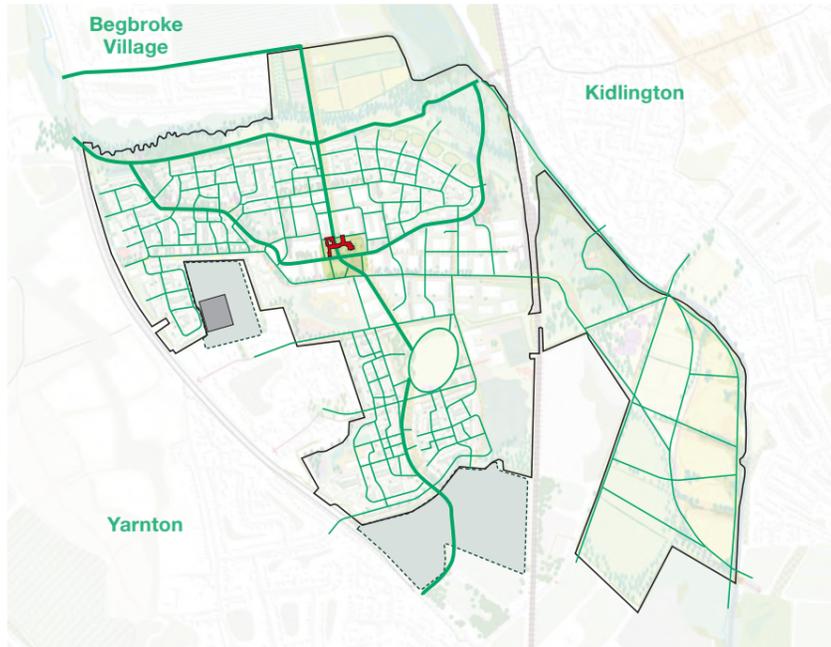


9.1. Car is a guest



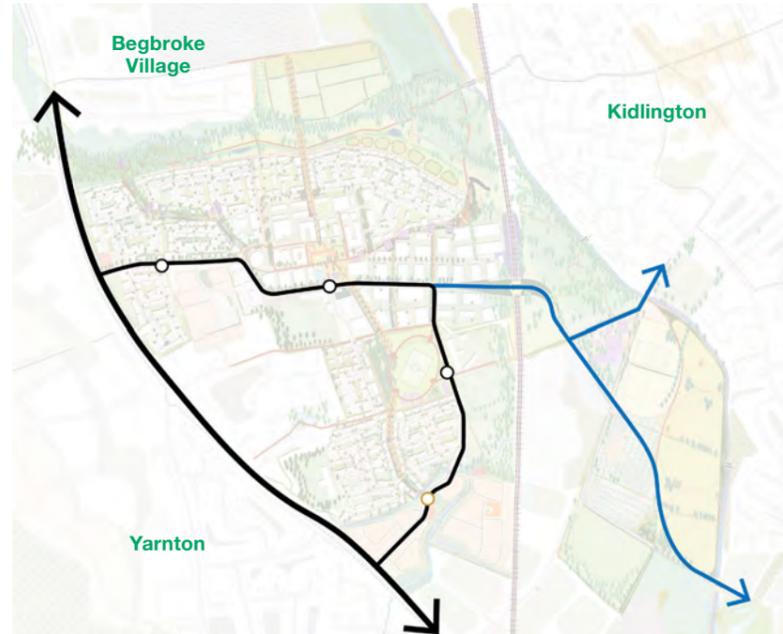
People first

The masterplan provides a strong foundation for pedestrian and cycle movement and connectivity across the Site, placing people not vehicles at the top of the movement hierarchy. Active travel modes are to be prioritised above all other modes. They will be afforded with a permeable, high quality and fine grain network of walk and cycle routes. It will be easier to walk or cycle through the site than by any other mode of transport.



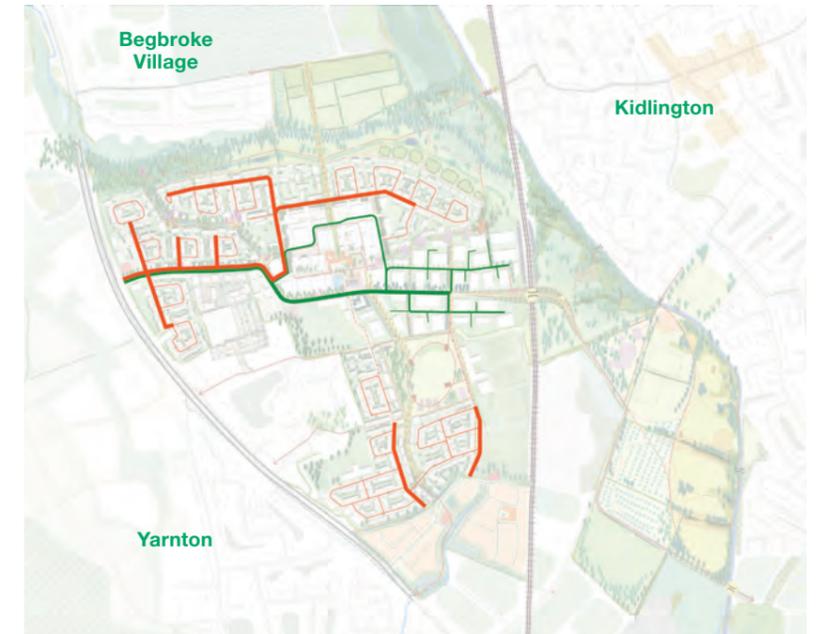
Public transport

A new bus route is anticipated to serve the site, subject to agreement with OCC of the precise route, and is illustrated in the diagram below along with the proposed upgraded S3 service.



Living streets

Low speed roads will connect to a network of 'living streets', which will consolidate on-street parking at the end of the street to make space for more green and social spaces.



