling links between them, as well as to nearby bus and rail interchanges.

**"... VeloCity's proposal is a thoughtful and pragmatic response filled with humanity and high quality of design of our countryside. This project shows the importance of connecting joined up strategic thinking with the people and places on the ground."**

*Professor Sadie Morgan, Commissioner of the National Infrastructure Commission (NIC) and judge of VeloCity's winning submission for the NIC's international placemaking competition to find more sustainable ways to plan and develop the region between Oxford and Cambridge.*

## Context

# VeloCity Principles

## People over cars

Creating more sustainable movement networks

## Compact not sprawl

Keeping the special character of our villages

## Connected not isolated

Linking villages with shared resources to benefit all

## Opportunity over decline

Releasing land for new places to live and work

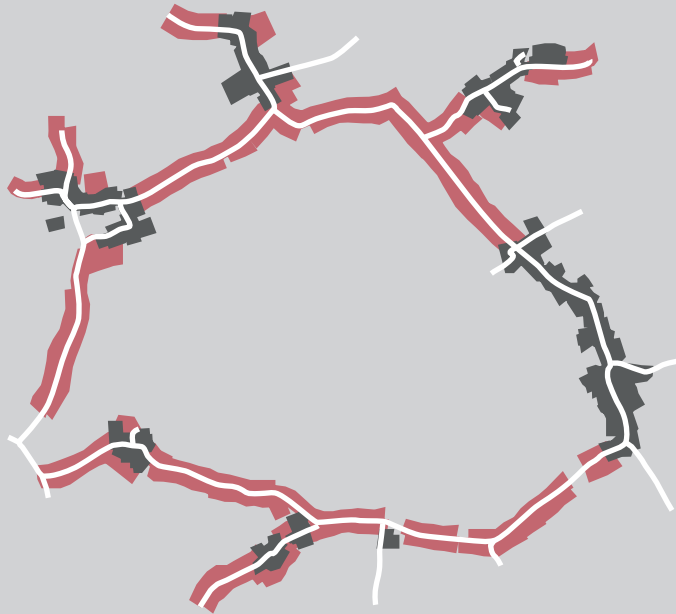
## Resilient not fragile

Promoting sustainable environments, health and well-being



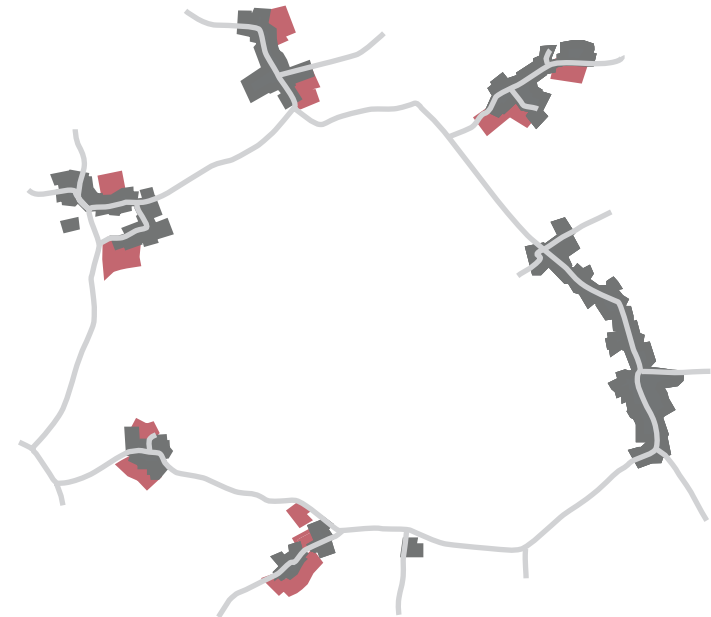
Context

If nothing changes,  
the sprawl continues...



Context

VeloCity villages: **compact,**  
**cohesive and well planned**



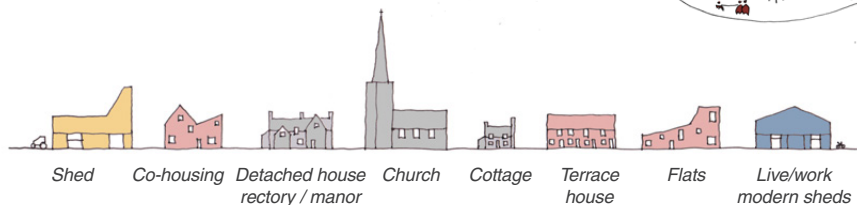
## Context

# A re-imagined village

Blenheim's vision is to enrich village life and a sense of place, while creating new homes and working environments in healthy and socially cohesive places. It comprises a 'polycentric' cluster of new and 'expanded' villages, which are connected to one another by a fine-grained network of cycle routes and within cycling distance of new/existing rail stations.

The village clusters are supported by the necessary social, environmental and economic infrastructure to enable them to operate in a sustainable manner within their environmental limits.

Cycling as the mainstream form of movement will shape the way places are planned and the way people communicate and relate to one another, enabling the development of resilient, intergenerational communities and a strong identity.





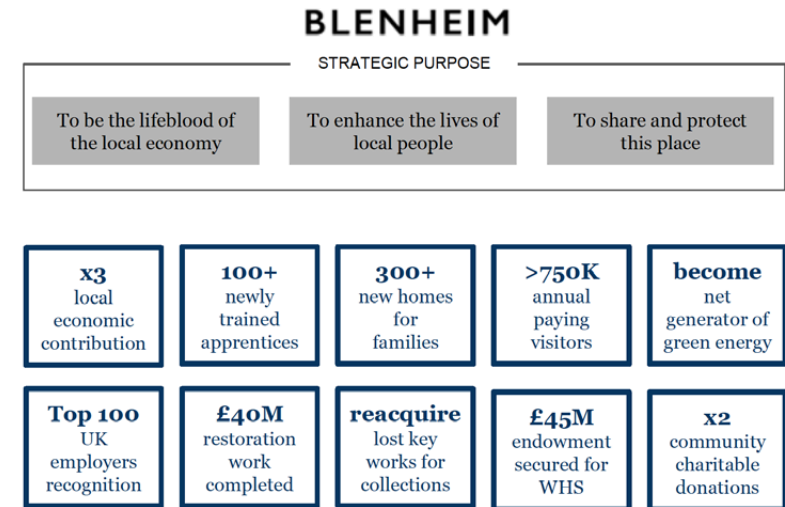
## Context

# Blenheim Estate and Palace

At Blenheim Estate we know that our land is precious and finite, but cared for properly its benefits can be limitless. By adopting new methods of valuing our natural capital we can view our land resources as part of an ecosystem. At the pinnacle of our ambitions is the goal to become the first estate to demonstrate carbon-negative land management.

Always growing our legacy.

## Context

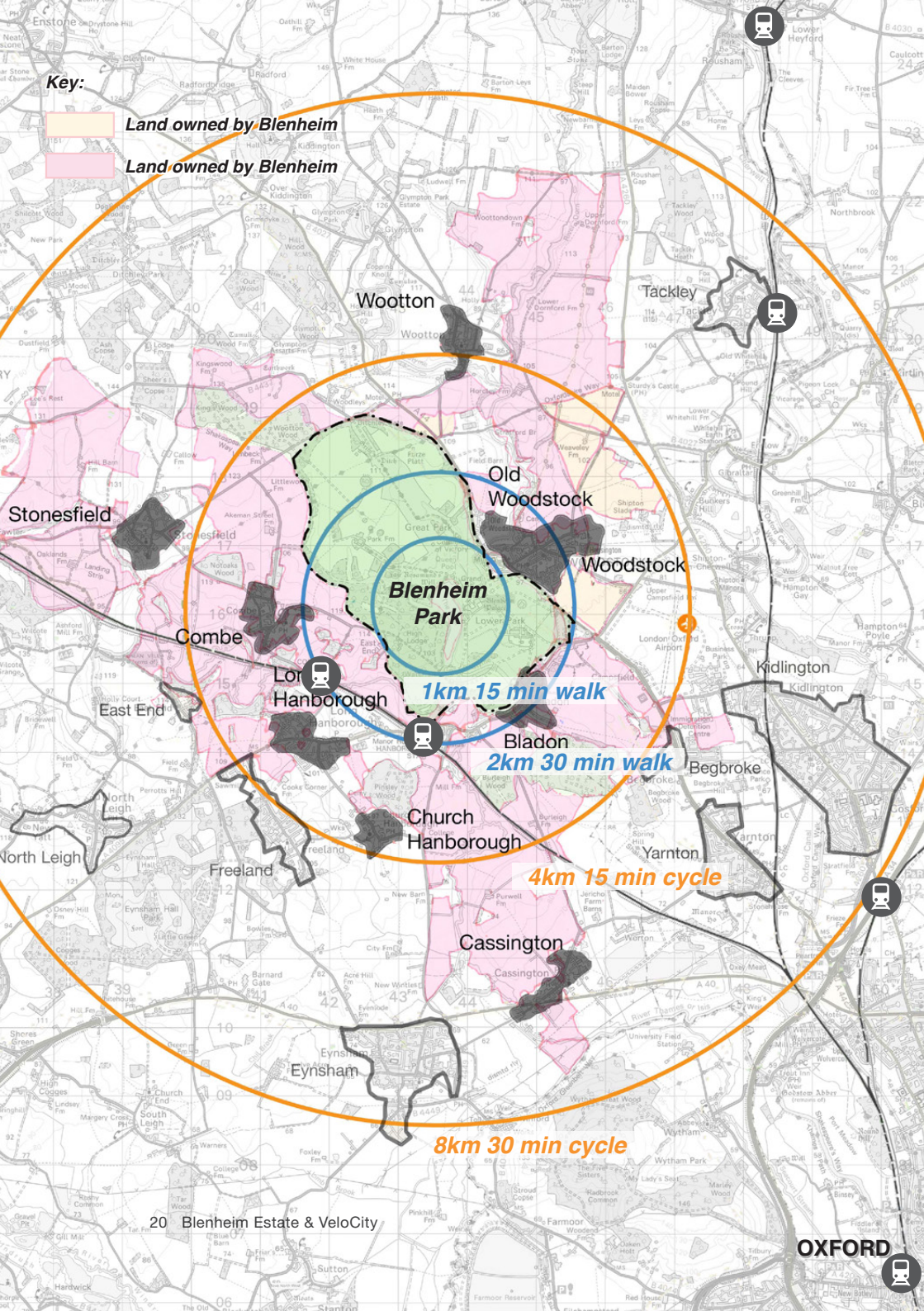


*Blenheim ten strategic goals*

The Estate sits in West Oxfordshire and the Council is one of six authorities, which are currently working towards a new joint 2050 Plan. This Plan recognises the need to think differently about how we plan for communities, taking into account a whole range of factors including the need to balance meeting development needs alongside health and well-being and addressing the climate emergency. As part of the plan making process the authorities are inviting people to advance ideas as to how they might approach the future planning of their communities.

Blenheim Estate is in a unique and unparalleled position to put forward a strategy that has the potential to deliver comprehensively on the 2050 Plan's aims and aspirations. Given this, we are looking to push the boundaries of creativity and innovation and fully explore the potential to shift behaviours and deliver an exemplar model for a future legacy.





## Context

## Our scope

The extent of the Blenheim Estate's ownership is shown in the plan opposite. The Estate comprises Blenheim Palace and the associated walled Park in green. The landownership also includes a number of villages including Wootton, Old Woodstock, Bladon, Church Hanborough, Cassington, Long Hanborough, Combe and Stonesfield. A number of other villages are located beyond the Estate's ownership but are within 8km of the heart of the Estate. This document summarises the output from the first stage of three stage process, which will eventually see the production of a strategy for the future development of the Estate to 2050. As part of this first stage SketchBook exercise we have:

- Reviewed all existing and emerging planning policy documentation.
- Reviewed all relevant statistical information associated with existing and future population projections and structure, economic activity and travel to work data.
- Undertaken a qualitative assessment of village character and community life, and the facilities that each village supports.
- Analysed the quality and extent of existing roads, bridleways and paths.
- Identified all proposals for the future enhancement of the transport infrastructure and their programmes.
- Identified all environmental and physical constraints and barriers to movement.
- Consulted with a number of key stakeholders

The output from these various investigations and discussions are summarised in the next section. We have then translated this analysis into a high level spatial strategy and set of initiatives and projects which are designed to both shift behaviours and facilitate movement by alternative means over time.

## Context

# VeloCity principles applied to Blenheim Estate

Blenheim Estate's emerging strategy embraces the 5 VeloCity Principles. Delivery will require fresh-thinking and policy change in relation to land and transport, effective community planning, engagement and new approaches to farming practice, food production and land management.

We illustrate how the strategy can be built out over a 30 year plan, testing and refining the approach in the short term to enable a transition in medium to long term.

The emerging strategy is being evolved in consultation with the Estate and officers from both the County and West Oxfordshire District Council and in consultation with a number of local groups and individuals. The output from these consultations will then form the basis for advancing the strategy through the various statutory plan making processes and will provide the opportunity to initiate and deliver some early projects.

In the short term we are seeking support from the Council and community and want to foster a spirit of collaboration between villages. Plans are being put in place to pilot new cycle and walking routes across the Estate linking villages more directly. Pop-up community hubs will be located along routes providing places to meet and work. New housing typologies will be developed to be low carbon and less land hungry in order to better protect the environment and countryside.

It is envisaged that this emerging strategy will when complete form the basis of a number of different strategies that can be promoted and implemented in to the Estate's Legacy plan.

Blenheim's emerging vision is a first step, and can be applied to many villages across the UK.

