3.12. Innovation and sustainability

Active stewardship

Principles

3.12.1. Development should follow natural contours and minimise cut and fill wherever practicable.

3.12.2. The layout of development on the site should use land efficiently.

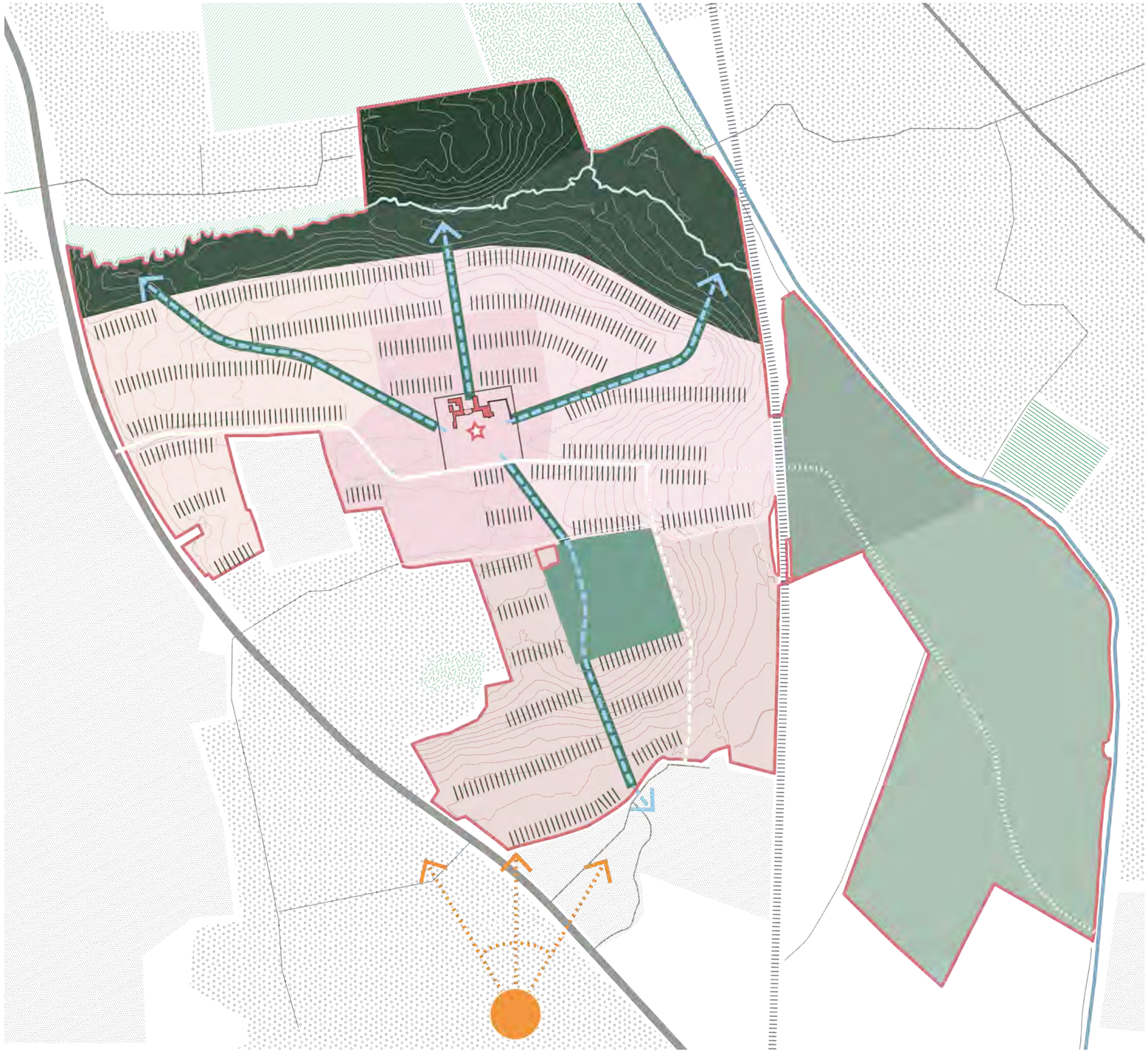
3.12.3. Building design will be flexible to respond to the current and potential future challenges of climate change and the changing needs of its occupiers over time.

3.12.4. Buildings should meet high standards of energy and water efficiency, and incorporate low carbon design and passive design principles where possible.

3.12.5. Streets and buildings should optimise orientation and create highly insulated and efficient thermal envelopes.

3.12.6. Careful consideration should be given to the size and placement of windows to utilise solar gain and/or avoid over-heating where applicable

3.12.7. Opportunities from digital connectivity should be maximised to allow for flexibility and adaptability to changes over time.



Key

- Application site boundary

Neighbourhoods

- Begbroke Hill
- Parkers Farm
- Foxes Cover
- Begbroke Science Park

Innovation and Sustainabiltiy

- Topography
- Green Arteries (Green corridors running through each neighbourhood)
- Swales
- Solar Orientation (Indicative orientation based on 30°due South for maximum solar gains)
- East/West Streetscape (East to west streets within the neighbourhood enabling North-South facing houses.)
- South Facing Local centre

Other features

- Oxford canal
- Rowel brook
- Key vehicular routes
- Railway line
- BSP

3.13.Health and well-being

Active stewardship

Principles

3.13.1. Community facilities should be located to be accessible, designed as distinctive and attractive buildings, and incorporate a range of flexible uses and services where possible.

3.13.2. The design of strategic and local play spaces will be exciting, adventurous and innovative, and provide a range of opportunities for play for children of different ages (see Playscape site-wide Guidelines

3.13.3. The design of green infrastructure including Central Park, Canalside Park, community sports facilities and sports pitches will encourage active and flexible use by all generations and be multi-functional spaces.

3.13.4. New allotments must be provided in accordance with the Development Specification. The location should take account of the need for the site to have good daylight and sunlight and have appropriate site access.

