

WATERBEACH BARRACKS & AIRFIELD

CATEGORY: EXCELLENCE IN MASTERPLANNING AND URBAN DESIGN SUBMITTED BY: BRADLEY MURPHY DESIGN (BMD) IN COLLABORATION WITH: URBAN&CIVIC, FLETCHER PRIEST ARCHITECTS, STANTEC (FORMALLY PBA), DAVID LOCK ASSOCIATES ENTRY NUMBER: UDM3917



Aerial shot of Waterbeach Airfield & Barracks

FOREWORD

In August 2014, Urban&Civic PIc were appointed Development Partner to DIO (Defence Infrastructure Organisation) to redevelop the 293 hectare former airfield and barracks site at Waterbeach in Cambridgeshire. The site constitutes two thirds of a new settlement allocated by South Cambridgeshire District Council (SCDC) through their Local Plan process, with a capacity for 8,000 to 9,000 homes.

BMD were commissioned by Urban&Civic to provide a full suite of green infrastructure services and have worked collaboratively with masterplanners Fletcher Priest Architects since the scheme's inception, developing the masterplan and submitting an Outline Planning Application in February 2017.

Formal outline planning permission was granted by South Cambridgeshire District Council (SCDC) on the 27th September 2019, resolving to grant permission for 6500 new homes and associated employment, transport, educational, health and community uses.

BMD are currently working on the detailed landscape design of Key Phase 1 and construction is due to commence on site later this year, with first occupations anticipated in 2022/23

Growing a Cambridgeshire town at Waterbeach

The Waterbeach Barracks and Airfield site is a unique place, nestled in a beautiful and established landscape. For generations people have lived, worked and played here. It provides the setting for outdoor living underpinned with the virtues of a modern, sustainable and well connected community.

THE VISION FOR WATERBEACH

Our vision is to support the next evolution of the site, building on centuries of prior settlement in the area. Development at Waterbeach Barracks and Airfield will grow along the Causeway route once trodden by medieval monks, linking the heart of the existing village to the re-energised barracks district through its unique waterfront and onwards towards Denny Abbey. This chain of places and activities gives a framework for a growing Cambridgeshire community layered with history but distinctive and of our age. A place that is nurtured and cultivated as it grows and evolves.

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NATURE LED APPROACH

Biodiversity and sustainability underpins the approach to the site by creating an interconnected multifunctional mosaic of habitats where people and wildlife can thrive. Our vision comprises of key design principles which aim at embracing the fen edge, creating interconnected parklands and restoring the historic links.

STRATEGIC LOCATION

STRATEGIC LOCATION

The Site lies immediately to the north of Waterbeach Village, approximately 5km from the northern edge of Cambridge and 15km to the south of Ely. It is situated between the A10 road to the west, the London to King's Lynn rail line to the east and south of the village of Chittering. It lies entirely within South Cambridgeshire District and Waterbeach Parish administrative areas.

The Site is positioned in a primary transportation corridor five kilometres north of the edge of Cambridge. The neigbouring A10 and the London-Kings Lynn railway line provide principal strategic links.

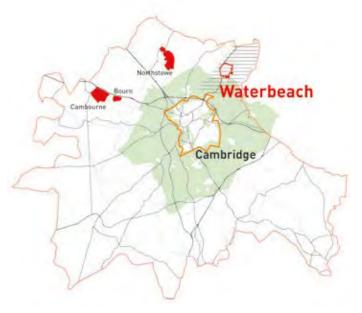
ECONOMIC CONTEXT

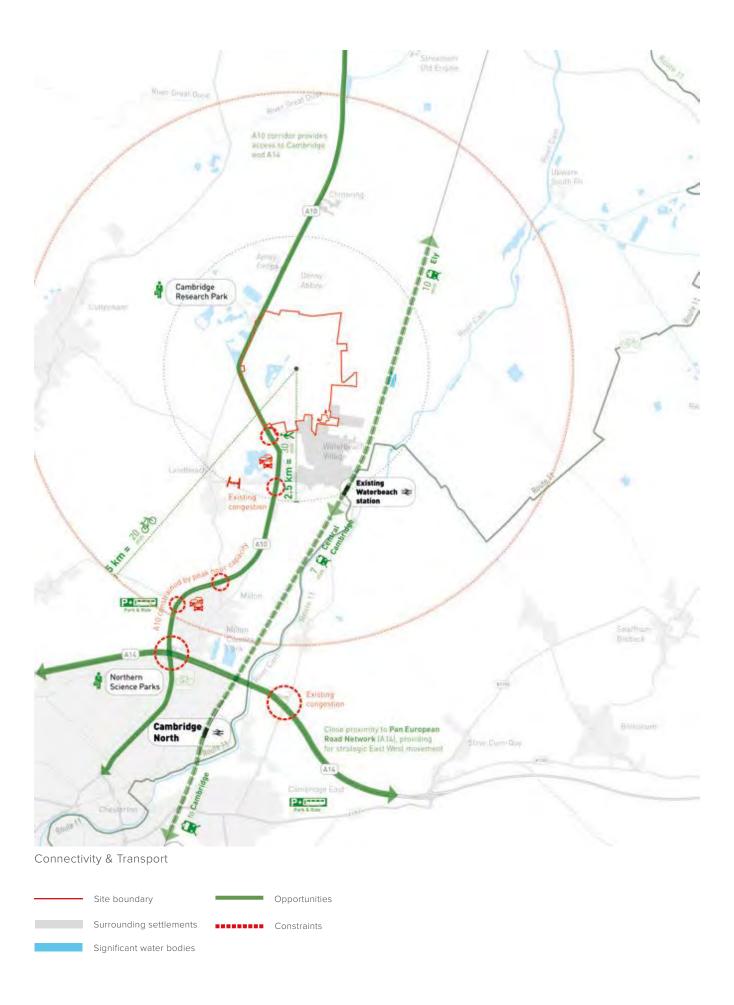
South Cambridgeshire and Cambridge have experienced significant economic growth over the last few decades. Technology and biomedical related businesses and jobs have grown on the back of the University's continuing success, research and development, inward investment and home grown innovation.

However, whilst Cambridge has benefited from high private sector jobs growth, it has also experienced the negative consequences of increased inward commuting, congestion and worsening housing affordability.

Through a long-standing and effective co-operation in planning for economic growth between the City Council, the County Council and South Cambridgeshire City Council a strategy has evolved to address these negative consequences. Through successive development plans, the focus is beginning to shift from intensification and expansion of the City, collared as it is by the Green Belt, to delivery of a number of outlying new settlements – Northstowe, Cambourne and now Waterbeach and Bourn - of sufficient scale to be distinct in character, viable and sustainable.

These offer the potential to function as part of a constellation of well-connected, independent nodes of activity and employment within the City's sphere and to influence and relieve acute housing need.





STRATEGIC GREEN INFRASTRUCTURE CONTEXT

Cambridgeshire's Green Infrastructure context has been shaped by a range of physical and cultural influences.

Cambridgeshire is a predominantly farmed landscape which has led it to become one of the least wooded counties in the country, with removal of large areas of woodland, species-rich grassland and hedgerows through agricultural intensification, farm amalgamation and changes in land management practices.

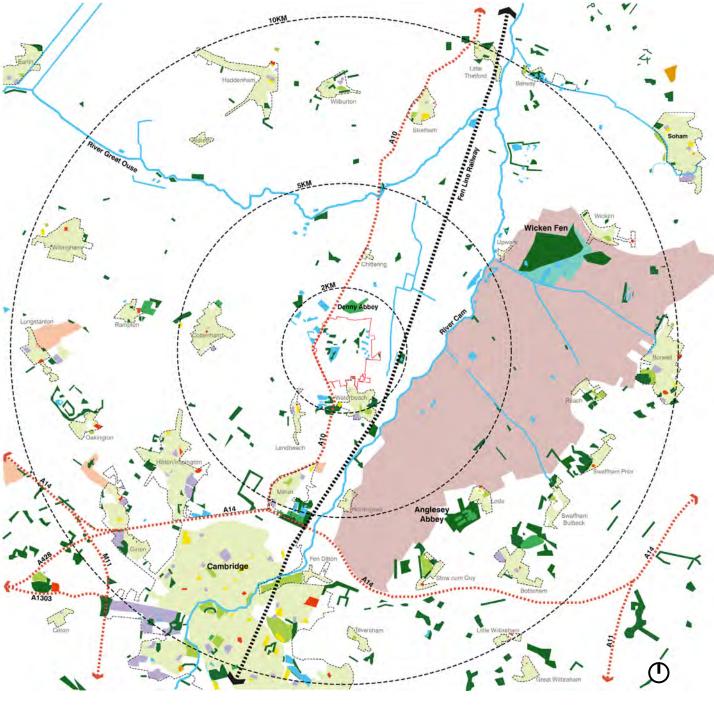
Even though Cambridgeshire is situated within the driest region of Britain, its low lying nature makes the county susceptible to flooding which is expected to increase as a result of climate change.

The Site lies in a strategic position just north of Cambridge where it forms an integral 'stepping stone' between Cambridge and the Fens.

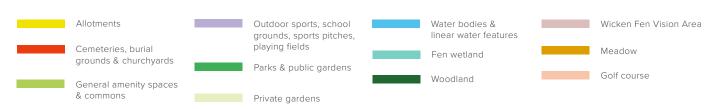








GI Sub-regional Context



WIDER GREEN INFRASTRUCTURE ASSETS

The Site is located in a unique position, surrounded by a wide range of Green Infrastructure assets to both benefit from and contribute to.