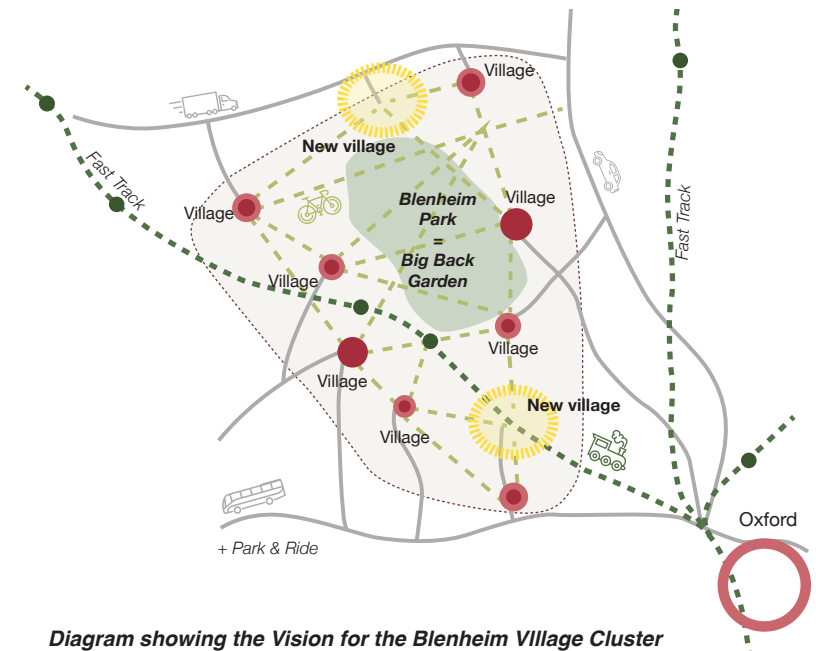
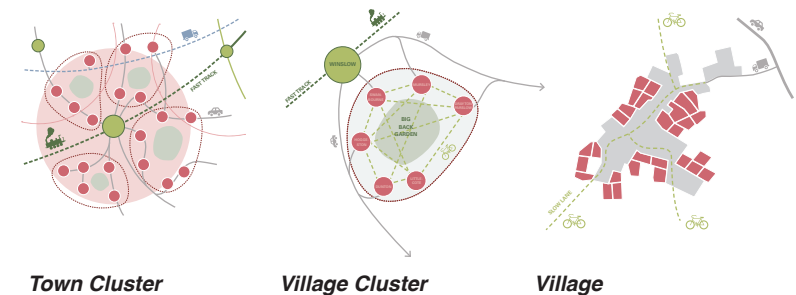


Diagram showing the Vision for the Blenheim Village Cluster



Town Cluster

Village Cluster

Village



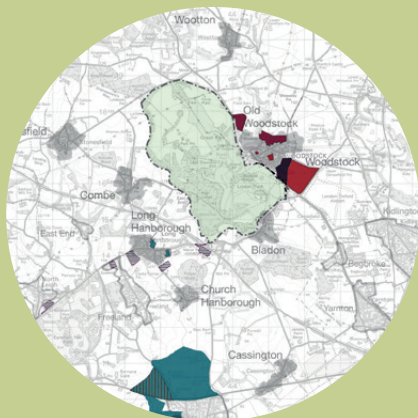


# Place: our understanding

Presenting our understanding of how the area functions today, drawing out potential issues and identifying future opportunities.



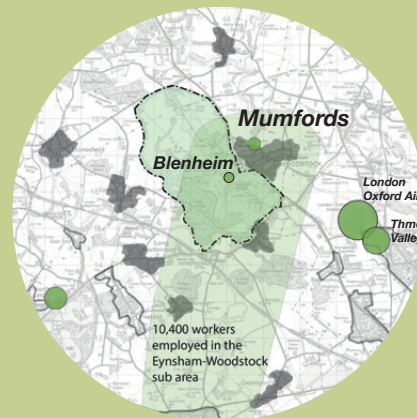
# Index of Areas of Research - see Appendix for more detail



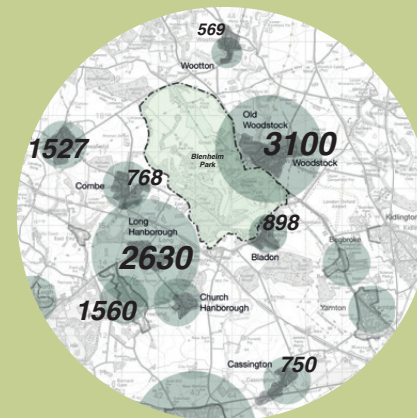
Development



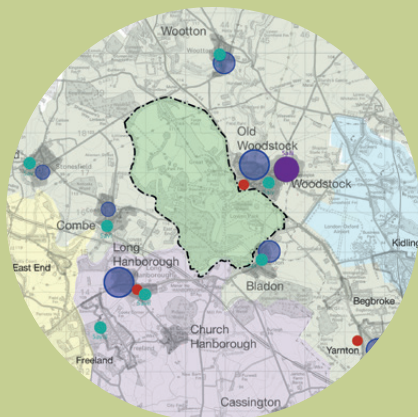
Environment



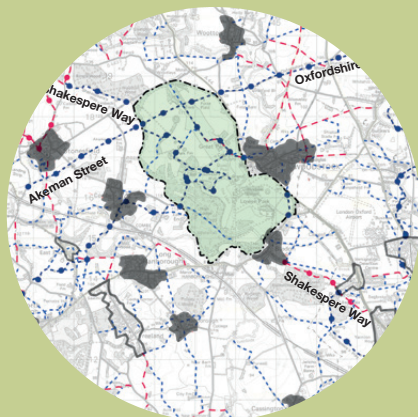
Employment



Population



Health, education & wellbeing



PROW's



Road



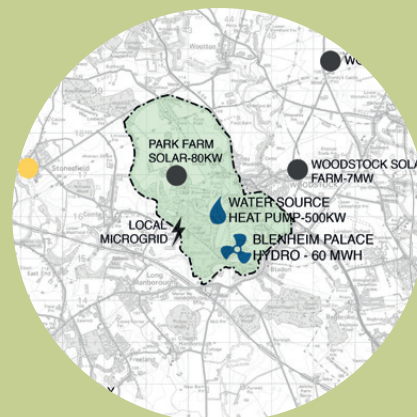
Rail



Bus



Cycle



Energy



Placemaking



Place: our understanding

# Movement: Future in 2031





## What we found out






- Oxfordshire Transport Plan sets the transport strategy to 2031 and has three components: mass transit, walking and cycling and managing traffic and travel demand.
- The strategy within the vicinity of the cluster will see the introduction of a series of rail and bus improvements, new park and ride facilities and new segregated cycle super and premium routes. and resourcing projects will need to be found.
- There is a need to improve public transport / cycle connections to the key employment
- The focus of this investment will mainly be to the south of the cluster.
- There are a number of longer term aspirations for future rail investment, which could further enhance public transport accessibility in the area.

## Where this takes us

- The investment strategy sets the context for planning a more local village cluster network of integrated cycle / walk links, which could provide short/ safe/ direct connections from existing and proposed developments to the key rail and PR stations and the proposed Cycle Super Routes and Premium Routes.
- Hanborough Station and the two PR stations will be the key points of interchange for the village cluster between bicycle and longer distance mass transit modes.
- Bus, cycle and rail transport in the area needs to be addressed in a holistic and integrated manner if a shift away from the car is to become a realistic proposition.




### Key:

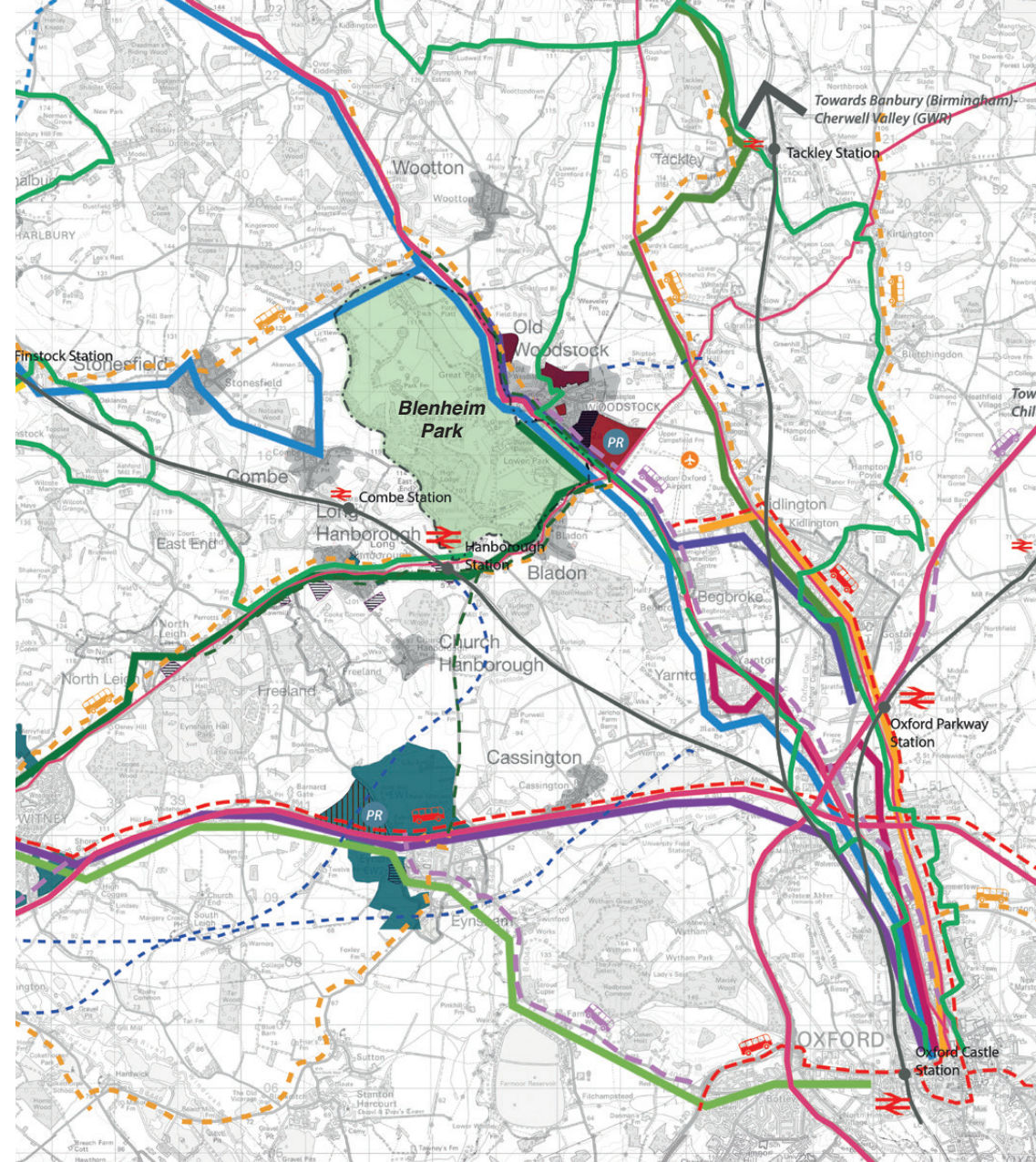
-  Land allocated for housing in West Oxfordshire Local Plan 2031
-  Developments brought forward by Blenheim Estates
-  Land allocated for employment in West Oxfordshire Local Plan 2031
-  Schemes with planning permission

-  Sustran cycle routes
-  New cycle routes
-  Proposed Park & Ride
-  Existing rail
-  Future rail, including some historic routes with potential for re-use

### Bus lines

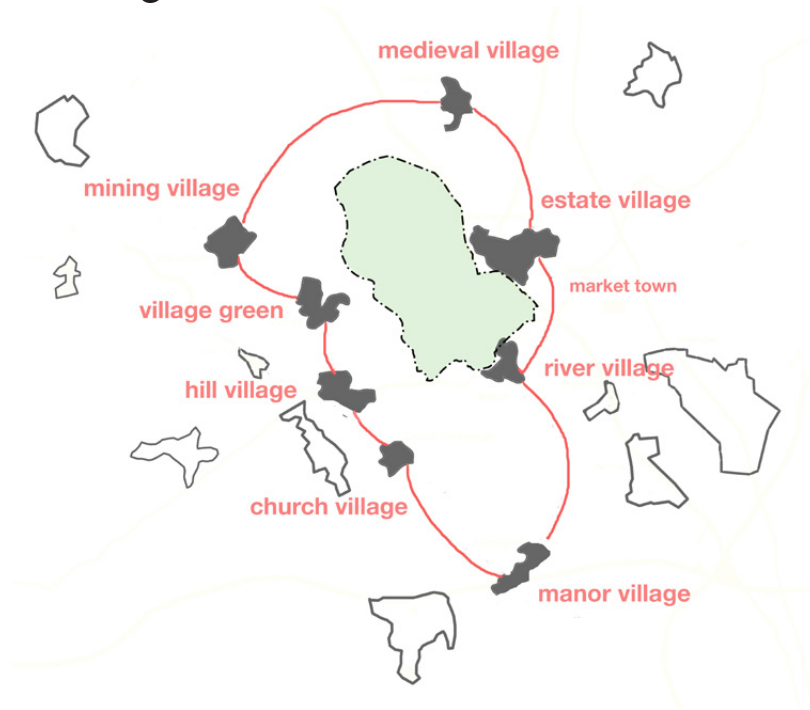
S2	S4	233
7	S3	X9
S1	7A	2

-  Proposed Rapid Transit Route
-  Proposed Premium Transit Route
-  Connector Transit Route



Place: our understanding

## Character and place: village cluster



### What we found out

- The villages within the Blenheim cluster all share picturesque qualities and a strong sense of identity.
- Whilst each village is distinctive they also share common characteristics. They

have all developed as rural settlements around farms, quarries and village greens.