Key

- Application site boundary

Neighbourhoods

- Begbroke Hill
- Parkers Farm
- Foxes Cover
- Begbroke Science Park

Wellbeing

- Cycle & Pedestrian Trails
  (Indicative network of recreational pedestrian / cycle trails through the landscape and parks that connects green and play spaces)
- Local centre
  (Social and wellbeing facilities cluster around the accessible and connected local centre)
- Accessible Green Infrastructure
- Informal sports
  (Indicative location of exercise stations)
- Formal sports
  (Indicative location of sport fields integrated into landscape)
- Play Nodes
  (Indicative location of play integrated within the green network)
- Allotments
  (Indicative location of new allotments integrated within the landscape)
- Community Farm

Other features

- Oxford canal
- Rowel brook
- Railway line
- Green Arteries

4. Character - Places and Parks

illustrative details for a number of character areas within the Site. The details in this section set out how the masterplan may come forward. The details are not fixed and are provided for illustrative purposes only.

4.1. The Arrival

Applicable Development Briefs

1. Begbroke Hill
2. Begbroke Science Park

Role in the proposal - Create a sense of arrival

TA① A special / landmark building could be located at the junction of Begbroke Hill and Woodstock Road, to signal the entrance to the site. This building could be distinctive in character, although not necessarily in scale or importance.

TA② Begbroke Hill should include planting and landscape, to create an attractive route accommodating active mobility.

TA③ Design should incorporate a green threshold including planting and landscape areas, to create a sense of calm and quietness when driving off the A-44.

TA④ Junctions along Begbroke Hill should include planting and/ or changes in surface, to contribute to a sense of place.

TA⑤ Buildings forming street edges should look to define continuous yet varied frontages along the road, with buildings close enough to the road to create a sense of enclosure.

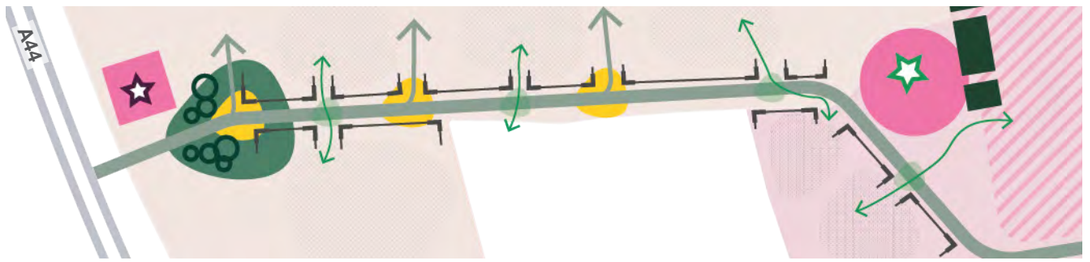
TA⑥ Frontage to Begbroke Hill should include entrances, front gardens and doors and avoid back gardens, to create a sense of activity and enhance the arrival experience.

TA⑦ Massing, breaks in built form and architectural expression should assist with wayfinding and mark pedestrian and cycling routes into the neighbourhood.

TA⑧ Bus stops should be integrated into the road landscape.

TA⑨ A second, and more important special / landmark building should be located terminating the vista along Begbroke Hill Avenue, to mark the entrance to the Research & Development area assist with orientation and enhance the arrival experience.

TA⑩ The street should be designed to naturally encourage lower vehicle speeds.



1. Special/Landmark Building
2. Begbroke Hill
3. Green Threshold
4. Junction Thresholds
5. Continuous Frontage
7. Architectural wayfinding
7. Pedestrian Network
7. Pedestrian Intersections
8. Indicative Bus Stop
9. Welcome Building

4.2. The Farmstead

② Begbroke Science Park

Role in the proposal - The heart

TF① The Farmstead should be designed around the Jacobean Farmhouse / Christian Building.

TF② Other existing buildings and structures of this area (e.g. low stone walls) should be retained.

TF③ The Farmstead should be defined as a series of informal smaller spaces including new and existing buildings and landscape, to define an informal village character and avoid city references such as public squares.

TF④ Pavilions, canopies, temporary structures and / or meanwhile uses are encouraged, to animate the public realm and contribute to place making.

TF⑤ Buildings with amenity or public access on ground floors should cluster around the Farmstead to animate the public realm and contribute to place making.

TF⑥ The green arteries of the three neighbourhoods should have direct and easy access to the Farmstead.

TF⑦ The north south route linking Begbroke Land and Hallam land should run through the Farmstead, to reinforce its centrality and facilitate access to amenity.

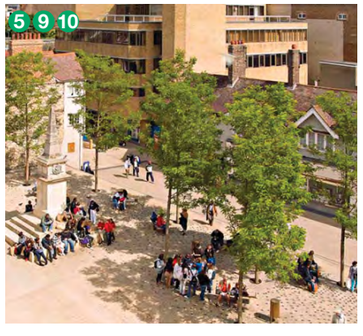
TF⑧ Subject to coordination with relevant stakeholders, a pedestrian crossing and bus stop should be located on the southern edge of the Farmstead, to facilitate access.

TF⑨ The layout of buildings and paths should invite pedestrians into the Farmstead and assist with wayfinding.

TF⑩ Where practical, existing trees should be incorporated into the design of the Farmstead.

TF⑪ The gardens east of the Farmhouse should be retained or redesigned to provide a calmer area for respite.

1. Jacobean Farmhouse / Christian Building
2. Farmhouse Garden Wall
3. Informal Public Spaces
3. Main Farmstead Plaza
4. Indicative wellness barn/ canopy
4. Indicative Development Plots
4. Amenity Frontage
5. Green Arteries
6. North South Link through the farmhouse
7. Pedestrian Crossing
7. Bus Stop
9. Existing Trees
10. Farmhouse Gardens



4.3. Farm Link & Innovation Avenue

1 Begbroke Hill
2 Begbroke Science Park
3 Parkers Farm

1 Rowel Brook Park (North)
2 Rowel Brook Park

Role in the proposal - Connect the Farmstead to the north of the site and beyond.

FL① The Farm Link & Innovation Avenue should provide direct access connecting the Farmstead to the agricultural land and allotments in Rowel Brook Park and Rowel Brook Park North, to promote cross-overs between different uses.