Key

- Pedestrian and cycling network
- A network of living streets prioritising people
- Mobility hub within the local centre
- Future proofing for autonomous transport
- Exploring app based demand responsive services
- Off plot parking has potential to be repurposed
- Electric vehicle charging
- Safe-guarding for potential railway station at Begbroke
- Flexible infrastructure across railway line and canal to enable additional sustainable transport

Key

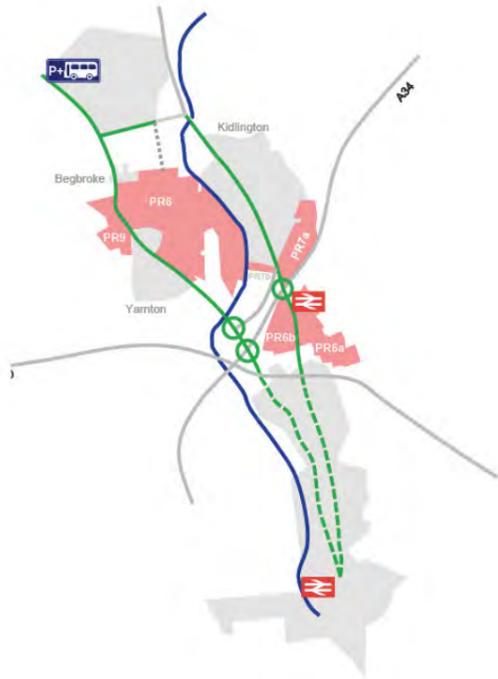
- Current route along A44 - a first phase will see frequency increased
- Second phase - public transport looping through the site off the A44
- Indicative location of a bus stop
- Indicative location of bus stop on third-party land
- Potential public transport route connecting to Oxford Parkway (via site PR7b) or Kidlington

Key

- Main vehicular access to residential areas
- Living streets - low traffic one way road
- Servicing access to R&D buildings

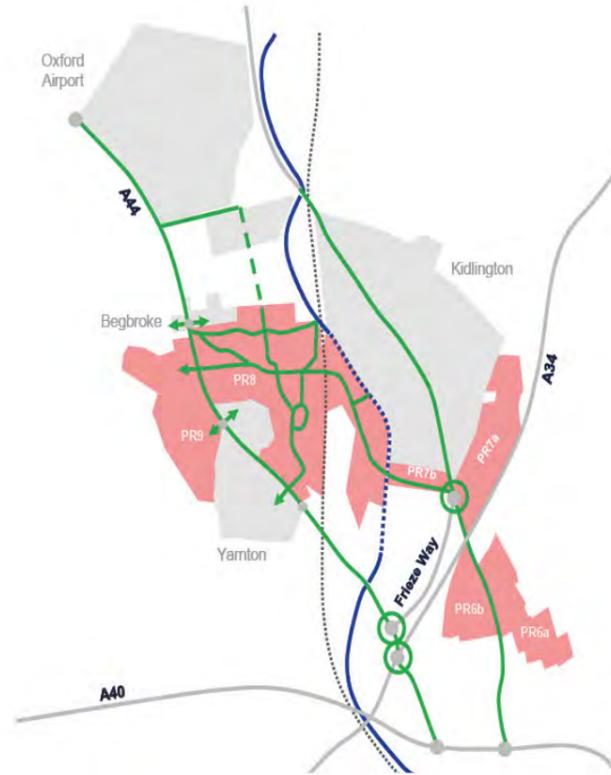
9.2. Connecting to wider networks

Existing walk and cycle network



- Key**
- Walk and cycle corridor improvement
 - Canal Path
 - - - Proposed corridor walk and cycle

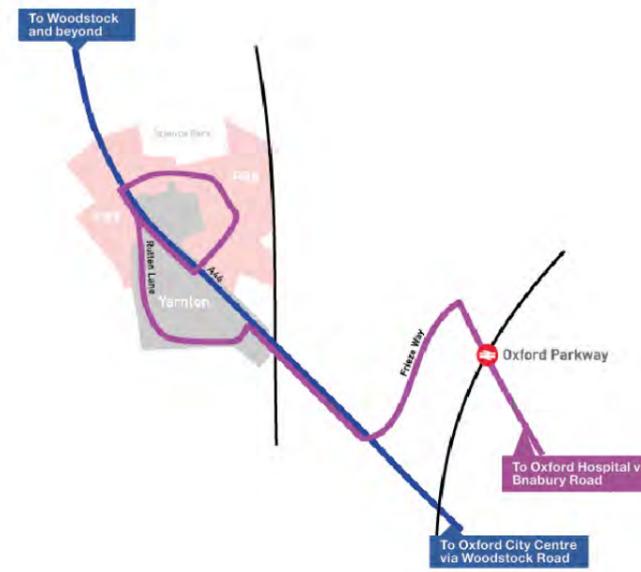
Enhanced walk and cycle network



- Key**
- Walk and cycle corridor improvement
 - ↔ New / improved pedestrian and cycle crossing across A44
 - Junction improvement for walk and cycling
 - Canal towpath upgrade from developer contributions

Public transport strategy

(final bus route subject to agreement with OCC)



- Key**
- A44
 - County Council proposed roads to serve PR8 and PR9

Public transport opportunities

(details to be agreed with OCC at later stages)