- The demographic and community life varies in each village as a result of its historic function, for example Stonesfield residents worked in the quarries and have a Social Club whilst many of Combe's

*It didn't occur to me that as a cluster of villages we can make more of a difference*

residents worked in Oxford's universities and refer to their community building as the Reading Room.

- In the past they were more self-sustaining communities each village having at least one school, pub, church and post office.
- Some villages are more compact and clustered around a village green or market place whilst others are more linear.
- Names of villages tell a story about the village's identity and evolution and reflect the topography and landscape of the area.



## Where this takes us

The importance of maintaining each village's distinct and separate characters. Opportunity to build on this and develop design guides and principles for new development that builds in flex to accommodate for different character of villages and countryside.

### Genealogy of village names:

**Combe** - meaning a valley, but the village is on a hill, so it is thought there has been a shift away from an earlier site in the valley.

**Stonesfield** - (Stoney field) - also referred to as 'fools field'.

**Wootton** - (tun in the wood) - meaning 'clearings in woodland'.

**Old Woodstock** - meaning a 'clearing in the woods'.

**Bladon** - derived from an earlier name for the river Evenlode - the 'Bladene'.

**Hanborough** - derived from Hagen's, Hanna's, meaning hill.

**Cassington** - derived from the Anglo-Saxon name 'caersentun', meaning 'tun where cress grows'.



# Character and place: spatial development

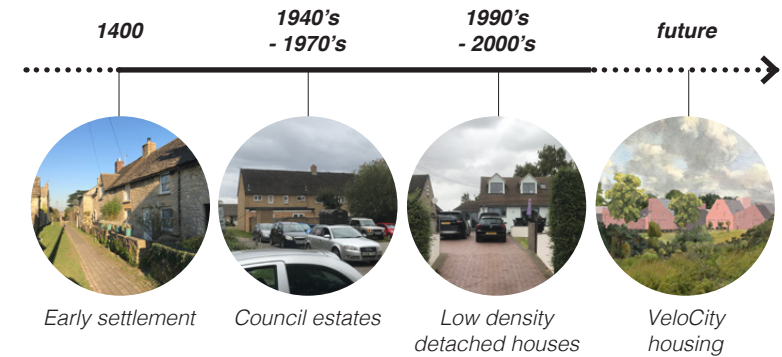
## What we found out

- Whilst all villages have seen the development of council estates and detached housing, the population increase has not grown proportionally. For example, Combe's population peaked at 655 in 1851 and despite over 120 new homes being built in 20C, in 2011 the population was only 768. This indicates that there has been a more recent increase in low density housing and smaller households living in large houses.
- New development is low density along roads out of villages - suburban style houses and bungalows with large gardens and forecourts for cars.
- Housing development has happened in an adhoc manner with no overall planning strategy.
- Council housing from post-war onwards is car dominated with few private garages and as

a result public space - streets, strips of green and pavements - are littered with cars.

- Public space in villages is often fragmented and poor. The village green and old walking paths have become disconnected and unusable.
- Roads within villages often have none or limited pedestrian footpaths and no segregated cycle paths, many are narrow and disconnected by drives and parking.
- Playing fields are often located at edge of village, remote to school and central core.
- Whilst all the villages in the Blenheim cluster have designated conservation areas, few have conservation area appraisals.

## Increase in low density housing and smaller households living in large houses



- Some villages have examples of historic picturesque terraced houses with only footpaths/ginnels leading to their front door, cars are parked remotely indicating an acceptance that this is part of everyday life.
- Less built up area also means more space for biodiversity, food production and community gardens.
- Opportunity to include within new design guides ways to improving usability and quality of existing and new public spaces.

## Where this takes us

- Opportunity to increase diversity and preserve character of a village by building higher density housing with a mix of smaller homes which stops sprawl eating into the countryside.
- With an incremental decentivisation of the car, a better spatial layout of new housing can provide more shared green spaces with options to relinquish garage and/or park cars remotely.



Grasscrete car parking on the edge of Dent - an old farming village in Yorkshire. The residents take pride in keeping their cobbled streets safe.

Place: our understanding

## Character and place: village life



*Eynsham local shops*



*Work units, Combe station*



*Local produce for sale*



*Wootton Community shop*



*Wootton Community shop*



*Village green littered with cars*



*Water Pump in Combe*



*Playing fields, Wootton*



*Combe Museum*



*Village notice board*



*Playing fields, Combe*



*Combe Hub*



*Car-free, pedestrian paths  
to front doors*



*Village bench*

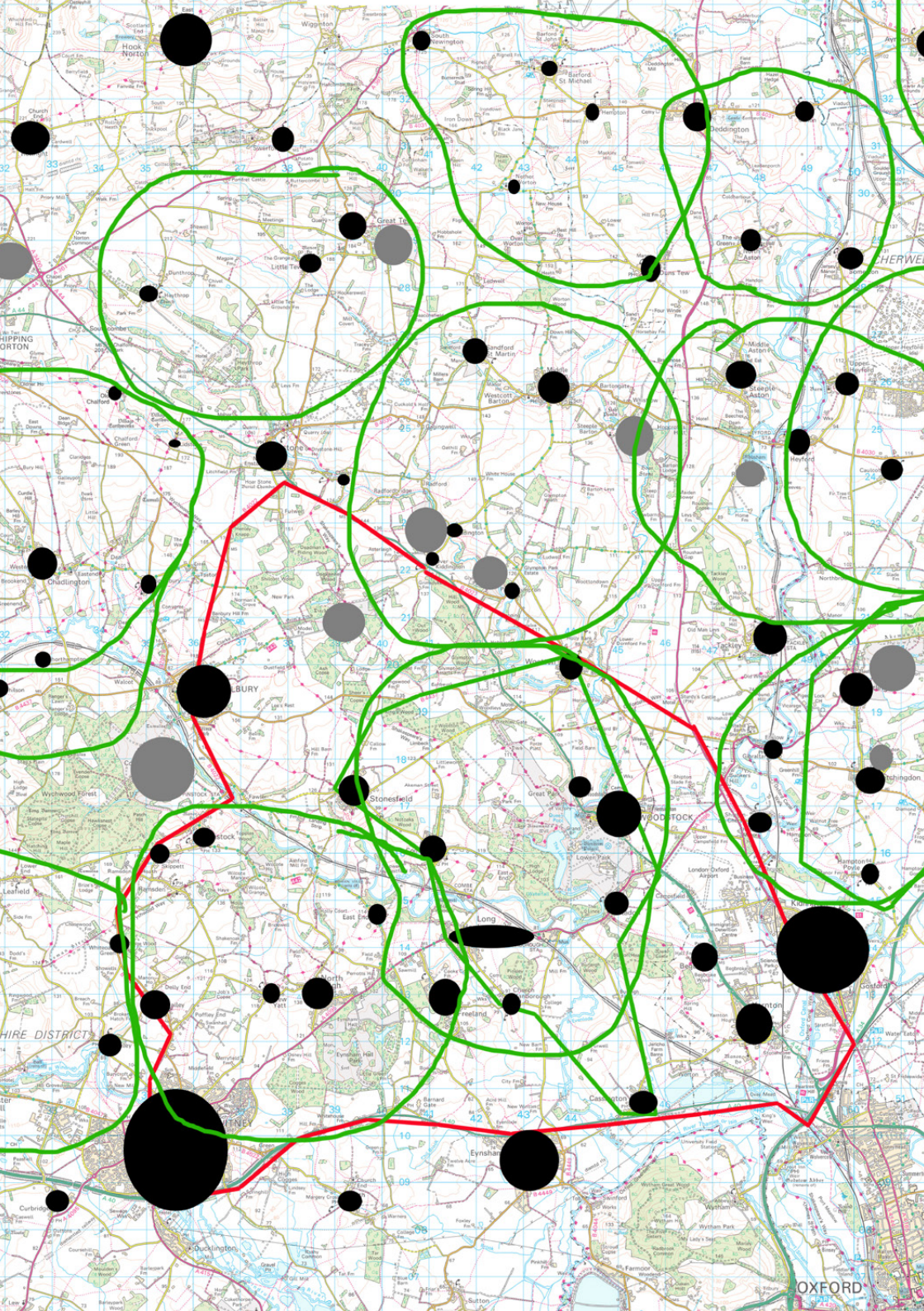


*Blenheim Park Farm*

# Emerging vision

Our emerging vision pushes the boundaries and fully explores the potential to shift behaviours and deliver an exemplary approach to development and to create a legacy of which everyone can be proud.





## Emerging vision

# Villages in a garden

Our background research has shown that planned growth and investment has focussed and been directed to the areas to the south of Blenheim. The villages and countryside that comprise our study area - situated to the north and east of West Oxfordshire District - are seen as unsustainable locations and as a result unsuitable for future development or growth.

As our research suggests, however these areas suffer from a number of intractable issues associated with aging populations, high house prices, a lack of and declining levels of services, high levels of commuting, high levels of vehicle movement and congestion and a lack of accessibility to alternative, more sustainable modes of transport.

In the absence of any positive planning or investment within these areas such issues will only get worse.

At the same time, however this part of the District is attractive and popular, existing villages have easy access to Blenheim Park and the wider countryside and all villages are only between 4-7 km from an existing rail station. In addition planned improvements to the strategic bus network and planned park and ride facilities will further enhance the accessibility of these locations.

The Blenheim village cluster shares similar principles to that of the Garden Village movement, the difference being one is concentrated around a single new village whilst the other is made up of a series of dispersed villages, hence the analogy, Villages in a Garden.



## Villages in a garden

Using many of the principles of the Garden Village, Blenheim wants to take a more holistic and joined up look at their Estate and the surrounding villages so they can support a future growth strategy. The scale and location of the villages offer a number of characteristics that enables them to bring this strategy forward:

- All existing villages are within 5.5 km of a rail station and proposed park and ride transport hubs.
- The villages in the Blenheim cluster already comprise approximately 2,200 homes between them and support a range of house types and tenures.
- The villages are well served by a hierarchy of existing roads.
- The land in and around them is largely in a single ownership.
- All villages have access to a high quality landscape and farmland.

Our research also found barriers preventing villages from fulfilling their potential:

- The majority of people drive to work on journeys that are less than 6km.
- The highway network connecting each village comprises rural roads not designed to carry large volumes of traffic.
- High volumes of vehicles, congestion and pollution on the roads running through the area.
- Opportunities to use more sustainable forms of transport are limited due to a lack of safe and direct cycle routes.
- Lack of facilities and services to support and meet the needs of the existing population.
- Lack of business support facilities to encourage home working and local business growth.
- High house prices and a lack of affordable homes.
- The relative remoteness of the villages to the north of the Estate.

## Typical housing development



**40% Roads + Parking**

**10% Pavement**

**27% Private Gardens**

**23% Building Footprint**

The proportion of space given to open space and community spaces used by people is frighteningly low in a typical housing development.

## Our alternative vision



**7% Road**

**5% Parking**

**3% Pavement**

**14% Community Courtyard**

**11% Ecological Buffer**

**12% Community Green Space**

**29% Private Gardens**

**11% Building Footprint**

With not much change to the houses and with attention to the spaces inbetween we think the alternative is a landscaped approach which gives less primacy to the car and instead creates more meaningful green space for people and the planet.

## Future growth strategy

The Blenheim village cluster shares similar principles of the Garden Village movement, the difference being one is concentrated as one new village whilst the other is dispersed, hence the analogy, Villages in a Garden.

Using many of the principles of the Garden Village thinking, Blenheim wants to take a more holistic and joined up look at their Estate and the villages surrounding them and in doing so, they can support the delivery of an holistic and all encompassing future growth strategy.



## Future growth strategy



### 1. Minimising car travel and maximising walking, cycling and public transport

- A network of new and upgraded cycle/pedestrian routes.
- Constrained movement through 20mph speed limits, quiet zones and the re-prioritisation of existing routes.
- 'Service and delivery hubs' at key entrance points into villages.
- Encouraging sustainable movement including bike/ electric bike hire; bike parking & storage; electric car hire schemes; local delivery based on bikes and electric vehicles.



### 2. Mixed communities and high quality housing

- Release of land in villages for new housing, employment and community facilities.
- Potential for new villages each supporting around 600 new homes.
- New housing responding to population needs i.e. age appropriate housing and affordable/starter homes.
- New homes designed to passivhaus standards and opportunity to improve energy efficiency of existing homes.
- High quality housing by local developers controlled by strong design codes.



### 3. Strong cultural, social and community facilities

- A comprehensive network of education, social and community facilities
- Work hubs to help facilitate home working, new business start-up and interaction between residents in key villages and at the heart of the community in Blenheim Park.
- Building on the success of an already well established cultural and leisure programme.
- Intranet linking the cluster of villages and promotion of sharing economy.
- Comprehensive waste and associated facilities.



### 4. Enhanced green infrastructure

- Photovoltaic park that community can have a stake in.
- Superfast broadband supporting live-work and foster creation of rural business.
- Minimising demand for resources through passive design and circular economy
- Allotments, orchards and woodland within and on edge of each village. Enhanced local parks/playspaces.
- Enhanced access to countryside and into and through Blenheim Estate.
- Protect existing habitats and create new ecosystems to support nature recovery.