FL② The Innovation Avenue should run through, around or adjacent to the existing Farmhouse / Christian building, to celebrate and incorporate the character of the heritage asset.

FL③ The route should transition in character from a village next to the Farmstead and existing science park to a more natural character towards the north. This transition should respond to the three different conditions along the route: the existing science park, new residential development, green open space.

FL④ The Innovation Avenue (within the science park) should include a design and furniture fostering outdoor activity (e.g. seating groups and meeting pods), to promote social interaction between different groups.

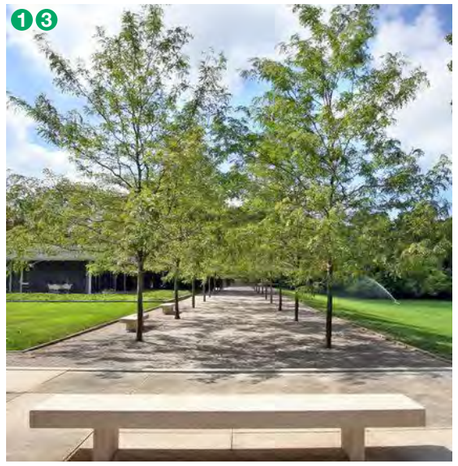
FL⑤ Buildings should contribute to define a clear edge of these routes

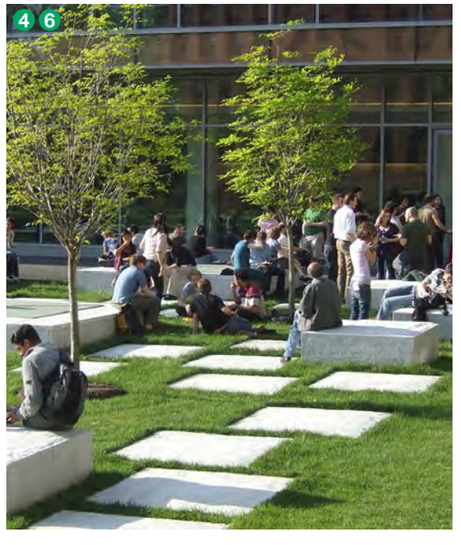
FL⑥ Active uses on ground floors should address and contribute to animate the Farm Link and Innovation Avenue.

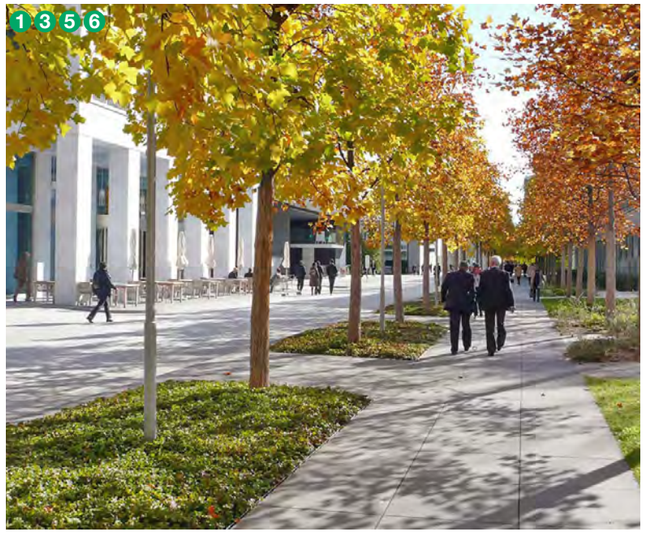
FL⑦ The junction between Innovation Avenue and the access route to the science park from the west (see diagram on this page) should present and active frontage and terminate the vista approaching from west to east, to assist with orientation and wayfinding.

FL⑧ Any vehicular routes that cross the Farm Link should do so in a way that prioritises the movement and safety of pedestrians and cyclists.

1 Direct Access
1 Farmstead
1 Rowel Brook Park
1 Rowel Brook North
2 Existing Farmhouse
3 Innovation Avenue
3 Farm Link
3 Transition
5 BSP Frontages
7 BSP Existing Entrance
7 Innovation Avenue Node
7 Innovation Avenue Frontage
8 Vehicular Junction
Consented Weed Garden
BSP Hedge
Indicative Development Plots
Rowel Brook







4.4. Central Park

2 Begbroke Science Park
3 Parkers Farm
4 Foxes Cover
5 Central Park

Role in the proposal - a green open space with amenity, connected to the Farmstead and next to residential and employment uses.

CP① The central park's character and use should focus on amenity and social activities including informal sports, play and gathering, to reinforce variety of offer and complement the natural character of larger parks across the site.

CP② The more programmed areas should be focused along the park edges, offering the chance of integrating spill-out activities from surrounding buildings.

CP③ The park should embed biodiversity features, including the strengthening of the Sandy Lane corridor and connections to the green arteries.

CP④ The park should include clear entrance nodes connecting it to the adjacent neighbourhoods.

CP⑤ Key routes such as Green Arteries should seamlessly blend into the park

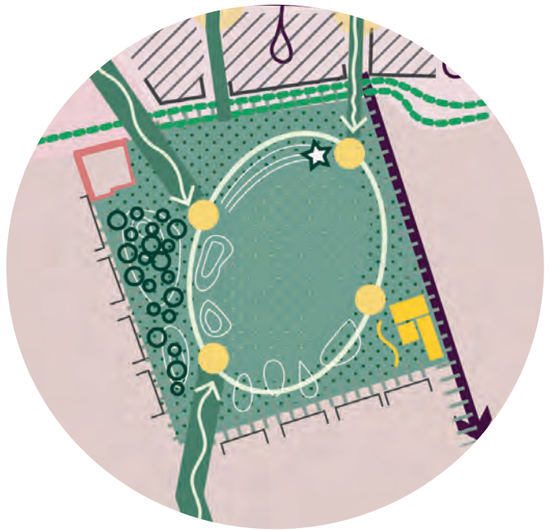
CP⑥ Topography should allow for tree planting and used to create opportunities for informal play and seating.