The Site sits between two strategic green corridors identified within Cambridgeshire's Green Infrastructure Strategy; the River Cam strategic corridor to the east and the River Great Ouse strategic corridor to the north.

Wicken Fen Vision Area is located to the east of the Site, associated with the local fenland landscape. The vision area encompasses two National Trust sites: Wicken Fen Nature Reserve; and Anglesey Abbey, which form key Green Infrastructure destinations within the area, from both a recreational and biodiversity perspective.

Immediately north of the Site is Denny Abbey, an English Heritage property, which is a local Green Infrastructure destination and forms a key heritage asset close to the Site.

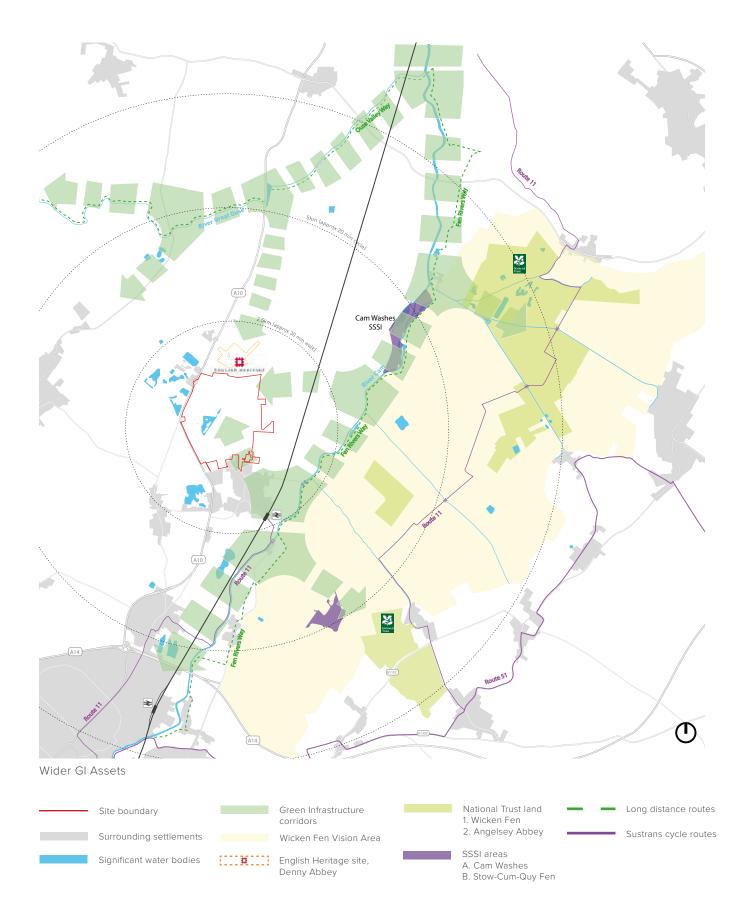
Key wider recreational and leisure routes run through the fenland landscape to the east of the Site. These being the Sustrans cycle routes 11 and 51 and the long distance route, Fen Rivers Way flanking the River Cam. Additional wider Green Infrastructure assets, from an ecology and biodiversity perspective, are two statutory protected SSSI sites; the Cam Washes and the Stow-Cum-Quy Fen.

Potential was identified for the Proposed Development to contribute and feed into these wider Green Infrastructure strategies and nature conservation initiatives. The diagram also highlights the potential for the Proposed Development's capacity to offer a western gateway to these Green Infrastructure destinations.









SITE CONTEXT

The Site is located on a largely level plateau within a predominantly agricultural area with a number of small villages and farmsteads in close proximity including Waterbeach village and Landbeach to the south-west and Chittering to the north.

The Site is bounded to the east and north east by open agricultural land. To the north of the Proposed Development is Denny Abbey, an English Heritage property which forms part of a series of heritage assets within the local area.

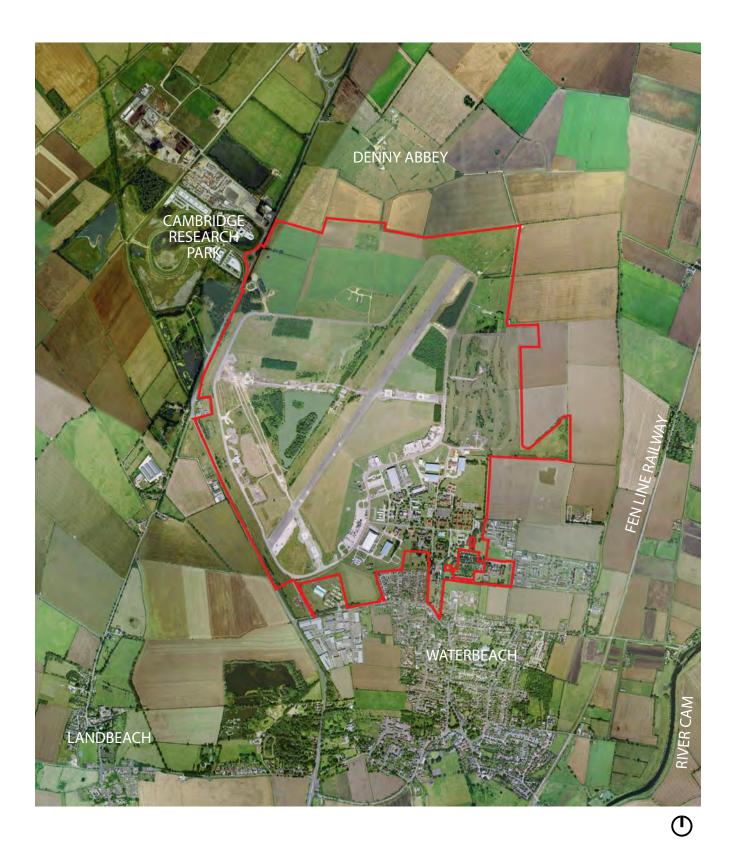
The western boundary is formed by the A10 road which links a series of small villages to Cambridge city and to other strategic routes mentioned above. The Site is bounded to the south by the extents of the current village of Waterbeach.

Waterbeach Village has grown out from its historic core along the High Street and village green running north to south. In continuation of the High Street and Way Lane lie the two historic causeways which cross the former airfield site and continue towards Denny Abbey. The village expanded in the 1960s and 1970s, with homes being developed along the village edges. In recent years, it has grown further, largely through infill development and more significant development to the north of the village. The village historic core contains a cluster of 15 listed buildings and a scheduled monument. This historic core forms the focus of the Waterbeach Conservation Area.









SITE ANALYSIS

Analysis of the Site identified a broad range of Green Infrastructure assets which have informed the structure of the Green Infrastructure Framework.

The inherited landscape features include the central feature lake, woodlands and large expanses of grassland from low to high value. This mosaic of habitats support a rich palette of flora and fauna with a variety of birds, small mammals, reptiles and invertebrates present.

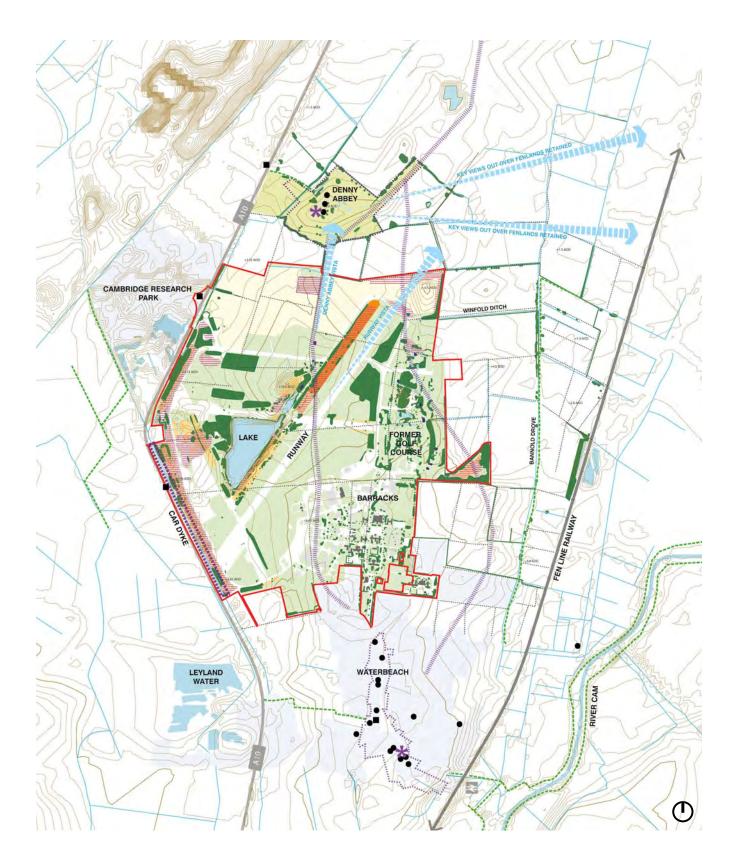
Denny Abbey is a key heritage feature to the north of the Site and the Waterbeach Conservation Area is located to the south. Two historic causeways previously ran through the former airfield, linking the abbey to the village. A number of listed buildings and structures are present within the immediate context of the former airfield. Car Dyke and Soldiers Hill are additional points of historic interest present on the former airfield.

Two prominent vistas exist on site; one along the causeway to Denny Abbey and another of the wider fenland landscape along the runway, forming a positive visual relationship between the Site and the surrounding Green Infrastructure assets.