# New housing typologies

Embracing Blenheim's principles of Legacy - **'Always Building Belonging'** to create house and spatial typologies that are characterful and "of this place"

- In line with Blenheim's Principles of Legacy and VeloCity's vision, we can create design guides and principles for spatial and building typologies. These will seek to improve and link open public spaces in villages and integrate new housing that is compact and sympathetic to the village character.
- This is an opportunity to build with a light touch footprint so that developments are compact not sprawling. With the right balance of smaller homes and less space given to roads and car parking, more can be given to community play, landscape and biodiversity gains. With less infrastructure and less built-up area it is also cheaper to build.
- In the early stages village cores could be tested as car-free spaces and new housing future-proofed for cars/vehicles to be parked on the edge of a village.
- We need to see a departure from modern pastiche and suburban housing typologies that proliferate our countryside. We will look to bring to the villages, new 'rural modern' housing typologies that capture the local character but are of their time.
- This is an opportunity to aim for low carbon homes to Passivhaus standards and provide homes which respond to need and particularly smaller homes for young and older people.



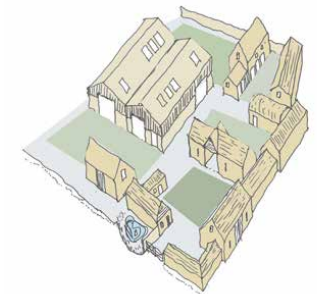
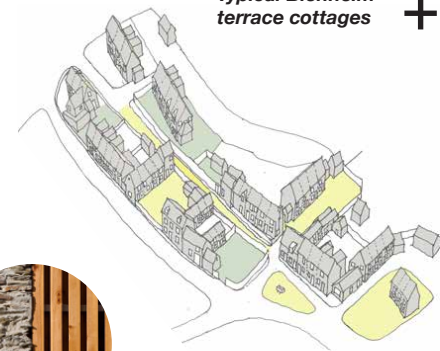
## New housing inspired by existing typologies in the study area



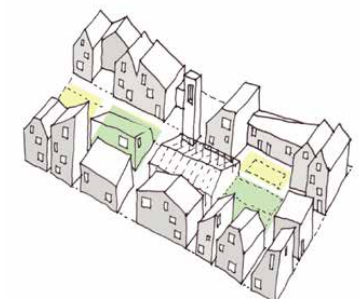
Typical Blenheim terrace cottages



Typical Blenheim farm courtyard



**New courtyard typology (density 50-60 dwellings per hectare)**



Plan of new courtyard typology with terraced house

Above: examples of modern interpretation of vernacular form and local materials which could help inform what the new 'rural modern' housing typology in villages might be.

# Making it happen

Having identified the opportunities, we have sketched out how this could be developed in the short, medium and long term.

Making it happen

## Making it happen

The initiative, which we are calling: **'Villages in a Garden'** will be led and championed by Blenheim Estate as landowner, developer and long term steward of the land.

Delivery will, however depend on the multiplicity of partners and the communities living and working in the area – now and in the future.

**0-2 years**

**Building the foundation**



**0-10 years**

**Enabling transition**



**10-20 years**

**Shifting gear**

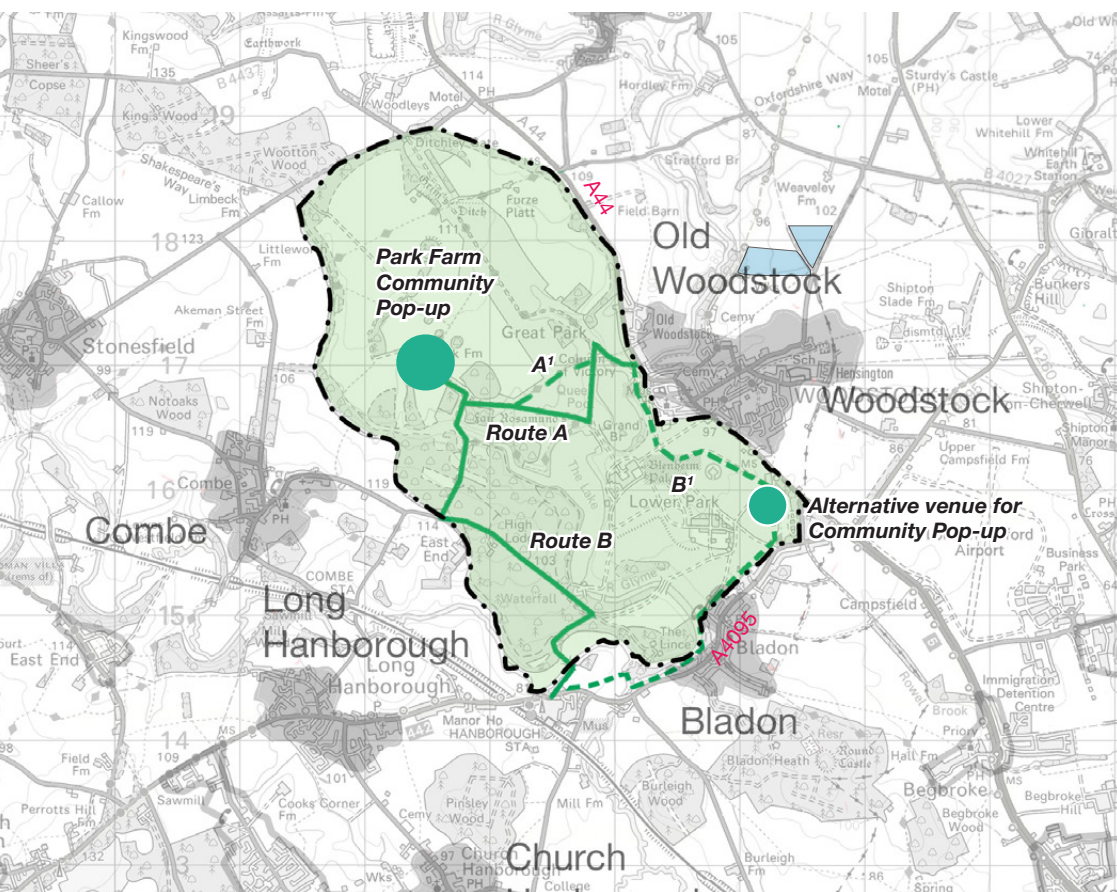




Making it happen

## 0-2 years: Building the foundation

The short-term strategy sets out quick wins, prototype solutions and engagement actions to help build support for the longer term strategy. We anticipate that these can be delivered over the next two years and be completed by 2022.



The first steps will be to open up 2 or 3 car-free routes through and around Blenheim Park. We have listened to local enthusiasm for safer routes championed by groups such as Sustainable Woodstock and local cycling champions, and see the value in creating new safer links between Hanborough station and Woodstock and Wootton to Old Woodstock and on to Woodstock.

These are a priority and will provide safer alternatives to the challenge of cycling or walking along the A4095 and the A44 and ease road congestion. Given the paucity of East West connections to the north of the study area, we also see the benefit of connecting Combe and Stonesfield to Woodstock and the main secondary school via a route across the Park. New routes could accommodate not just cycling and walking but a range of alternative green travel such as electric buggies and scooters.

We also see an opportunity to locate a community pop-up facility at the intersection of new cycle routes crossing the Park. It can provide for work spaces, educational workshops, seminars and pop-up markets, providing an alternative offer for the locals which is different from the visitor attractions in Blenheim. This pop-up facility can play an important role early on, drawing communities together and raising the profile of the work being undertaken by Blenheim to connect communities, think differently about land management and deliver a more sustainable future.



*It's very quiet living on the Estate at the weekends... it would be nice for the kids to have something to do.*

## Making it happen

# 0-2 years: Building the foundation

Possible locations for a pop-up community facility might be within an existing working farm or a redundant building in the Blenheim Estate that are located along new routes and away from the main tourist attractions.

An Energy Report commissioned by Blenheim Estates identifies opportunities for the installation of alternative energy technologies and PV's. A community pop-up hub could illustrate the benefits of these future technologies and help communities have a lower carbon footprint.

## Criteria for a community hub

- An opportunity to create a community facing facility, along new cycle routes. Located at central crossing point of new cycle and walking routes

linking villages, it can provide work spaces and a place to pause and meet friends and colleagues, particularly in the early stages when villages are still growing and not yet able to provide all supporting community facilities.

- Provides an alternative face of Blenheim one that addresses the local community and talks of Blenheim's legacy for land, the local community and a sustainable future utilising low carbon technologies. Initial experimental pop-up events could occur including educational workshops, tours and farm shop.

- An opportunity for the community to learn about innovative technologies being installed at Blenheim to support their adoption at scale to create zero carbon communities.



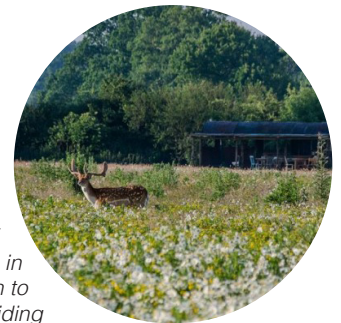
*Illustration of a Community Hub located within existing farm buildings*



*The Do Lectures in a cowshed in rural West Wales based upon the Ted Talk model.*



*Farmer's Lavender Farm in Powys, Wales introduced a shop, cafe and local community events around farming activity.*



*Managed re-wilding of Knepp Farm in Sussex open to visitors providing a public benefit.*



Making it happen

## 0-10 years: Enabling transition

The medium-term strategy starts to build the strategic cycle network and slow down roads. We see growth enabled in some of the villages and provision of associated social infrastructure. This phase provides the foundation for transformative approaches in the longer-term strategy.

In the medium term, we start to build the foundations for change. We enable expansion of villages through investment in a wider cycling network and supporting infrastructure.

We disincentivise car use through speed and access restrictions for heavy goods vehicles.

We establish hubs for interchange between transport modes where deliveries can

be dropped off and picked up and movement within villages is slowed down.

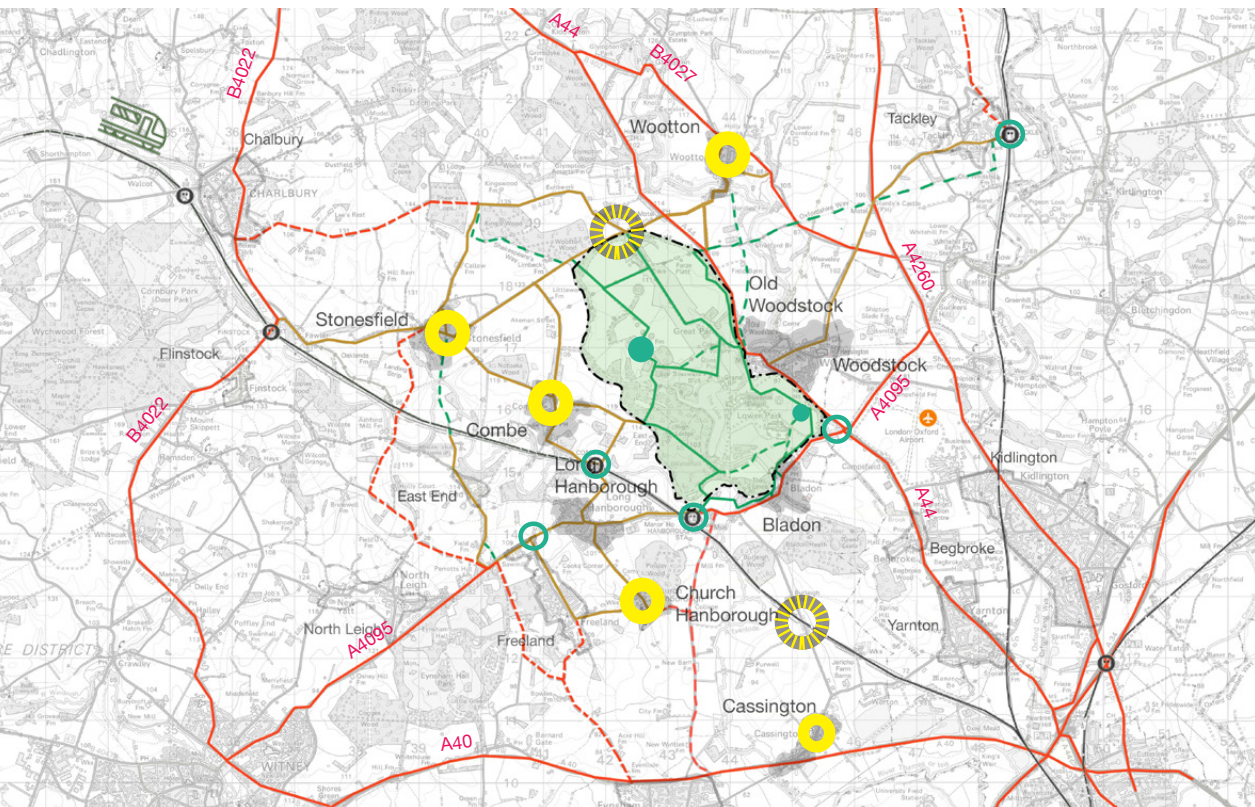
We identify and plan for new villages linked into the existing village network. Whilst villages remain distinct in their identity, communities start to share facilities and services, building resilience in social infrastructure provision.

Supporting infrastructure is provided to ensure resilient and zero carbon communities are developed.

Criteria for New Villages:

- Distance - Villages should ideally be no more than 1.8 miles (3km) apart to support cycling and walking. Where they are greater then new villages should be considered. Currently Stonesfield to Wootton is 3.8miles and Cassington to Bladon is 3.7miles. (Cassington to Church Hanborough is 3 miles and Cassington to Eynsham is 2 miles). All other villages within the cluster are less than 1.8miles.

- Population - a new village may be required if growth in existing villages can not meet the optimum population required in a particular village cluster. We are proposing each village needs to support populations of around 1,000 people and the cluster around 10,000 people.