CP⑦ The main internal pathway of the park should be wide enough to safely combine space for pedestrian and cyclists, to offer opportunities for encounters between different users.

CP⑧ The park should be equipped with a central multifunctional open lawn, to host events, formal or informal sports.

CP⑨ The design should consider special features of interest that combine landmark appearance with usable amenity to serve as destination.

CP⑩ Landscaping will be used to prevent unauthorised vehicular access into the Central Park



1 Formal Sport & play
2 Programmed edges
2 R&D Frontage
2 Housing frontage
3 Sandy Lane corridor
4 Indicative Nodes
5 Indicative main paths
5 Green Arteries
5 Other green routes
6 Central open lawn
8 Landmark feature
9 Indicative Vehicular route

4.5. The interface

1. Begbroke Hill
2. Begbroke Science Park
3. Parkers Farm

Role in the proposal - manage the transition between differing character areas (i.e. science park and residential neighbourhoods) through landscape

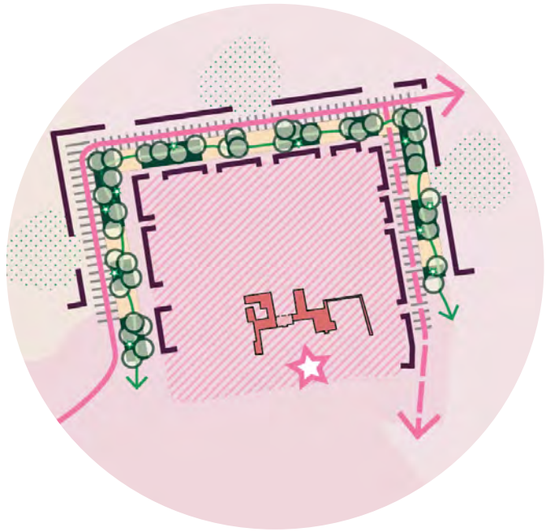
IS ① These streets should combine the qualities of a residential street (e.g. residential frontages, traffic calming measures or crossing points where appropriate, landscape and paving, etc.) with the integration of the existing hedge and the science park beyond it.

IS ② Buildings either side of the hedge should make a positive contribution to the street and not treat it as a 'back', to assist with the transition between character areas and uses.

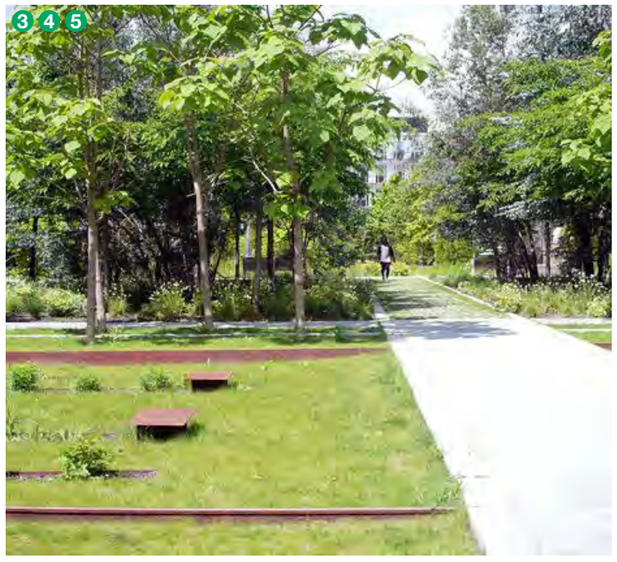
IS ③ Landscape and public realm should reinforce this transition, by contributing to placemaking and activity.

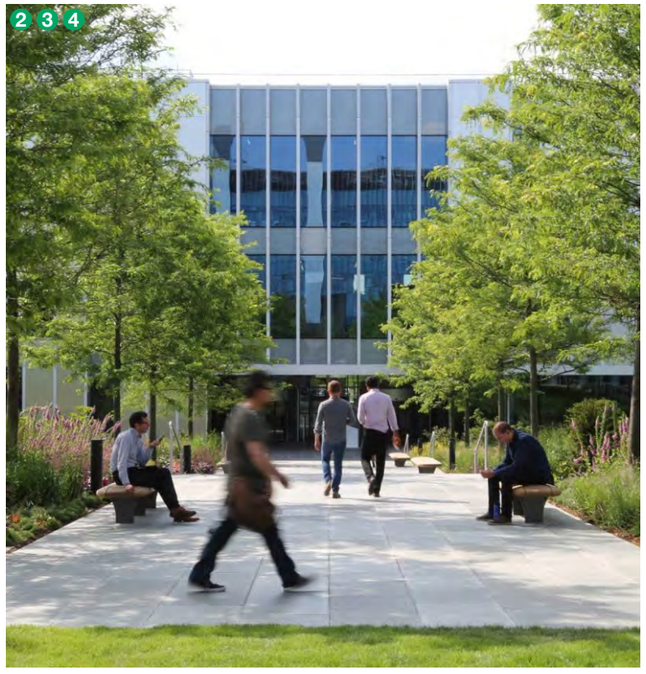
IS ④ Strategic openings through the continuous hedge line could be created where appropriate, to open the existing science park and make it accessible and integrated with the other neighbourhoods.

IS ⑤ The hedge should become a piece of landscape including routes through and / or spaces to dwell within.



1. Interface Street outside of BSP
1. Interface Street within BSP
2. Indicative Frontage
3. Landscaped interfaces
4. Dissected Hedge
5. Activity within the hedge
5. Path within the hedge
- BSP
- Farmstead
- Farmhouse





4.6. Research and Development

2 Begbroke Science Park
3 Parkers Farm

Role in the proposal - Landscape-led research and academic facilities

RD① Landscape should be delivered as shared, publicly accessible communal spaces to encourage interaction between different groups.

RD② Buildings should be open and welcoming, with permeable ground floors where practical, that are integrated as part of the public realm.

RD③ Servicing and vehicular access routes to all buildings should allow areas for landscape and / or pedestrian priority.

RD④ Servicing access as well as loading and unloading should be located on transversal routes off the main access road where practical.