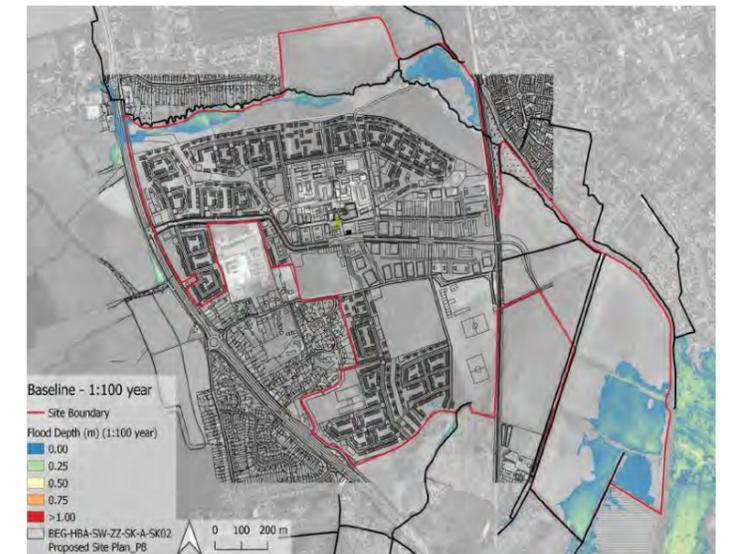
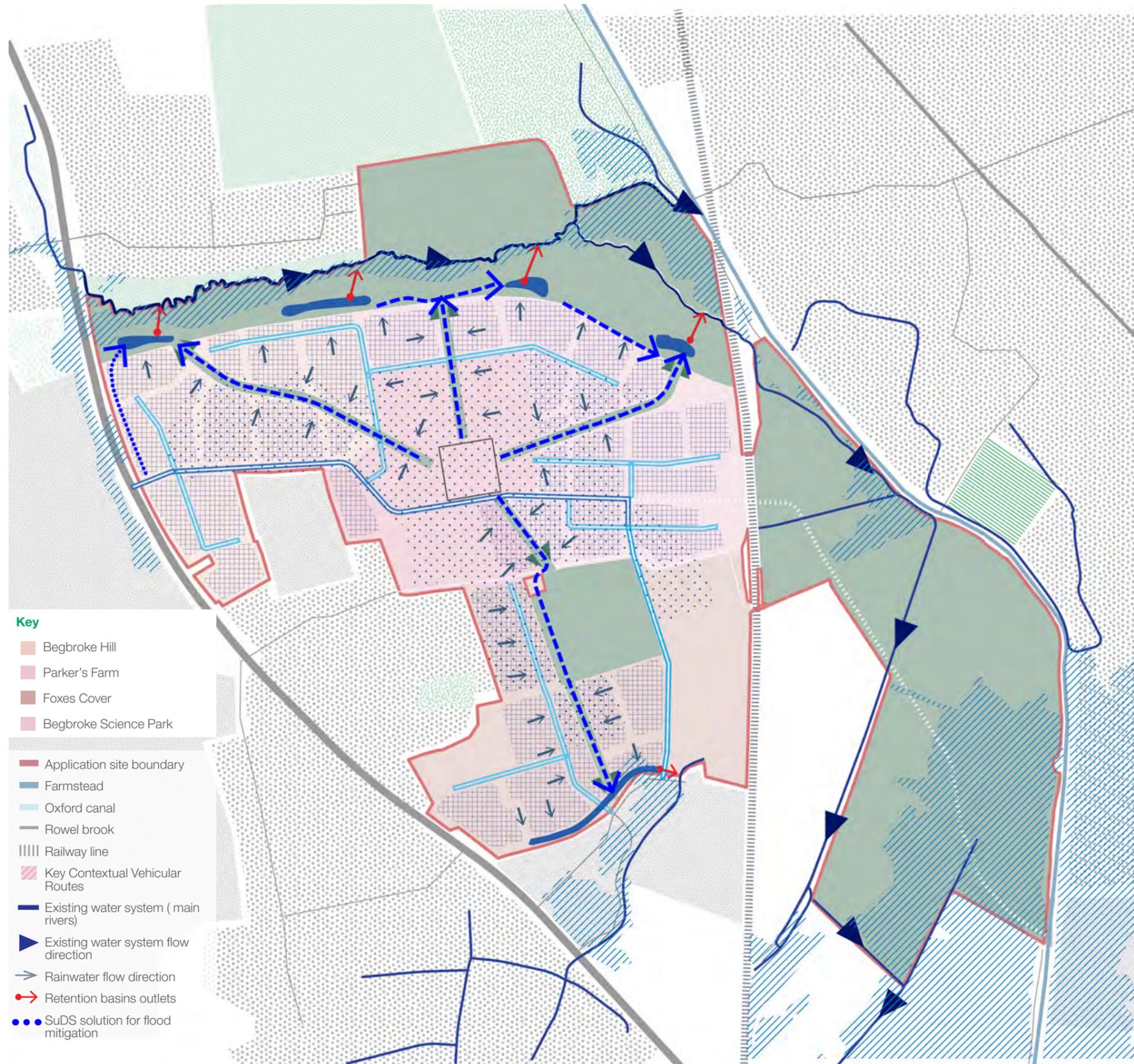


- Key**
- A44
 - County Council proposed roads to serve PR8 and PR9
 - Indicative East-West community bus
 - Potential bus routes with a New Canal Bridge between PR8 and PR7b

10. Infrastructure

Sustainable systems including natural drainage and landscape as resilient infrastructure.

10.1. Flooding and surface water drainage



Baseline 1:100 year flood event
 Illustrating flood mapping for sensitive areas addressed in the design and natural drainage strategy.

- Green Arteries**
 Green Arteries constitute the primary drainage feature of the development. Within these arteries, Sustainable Drainage Systems (SuDS) seamlessly blend with public spaces, creating attractive, highly accessible areas with programmed features. Strategically placed vegetation promotes biodiversity.
- SuDS should seamlessly blend into the public space, be visually appealing, accessible, and offer minor playful amenities.**
- Swales along secondary vehicular routes**
 Planted swale and/or rain gardens along secondary roads help storing, infiltrating and/or convey water. Swales should be planted and attractive, with a focus on biodiversity.
- Potential for infiltration**
 Areas where infiltration is possible due to soil conditions.
- Attenuation Basins**
 Attenuation basins are wet ponds with extra space for storing SW drainage in times of high rainfall, an attenuation basin only stores water in high rainfall events and is often dry.
- Living Streets**
 Within living streets the goal is to prioritize open surface water infiltration and conveyance instead of relying on conventional gutter drainage. Runoff from the streets should be directed towards detention areas within the green islands. In this case
- Illustrative flood extent**
 Revised flood extent.

10.2. Utilities

The utilities strategy set out the existing utilities services that service the site and assess the potential impacts of the proposed development on the wider network, including the provision of additional services that may be required to deliver the proposed development.

Consultation

Relevant utilities stakeholders have been consulted during the pre-applicatino stage on existing utilities infrastructure, requirements for the development and servicing of Begbroke Innovation District, and the potential for any reinforcement measures or diversions.