A number of isolated fragments of public rights of way (PROW) exist within the immediate setting of the airfield, however, there are no direct PROW connections with the Site.

The Site's topography is predominantly flat, characteristic of the local landscape. This has played a vital role in determining drainage, flood attenuation and SuDS within the new development. Although widely flat, the Site does have a central high point and falls away to the east and west, providing minor level changes to assist with drainage.

Development of the previously fenced off airfield provides an opportunity to open up access to these GI assets for the enjoyment of both existing and new communities. The established landscape and ecology creates a rich habitat mosaic that provides an opportunity for a high quality and bespoke setting for a new development.



	Site boundary	Arable land	Alignment of former causeway		Great Crested Newt pond
	Built form Low value grassland	Woodland blocks	 Causeway still evident on the ground	•	Listed building
	Moderate value grassland	 Reptile habitat	 Public right of way		Listed Structure
_	High Value grassland	 Scheduled monument	 Historic field pattern	*	Denny/Waterbeach Abbey

BIODIVERSITY STRATEGY

The Biodiversity Strategy has sought to ensure a net gain in biodiversity as the site is developed in phases over an extended period of time. This is achieved by adoption of a series of strategic and design principles to be applied to each phase of the development. These will, alongside management principles and regular monitoring, ensure the long-term success of the habitat enhancement and creation measures.

The Biodiversity Strategy focuses on the retention of key existing habitat mosaic areas, identified as Biodiversity Priority Areas in the baseline, which form the basis of three north-south wildlife corridors: western bund and Car Dyke, comprising grasslands and linear watercourse ecosystems; open water and wetlands, lake and runway, comprising open water, grassland and scrub ecosystems; and former golf course comprising wetland ecosystems.

These north-south corridors are linked along the northern extent of the site by an east-west wildlife corridor forming part of the northern buffer, comprising grassland and parkland habitats. A finer grain level of biodiversity connectivity is provided by a network of green links, connecting internal stepping stones such as woodland ecosystems, productive landscapes, hedgerows, wildlife friendly amenity space and school playing fields, to the strategic wildlife corridors. The diagram to the right illustrates the proposed interconnected habitat mosaic across the site, as part of the Biodiversity Strategy.

The principle of dark corridors for ecological benefit will apply to the east-west wildlife corridor along the northern extent and dark zones associated with the other Biodiversity Priority Areas, a key area being the lake.

Beyond the site, wildlife corridors connect with surrounding arable land to the north and east in the short term. In the long term, opportunities exist to connect with future wildlife corridors associated with Bannold Drove to the east and Denny Abbey to the north. In addition, proposed enhancements to the ecological value of Car Dyke and the creation of wetland ecosystems in the north west extent of the site provide opportunities for connectivity with existing water bodies in Cambridge Research Park.

The strategy has been developed to positively contribute to local, regional and national environmental policy, following the 'Avoid, Mitigate, Compensate' hierarchy protocol. It is built upon baseline data gathered since 2015. The implementation of the Biodiversity Strategy at each key phase will be based on updated surveys completed as deemed appropriate and necessary to inform each key phase.



Site boundary
 Retained grassland
 Woodland blocks
 Waterbodies and ditches
 Proposed SuDS ponds
 Proposed grassland habitat



Area 1: Former golf course and snake pit (Winfold Common); wetland ecosystem

Area 2: Lake and runway; open water, grassland and scrub ecosystem

Area 3: Western bund and Car Dyke; linear water feature, open water, wetlands and grassland ecosystem

Area 4: Northern buffer; grassland and parkland trees ecosystem with open water wetland

BIODIVERSITY PRIORITY AREAS

The Biodiversity Priority Areas seek to retain, enhance and create habitats to achieve a sustainable, interconnected mosaic of habitats both across the site and within the wider countryside. These areas are the backbone to the Biodiversity Strategy and have been fundamental in structuring the Green Infrastructure framework which in turn informs the masterplan.

The proposals will provide a minimum of 60 hectares of interconnected multifunctional habitat mosaic linking grasslands, woodlands, wetlands and water, to form a biodiversity rich landscape for wildlife and enjoyment by new and existing communities, details of which are summarised below.

Biodiversity Priority Area 1: Former golf course and Snake Pit (Winfold Common);

- Minimum of 10ha of high quality, diverse habitat mosaic will be created, through retention and enhancement. Emphasis will be on quality and supporting local BAP habitats, such as wetlands, reflecting the Fen edge character.
- Focus will be on terrestrial and aquatic habitats for Great Crested Newts (GCN).
- Bats in particular, but also reptiles, birds and invertebrates, will also benefit from a high-quality terrestrial/aquatic mosaic of habitats.
- The Snake Pit will be enhanced to increase the carrying capacity of Winfold Common to support additional Great Crested Newts translocated from the centre of the site.
 Without being translocated, these newts could become an isolated population.
- Potential disturbance by use from people will be managed through path creation and educational trails/interpretation boards.

Biodiversity Priority Area 2: Lake & runway parklands

- Minimum 18ha of existing open water, woodland islands, wet woodland and grassland mosaic will be retained and enhanced with the higher value runway grasslands being used as focal points to ensure continuity of local genetic provenance.
- The carrying capacity for the existing wildlife will be enhanced through additional planting and appropriate management.
- Bats will be the key beneficiaries from this complex habitat mosaic but birds, reptiles and invertebrates will also reap the benefits.
- Areas of the lakeside will be managed solely for wildlife and the public will be actively discouraged from such areas.
- Existing high value grassland alongside the former runway will be retained so it will continue to support reptiles and invertebrates in particular, but also birds and bats.
- The existing grassland habitat will be enhanced through

management and, where necessary, measures will be put in place to control public use such as raised boardwalks or 'blue fences' i.e. wet ditch boundaries.

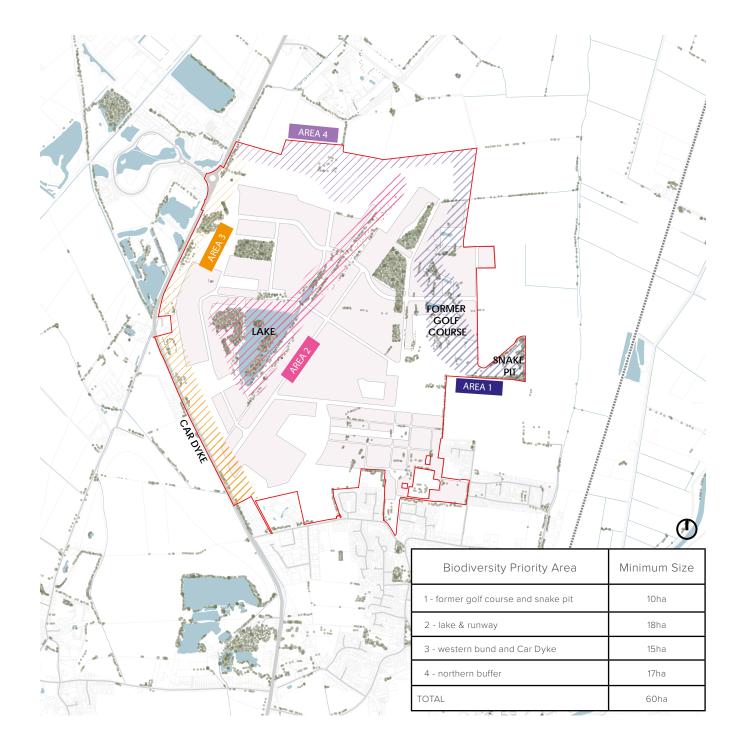
 The proximity of grassland to the lakeside will improve connectivity by offering an interconnected habitat mosaic.

Biodiversity Priority Area 3: Western bund and Car Dyke

- Minimum of 15ha of species rich grassland, marginal habitats along Car Dyke's edges and clusters of native tree planting, both existing and proposed.
- The enhancement and creation of high quality grassland mosaics along the dyke will benefit species associated within the area, such as reptiles, invertebrates and bats.
- The unshaded location in part, with a south-west or southeast aspect will offer good conditions for a sustainable reptile community.
- Management and enhancement of the dyke will benefit other species that may migrate into or pass through the area, such as otter and water vole.
- An extensive area of wetland creation at the north extent will introduce a new habitat mosaic here
- With the A10 forming the western barrier, this area will naturally be fairly secluded from human disturbance and will offer a wildlife focused corridor.
- Public use will be managed through creation of dedicated footpaths.
- The corridor will connect with the northern buffer providing complementary habitats and creating an extensive seminatural corridor linking into the wider landscape.

Biodiversity Priority Area 4: Northern buffer

- Minimum 17ha mosaic of high quality grassland and wetland habitats connecting to Winfold Common.
- This area is largely habitat creation, converting the existing arable fields to a mosaic of mostly grasslands and parklands with peripheral wetland areas.
- Swathes of grassland will complement the habitats proposed within Winfold Common, while areas of wetland will provide an additional link between the two Biodiversity Priority Areas.
- Species to benefit from this large area of high quality grassland include reptiles, invertebrates, bats and birds.
 With appropriate additional seeding, such as rapeseed and linseed, resources will be also be available for farmland birds.
- Grassland focused habitats will also support the objectives of local Biodiversity Action Plans (BAP) and complement the adjacent farmland habitats to the north.
- Public access will be discouraged over large areas at sensitive times of year, such as the ground nesting bird season.