RD⑤ The layout of plots and buildings should allow clear pedestrian and cycle routes connecting to the existing science park, local centre and open spaces such as Parkers Farm Green Artery and Central Park.

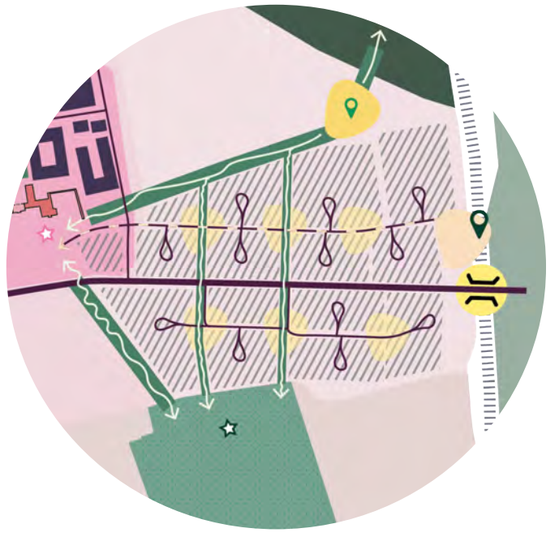
RD⑥ The location of buildings should contribute to form clear edges to routes, to assist with orientation and wayfinding.

RD⑦ Where buildings can not actively front onto public space, positive frontage should be established through facade treatments such as colour, texture and / or fenestration

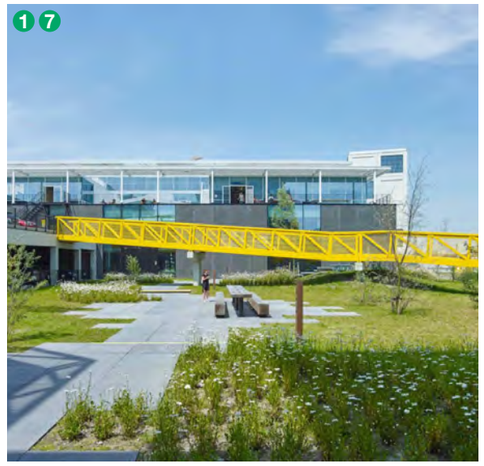
RD⑧ The layout of buildings and routes should contemplate the potential location of a Rail Halt to the east and enable a future direct connection from the station to the Farmstead.

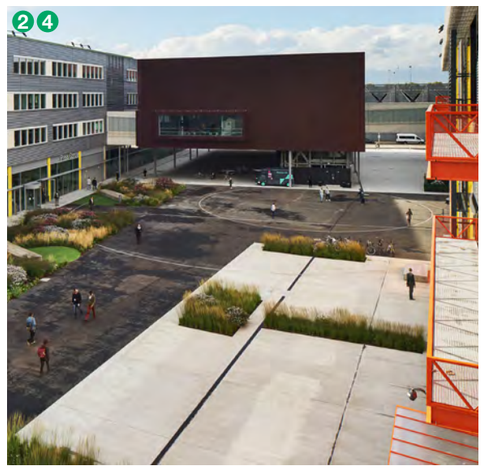
RD⑨ Plots and building layout should allow routes to and from the embankments of the Network Rail bridge, to create direct and easy access from people's desks to natural areas.

RD⑩ Where practical, buildings scale, grain or facade length should transition to smaller sizes where adjacent to residential uses, to reinforce the sense of transition and relationships between uses.



1 Indicative shared communal spaces
4 Vehicular Servicing Routes
5 Active mobility within green network
5 Green Arteries
5 BSP
5 Existing BSP Buildings
5 Farmstead
5 Central Park
5 Parkers Farm
8 Railway Station
8 Rail Station Connection
9 Network Rail Bridge
Indicative R&D Plots





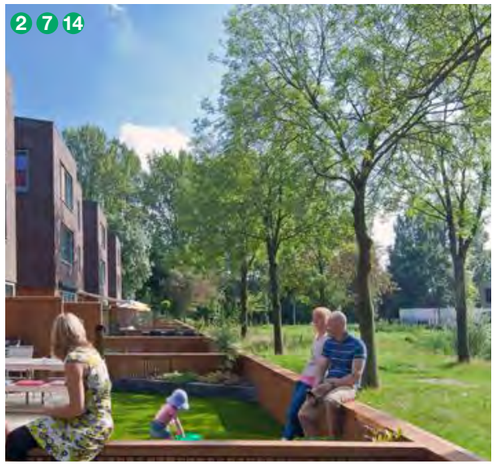
4.7. Green Arteries

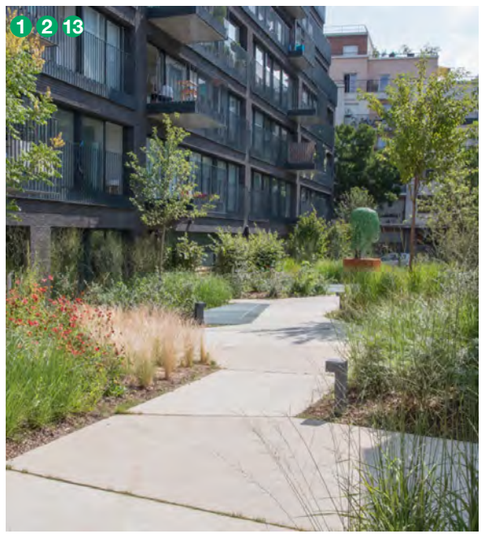
1. Begbroke Hill
2. Begbroke Science Park
3. Parkers Farm
4. Foxes Cover

Role in the proposal - central green amenity to each neighbourhood, active travel corridors and part of the drainage systems.