Electricity

The electricity network in the area is operated by SSE. An all-electric approach is proposed to achieve Net Zero Carbon emissions from operational energy use when used in conjunction with on and off-site renewable energy sources. Electricity will be used for the heating and cooling of the proposed development, and the operation of electric vehicle (EV) car parking spaces.

Gas

The gas network in the area is operated by SGN. In line with sustainable development principles and the Net Zero Carbon target, Begbroke Innovation District will be a fossil fuel free development. Therefore the new homes will not be connected to the gas network.

Potable Water

Potable water will be supplied to the proposed development by Thames Water. Buildings are designed to be water-efficient, utilising rainwater and grey-water harvesting techniques to minimise potable water demand.

Telecommunications

Openreach own the existing telecommunications infrastructure in the area and are expected to supply connections to the proposed development.



11. Access

Creating an inclusive and accessible community for residential, education, commercial, and recreational uses.

11.1. Introduction and design guidelines

Introduction

This Inclusive Access and Inclusion Statement report outlines how the proposed Begbroke Innovation District scheme proposal will achieve a good level of access and inclusive design. The report sets out the design principles and intentions, confirms the design standards and guidance documents referred to relating to inclusive design that are relevant to this scheme which falls under Cherwell District Council planning authority.

Given that the application is submitted in outline with all matters reserved, specific details relating to accessibility standards is naturally limited at this point. The mixed use nature of the development will help ensure that distances to services and amenities is reduced. The development will be served by public transport links running through the Site

The design will be developed so that it integrates the principles of inclusive design to enable the newly created mixed-use development to be used safely, easily and with dignity by everyone, regardless of ability, age, gender or ethnicity. The intention is to ensure all areas of the community are convenient and welcoming to allow everyone to live, work, and visit independently without undue effort, separation, or special treatment. Wherever possible, adaptability and flexibility will be key elements so that the environment and buildings can respond the evolving needs of the people working and living within the area.

A range of access and inclusive design guidance documents will be referenced during the developing design of the scheme. These cover the external landscaped areas, public realm, non-residential and residential accommodation.

It is recognised by the design team that good design encompasses the seamless integration of inclusive features, and that providing inclusive environments is the norm rather than an exception.

Design guidance references

- Relevant standards include:
- Cherwell Local Plan 2011 – 2031 (adopted 2015)
- Cherwell Local Plan Part 1 Partial Review
- Cherwell Residential design Guide Supplementary Planning Document, 2018
- Building Regulations, Approved Document M Access to and the use of buildings Volume 1: Dwellings (2015 with 2016 amendments)
- Building Regulations, Approved Document M Access to and the use of buildings Volume 2: Buildings other than Dwellings (2015)
- Approved Document K Protection from falling, collision and impact (2013)
- Wheelchair housing Design Guide, Third Edition, Habinteg, 2018
- British Standard BS 8300:2018 Design of Building and their approaches to meet the needs of disabled people – Code of Practice
- Requirements and implications of the Equality Act 2010
- Requirements and implications of the Public Sector Equality Duty.
- Building Bulletins 100, 102 and 103 – educational buildings

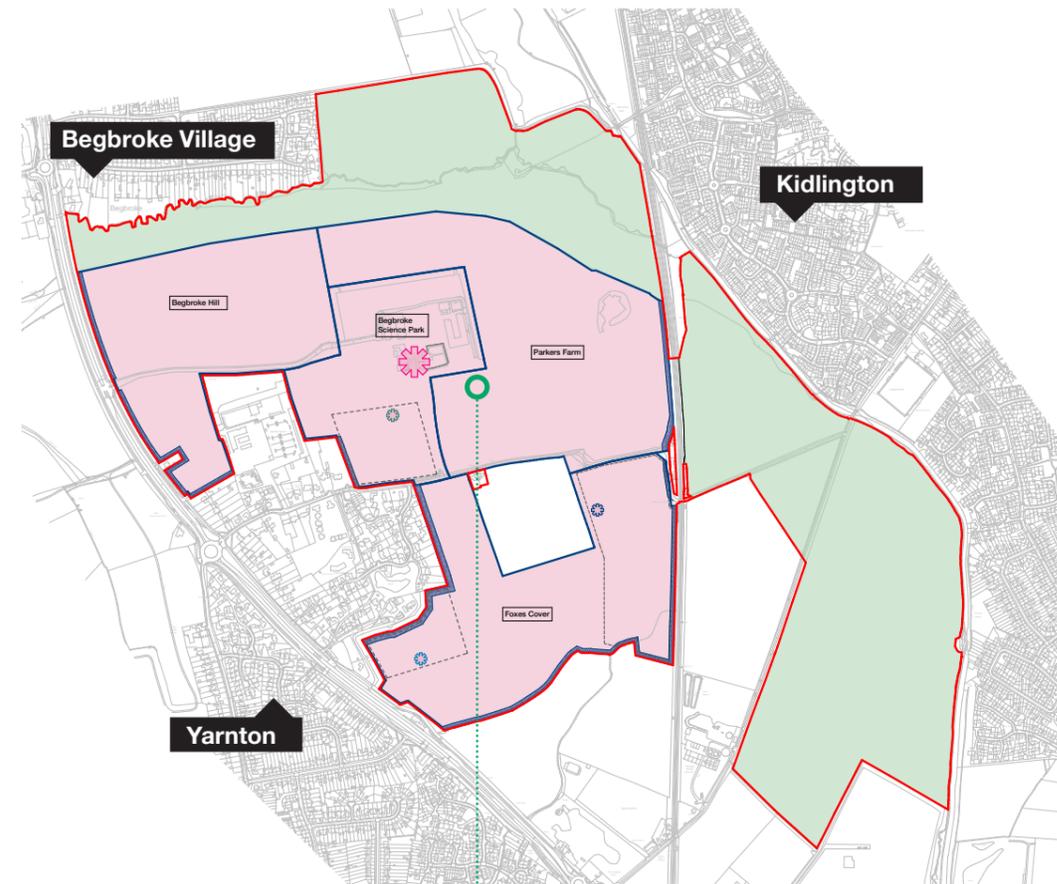


Access Consultant and consultation

As part of the outline planning process, the team has sought input and guidance from an access consultant Vin Goodwin NRAC who has experience with regard to the built environment and the issues around inclusive design and advising on the implementation of practical design solutions.