Site boundary

Woodland blocks

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Area 1: Former golf course and snake pit (Winfold Common); wetland ecosystem

Area 2: Lake and runway; open water, grassland and scrub ecosystem

///// Area 3: Western bund and Car Dyke; linear water feature, open water, wetlands and grassland ecosystem

Area 4: Northern buffer; grassland, parkland trees and wetland ecosystems

OPPORTUNITIES SUMMARY

A. BIODIVERSITY

- Opportunity to contribute and reflect the strategic nature conservation designations and biodiversity initiatives such as Wicken Fen Vision.
- Opportunity to retain, restore and replenish existing ecology
 habitats for resident and wider wildlife populations
- Link fragmented biodiversity assets by creating an interconnected habitat mosaic focussing around grassland, woodlands, wetlands and water habitats
- Green corridors that provide rich habitat networks for a variety of wildlife species, both already present on site and from surrounding areas

B. CLIMATE CHANGE

- Address risk of flooding further downstream through tree planting, grassland and wetland creation which will help control storm water surge
- Integration of a SuDS (Sustainable Drainage Systems) network to provide local flood alleviation downstream

C. HERITAGE

- Reinstate historic links between Waterbeach village and Denny Abbey
- Reference more recent military heritage to form character and sense of place
- Opportunity to combine heritage assets and biodiversity through creation of runway parklands

D. LANDSCAPE

- Retain and enhance existing woodland blocks
- Enhance vistas of surrounding countryside and heritage assets
- Opportunity to positively address the setting of Denny Abbey

E. GREEN INFRASTRUCTURE GATEWAYS

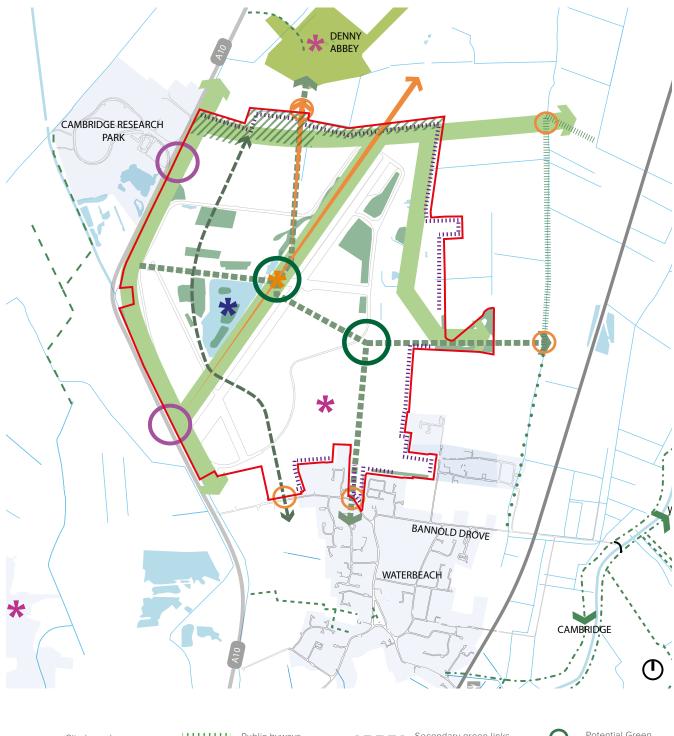
- Provide a gateway to Denny Abbey, Wicken Fen, Anglesey Abbey and the wider Fen's
- Opportunity to establish the Proposed Development as a Green Infrastructure destination in its own right

F. PUBLICLY ACCESSIBLE OPEN SPACE

- Create new accessible greenspaces to address current deficits
- Improve sustainable transport links between the Proposed
 Development and the surrounding area

G. RIGHTS OF WAY

- Opportunity to promote managed access between the
 Proposed Development, Wicken Fen and Anglesey Abbey
- Provide a network of connected public rights of way throughout the Proposed Development and connecting to the surrounding countryside and Cambridge city centre.









CONSULTATION

A continuous and comprehensive process of consultation and engagement informed and underpinned preparation of the outline proposals.

Urban&Civic and their consultant team engaged with the local community of Waterbeach and the surrounding area, relevant representatives of the Local Authority, Cambridgeshire County Council and other statutory consultees and technical stakeholders.

The process of consultation and engagement presented a variety of opportunities and has forged valuable relationships between the client team and the local community. It also improved understanding of the Site, its context and evidence base.

The key elements of engagement undertaken were:

- Introductory visits and tours
- Ongoing officer engagement
- Individual technical meetings
- Open Days
- Thematic workshops
- Drop-in sessions
- Presentation and briefings
- Parish Council meetings
- Public exhibitions
- Newsletters
- Dedicated website

The main consultation events with the local community and stakeholders are described in more detail in the following pages and the key feedback and design responses are summarised on the opposite page.







KEY FEEDBACK

Transport

- Concern about the impact of the development on an already overloaded transport network (trains and roads);
- Concern about increased traffic on the road leading to Waterbeach station and about the parking in that area.
- Landscape and green infrastructure
- Welcoming the commitment to protect and enhance the existing landscape and habitats, including the lake, woodland and rich grassland areas, and celebrating the fen edge.

Heritage

- Positive feedback on the proposals to reconnect the village with Denny Abbey;
- Strengthening of the Causeway as a key organising structure in the proposal, providing pedestrian and cycle access from the village, through the heart of the site, to Denny Abbey.

Community infrastructure

- The lack of community infrastructure in the village including limited growth capacity at the existing GP practice, the limited capacity at the primary school and the demand for better indoor sports facilities and community meeting spaces;
- Commitment to early investment in facilities such as primary and secondary schools, health care, sports facilities and other services, accessible to all local residents (existing and new).

Impact on village character

- The need to ensure the new development protects and enhances the character of the existing village;
- Mainly positive reaction to the opportunity to reconnect Waterbeach residents to the airfield and barracks site, creating links between neighbouring communities.

Types of homes and types of residents

• The need for affordable housing.

Business and employment

• The consultation process showed that there is a local preference for the development of the Site to provide the opportunity for small scale employment space suitable for small and medium-sized enterprises, and for start-up businesses.

Flooding and Drainage

 Through the consultation process it has been clear that the local community are seeking reassurance that issues of flood risk will be given necessary consideration in the Application proposals and technical supporting studies. The consultation process also showed a preference for Sustainable Drainage Systems (SuDS) to be incorporated into the landscape.

DESIGN RESPONSE

Transport

- Ensuring phased investment in key infrastructure in road, rail, bus and cycle facilities – to ensure the capacity is in place as new homes are delivered;
- Ensuring the transport strategy prevents traffic running through the village, but enables local residents to access facilities on the new development.

Landscape and green infrastructure

 The principle to protect and enhance the existing landscape and habitats continued to be central to the design proposals.

Heritage

- Retention of the memorial garden within the proposed Runway Parklands and retention of the grid in the barracks area;
- Commitment to exploring ways of commemorating the military heritage as detailed proposals are developed further.

Community infrastructure

- Position of the secondary school at a key location with easy access for residents in the new development as well as those living in Waterbeach village;
- Opening up of sports and community facilities within the Barracks area.

Impact on village character

- Restricted vehicular access through the barracks and from the site to the village whilst providing pedestrian and cycle access;
- Consideration of village shops and services as part of the mix of commercial activity across the proposals, to maximise shared economic benefit.

Types of homes and types of residents

• Provide a wide range of housing types and sizes.

Business and employment

 The Site benefits from its close proximity to the existing Cambridge Research Park. Connections and access to CRP for walking and cycling have been maximised within the OPA proposals.

Flooding and Drainage

 SuDS will be an important part of the water management approach supporting the development of the site. The provision of SuDS presents the opportunity to support the character of the development and add amenity and richness particularly to the public realm and open spaces. Consideration has been given to the location and form of SuDS in the masterplanning process.

CONSULTATION

OPEN DAYS

Open day events were held in October 2015 in order to invite comments from local stakeholders on key issues relating to the future development of the Waterbeach Barracks and Airfield site and to understand the aspirations and principles of importance of the local community. These events were organised as an opportunity for the local people to visit the site, undertake a guided bus tour, view a range of consultation material and speak to representatives of Urban&Civic (U&C) and their consultant team. The open days were an important element of U&C's involvement and engagement strategy. Outcomes from the events have been used to inform the preparation of the outline proposals and informed the identification of priorities for working groups and discussions which have fed into the planning proposals. U&C have also offered the full feedback and subsequent discussions to assist the Neighbourhood Plan Working Group and published a summary report.

THEMATIC WORKSHOPS

The thematic workshops were organised and held by U&C in the early months of 2016. These were aimed at informing the preparation of a Development Framework Documents (DFD) for the Waterbeach Barracks and Airfield and the wider area of land identified within Policy SS/5 'Waterbeach New Town' within the emerging Local Plan for South Cambridgeshire.

The evidence base and information generated for the DFD including the outcomes of the consultation activities undertaken as part of this process was used to inform the outline proposals for the Waterbeach Barracks and Airfield site. The sessions were technical workshop sessions and included expertise from Urban&Civic's design team, statutory partners and special interest groups. Members of the public were also invited to sign up to join these discussions at the open day. The workshops comprised two sessions per selected theme. One session was dedicated to collecting input and ideas from the community and the other to speaking to the officers and stakeholders. Initial focus was on the nature and character of the development, and later focus on specific detailed themes such as connectivity & transport; utilities & sustainability; green infrastructure; design quality and building a community.