- GA① Green Arteries should be the central green space and main active mobility corridors of each neighbourhood.
- GA② Green Arteries should be car free.
- GA③ Green Arteries should not be interrupted by vehicular routes crossing them except next to the existing science park.
- GA④ Green Arteries should have a green character, substantial canopy cover and relative darkness during night-time, to contribute to the biodiversity network.
- GA⑤ Green Arteries should include a series of linked bio-retention swales and rain gardens, to perform a key role in the overall sustainable drainage system.
- GA⑥ Green Arteries should include a primary path, wide enough to comfortably and safely work as a shared space between cyclists and pedestrians. This path should sufficiently separated from private gardens and windows, to safeguard privacy.
- GA⑦ Green Arteries should include informal long-stay sitting elements with, to invite people to gather.
- GA⑧ Each Green Artery should define a distinctive character inspired by the larger regional landscape and / or its history (e.g. a forest, an orchard, a farm, a country lane) and linked to the landscape character of the neighbourhood.
- GA⑨ The design of each Green Artery should consider species selection, density and layering of under story planting, hardscape materials, tones and furniture.
- GA⑩ In terms of layout, the Green Arteries should combine transition spaces and nodes by creating angles in their alignments and / or introducing setbacks widening the section of the artery.
- GA⑪ In terms of activity, the neighbourhood main amenity, such as play or sitting areas, should be clustered around the Green Artery ‘nodes’.
- GA⑫ The Green Arteries should have permeable edges and be well connected with their neighbourhoods. Landscape elements such as signature trees should highlight such connections and promote intuitive wayfinding.
- GA⑬ Buildings directly along the Green Arteries should provide positive frontage towards the Arteries, to facilitate passive surveillance and activation.
- GA⑭ Height and materiality should contribute to the overall character of the Artery.

(Right) Indicative typical section through a green artery





4.8. Begbroke Hill Green Artery

To be read alongside 4.7 'Green Arteries'

1 Begbroke Hill
2 Begbroke Science Park

Role in the proposal - Neighbourhood-wide amenity and access to the site from Begbroke Village and the north-east.

BH① The layout of the Begbroke Hill Artery should seek to include bends and angles, to create nodes and vistas contributing to a sense of spatial compression and de-compression and assisting with wayfinding.

BH② Where practical, buildings with more units (e.g. flats over houses) should cluster around the artery nodes, to contribute to the activity of these and create spaces for the community to meet.

BH③ These nodes should also concentrate neighbourhood amenities such as thematic gardens, allotments, play elements and sitting elements for long stay, to foster community mix and interaction.

BH④ The character of the artery should be a forested woodland with shrub and groundcover planting, referencing the surrounding existing woodlands west of the site, such as Worton Heath or Bleinheim Palace grounds.

BH⑤ The planting palette should be inspired by surrounding woodlands species such as Common Alder, Quercus robur and Fern-Leaved beech.

BH⑥ Swales should seamlessly blend within the design, alternate dense planting to accessible lawn and alternate soft inviting slopes to steeper ones to mark accessibility.

BH⑦ The nodal spaces of the Begbroke Hill artery should act as clearings within a forest, having a more urban atmosphere.

BH⑧ Alternative playful stations and / or routes composed of informal play elements (i.e. logs, stepping stones) should be implemented at regular distances along the artery.

1 Green Artery
1 Indicative primary path
1 Iconic element
2 Indicative active nodes
2 Architectural markers
4 Woodland
6 Swales
GA 12 North-South connections
GA 12 Wayfinding trees
GA 13 Residential frontages
Rowel Brook
BSP

4.9. Parkers Farm Green Artery

To be read alongside 4.7 ‘Green Arteries’

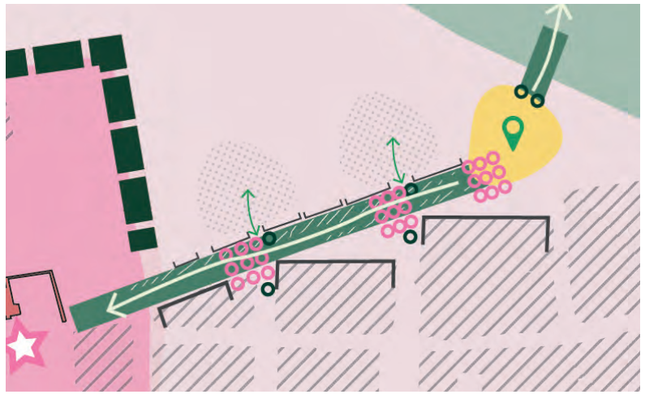
2 Begbroke Science Park
3 Parkers Farm

Role in the proposal: Central green space of the Parkers Farm neighbourhood.

PF① The location of the former Parkers farm should be considered the main node, where neighbourhood amenities should be concentrated.

PF② The atmosphere of the artery should contribute to the neighbourhood identity and strengthen its relation with the agricultural heritage of the site, including community orchards and edible hedges.

PF③ Special attention should be paid to strengthen the relationship between housing and research & development buildings, both through mitigating visual impact and promoting interaction between the users.



1 Green Artery
1 Indicative primary path
1 Indicative active node
1 Parker’s Farm
2 Orchards
3 Residential frontages
3 R&D Frontages
GA 5 Swale
GA 12 North-South connections
GA 12 Wayfinding trees

4.10.Foxes Cover Green Artery

To be read alongside 4.7 ‘Green Arteries’

4 Foxes Cover
5 Central Park

Role in the proposal: Central green space of the Foxes Cover neighbourhood.

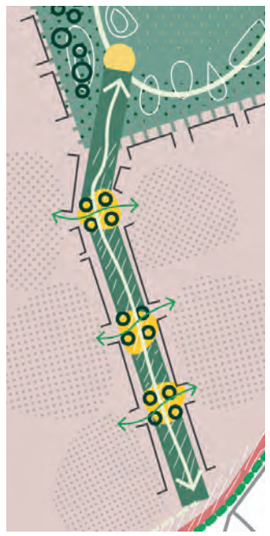
FC① The artery should be the main active mobility corridor of the neighbourhood, connecting it to Hallam land to the south and the Central Park and local centre to the north.

FC② The Foxes Cover green artery should form an integral whole with the Central Park.