A robust programme of consultation with the public and key stakeholders has been carried out through the pre-application process, including a series of public consultation events held between July 2022 and July 2023. Full details of the public consultation carried out are set out in the Statement of Community Involvement prepared by community engagement specialists Kevin Murray Associates.

11.2. The district



Site plan indicating development zones



The Begbroke Innovation is a mixed-use development including residential, education, commercial and recreational uses.

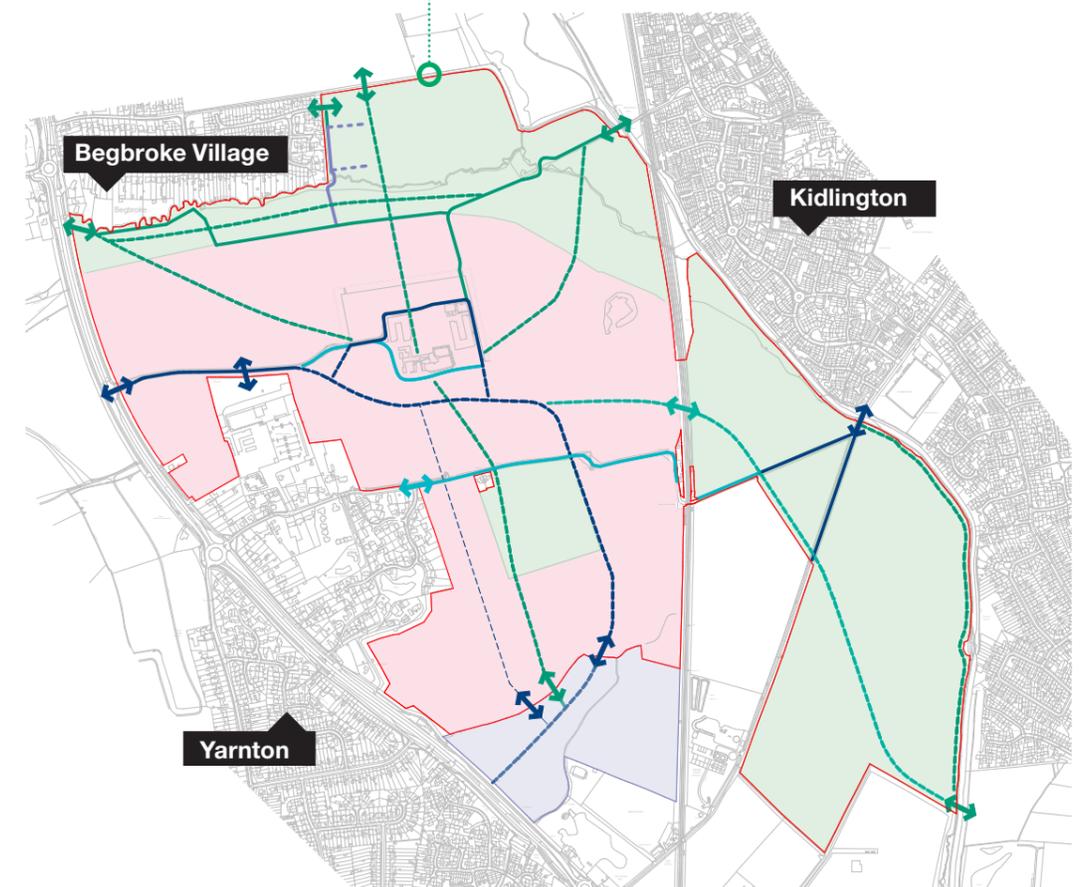
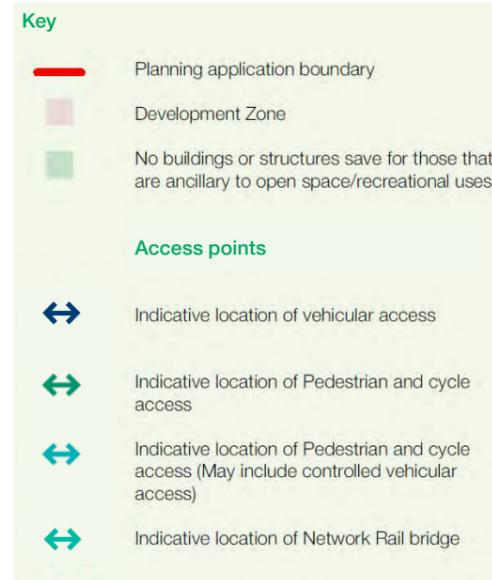
These uses are located around an existing science park which will be expanded. Vehicle access and parking will be provided throughout, for people who need it but the scheme will be designed so that it is also able to work well without an over reliance on cars, and enabling disabled and older people to live more independently and easily within the community.



Transport and arrival

Good access is achieved through proximity to the A44 to the west of the site with its existing S3 bus route to and from Oxford. A proposed central mobility hub including pedestrian links, vehicular (car and bicycle) routes and parking provide a range of transport options for a variety of people. An extended loop route for the S3 bus is proposed to further improve public transport links within the site.

- Pedestrian and cycle links are provided from adjacent neighbourhoods including Yarnton and Kidlington with all new pedestrian routes being step free.
- To the east of the site a new railway bridge crossing is proposed though this does not form part of this design scheme and application. It is anticipated that this bridge will have step free access.



Site plan indicating access and movement



Parking

A mixture of on street, surface parking and multi-storey car parking is proposed. Residential units will have on street or within boundary parking as appropriate while the science park employees will use multi storey parking. Car parking located at ground level near the commercial and science park buildings will be the primary location for Blue Badge parking bays to create convenient access for employees and visitors.

A suitable proportion of non-residential accessible parking bays will be provided according to guidance provided by BS8300. Residential accessible parking will be allocated proportional to the accessible housing provision with due regard given to disabled visitors as well as residents.