DROP-IN SESSIONS

In April 2016, U&C organised two days of 'open house' drop-in and discussion sessions with displays, maps, and draft material for the DFD. Consultation team members were available to feedback and widen the discussions with members of the public and local stakeholders held during the thematic workshops between January and March 2016.

PUBLIC EXHIBITIONS

A three day consultation event was held at the Sports Hall in the former Barracks in September 2016. This was an opportunity to present more detailed ideas for the Site, for the community and other stakeholders to meet with U&C and its consultant team and for U&C to pose questions to stakeholders. The exhibition was open to the general public and was an opportunity for U&C to share its vision for a sustainable new community. The proposals presented at the consultation event had developed from the open day events and workshops undertaken in early 2016.

The exhibition was attended by senior representatives of U&C and its project team. U&C were supported at the exhibition by its consultant team who engaged with the public presenting the exhibition information and responding to questions. Attendees were invited to provide feedback on topics during the exhibition directly to U&C and their consultant team or leave comments through feedback forms.

DEDICATED WEBSITE AND ONGOING ENGAGEMENT ACTIVITY

U&C pursued an approach to targeted engagement to reach out to a range of harder to reach groups and people who may not otherwise be engaged with the consultation process. This included targeted engagement with Waterbeach Community Primary School via a school project and engagement with local clubs. U&C also ensure that local members are regularly engaged. This includes a bi-monthly discussion with County Council and District Council members. Constant updates and other information is also available through a dedicated website. This provides newsletters and the opportunity to contact U&C directly.



ENGAGEMENT TIMELINE

→ JANUARY 2015

- Project Start
- SCDC Meeting regarding the Site
- Waterbeach Transport Meeting at Shire Hall

→ SEPTEMBER 2015

- Waterbeach Parish Council Engagement
 Strategy
- Community Newsletter

→ OCTOBER 2015

- Planning Officers' meeting
- School visit to Airfield & Barracks for history
- Barracks and Airfield Open Days & building projects

→ NOVEMBER 2015

- Planning Officers' meeting
- Meeting with local GP surgery
- Promoters' meeting
- Meeting with CCC Highways

→ DECEMBER 2015

- Education meeting
- Residents Open Day
- Promoters' meeting
- Waterbeach Winter Newsletter issued

= 2016 =



- 2015 -





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= 2017 =

→ JANUARY 2016

- Highways England meeting
- Natural England meeting
- Ecology site visit

→ FEBRUARY 2016

- Education meeting
- Promoters' meeting
- Heritage Workshop: Officers.

→ APRIL 2016

- DFD Officer Review workshop
- Parish briefing
- Community Drop-in session

→ JUNE 2016

- Cambridgeshire Quality Panel
- Parish Briefing
- Promoters' meeting
- Planning and Design Officers' meeting

→ AUGUST 2016

- Waterbeach Cycling Meeting
- Residents Open Day
- Promoters' meeting
- Waterbeach Highway Design

→ SEPTEMBER 2016

- Public Transport Meeting
- Waterbeach Travel Plan
- Public Engagement Event

→ JANUARY 2018

- KP1 SCDC Inception
- Strategic Movement Principles

→ FEBRUARY 2018

- Design Coding Inception
- Landscape, Open Space and Ecology Pre-app

→ MARCH 2018

Design Team Meeting with SCDC

→ MAY 2018

- Reg Plan and Design Code Pre-app
- Transport and Highway Design Pre-app

→ JUNE 2018

- Cambridgeshire Quality Panel
- Overarching Master Planning Approach

→ JULY 2018

- Design Code Pre-app
- Grey Infrastructure Pre-app

→ SEPTEMBER 2018

- Design Code Pre-app
- Detailed Highways Design Pre-app
- Detailed Landscape Design Pre-app

= 2018 =











2020 -

→ MARCH 2019

- Highways Pre-app
- Highways & Cycling with CCC

→ JUNE 2019

- Highways Pre-app
- Footpaths & Cycle Infrastructure with CCC
- CCC Transport
- Heritage Stakeholders

→ OCTOBER 2019

- SCDC Officers KP1 Briefing
- Community Forum
- Community Consultation
- Highways Review with CCC
- Parish Council Briefing

→ NOVEMBER 2019

- Education with CCC Primary School
- Heritage Stakeholders
- PRoW and Equestrian Groups
- SCDC KP1 Design Code Briefing
- Foul Drainage Strategy Review
- Member Briefing

➔ JANUARY 2020

- KP1 Design Code Testing
- Design Code Workshop

→ JUNE 2020

- Virtual Committee
- Permission to Grant

We have a strong, coherent and carefully considered vision for Waterbeach, founded on thorough initial research and underpinned by the collective experience of the team.



LANDSCAPE VISION

Underpinning the nature led vision for Waterbeach is the notion of 'taking down the fences,' allowing both nature and communities back in.

BMD identified five key landscape design principles that helped to inform and shape the evolution of the Waterbeach masterplan:

- Conserve and enhance inherited natural assets
- Integrate a 'wild infrastructure' mosaic for nature and wildlife to thrive
- Embrace the site's location as a gateway to the fens
- Create a new 'healthy infrastructure' network to ensure uninterrupted access to nature and reduced car dependency
- Restore long-lost historic links between Denny Abbey and neighbouring Waterbeach Village

At the heart of the design, several new distinctive parklands will serve as major destinations in their own right. Runway Parklands will be the green heart of the scheme forming the defining landscape characteristic of the Proposed Development's masterplan vision. Themed around the former runway and associated species-rich grasslands, the parklands will form a key Green Infrastructure node, a meeting point for residents and visitors. The alignment of the Runway Parklands will enable the historic link between Waterbeach Village and Denny Abbey to be reinstated and, more strategically, it will form an attractive route for walkers and cyclists traveling towards the Fen Rivers Way and Wicken Fen beyond.

Northern Parklands will form the transition zone between the Proposed Development and the historic setting of Denny Abbey. Northern Parklands will have a strong rural country park character reflecting the intimate rural setting around Denny Abbey and will draw on the Fen landscape influence from the east. The parklands will comprise a mosaic of habitats including grasslands, trees and wetland features. The public footpath network will be enhanced and people will be invited to visit Denny Abbey improving understanding and interpretation of the Site and its setting.

Winfold Common will form an ecology focused green space within the Proposed Development and will have a more informal, naturalistic character. The common will comprise a mosaic of ponds, marginal vegetation, wetland features and swathes of trees, creating a high quality amphibian habitat. Appropriately managed access will allow public enjoyment whilst minimising disturbance to wildlife habitats.



GREEN INFRASTRUCTURE FRAMEWORK

The Green Infrastructure Framework comprises the following Natural England typologies:

- Natural and semi natural green space
- Green corridors
- Parks and gardens
- Outdoor sports facilities
- Amenity greenspace
- Productive landscape
- Civic spaces
- Built form vegetation

Natural and semi - natural green spaces



Green corridors



Tree lined roads corridors with integrated SUDS, cycleways and footpaths

Parks and gardens

Northern Park
 Runway Parklands
 North
 South
 Winfold Common

Outdoor sports facilities



Playing fields (football, cricket, tennis)



Amenity greenspace

Linear Parks & Green Links

Informal amenity space

Private gardens

Productive Landscape

Community Orchards

Allotments

Civic Spaces

A: Market Square B: Boardwalk



ILLUSTRATIVE MASTERPLAN

The new development at Waterbeach Barracks and Airfield will provide new places to live. But more than just new homes, it includes the foundations of community and civic life, reflecting the needs of modern society today and for future generations.

It will support its existing and growing population with a range of amenities, facilities and spaces. It will be underpinned with technical and social infrastructures that meet daily needs and which support a healthy, robust and sustainable community.





CGI view of Waterbeach Masterplan

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WOODLAND BLOCKS

These are important Green Infrastructure assets which help to frame and define various areas within the Proposed Development and provide a sense of place. These woodland blocks have a significant role in creating an attractive environment to live, rest, play and work, but also provide a functional and useful resource throughout the Proposed Development. Existing trees, groups and woodland blocks will be retained where their condition and location can make a positive contribution. Their retention also preserves their landmark value within the wider setting.

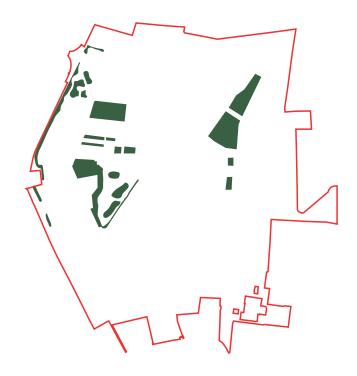
The Green Infrastructure network will connect these existing woodland blocks where possible, providing a green route through the heart of the Site: these will also link up with proposed parkland areas.

By using the woodland blocks within the Proposed Development, we are able to provide a mature setting from day one. This translates to a scheme that already has fully developed landscape features and doesn't rely on time for these elements to make an impact. The Proposed Development looks to make the woodland blocks destination points, animating these spaces with play activities, SuDS provision and key pedestrian movement routes through them. These 'green rooms' enclosed by tree belts will be well surveilled by surrounding residential dwellings orientated to front onto them.

A series of play and recreation provisions will also be accommodated within the woodland blocks, such as LAPs, LEAPs and NEAPs, as well as community games areas and outdoor classrooms, which will create a different sense of character within each woodland block.

Along with the social benefits that the woodlands will provide, there are also enhanced ecological benefits. By preserving the woodland blocks, we are able to manage them appropriately to ensure their longevity and enhancing existing habitats with the introduction of glades and SuDS, to increase biodiversity and help attract a variety of wildlife into the Proposed Development.