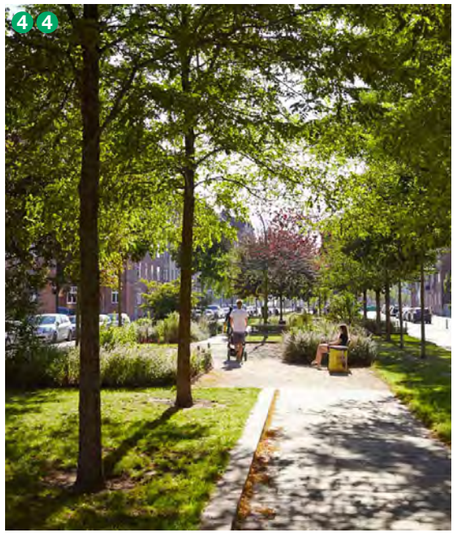
FC③ The artery should be uninterrupted by vehicular routes crossing the artery with the only potential exception of a single crossing as far south as possible if required, to allow uninterrupted access to the Central Park through the artery for the majority of the neighbourhood.

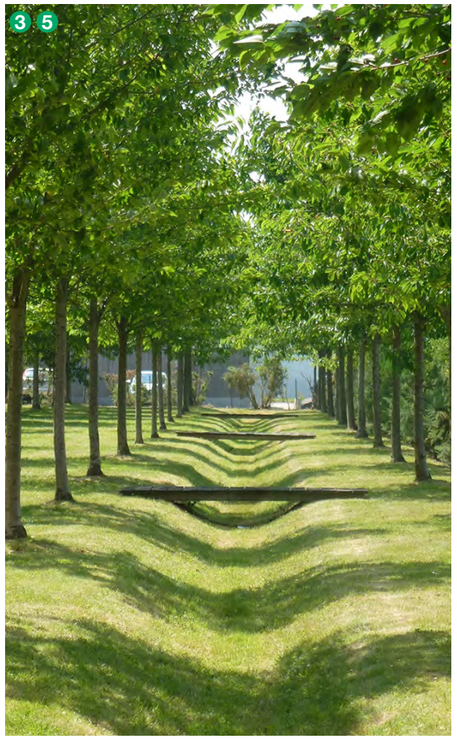
FC④ The artery should consist mainly of transitional spaces, with amenity and community uses concentrated in the Central Park.

FC⑤ The character of the artery should contribute to the neighbourhood identity and its connection to the surroundings, including a tree-lined curved path and hedgerows.



1 Green Artery
1 Indicative primary path
2 Connections to neighbourhood
2 East-West pedestrian connections
GA 5 Swales
GA 12 Wayfinding trees
GA 13 Residential frontages





4.11. Living Streets

1. Begbroke Hill
2. Begbroke Science Park
3. Parkers Farm
4. Foxes Cover

Role in the proposal - Residential streets that put people over cars and encourage them to inhabit the public space around their homes.

LS① The design of the living streets should prioritise people and landscape over vehicles. The whole surface should create a shared space where vehicles can move through but leave space for play, rest, meet your neighbours and other community activities.

LS② Landscape should be clustered in planted islands becoming gathering spaces that accommodate informal appropriation of the streets and provide a layered approach to planting including species of different height and types as opposed to single trees.

LS③ Carriageways should be one way and loop around off secondary roads and avoid turning and reversing. Their width should be kept to a minimum and its layout include bends and gentle turns, to reduce the visual perception of the carriageway and introduce traffic calming measures.

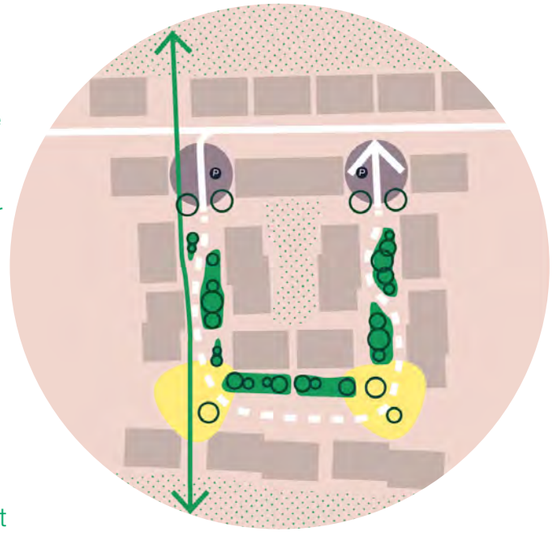
LS④ Parking should be consolidated at entrance points to living streets (junctions off secondary roads), to reduce through traffic and minimise the parking within the streetscape.

LS⑤ Where additional parking is required, it should be clustered at a point, reasonably equidistant from the consolidated parking at entrance points, to provide as many parking free segments as possible.

LS⑥ Landscape elements such as planting and benches should be strategically located, to prevent parking outside allocated parking bays.

LS⑦ Defensible space between buildings and public realm should be designed to contribute to the street character.

LS⑧ Living streets should be interconnected to the wider neighbourhood pedestrian network and green spaces. Landscape features, such as trees or furniture, should be strategically located to assist with orientation and wayfinding.



1. Parking Pools
2. Vehicular Loop
3. Inhabitable Nodes
3. Planting islands
7. Pedestrian Network
7. Green Spaces

4.12.Rowel Brook Park (& North)

1. Rowel Brook Park (North)
2. Rowel Brook Park

Role in the proposal: Offers a variety of rural landscapes for people to get close to nature.

RB① Rowel Brook park should integrate and enhance the existing Rowel Brook including its woodland.

RB② Rowel Brook Park should provide east-west connectivity linking Kidlington and the Oxford Canal in the east, Begbroke village in the west and the northern neighbourhoods of the proposal.

RB③ Rowel Brook Park should include a variety of accessible natural and rural landscapes, to offer the benefits of countryside living in close proximity to homes and workspace.

RB④ Rowel Brook Park should have a gradation of characters. In the west, it should be forested to provide visual screening between Begbroke Village and the proposal. The centre should have an open character with flower-rich meadows. And to the east, wetland and marshlands habitats should be delivered to aid connectivity between Rushy Meadows SSSI and The Marshes.

Rowel Brook Park North - Role in the proposal: Agricultural land and allotments.