Where electric car charging bays are provided, it will be ensured that some are also accessible bays.

The design of the accessible bays will meet current guidance with a step free route to the pavement and to building entrances and with suitable resting places on longer routes where necessary.

Suitable secure cycle parking will be provided, associated with residential and non-residential uses. Provision will be made for accessible / adapted cycles as well as powered trikes and scooters with charging facilities. Suitable accessible vehicle drop-off and pick-up areas will be identified where appropriate to serve residential and non-residential buildings.

Landscape and public realm

The scheme proposes many external public and private external landscaped spaces. Zones of the development site to the north, south and east will be recreational or natural only with no buildings proposed.

Through choice of material, road treatments, planting and lighting, each space will be designed to have a clear identity and provide a place for everyone to meet, for communities to integrate and providing welcome views and vistas from people's homes and workplaces

General principles of landscaping

The overriding principle adopted for all external landscaped areas and public realm will be that all spaces will be accessible to all. Landscaped amenity spaces - whether private, public or semi-private - will be created to be distinct in terms of their character and use to facilitate good wayfinding around the site.

While helpful for all users of the environment, the creation areas with recognisable character particularly responds to potential needs of neurodivergent people by assisting in wayfinding without over-reliance on signage or written information or on approaching others for assistance. This principle will also be considered for the architecture by providing a variation in design, style and materiality enhancing legibility and orientation for everyone.

Each area will be designed and detailed to maximise safety for all users, particularly pedestrians by clearly defining areas for cars, bicycles and pedestrians.

Inclusive design features incorporated into the landscape scheme include:

- Route widths sufficient for all users, including wheelchair users, to pass others travelling in the opposite direction.
- Resting places with seating are provided at regular intervals as required.
- Suitable seating design for all – some with arm and back rests.
- Routes will be level or a very shallow gradient of 1:60 or shallower wherever practicably possible.
- Where stepped routes are necessary, these will have an alternative step free route and steps will be designed to be easy going and accessible for as many people as possible.
- Landscaping materials will be specified to maximise independent use by people with visual impairment.
- Where vehicle routes require pedestrian crossings, these will be clearly demarcated and have suitable tactile warning surfaces as required.

Cycle routes will be carefully detailed and prioritised to ensure safety for all users of the public realm. Where cycle paths are separated, these will be carefully delineated for clarity and safety whilst maintain good access for pedestrians including people with visual impairments and wheelchair users.

Throughout the scheme, surface materials will be firm, durable, smooth and slip-resistant in all weather conditions.

Street furniture will be positioned at or beyond the edge of pedestrian access routes so as not to cause an obstruction or hazard. Fixtures will be clearly identified by contrasting visually with surrounding surfaces and be logically grouped to avoid them becoming obstacles. Seating will provide suitable arm and backrests within each seating group plus suitable space adjacent to enable appropriate positioning for wheelchair users, for carers of children with push chairs and people with assistance dogs.



Art impression of Open space within the Research & Development area

Amenity spaces for play and activity, will ensure accessibility for a range of age and abilities, including older and disabled people. Consideration will be given to allocating appropriate space for dog spending by assistance and guide dogs.

11.3. Residential accommodation

It is proposed that around 1800 new homes will be provided within the scheme to address the housing needs of Oxford. The residential accommodation is linked directly with Oxford University though not intended as student accommodation.

The residential accommodation will be served by new retail, commercial and school facilities. The dwellings are expected to be 50 % affordable and 50% open market.

Residential standards

Residential standards adopted will be developed in subsequent design stages with reference to Cherwell District Council's own housing policy and guidance.

Consideration will be given to the provision of a range of housing types including visitable homes (Cat 1), accessible/ adaptable homes (Cat 2) and Wheelchair users dwellings (Cat 3). Wherever practicable, step free access to dwellings will be provided. Where lift access is provided, consideration will be given to procedures when lifts break down or are being maintained.

Where adaptable and wheelchair units are provided, these will be distributed across the scheme, and located in good proximity and travel distance to amenities and transport links.

Consideration will be given to how wheelchair users and others with mobility difficulty will gain access to the public realm and amenity space as well as to the dwellings themselves. Inclusive and convenient access for wheelchair users will be achieved throughout the development, linking the approaches to the neighbourhood, suitable parking places, building entrances and external facilities.

Careful consideration will be given to emergency evacuation from residential dwellings including the feasibility of evacuation lifts to assist in the evacuation of people who find it difficult or impossible to use stairs.

The design of wheelchair accessible and adaptable units will follow guidance in the Approved Document M Volume 1 guidance. Features incorporated would include:

- Step free approach to all units.

- Wheelchair user dwellings only provided above ground floor level where at least two communal lifts are provided to gain access to them.
- Appropriate accessible parking bays provided for for 3% of total units provided with space provided to expand to 7% meeting LLDC IDS guidance.
- Minimum 1500mm by 1500mm space outside the communal entrances and outside dwelling entrances.
- Adequate 850mm clear opening widths to entrance doors and a minimum 300mm space to the leading edge and 200mm nib provided to the following edge.
- Level internal circulation to the dwelling and minimum internal passageway widths of 1200mm where there is a door approached not head on.
- Turning space inside dwelling entrance door, with adequate 300mm clear space to side of leading edge of door protected for 1800mm.
- Clear opening widths of 850mm to entrance door and to all internal doors.
- 1100mm x 1700mm space for wheelchair charging and storage.
- Adequate manoeuvre space in all rooms including bedrooms following guidance in AD M Volume 1.
- Suitable sanitary facilities with required access zones provided adjacent to the internal fixtures and fittings.
- All AD M4(3) adaptable units are designed so that they can be adapted to be fully accessible meeting M4(3) accessible dwelling standards.
- Refuse and recycling facilities will be designed and located to be accessible to as many people as possible, located where they can be reached without using steps and with the minimum practicable travel distance.