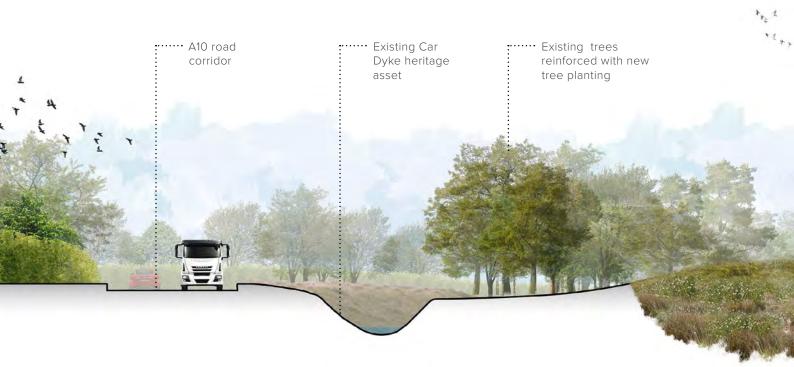


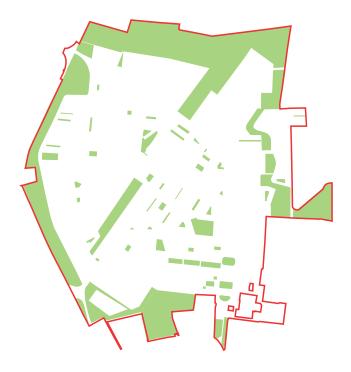




GRASSLANDS

The Green Infrastructure Framework has the potential to deliver approximately 82 hectares of multifunctional grassland that can be managed for both open space and biodiversity benefits, through a combination of retention and creation. The proposals will promote the protection and enhancement of existing species-rich grassland along the runway strip and the western bund. The western bund forms a wildlife corridor to the perimeter of the Proposed Development whilst the runway grassland will be integrated with, and will inform the character of, the Runway Parklands. A significant area of grassland creation will be offered within the north of the site as part of Northern Park and within the historic parkland setting to Denny Abbey.







WATER

The key water feature on site is the central lake which is a destination point with an established setting: providing an important mosaic of habitats and biodiversity value, alongside the ponds within the former golf course. The lake also has the capacity to contribute to the Sustainable Drainage Systems (SuDS)

The proposed SuDS are part of a site wide natural system with water features that form an overall network of water. These water features are designed to collect the excess surface water runoff that will be produced from implementing built form and hardstanding areas. These will then be temporarily stored, naturally treated and released into existing watercourses. Care will be taken to ensure that runoff is held for the correct length of time so as to avoid downstream flooding.

The various components that make up the Proposed Development's SuDS include;

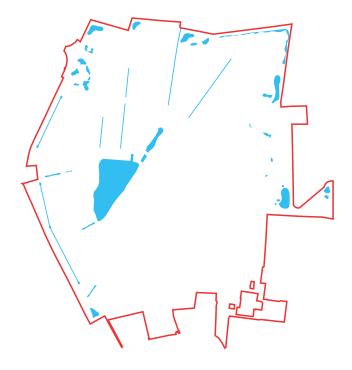
- Wetlands areas of wetland vegetation that improve pollutant removal, stormwater attenuation and enhance the local wildlife habitats. They form a significant contribution to the Proposed Development's SuDS and are discussed in more detail on the following pages.
- Swales shallow channels designed to store and convey runoff and remove pollutants. They can be used to convey water as part of the treatment process. A swale is broad and shallow, typically with a 1:3 slope, and covered by grass and vegetation that is able to thrive in both wet and dry conditions.

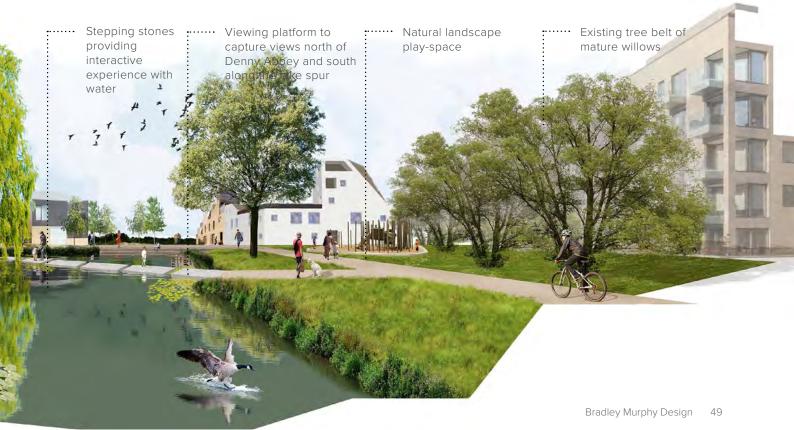
• Ditches - characteristic of the Fens landscape, are also used for the conveyance of water, typically used alongside roads or fields, and can be used as part of a SuDS network. Ditches tend to be steeper that swales, often 1:1 sides. They are usually grass covered and often planted with scrub plants. Unlike swales, ditches tend to permanently hold water.

Finer grain SuDS components integrated within the Proposed Development include;

- Filter Drains a trench filled with permeable material into which runoff is collected from the edge of the paved foot/cycleway, then stored and conveyed. These will be used primarily along movement corridors.
- Pervious Pavements hard surfacing that allows surface water to infiltrate into an underlying filtration layer before discharging into the attenuation network. This application may potentially be used within tightly developed areas such as local centres or residential areas.
- Bio-Retention Areas shallow depressed landscaped areas that are underdrained and rely on enhanced vegetation and filtration to remove pollution and reduce run-off volumes. The soft and hard landscape design of the bio-retention area will be bespoke to enhance the individual character areas of the Proposed Development.
- Rainwater Harvesting water butts can capture rainwater from the roof for garden irrigation, vehicle washing and other non-potable applications.







WETLANDS

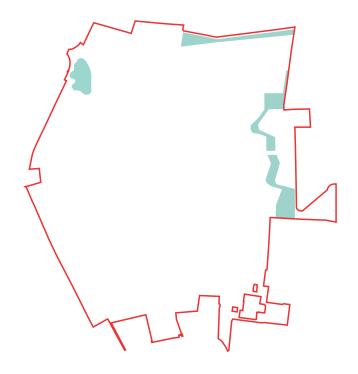
Wetlands provide both stormwater attenuation and treatment. They comprise shallow ponds and marshy areas, covered almost entirely in aquatic vegetation. Wetlands are used to retain water so as sediments may settle, contaminants are removed.

Areas of wetland within the proposed Green Infrastructure Framework are strategically located at the lower areas of the Proposed Development and tie into the drainage strategy and existing outfalls.

This Green Infrastructure typology also provides significant biodiversity and ecological benefits within a mosaic of habitats including wet grasslands, marginal vegetation, reeds and waterbodies. This resilient typology is well suited to the Proposed Development's flat, low level topography and high water table, which is reflective of the fen landscape to the east.

A significant area of wetland is proposed running north south along the Proposed Development's eastern boundary connecting up the existing network of ponds present in the former golf course, which are home to populations of Great Crested Newts. Habitat creation here is beneficial for retention and protection of this protected species. This semi natural greenspace acts as a green corridor that integrates with the Proposed Development, forming an environment for both people and wildlife to enjoy.





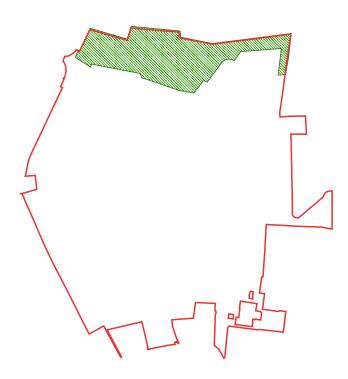


PARKS & PUBLIC GARDENS

NORTHERN PARK

Northern Park will be located along the northern periphery of the Proposed Development, directly adjacent to Denny Abbey further to the north. The park will play an important role in respecting the setting around Denny Abbey by providing an appropriate historic parkland setting to this heritage asset. The open expansive nature of the park will also allow for the enjoyment of panoramic views across the flat, expansive fenland landscape surrounding the Site.

The park also forms a significant amount of habitat creation and enhancement of wildlife habitats. The grassland will be enclosed by large individual parkland trees positioned to reference historic tree planting, creating a historic parkland character. The eastern and western extents of the park will be characterised by areas of wet meadows, wetlands, reed beds and water bodies, offering stormwater attenuation and a resilient biodiverse habitat of ecological value. In combination with outdoors sports provision in the eastern corner, Northern Park is a multifunctional park offering a variety of uses and characters. The park is served by a network of footpaths and cycleways including the Denny Abbey causeway, linking Denny Abbey to Waterbeach village. The Site's heritage is also acknowledged with the park embracing the listed Soldiers Hill, offering a lookout point to capture long distance views east across the Fen landscape.





PARKS & PUBLIC GARDENS

RUNWAY PARK

This is one of the parkland typologies that make up the 'Runway Parkland'. Its focus is around ecology and the retention and protection of existing species rich grassland that is located there. Linear in nature, the park will also preserve the long distance views out towards the Fens and will connect with Northern Park to the north of the Proposed Development which runs east to west.