Making it happen

## 0-10 years: Enabling transition

We think there are great opportunities to create new movement networks between and within villages that prioritise people over cars.

This can not only make connections with other villages so as a cluster they can support important local resources such as schools and shops, but can also provide better and safer pathways within villages so that community assets are connected not isolated and their usability improved.

### Roads and how they evolve

The local roads are busy with cars travelling at 60mph. Along the majority of roads, cyclists must share with cars and other vehicles, which can feel unsafe.

The few designated cycle paths along roads are shared pavements, which cause clashes with pedestrians, especially if there are large numbers of cyclists. There are a number of approaches that can be used to incorporate better conditions for cyclists.

Where there is ample space such as along Lower Road between Hanborough and Eynsham, additional segregated cycle paths can be incorporated within the verge. A cycle path should be 1.8m wide for cycles in one direction, or 3m for two-way cycle traffic.

For narrower roads which run adjacent to farmland, such as

the A4095, the ideal would be to create a new pathway within the field. Other options include addition of cycle lanes within the roadway or segregated if there is space.

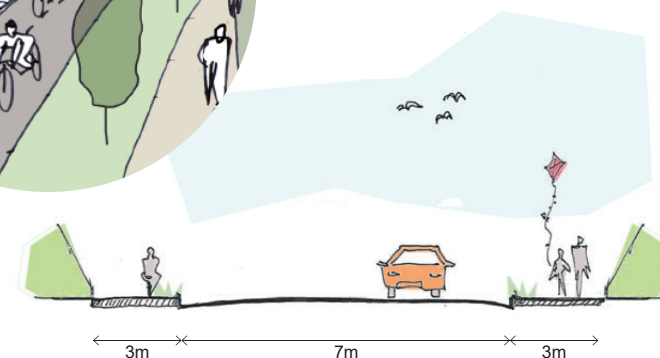


The existing cycle network through Long Hanborough is classed as 'traffic-free' as cyclists are expected to use the pavements.



#### Village edges

- Between village core and village periphery
- Segregated cycle paths along roads



#### Segregated cycle and walking

- Cycle and footpaths can be incorporated alongside the road.



Segregated paths alongside road.

Run cycle paths in adjacent fields, as seen in Holland.



## 0-10 years: Enabling transition

### Paths and how they evolve

Existing footpaths are typically 1m wide gravel. These can be increased to 3m wide to enable cyclists in both directions. Compacted gravel is suitable for quiet roads. Higher durability is required for routes with high traffic or areas prone to pooling or erosion, and can be provided by use of resin bound gravel or asphalt with vegetable binders. These surface types are in keeping with the natural environment and have less negative environmental impact, as opposed to traditional asphalt.

Estate roads are typically 4m wide. We recommend that private vehicle use is restricted, and cyclists and walkers are prioritised. The existing road could easily turn into a 2.5m wide cycle lane alongside a

1.5m footpath, with or without painted dividing lines.

Some areas of the estate suffer from high ground water. In these areas you could consider boardwalks, raising the path and providing access.

There are concerns regarding safety of travelling at night. Lighting can be incorporated into paths, however the impact on wildlife should be considered and therefore direct, low level lighting is preferable.



*Typical footpath between Long Hanborough & East End*



#### **Scenic landscape cycle path**

- Shortcut between villages across landscape
- Soft paths through natural landscape
- Suitable for recreation / weekend movement



#### **Commuter cycling highway**

- Segregated dual carriage cycle path
- Smooth surface for speed
- Fast connection to closest rail station
- Integrated street lighting



*Compact gravel paths*



*Resin bound gravel in West Sussex*



*Shared pedestrian and cycle paths, eliminating the car.*



*Raised path/boardwalk, used here to connect the National Cycle Network between Cheshire, Flintshire and the Wirral, over areas of wetland*



*Cyclists & cars share the road, with cycle lanes on each side. Suitable for one way car or light traffic both ways.*



*LED lights in the pathway along the Doneraile Walk, Tranmore, Ireland*

Making it happen

## 10-20 years: Shifting gear

The long-term strategy fits with the local planning cycle. It sees the delivery of a logistics hubs and a transformative shift away from cars and lorries. We see the delivery of new communities enabled by the delivery of active travel infrastructure.

By the 2030s, the sale of combustion engines will be well on the way to being phased out. The Local Plan will have set the spatial and infrastructure strategy to enable the shift in the way we move. The improvements the service at Long Hanborough have been delivered. Blenheim and their community partners will be ahead of the curve in planning for this transition and will be seen as a model for development.

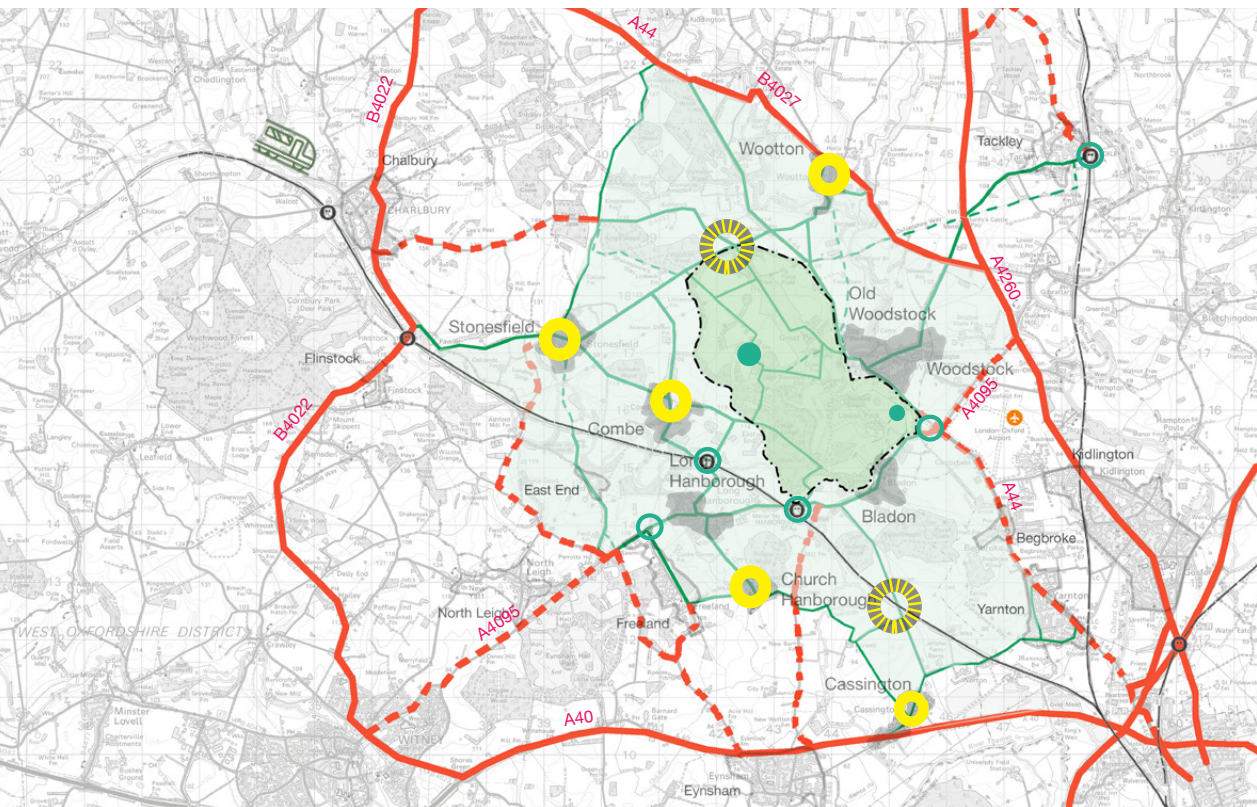
The interchange hubs will enable consolidated logistics with last miles being undertaken by electric vehicles and cargo bikes. Reverse logistics will bring back residual and packaging materials for reprocessing.

This approach enables elements of the A44 and A4095 to become car free. The network of cycling routes is expanded and interconnected with neighbouring communities. Although we call them cycling routes, this terminology is a










legacy of a previous era. All sorts of self powered and slow electric vehicles are used to move about and connect to rail infrastructure. This is supported by on demand and shared shuttle services provided by electric vehicles and enabled by digital technology.

Supporting infrastructure is provided to ensure resilient and zero carbon communities are developed. All new homes have been delivered to passive house standards and investment in renewable energy solutions helps to offset residual emissions.

The new villages have been completed. Value has been captured and reinvested in community infrastructure and biodiversity enhancements. This includes the provision of next generation digital infrastructure which has led to the creation of thriving community work spaces.



Key:

-  **New village (approx. location)**
-  **Expanded village with interchange hub**
-  **Community hub**
-  **Interchange hub**
-  **Cycle/pedestrian route or priority with car reduction**
-  **Alternative cycle/pedestrian route**
-  **20mph/ local traffic routes**
-  **Main roads around village cluster**
-  **Feeder road - 30mph with segregated cycle routes**



Making it happen

## Alternative self-powered mobility

The revolution in cycling has brought a variety of innovative alternatives to the bicycle.

In addition to the classic bike, cargo bikes, folding bikes, segways and scooters and e-bikes are now widely used.

Options for the school run include the bike bus and bikes with facilities to carry children. There are also a huge number of children using scooters as a way of keeping up with their walking parents.

Blue badge users are also seeing innovations beyond typical mobility scooters with a range of different and more appealing options. It will be important to ensure that cycling infrastructure is accessible for all users. For example, requirements for cyclists to dismount or

navigate around tight barriers should be avoided. For fair weather cyclists, there are a number of covered options.

For longer distances or hilly climbs, e-bikes help to make journeys light work. Sales of e-bikes have seen a phenomenal increase, with Halfords reporting 220% in 2017 alone. As a result costs are reducing.

For commuters, folding bikes and electric scooters make multi modal travel easy and convenient. Brompton's new 'Explore' model is designed for the countryside, with 6 gears to tackle hills and resistant tyres.



*Bike bus*



*Mobility for all*



*E-bikes*



*Tagalong bike*



*Bike roof*



*Electric scooters*



*Brompton's 'Explore' model*



*Children's scooters*



*Cargo bikes for children*

## Last mile journeys & alternative transport models

### Last mile journeys

Cargo bikes are increasingly used for deliveries. Sainsbury's and the Post Office are both trialling the use of bikes for deliveries.

Within the estate, we recommend limiting private vehicle use and adopting the use of electric buggies for getting around the site and for maintenance vehicles. Electric vehicles can also be used for local waste collection and deliveries. Having a central logistic hub will optimise delivery journeys.

### Alternative transport models

Shared mobility solutions are increasingly popular, especially in more dense urban environments.

Car share schemes eliminate the need for individual personal cars and features including GPS tracking and unlocking through use of an app, as well as a range of vehicle types, increases convenience.

Schemes including Getaround allow you to rent out and earn money on your own car, with use of the automatic unlocking device through the app.

Bike share schemes are increasingly convenient, with use of apps, dockless locking and GPS, increasing the opportunity for everyone to cycle.

Pony dockless bikes in Oxford allows you to buy a bike (a 'pony'), and rent out and track your bike, with use of an app. Community schemes include on demand bus services such as PickMeUp in Oxford. With

use of an app, passengers state their 'virtual' bus stop origin and destination, and their trip is integrated with others to provide a convenient service.

Walking buses are often run by primary schools, with parents and teachers 'driving'. Reduces the car dependence of the school run provides good exercise and use of the outdoors.

Free public transport trialled in Tallinn, Estonia - 6 years ago government introduced free public transport for residents (not visitors) after officials asked residents to vote on the proposal in a public referendum – 75% said yes. All people had to do was register as a resident of the city, and pay €2 for a "green card" to use a network of buses, trams, and trolley buses.



*Sainsbury's bike delivery in trial*



*Pony bikes, Oxford*



*Royal Mail bike delivery in trial*



*Electric waste collection vehicles*



*Walking bus*



*PickMeUp Oxford*



*Electric golf buggies used to transport visitors at Anglesey Abbey.*



*Co-wheels car club, which have cars in Oxford.*



## Making it happen



### Daily commute

Man aged 40 works in Oxford  
Journey: Woodstock - Hanborough station  
Route types: Estate cycle path and segregated road  
Mode transport: Electric fold-up bike & train

**12 min Drive time  
at peak time**

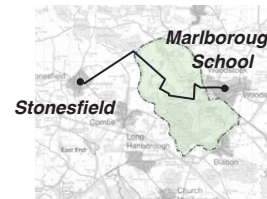
**9 min Electric bike  
@ 18 mph**

**13.5 min Cycle  
@ 12 mph**



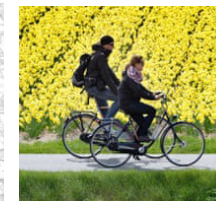
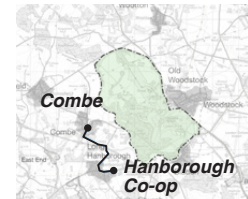
### School run

Teenager living in Stonesfield  
Journey: Stonesfield - Marlborough School, Woodstock  
Route types: Estate cycle path & segregated road  
Mode transport: Electric fold-up bike



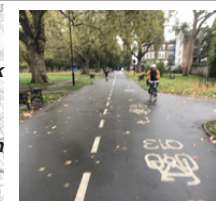
### Weekly shop

Woman aged 62  
Journey: Combe - Hanborough Co-op  
Mode transport: Electric cargo bike or mobility vehicle  
Route types: Dedicated cycle road



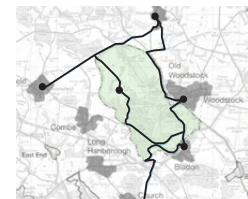
### Commute with school drop off

Father and doctor lives in Church Hanborough, works in Woodstock  
Journey: Church Hanborough - Bladon Primary school - Woodstock Surgery  
Route types: Lower Rd segregated cycle route, estate cycle path & road  
Mode transport: Electric cargo bike



### Family weekend

Local family living in Stonesfield. Journey: Stonesfield - visit to Park Farm community event - lunch in Woodstock - visit Granny in Wootton - then Home  
Route types: Estate cycle path, bridleway/cycle routes and segregated road  
Mode transport: Electric bicycles & cargo bikes



### Kids school bus

Primary school children age 4-7  
Journey: Old Woodstock to - Wootton  
Mode transport: Cycle bus  
Route type: Upgraded bridleway



## Next steps

Using feedback to this vision, our next step will be to develop a spatial strategy working with existing communities and key stakeholders.