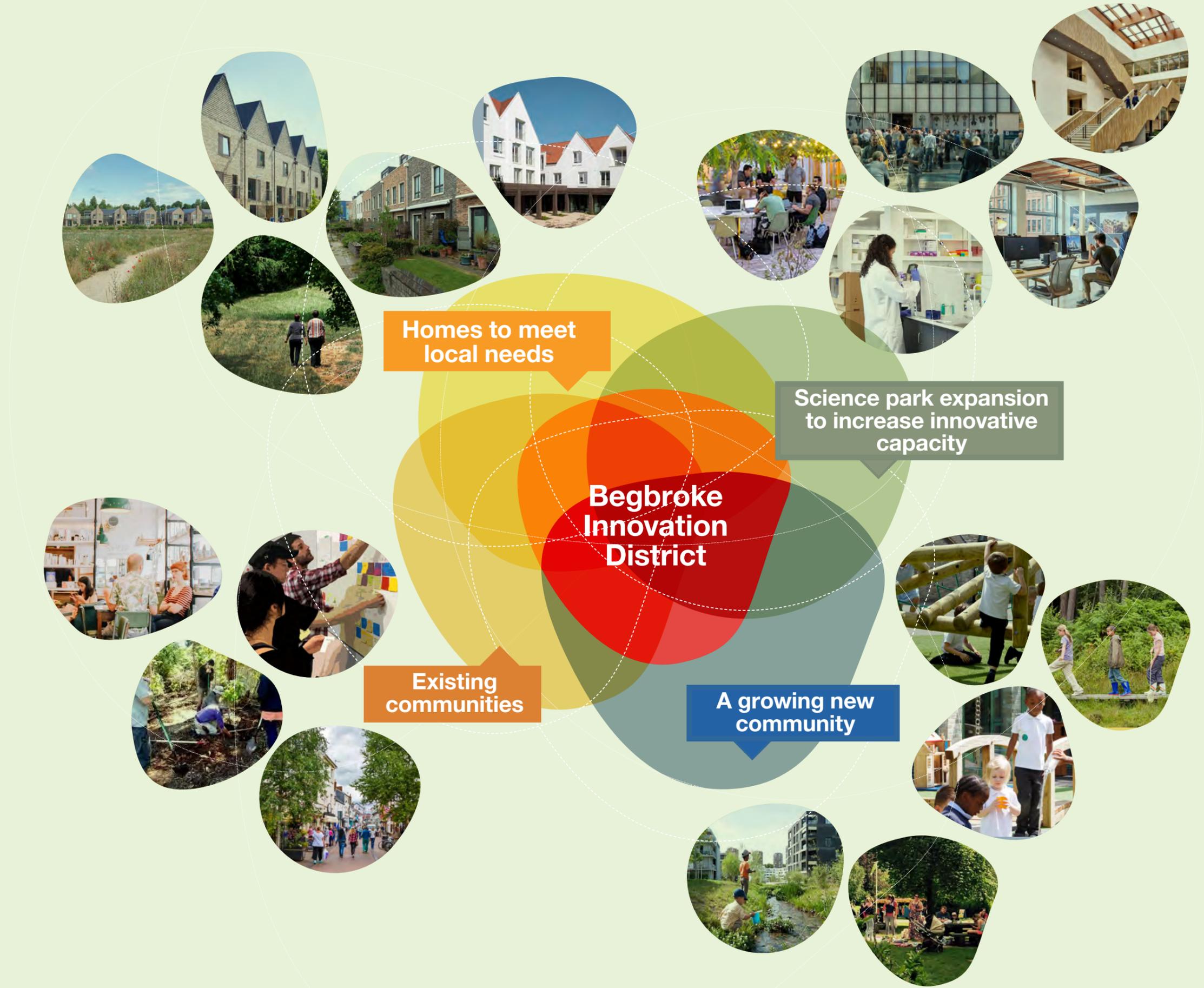
Non-residential buildings

- All non-residential buildings will be designed to be accessible for all following guidance provided in Approved Document M and BS8300:2018. This will include clear, identifiable entrances; logical internal layouts; step free access throughout the buildings; suitable sanitary facilities; internal décor and lighting plus adequate provision for safe evacuation of disabled people.
- Education buildings will also be designed with reference to additional guidance found in Building Bulletin 102 and 103 for mainstream and SEN schools plus Building Bulletin 100 referring to fire safety in schools.

12. Conclusion

From local needs to wider results, and back to local benefits, challenging national property development models through the journey.

12.1. Emerging from multiple needs



From diverse needs to an Integrated Community

The Begbroke Innovation District emerges as a result of multiple needs converging into a cohesive vision for an integrated community

Economic growth, technological advancement, sustainable development, and social connectivity, the district is being shaped into a 21st century contemporary village that caters to diverse stakeholders.

The integration of different elements, including businesses, research institutions, educational facilities, housing, and public spaces, fosters collaboration, knowledge exchange, and a sense of community.

12.2. Resulting in tangible benefits

(Indicative figures at this stage)

50%
open space

12 ha
nature
conservation
area

1,400m
Green Arteries

All homes and workplaces within 5 min of open space

An increase of
20%
in biodiversity

Community
and public offer

with up to

6,000m²
Amenities

Such as:

- Community Building
- Farm shop
- Nursery
- Cafe & Restaurant
- Sports pitches
- Retail
- Gym
- Cookery school

155,000m²
Science and
Employment
space

1,800
Homes
50%
Affordable

12 km
walking
trails

neighbourhoods
structured around

**Living
Streets**

focused on
people

One
Multi-modal
hub

75 ha
new
parks

5 ha
community
farm

Space for
primary and
secondary
schools

Artist-in-
residence
& collaboration
with local talent

Innovative
inter-generational
playspace

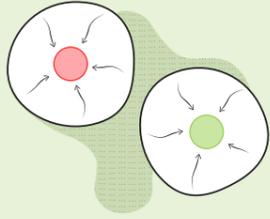
8 km
SuDS
Sustainable Drainage
Systems (SuDS)