The park will be characterised by the large expanse of natural species rich grassland, its linear form structured by the former runway, and criss-crossed with boardwalks. The grassland area will be flanked by a generous community orchard, adding visual interest and providing informal amenity space and outdoor sport provision. In keeping with the rural quality, cattle grazing is a potential method of natural maintenance for the grassland, offering an interesting feature and drawing the countryside into the Proposed Development. To achieve an appropriate balance between protecting the higher value grassland and community use, public access will be controlled through a number of subtle devices. Firstly, the grassland will be flanked by two 'blue fences'; an existing ditch on the west and a proposed ditch to the east. These ditches will control access to dedicated entrances points as well as contribute to the SuDS strategy, reflecting the use of wet ditches as natural boundaries in the fenland landscape.

Secondly, echoing techniques used at Wicken Fen, the use of slightly elevated boardwalks encourage users to stay on the footpaths rather than disturbing the grassland. The use of cattle grazing as a land management method will also naturally encourage people to pass through and enjoy the experience, with dogs kept on leads, rather than use the grassland for informal recreation. Estate railings to contain the cattle will also reinforce the boundary function of the wet fences.





PARKS & PUBLIC GARDENS

WINFOLD COMMON

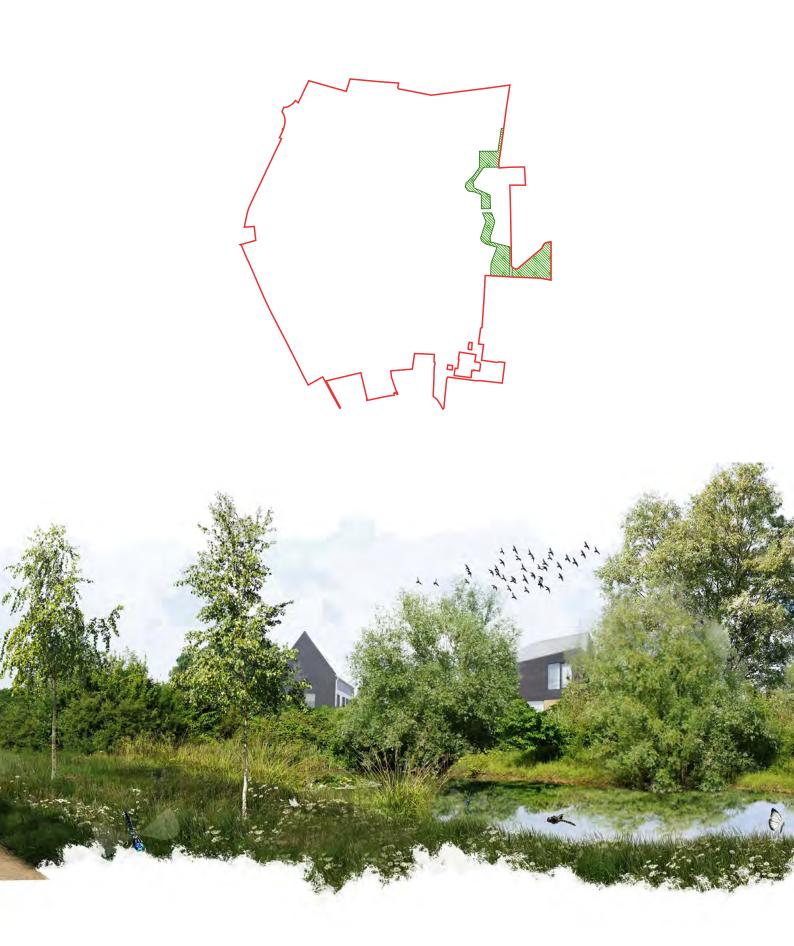
Winfold Common runs through the former airfield golf course, bounding the eastern edge of the Site.

The common, which will also become the Great Crested Newt Corridor, has been designed to protect and conserve the endangered Great Crested Newts that currently reside in a series of ponds within the former golf course. As well as these, smaller populations of newts have been found elsewhere in the Site and it is proposed that these will be relocated into Winfold Common.

The former golf course is made up of established grassland meadow, habitat rich ponds and a variety of mature tree species. These features will inform the character of the park, helping to provide a mature, well established setting that is rich in biodiversity. It will also add a informal recreation element in addition to its function as a wildlife corridor. Winfold Common will be publicly accessible and provide a unique space, connecting to the Proposed Development's other Green Infrastructure assets. Footpaths and cycleways will meander through the common, providing connections to surrounding residential areas and wider cycle network.

The space runs north to south along the eastern boundary, acting as a green lung for the proposed neighbourhood. This will provide a strong landscape setting as well as a multifunctional green corridor between the north and south of the Proposed Development. A series of smaller east to west routes will punctuate the space, connecting to the surrounding residential parcels. The common will provide crossing points for ecological movement, enabling a variety of species to move freely between areas, away from the traffic flow.





OUTDOOR SPORTS FACILITIES

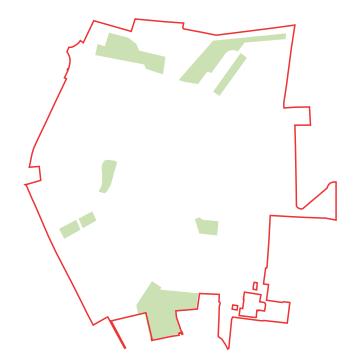
The Proposed Development's Green Infrastructure Framework proposes a range of facilities for a variety of sports, including sports pitches for rugby, football, cricket and an athletics track, which will be distributed throughout the Proposed Development to meet local provision standards of 1.6ha per 1000 population. Playing fields will be sensitively integrated into the public realm and where possible will also incorporate SuDS features, hedgerows and tree planting to complement adjacent land uses. Outdoor sport facilities within Northern Park will not have any flood lighting or associated structures to limit any visual impact on the setting to Denny Abbey.

The central lake creates a unique opportunity to provide water sports such as canoeing, rowing and pedalos to navigate around the three tree islands. This will be facilitated by the provision of a community boat house and slipway in partnership with a beach. A cricket pitch is proposed on the southern boundary, it offers a civic green gateway integrating the new and existing communities. Further sports facilities will be provided as part of the education land uses throughout the Proposed Development.

The Proposed Development also provides various other lighter format sports provision such as tennis, table tennis, bowls and petanque squares pepper-potted throughout, offering outdoor sport within walking distance of people's homes.

Pedestrian and cyclist network routes have been integrated within the Green Infrastructure Framework to provide strategic links to the Proposed Development's outdoor sports facilities. All outdoor sports facilities will be accessible by sustainable transport through green routes, reinforcing the focus of health and well-being. This transport network will provide walking routes and cycle links using the proposed green corridors, such as parks and semi-natural open spaces.







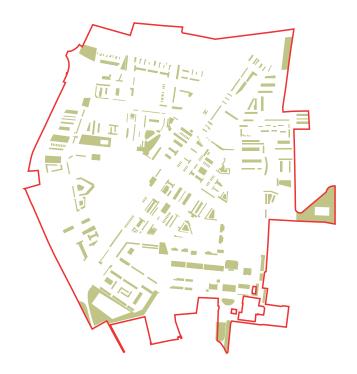
GREEN CORRIDORS

Amenity Green Space includes informal recreation spaces such as linear parks, pocket parks, greens and garden squares in and around housing areas, play areas and domestic gardens. These green spaces also contribute to the informal open space provision standards and provide doorstep green space for the local community.

LINEAR PARKS

These will provide multifunctional green corridors between destinations within the Proposed Development. They will be informal in character and less intensively managed than 'Parks and Gardens'. They are described as multifunctional because they can provide a variety of different uses, activities and functions, including linkages, play and recreation, food growing opportunities, surface water management, visual amenity, micro-climate control and creating a high quality living environment. There are a number of such areas proposed within the Green Infrastructure Framework.





 Pedestrian and cycleway recreational lakeside loop Runway grassland providing open expanse of amenity green space

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 Perimeter parkland trees, helping to obscure views into surrounding dwellings Parkland setting to onlooking dwellings

GREEN CORRIDORS

Green corridors are vital to the overall Green Infrastructure, ensuring all open spaces are strategically linked to one another. They provide movement routes for people and wildlife alike. These green corridors not only provide standalone linear parks, but also make up the streetscape through verges and street planting.

These corridors will provide attractive and practical links, encouraging walking and cycling as primary methods of transport around the Proposed Development. They will also provide informal recreational space with high quality habitats, enhancing their overall biodiversity and linking to the wider Green Infrastructure assets.

PRIMARY GREEN CORRIDORS

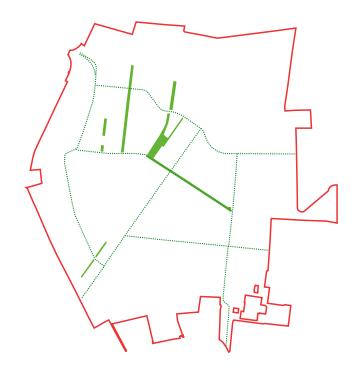
Denny Causeway is the core green corridor through the Proposed Development running through Northern Park, Denny Waters and the heart of the Proposed Development. This corridor connects primary green spaces in the north to smaller town parks in the heart of the Proposed Development. The routes focus on pedestrian and cyclist movement between neighbourhoods and primary green spaces, flanked by large specimen trees. Smaller green corridors run through individual neighbourhoods, again providing pedestrian and cyclist movement, but also providing features such as rain gardens and door step play.

ROADS VERGES AND STREET PLANTING

The road network is designed to thread through the Proposed Development; connecting different neighbourhoods with each other. There is opportunity to integrate additional landscape features. Road corridor landscaping increases the aesthetic appeal of the streetscape, providing habitat links and a strong sense of place.