Our vision is a blueprint that could be applied to many villages across the UK and we invite communities, landowners, councils and stakeholders to help us take forward the vision.



## VeloCity team

*Left to right*

**Sarah Featherstone** *Featherstone Young*

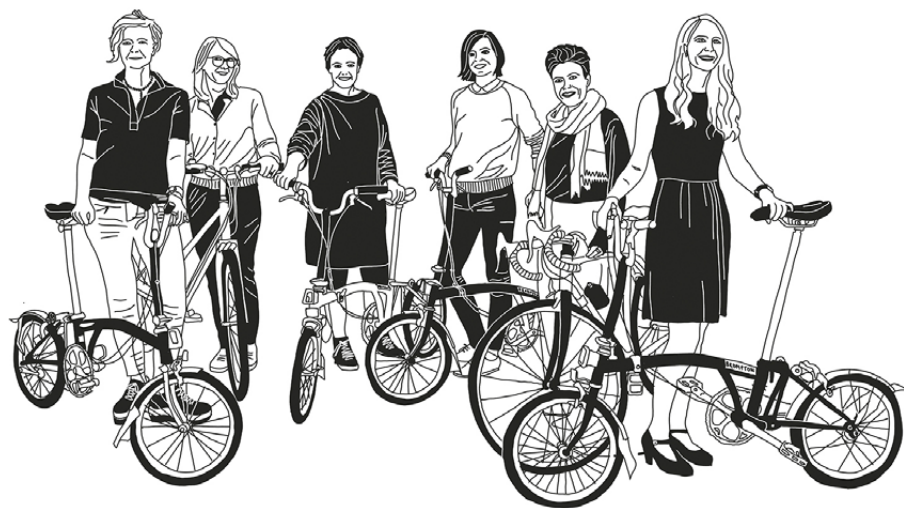
**Kay Hughes** *Khaa*

**Annalie Riches** *Mikhail Riches*

**Petra Marko** *Marko & Placemakers*

**Jennifer Ross** *Tibbalds Planning and Urban Design*

**Judith Sykes** *Expedition Engineering*



## VeloCity story

VeloCity is the winning proposal for National Infrastructure Commission's placemaking ideas competition, which sought inspirational visions for the future of development within the arc encompassing Cambridge, Milton Keynes, Northampton and Oxford, one of the UK's fastest-growing and most productive regions.

VeloCity was devised by an expert team of placemakers, informing the National Infrastructure Commission's report *Partnering for Prosperity: A new deal for the Cambridge-Milton Keynes-Oxford Arc*, published in November 2017.

The team have spoken widely about VeloCity vision to government, local authorities, communities and landowners.

The VeloCity vision has received awards nationally and internationally, including honorary award at the *International Making Cities Livable Conference* in Ottawa, Canada (2018), *RIBA Research Fund* (2018) and the *William Sutton Prize for Excellence in Social Housing Design and Placemaking* from Clarion Housing Group (2018).

# Appendix

## Place: Our Understanding Areas of Research

Plan-making & Development

Environment

Employment

Population

Health, education and well-being

Movement: roads

Movement: rights of way

Movement: bus and rail

Movement: cycle routes

Energy

Character and place



## Plan-making and development

### What we found out

- The proposed housing requirement for West Oxfordshire in the period 2011 – 2031 is 660 homes per year which equates to 13,200 homes in total.
- The Oxfordshire Growth Board has been established whose role is to deliver major projects affecting the County for which joint working is necessary.
- Joint working has been taking place between the Oxfordshire local authorities and co-ordinated via the Oxfordshire Growth Board (OGB). In order to meet the housing demand, 935 dwellings per year will need to be delivered between 2021 and 2031 (excluding past backlog).
- Land north of Eynsham has been identified in the West Oxfordshire Local Plan

as a Strategic Location for Growth (SLG) – a broad area at which it is proposed that a new settlement is created in the form of a ‘Garden Village’ providing around 2,200 homes in the period 2021 – 2031.

- The Local Plan identifies a series of smaller non-strategic housing sites.
- As part of the Oxfordshire Housing and Growth Deal agreement with the Government, six Oxfordshire authorities have committed to producing a joint statutory spatial plan (JSSP), known as the Oxfordshire Plan 2050, involving wide-reaching consultation with communities.

**935 dwellings  
per year will need  
to be delivered  
between 2021 and  
2031**

### Where this takes us

- The housing growth figures identified in the current Local Plan will require a significant increase in the future rate of delivery of new housing in West Oxfordshire.
- The policies of the Local Plan provide a useful framework within which to consider and develop our proposition. This together with the constraints on housing supply and delivery could create an opportunity to begin promoting our strategy within the current Local Plan framework.

- The allocation of Eynsham Garden Village - given its scale and ambition - should form a key component in our future strategy consideration.
- The Growth Board, its scope and ambition, together with the scope and timing of its 2050 plan provides a fantastic opportunity to introduce, develop and deliver a future vision for the Estate.

*I want my daughter  
and her family to be able  
to move in to the village  
with me now my wife  
has died, but they can't  
afford to as houses are  
too expensive.*





*For me Blenheim is all about heritage - the palace and its big events attract visitors from far and wide but it's not for the locals and it just brings more congestion to the roads...*

*I didn't know about Blenheim's vision to protect the environment, link communities and farm the land more sustainably, but it sounds very positive!*

Place: our understanding

## Environment

### What we found out

- The topography is undulating with a general fall towards the south of the study area.
- Surface water features are fundamental to the character of the local area with the Rivers Glyme and River Evenlode flowing through the study area. However, there zones of higher flood risk are especially to the south of the study area.
- Areas of high groundwater have been reported, and the south side of the Blenheim Estate can be described as saturated.
- The area is sensitive, comprising ANOB, SSSI and conservation sites.
- There are a number of scheduled monuments, especially to the north of the study area.
- WODLP acknowledges that there is a need to further enhance and extend habitats and to develop networks and a series of Conservation Target Areas. (WODLP).

### Where this takes us

- The landscape is a fundamental part of the identity of the area. We need to protect this and make a good place to live with a high quality environment – landscape, built heritage and biodiversity.
- Any development must respond to the environmental designations and generously gift back to the landscape through ecological enhancement.
- There is a need to ensure that homes and communities continue to be protected from risk of flooding, particularly in the context of revised estimates on flood levels and climate change allowances from the Environment Agency.

**Landscape is a fundamental part of the identity of the area**



## Employment

### What we found out

- The area demonstrates a reasonable level of self-containment. 65% of residents in employment either commute within the District, work at home or having no fixed place of work (WODLP).
- Relatively skilled workforce, high levels of economic activity and low unemployment (WODLP)
- 30% of the population work in Oxford City and most travel by car (around 64% (Woodstock) -82% (Wootton), which places severe pressures on the road network – the A40 in particular (WOLP).
- The average distance travelled to work from each of the villages that comprise the cluster is 17.1km.
- Cycling to work caters for an average of 11% of movements and public transport for an average of 8% (compares to England average of 17% public transport and 14% by bike).
- Many of the key roads are at, or approaching capacity (especially at peak periods) and public transport is overcrowded. Many of the urban areas have poor air quality and climate change is an issue that needs to be addressed.
- There is a strong and diverse local economy, including small businesses, specialism in high-tech manufacturing and engineering (WODLP).
- 13-20% of the economically active population in the villages work from home.
- 90% of enterprises in the District are micro businesses (0-9 employees).
- 9% of enterprises in the District are small businesses (10-49 employees).

**17.1km is the average distance travelled to work**

## 90% of enterprises in the District are micro businesses

- Self-employment as a % of the economically active is 16-21% in the cluster of villages.
- West Oxfordshire has the lowest unemployment rates in the County. Pressures for further growth are set to continue.

### Where this takes us

- There is an opportunity to increase working from home / village and as a result reduce the need to travel
- The amount of small business and the trend towards home working suggests there is an opportunity to build and cater for this trend within the villages.
- There is a need to develop credible alternatives to movement by car if capacity issues are to be addressed.

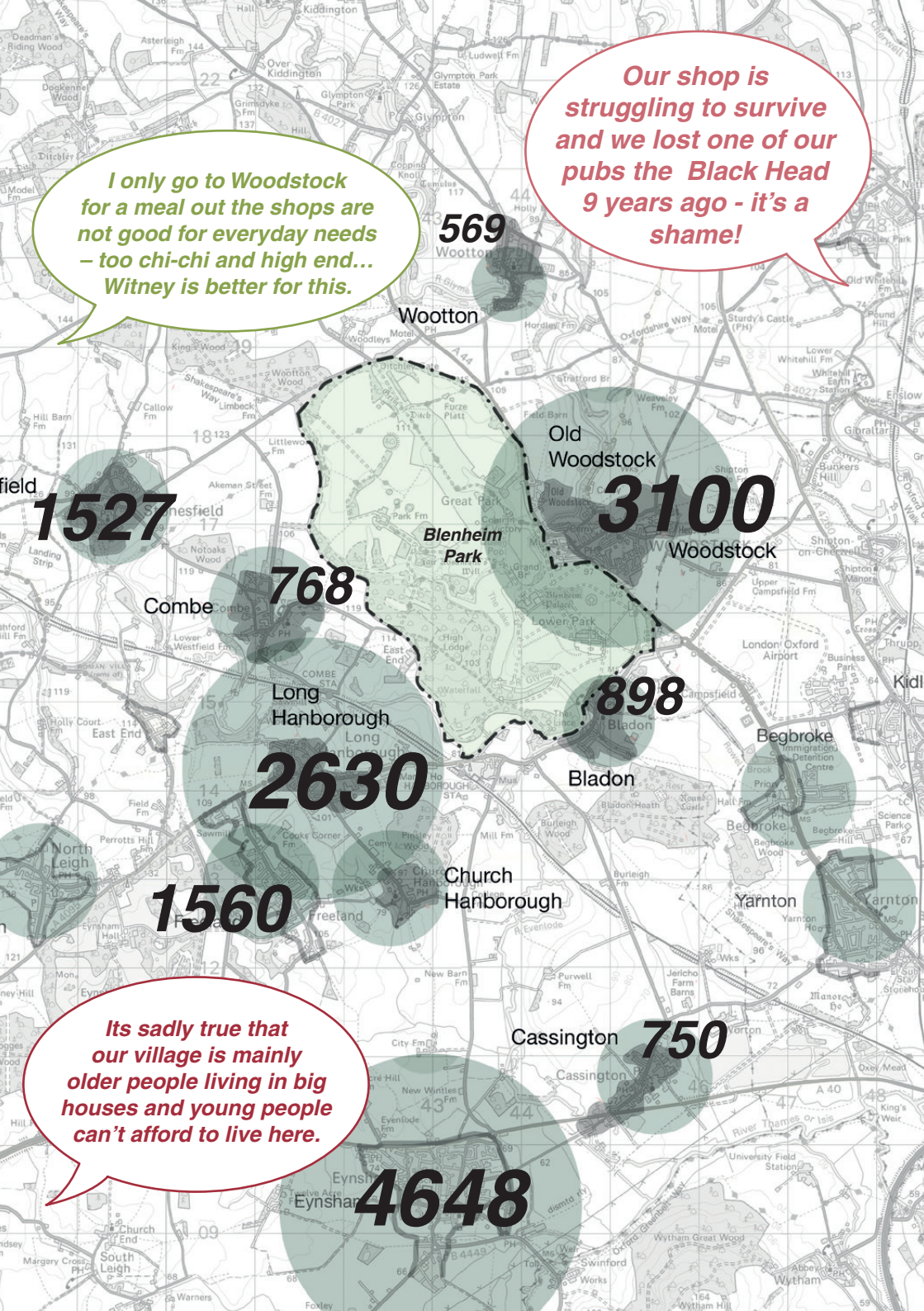
- The average distances travelled by people to work suggests that there is considerable scope to shift movement onto bicycles (6-10 miles is considered a 'do-able' commute particularly if electric bicycles are used).

- In parallel with measures to encourage the delivery of high quality public transport / cycle / pedestrian infrastructure measures need to be introduced to restrain the use of the car or to make it less convenient.

- There is also need to rethink the way goods are delivered to the area in order to reduce pollution and congestion.



***If you are self-employed and work from home like me, there is nowhere to meet a colleague - no cafe or work hub, just a pub that doesn't open until midday.***



Place: our understanding

## Population

### What we found out

- 53% of the population of the District live in rural villages (second most rural district in the south east region).

- Population density in WODC is less than 1.5 people per ha (4.2 across England)

- A higher proportion of the population in rural areas are over 65 (22-27%).

- By 2040 older people (60+) are expected to make up a third of the population in the district.

- Within the cluster of villages the 65+ age group is expected to grow by 44%; 19-65 by 2% and 0-15 by 4%.

- Total population (Bladon, Cassington, Church Hanborough, Long Hanborough, Combe, Stonesfield, Wootton and Woodstock): 10,242 people with 4,580 households.