Deliver
Net Zero
buildings in
operation

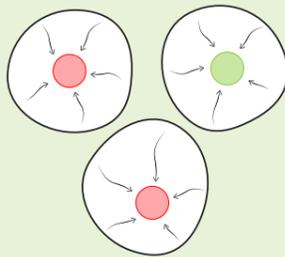
12.3. Shifting development models

from...
current models based on:

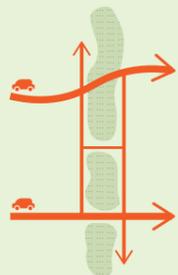
Green buffers



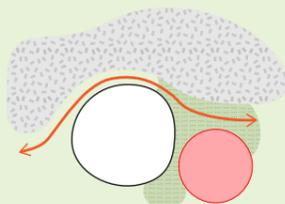
Independent Clusters



Car is the focus

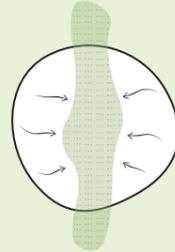


Isolated communities

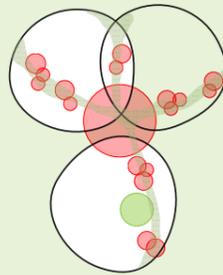


to...
a 21st century
contemporary village:

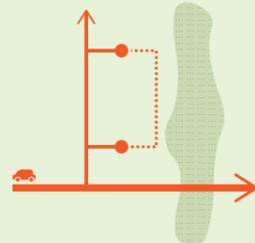
Green arteries



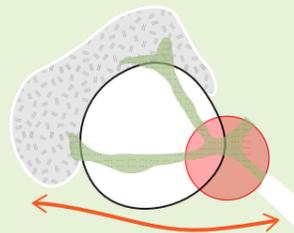
Engineering serendipity



Car is a guest

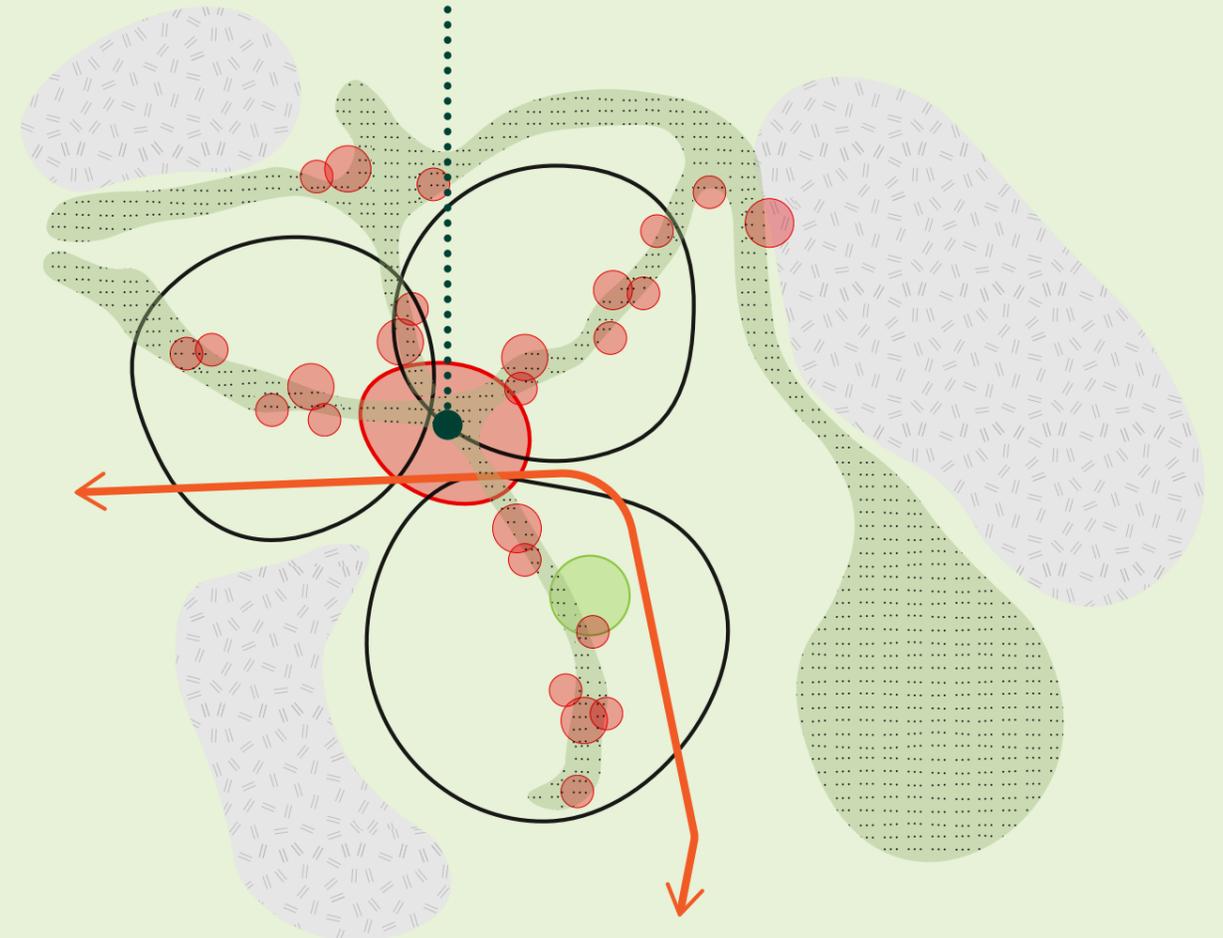


Opening to Oxfordshire



Sharing...

- ...a local centre easily accesible for all communities within and surrounding the site
- ...parks and nature that are open to all
- ...routes for active travel connecting to all areas and communitites
- ...streets that are for people
- ...Begbroke
- ...Oxfordshire



Begbroke Innovation District

Begbroke will be an innovation district both due to the activities taking place in it and by the ways in which it will be developed. It challenges standard models based on private vehicules, green wedges and isolated communities proposing shifts in development models that can cross over cutting-edge science, nature and village life benefiting them all, and that can also permeate into development modes and define new starndards for the 21st century.

12.4. Cultivating a place... from and for Oxfordshire



Cultivating a place...
to work and
research