RB⑤ Consideration should be given to how the retained agricultural land north of Rowel Brook could be used as a community farm to serve both as a source of food and as a community well-being asset.

RB⑥ Allotments (both re-located and a portion of the new ones) should be located in proximity to the local farm, to share facilities and foster knowledge exchange.

RB⑦ Additional new allotments should be located close to Parkers Farm neighbourhood. The layout of the allotments should be in ‘islands’, with space flowing through the allotments. Where necessary, hedges of various heights, should be used to create a visual barrier that blends within the landscape.

1 Rowel Brook
1 Existing vegetation
1 Enhanced woodland
2 Indicative primary path
2 Indicative secondary network
2 Existing canal bridge
4 Flower meadows
4 Wetland/Marshlands
5 Community farm
5 Indicative agricultural land
6 Allotments

4.13.Railway Marshes

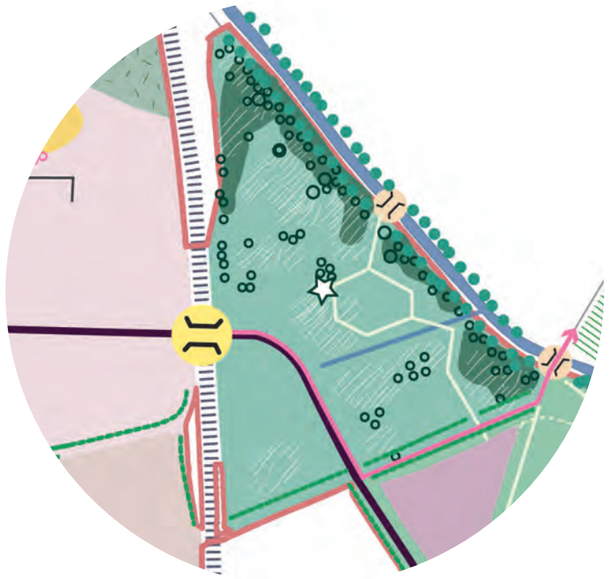
❸ Railway Marshes

Role in the proposal: Main Nature-focused area.

MA① The Railway Marshes should focus on biodiversity.

MA② The landscape should include a variety of wet habitats that strengthen the Oxford Canal corridor, integrate existing woodland patches and strengthen the link to the Rushy Meadows SSSI.

MA③ Access to the Railway Marshes should be limited (for example a board walk) and controlled to ensure minimal disturbance to habitats. Where access is provided, this should be to connect to Bullers Bridge.



❶ ● Existing canalside vegetation
❶ Reinforced vegetation
❶ ○ Indicative new vegetation
❶ Existing hedgerows
❷ Marshes
❷ Oxford Canal
❸ Indicative Boardwalk
Landmark feature (lookout tower)
Railway
Existing bridges
Network Rail Bridge
Bus Route
Pedestrian/cycling connection
Existing ditch

❶ ❷ ❸

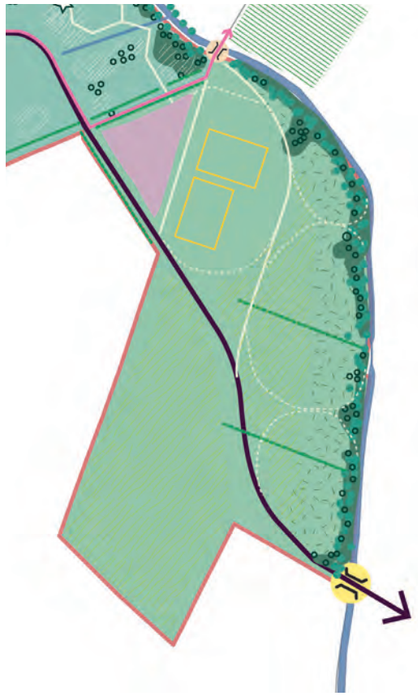
❶ ❷ ❸

4.14. Canalside Park

4 Canalside Park

Role in the proposal: A destination for play, sports and leisure and retained agricultural land.

- **CS①** The Canalside Park should balance spaces for organised and informal sports, active forms of recreation and areas of relative tranquillity and inaccessibility.
- **CS②** The landscape character should include a variety of meadows, with wet meadows along the canal and dryer meadows central in the park.
- **CS③** New hedgerows should be added where appropriate.
- **CS④** The Canalside Park should provide key interaction points between the canal and the site.
- **CS⑤** Design should consider opportunities for shared visitor facilities including rest rooms, changing facilities etc.
- **CS⑥** Vehicular access and parking should be limited to the absolute minimum to safeguard Yarnton Bridge as a safe crossing point primarily for pedestrians and cyclist. Measures for restricting unauthorised vehicular access to open spaces should be explored, such as strategically placed hedgerows and ditches.
- **CS⑦** A primary cycling path -connecting to the canal towpath to the south and the Yarnton Bridge to the north- should run through the centre of the park to provide activity and leave the towpath to pedestrians.
- **CS⑧** A secondary network of looped paths should be include connecting the primary path to the canal towpath.
- **CS⑨** The Oxford Canal planted edge should be widened to strengthen its role in the wider ecological network.
- **CS⑩** Supporting buildings should be combined with other functions as much as possible to provide shared facilities and limited the number of structures required.
- **CS⑪** If large areas of play were to be included within Canalside Park, consideration should be given to the area between Sandy Land and Yarnton Road, to facilitate access from existing and new residential areas.



- 1 Indicative formal sports
- 2 Wet Meadows
- 2 Dry Meadows
- 3 Existing hedgerows
- 3 Existing canalside vegetation
- 3 Reinforced vegetation
- 3 Indicative new vegetation
- 4 Oxford Canal
- 5 Yarnton Bridge
- 7 Indicative primary path
- 8 Indicative secondary network
- 11 Indicative potential play area
- Indicative Potential New Bridge
- Indicative Potential Bus Route

Oxford University Development

Begbroke Innovation District

Strategic Design Guide

July 2023

Hawkins\Brown
With
OKRA
RCKa
OOZE