- High house prices and predominance of larger properties.

- The majority of people claiming pension credit live in the rural areas (WODLP).

### Where this takes us

- The population is aging and the numbers of over 65's is projected to increase. significantly compared to the other age groups.

- There is scope to increase density and housing numbers and in so doing to actively plan for the longer term sustainable growth of the village cluster.

- With shifts in mobility technology, there is an opportunity to ensure connections to local services enable access for all.

**53% of the population of the District live in rural villages**



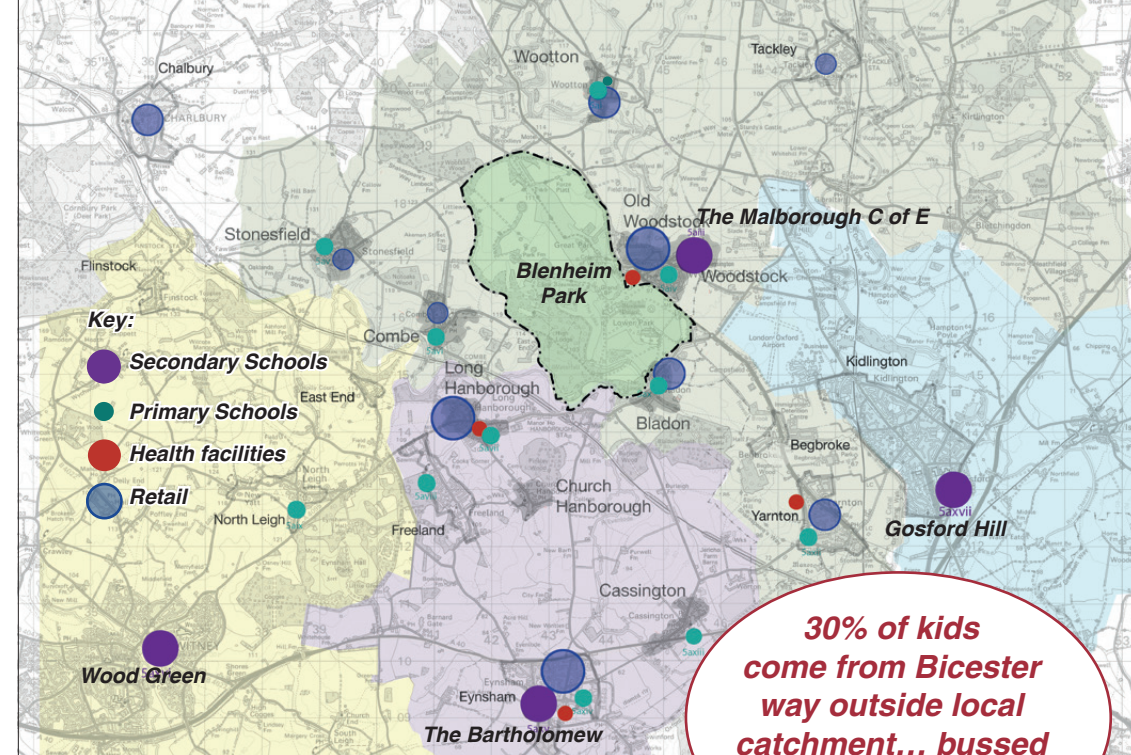
Place: our understanding

# Health, education and well-being

## What we found out

- The villages contain higher than average car ownership and there are high levels of out commuting and reliance on the private car.
- Primary schools are either already under pressure or forecast to fill as pupil numbers increase, although word from the ground suggests differently, with some primary schools in villages fighting to survive. There is more flexibility at secondary level (WODLP).
- An identified need for secondary school capacity at Eynsham to support the proposed Garden Village.
- Poor access to services and facilities plus a trend for loss / closure of rural services (WODLP).
- Primary and secondary health care in the District is provided by a network of 16 local GPs and two hospitals in Witney and Chipping Norton.
- West Oxfordshire priorities for health and well-being of its population are to reduce obesity in children and adults, increase physical activity and improve screening programmes.
- Rural Service Centres and shopping destinations in cluster: Eynsham, Witney, Woodstock and Long Hanborough.
- Health better than average on all indicators. However, numbers of people killed and seriously injured on roads is worse than average (WODLP).
- The need to improve public transport facilities, reduce volumes of traffic/speeds, improve safety and the quality of roads were identified by residents of the rural villages in West Oxfordshire as key priorities. (West Oxfordshire Settlement Sustainability Report)

**There is strong reliance on the car to access services and facilities.**



## Where this takes us

- Key service provision is concentrated within certain key villages and towns, and there is strong reliance on the car to access these facilities.
- There is limited opportunity to move between villages by public transport / cycle or on foot.
- There is an identified demand from residents for better public transport facilities and for the introduction of measures that reduce the impact of vehicles.
- There has been a lack of cohesive/ integrated planning in relation to the individual villages that comprise the cluster, which has given rise to a number of the problems that exist within the cluster of villages. Such problems will continue in the absence of any proactive planning.







*I hate that people use our village lanes as a shortcut when main roads are too busy.*

*The A40 and A44 are not cycle friendly - they are too fast and even with segregated lanes they are polluted and badly maintained.*

Place: our understanding

## Movement: roads

### What we found out

- The car is the dominant mode of transport, accounting for 72% of journeys in Oxfordshire.
- Severe congestion on the A40, with the A44 made worse by traffic using the A4095 to avoid the A40. Other roads used as short cuts also suffer during peak hours, such as Lower Road linking Eynsham to Long Hanborough.
- Considerable additional areas are required for car parking for events at Blenheim Palace.
- High levels of HGV traffic, including lorries traveling to and from local quarries.
- Congestion and air quality issues experienced in a number of villages (WOLP).
- Plans to enhance the A40 and plans for a link road between the A40 and the A44.
- There is a desire by local people and Oxfordshire County Council to re-examine the nature and hierarchy of roads.

### Where this takes us

- There is no convenient alternative to driving, resulting in the country roads being pushed to capacity and creating a congested and polluted natural environment. This will be exacerbated by improvements to the train service at Hanborough.
- There must be a mind shift to get people out of cars to avoid further decline associated with future development.
- There is an opportunity for Blenheim to lead the way with its own travel plan and supporting increasing visitor numbers travelling by public transport.

**72% of journeys in Oxfordshire are by car**



Place: our understanding

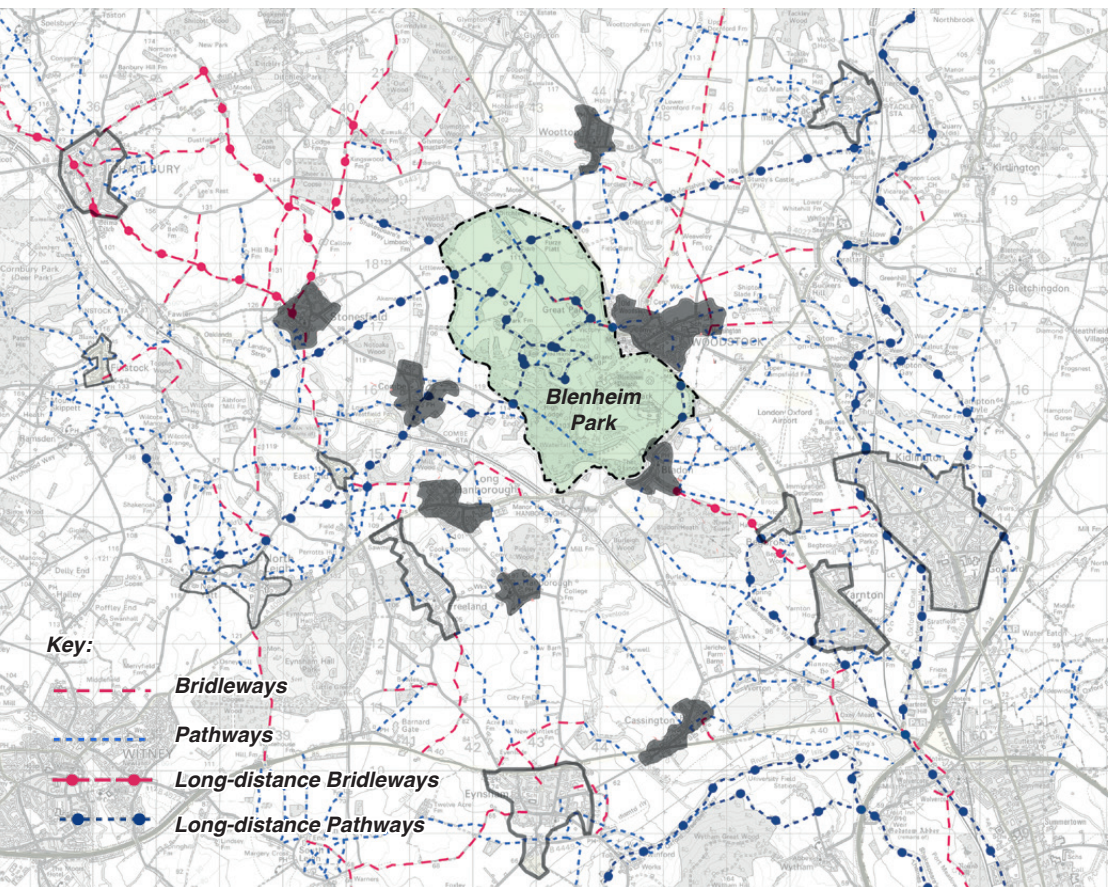
## Movement: rights of way

### What we found out

- There are three national pathways running through the study area including the Shakespeare and Oxfordshire Way and Akeman Street.
- Many pathways in the area are poorly signposted and difficult to navigate. Some are also overgrown.
- There are Public Rights of Way that cross the Blenheim Estate which are largely concentrated to the north of the site.
- The routes through the estate are not particularly inviting, many have gates and barriers at their entrances.

*I like the idea of turning footpaths in to proper cycle routes but how do you make them safe?....*

*Only locals know about the public footpaths across Blenheim... have you found the secret green gate?*



- Many of the old footpaths and bridleways in the wider area are under-used and unkempt, for example, Wootton Way which links Wootton to Old Woodstock.

### Where this takes us

- There is an opportunity to improve access into and across the estate and support Blenheim's Grass Route initiative to use their land to connect communities and promote shared facilities and green travel.
- There is an opportunity to improve the navigability and quality of footpaths and bridleways in the wider area, connecting the villages with a network of direct and safe cycle and walking routes.



*Public footpath crossing Blenheim Park and wall*



*Secret 'green gate' to public footpath in Blenheim Park*



Place: our understanding

## Movement: bus and rail

### What we found out

- The area is served by the North Cotswolds line and the Cherwell Valley line.
- On the North Cotswolds line, recent track redoubling and platform extension has seen passenger growth up by 239% at Hanborough and 30% up at Charlbury.
- There are currently 10 bike stands at the Hanborough Station. Proposed improvement includes further track redoubling, having 4 trains an hour running through Long Hanborough and a skip-stop timetable. 400 additional car parking spaces are proposed.
- Combe and Finstock stations will remain single track with infrequent services.
- Local bus network is primarily radial around Oxford and links the main towns, leaving rural areas with limited access.
- Rural buses are infrequent and journey times are long.

- Proposed major improvements to the bus network focus on the connection into Oxford, with the introduction of two new park and ride stations.

### Where this takes us

- Hanborough's position as a commuting station will continue to increase. Without supporting infrastructure and only an addition of carparking space it could lead to increased car usage.
- Providing more cycle parking, hire and workshop facilities and reducing the convenience of driving and parking will encourage journeys to the station to be made by bike and foot.
- For the bus network to be well used, it must offer a preferred alternative to driving, serving desired routes at convenient times, as seen within Oxford.
- Timetable coordination between rail and bus companies should encourage multi-modal journeys.
- Bike storage on buses would be useful.