All primary and secondary streets will incorporate tree planting, helping to mitigate vehicular pollution at source. Verges can be used for a variety of landscape treatments such as amenity planting that provides protection for pedestrians, as well as aesthetic interest to the streetscape, and SuDs that manage surface water run off at source and begin to filter out pollutants.







PRODUCTIVE LANDSCAPE

The Green Infrastructure Framework includes provision for the new community to grow and harvest their own food. This will be delivered in the form of allotments, community orchards and edible streets.

ALLOTMENTS

Allotments will be a key area of productive landscape for new and existing residents of Waterbeach. Allotment sites will provide parking, water outlets and toilet facilities. The allotments are aimed at maximising opportunities for new and existing residents of Waterbeach to produce their own food within close proximity to their homes.

COMMUNITY ORCHARDS

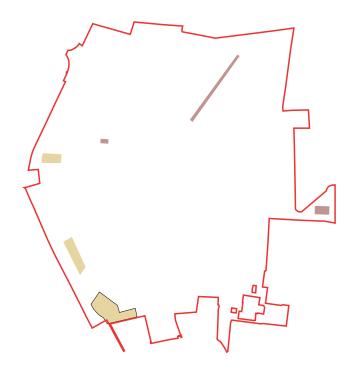
Community orchards will be implemented amongst residential areas and will be easily accessible. They will vary in size and will give residents the opportunity to play an active role in their community. The orchards will offer a range of fruits, vegetables and nuts which will provide food for residents and wildlife. They will be located within Eco Park, Winfold Common and located along the green corridors between blocks of development.

EDIBLE STREETS

Fruiting trees and hedgerows will be located at various points throughout the Proposed Development, offering an increase in biodiversity, community participation, foraging and food production. They also offer an aesthetic value to their location.











CIVIC SPACES

BOARDWALK

The boardwalk is a key civic space that benefits from a positive relationship with the lake and the established lakeside setting. The boardwalk will consist of a high quality promenade and decked walkway that provides a wide multifunctional movement corridor. Soft landscaping and informal seating will help to define the spaces, providing various breakout areas for the shop and cafe frontages.

Active frontages will support the high quality public realm, providing a concentration of leisure and lifestyle activities such as coffee shops, restaurants, health and fitness and leisurely water sport facilities.

Informal links between the boardwalk and the high street to the north open up vistas through to the lake and help to break up the built form edge through the use of specimen trees. Soft landscaping will line the lake edge to help soften and enhance the space as well as provide pockets of shade around the informal seating.

Interaction with water is promoted as a key principle of the boardwalk. Floating pontoons will extend out from the boardwalk, allowing users to further step out over the waters surface and providing recreational space away from the vibrant main walkway. These pontoons will fluctuate with the seasonal water levels providing and unhindered interaction with the lake.

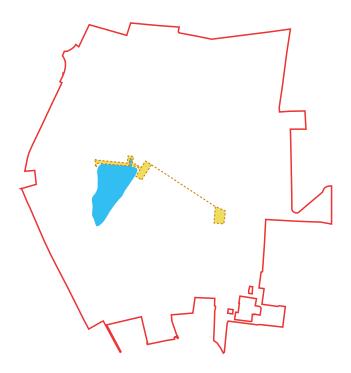
The creation of the interactive dock, comprising terrace seating and steps leading down to the waters edge, reinforces the principle of interaction with water. This will create a varied character along the boardwalk, with opportunity for additional active frontages and spill out space.

TOWN SQUARE

The town square will be set in a denser urban environment flanked on its western and southern borders by residential development, the secondary school on it's eastern border and the main connecting road to the north.

Much like the boardwalk, active frontages from the surrounding residential development will support the public realm, with opportunities for event space within the square such as weekly/seasonal markets or annual festivals.

Within the development parcels adjoining the square, there is further opportunity for ground floor commercial use with spill out space into the square. This will ensure that the space is used at varying times of day with its use not limited to daylight hours, thus ensuring the square remains safe and secure.





INTEGRATING PLAY

A combination of play spaces will be distributed throughout the proposed residential areas meeting and exceeding local provision standards. These will include formal equipped areas for play as well as more informal areas based on principles of natural play. Informal areas for natural play could potentially combine with some of the Site's heritage assets and be subject to alternative settings such as adventure play glades within the existing woodland blocks.

The innovative play strategy model at Waterbeach aims to set a new standard for play and activity in a new-build development. The underlying structure would involve weaving together practical, aesthetic and educative strands into an overall play provision that responds to people and place

1

Key phase **design coding** and planning requirements

2

Overlaying defined **themes** to help further guide decisions on specification and ensure targeted positive outcomes are achieved from the play provision. Each element could have one specific theme or be a combination

3

Understanding the **sense of place** for each element of Waterbeach play provision to define themes, which in turn inform the landscape design, materials, equipment, planting and overall character

4

Successful play built on sense of place, learning and enjoyment



Key Phase 1 extent

The Waterbeach Masterplan demonstrates that an exceptional, sustainable, innovative and distinctive place can be delivered within the parameters for which consent is sought.

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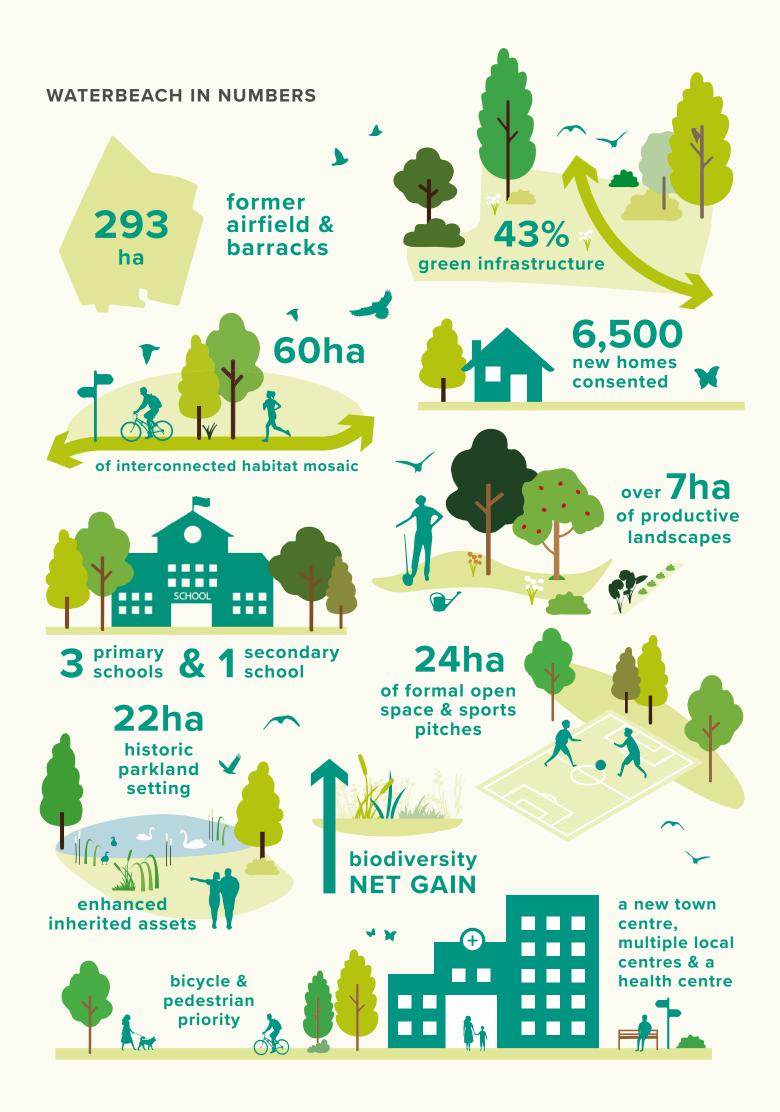
CONCLUSION

Waterbeach is the result of a collaborative best practice approach to masterplanning and urban design. Its nature-led vision, embracing and reflecting the surrounding landscape, has shaped the development of new community and civic life, creating an exceptional place to live.

The vision for the Proposed Development at the Former Airfield and Barracks has been underpinned by targets and initiatives set out in the Biodiversity Partnership for Cambridgeshire and Peterborough's 50 Year Wildlife Vision and the Cambridgeshire Green Infrastructure Strategy (2011).

This document demonstrates that the masterplan has taken account of baseline Green Infrastructure assets, responds to national, regional and local policy aspirations as well as sub-regional guidance and will deliver significant net gains in Green Infrastructure value, which will be achieved through:

- Safeguarding and enhancement of existing assets including woodlands, species-rich grasslands, lakeside mosaic and historic features.
- Creating a new connected multifunctional habitat mosaic linking grasslands, woodlands, wetlands and water, to form a biodiversity rich landscape for wildlife and enjoyment by new and existing communities.
- Championing a comprehensive internal network of people-focused movement routes for walking, cycling and running. This connectivity is a structuring principle to the Proposed Development, promoting sustainable mode of transport as well as healthy living and well being.
- Creating a high quality landscape setting to support sustainable and economic growth and attracting inward investment of jobs and people.
- Integrating a suite of SuDS applications to provide biodiversity, visual amenity and help alleviate flood risk off site and down stream.
- Urban cooling and carbon sequestration through urban tree planting.
- Promoting local food production with provision for community allotments and orchards.
- Celebrating the Proposed Development as a Green Infrastructure destination in its own right and as a gateway promoting local recreational destinations including Denny Abbey, Wicken Fen and Anglesey Abbey.





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