*6th form kids can't take the school bus. With a poor bus service they are forced to learn to drive... that's not what we want to put on our young people.*

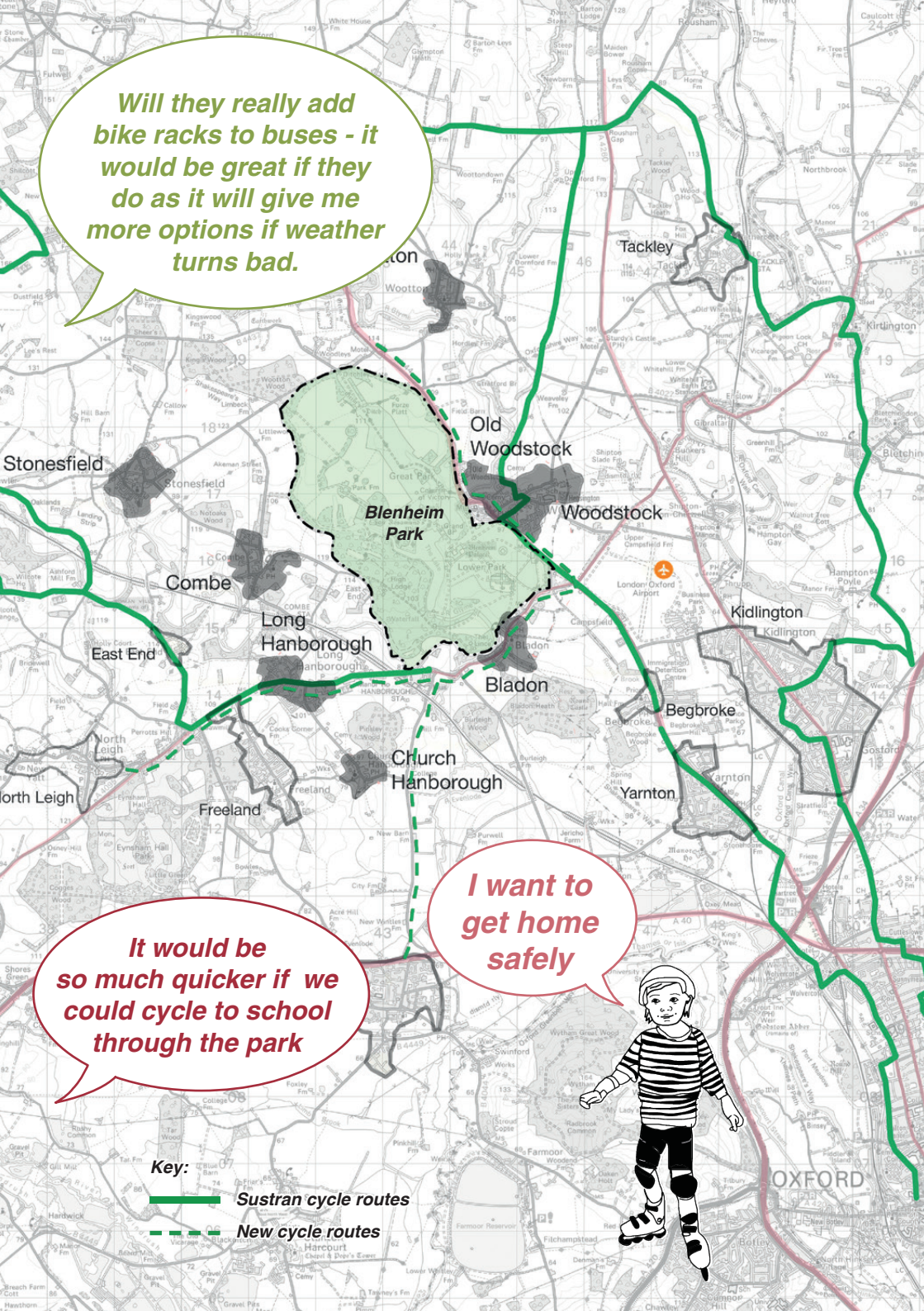
*A footbridge over the railway track at Hanborough would make cycling and walking to the station much safer - the road is way too narrow here.*

*There is talk about open-ing up the old line between Oxford and Witney - it would be good for Cassington*

**239%**  
passenger growth at  
Hanborough Station  
following recent  
track redoubling

*Photo: Single track between  
Hanborough and Charlbury*





Place: our understanding

## Movement: cycle routes

### What we found out

- There are a limited number of cycle routes and they are very disconnected from each other.

- There are limited opportunities for safe travel by foot or cycle outside the main towns.

- The Sustrans Routes follow main roads and are of low quality. The cycling route along the A40 is especially tokenistic and not at all pleasant.

- There is a lack of east west cycle connections.

- Local community groups are advocates for improving the quantity and quality of routes.

- Safety and poor cycle parking identified as a key issues.

- Desire for a new cycle route connecting Woodstock with the school at Wootton.

- There is a proposal for a new cycle route between Enysham and Long Hanborough Station

- There are precedents of support for strategic cycle networks by Oxfordshire City Council.

- There is a perception that Blenheim would never allow cycling through the estate.

### Where this takes us

- There is a need to deliver a high quality, safe and integrated network of routes.

- Opportunity to create greater east west connectivity by upgrading footpaths to cycle ways through and around the Blenheim Estate. This could be achieved at relatively low cost, but would require creating more welcoming entrances and clearer navigation.

- In particular, creating commuter links to Long Hanborough and between Woodstock and the school at Wootton, will help to reduce car use and mitigate the impacts of improved services from the station.

- This approach could also shift visitors to Blenheim away from their cars. Coupled with mobility apps or bike hire solutions, the Grass Routes could also be part of the visitor experience.

## Energy

### What we found out

- West Oxfordshire District Council and Oxfordshire County Council have both signed up to the climate emergency declaration, pledging to achieve carbon neutrality by 2030.
- The Blenheim Estate has set a target to become a net generator of green energy by 2027. Within the Palace, they have identified opportunities of integrating water source heat pumps, battery storage, electric vehicles and offsite 7.0MW renewable energy farm at Woodstock, effectively creating a locally balanced microgrid. A hydropower turbine located within the River Glyme is used to provide power to the Palace and grounds.
- In addition to the renewable energy generation, building and site wide energy management systems are being looked at to reduce energy wastage.

• More widely, there are also solar farms operating in the local vicinity and one planned array for 7.5MW. Whilst the local wind speeds indicate that wind turbines would be viable, Blenheim falls within the “Wind Turbine Safeguarding Zone” referenced in the West Oxfordshire Local Plan (Clause 8.71). As such, wind turbines are discouraged in this area due to safety and signalling issues associated with the operation of the nearby airport.”

### Blenheim Estate has set a target to become a net generator of green energy by 2027

### Where this takes us

- There is local support for creating more sustainable communities and increasing renewable energy sources. Additional local sites should be identified to locate solar farms.
- The microgrid being established by Blenheim provides a platform for sharing innovative approaches and generating community interest.
- There is potential to establish a network of community owned microgrids. These can help to regulate energy prices and enable a more dynamic electricity usage, integrated with the use of electric bikes and vehicles.
- Solar panels can be more freely placed in nearby areas since they have minimal noise and danger. Both technologies are compatible with low lying green spaces restoring biodiversity in the area.

*We need to show ambition and impetus to push the climate change agenda forward...*

*...and we need to establish what the key areas are where we can make a change such as planning provision, electric vehicle charging points and ensuring new homes are built as efficiently as possible.*



Cllr David Harvey, Cabinet Member for Climate Change, WODC



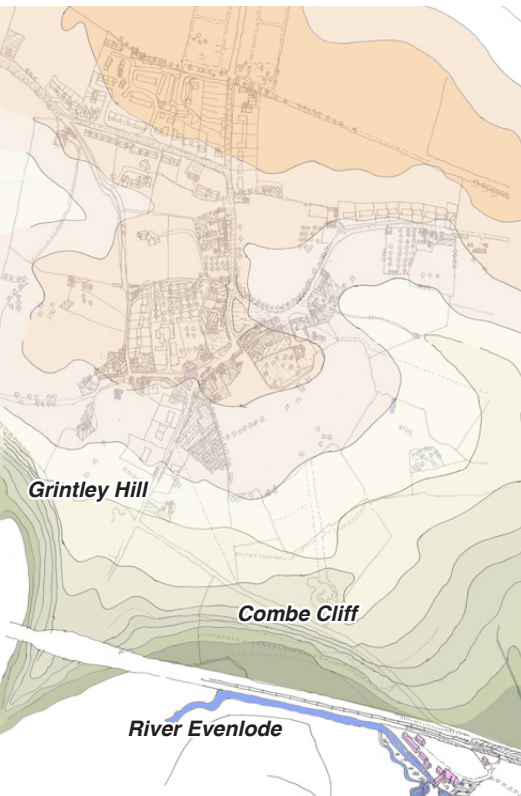
Place: our understanding

# Character and place: take a village

## What we found out

Closer analysis of Combe, one of the villages in Blenheim cluster, demonstrates significant influence of topography and

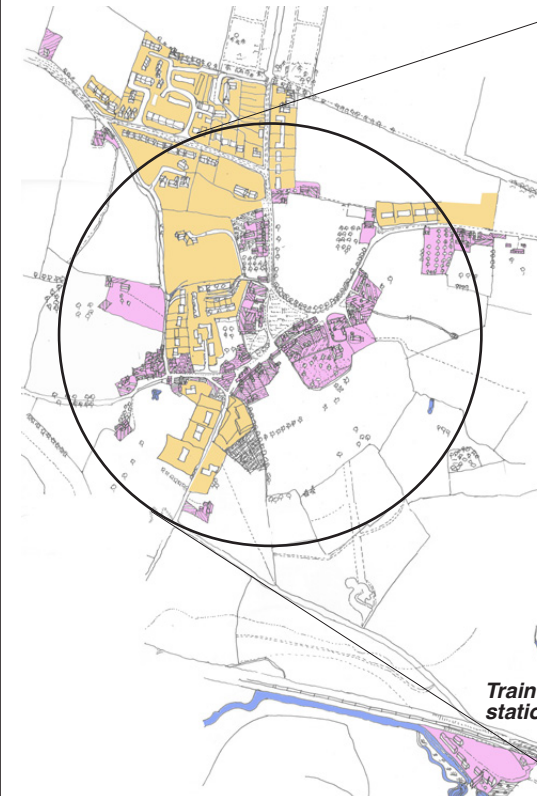
landscape on the development of this and other villages in the study area. We see the impact that the river valley, steep escarpment and ancient woodlands have on the village boundaries and footprint.



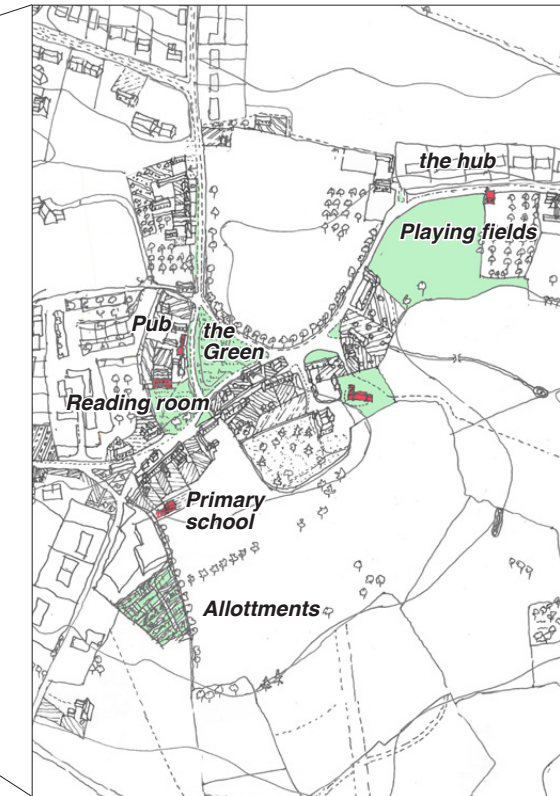
Topography



Landscape



Building



Community & public space

Hedges, paths, planted tree belts, low walls and the railway line also shape their development. Historic activities such as farming, mining and working on the Estate have also influenced the evolution of housing and community life in the villages. Villages have embraced their natural

surroundings and integrated village greens, orchards and ponds within their built up footprint.

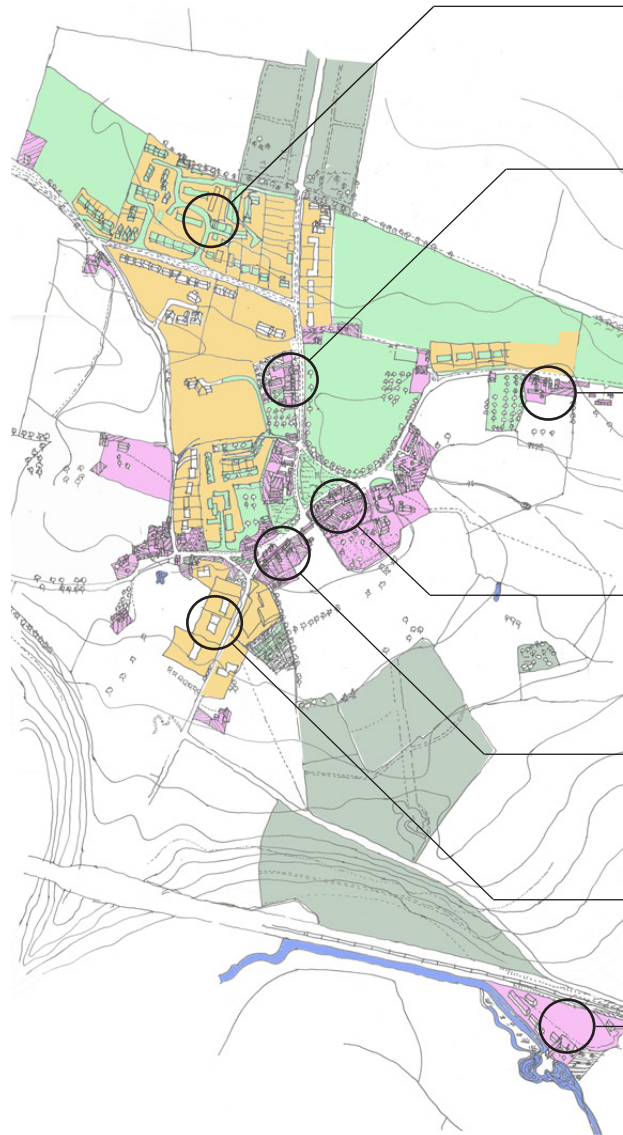
## Significant influence of topography and landscape

Place: our understanding

# Character and place: take a village

## What we found out

- We have examined predominant spatial forms and cluster settings that define the character of Blenheim and the surrounding villages and have found that some work more closely with their context than others.
- The terraced workers cottage predominates in many villages and their form and arrangement could offer cues for a new emerging typology, particularly where land is sloping and terraces can run parallel to the contours.
- Farmhouses with groupings of barns and agricultural outbuildings form attractive, informal courtyard clusterings which could also inform new housing typologies
- Burgage plots have narrow frontages and long plots which may suit a smaller grouping of homes around courtyards within a wider development.



*Estate housing*



*Cottage*



*Farm courtyard*



*Terrace + Ginnel*



*Burgage plots*



*Detached house*



*Linear industrial buildings along rail & canal routes in valley*







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