

BROADWATER GARDENS

Welwyn Garden City

Planning Application

December 2020

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BLOW DOWN



1.0

INTRODUCTION

1.1 The Applicant & the Team

1.2 Purpose of the Document

1.1 The Applicant & the Team

This Design and Access Statement has been prepared for HG Group, with input from across the project team to support the planning application for the site, Broadwater Gardens.

The Applicant:
HG Group

The project team comprises:

Alan Camp Architects
Architect
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hgh Consulting
Planning Consultant
www.hghconsulting.com

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Townscape and Heritage
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Bradley Murphy Design
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i-Transport
Transport Consultant
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Anstey Horne
Daylight and Sunlight
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EDC
MEP, Energy & Sustainability
www.edcengineers.com

Green Environmental Consultants
Ecology
www.greenecology.co.uk

Noise Solutions
Acoustic Consultant
www.noisesolutions.co.uk

Curtins
Flood Risk and Drainage
www.curtins.com

BB7
Fire Consultant
www.bbseven.com

Marengo Communications
Public Relations
www. marengocomms.com

Air Pollution Services
Air Quality
www.airpollutionservices.co.uk

BWP
Structural Engineer
www.bwp-eng.co.uk

David Clarke Chartered Landscape Architect and Consultant Arboriculturist Limited
Trees

Symbiotic Solutions
Ground Conditions
https://www.symbioticsolutions.co.uk

Geotechnical & Environmental Associates
Basement Impact
https://www.gea-ltd.co.uk

Kempton Carr Croft
Viability
https://www.kemptoncarr.co.uk


FV12 MNK

1.2 Purpose of the Document

This Design and Access Statement has been prepared to support the planning application for the site: Biopark, Broadwater Road, Welwyn Garden City, AL7 3AX.

The main body of the document is split into five sections:

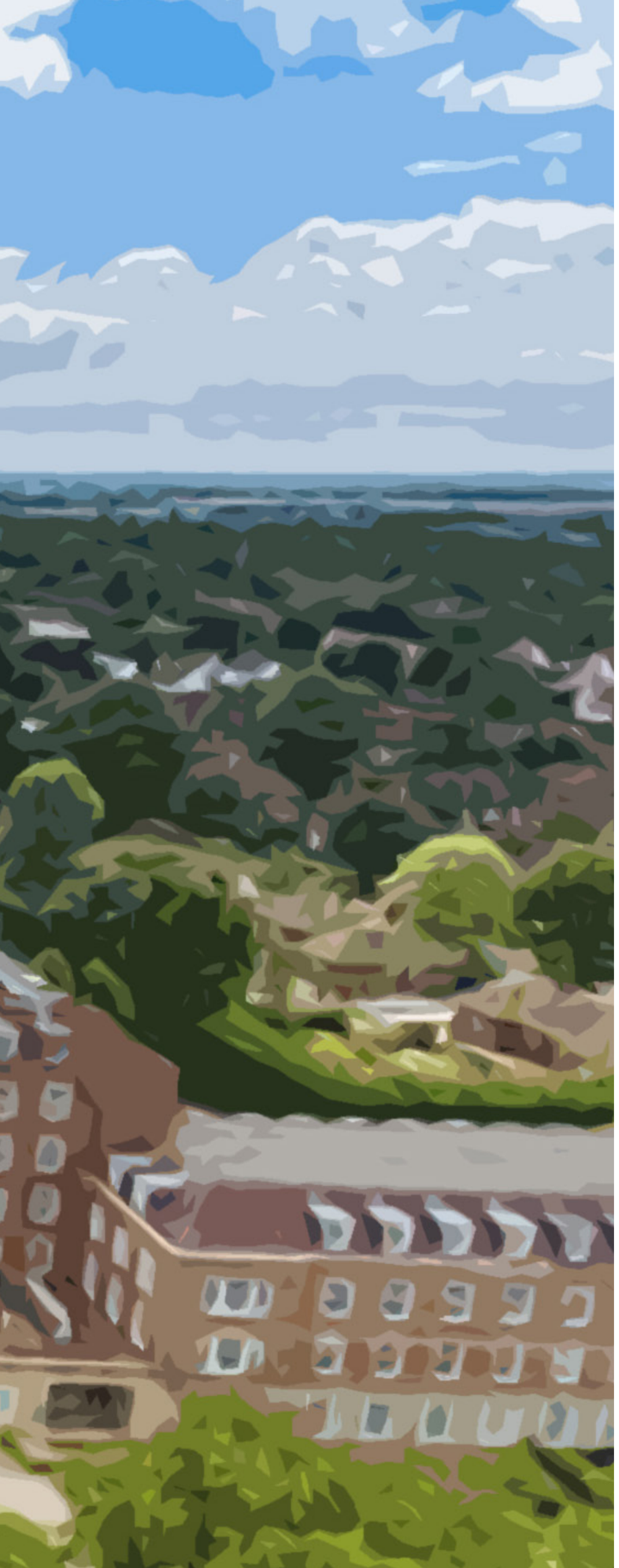
Section 2 identifies the existing site and talks about Garden City Principles and planning policy relevant to the site. This section also details the local emerging context and more specifically schemes which are currently being considered as planning applications.

Section 3 details the design process including the key meetings and consultations which have been held during the design development.

Section 4 describes the planning application scheme including use, layout, scale, massing, materials, landscaping, the commercial spaces and sustainability. It also contains a qualitative review of the housing in terms of National Space Standards, Part M and Secured by Design.

Section 5 goes into further details on the landscaping, the strategy and the plant types.





2.0

CONTEXT

2.1 The Site

2.2 Historical Context

2.3 Local Vernacular

2.4 Context Study

2.5 Planning Context

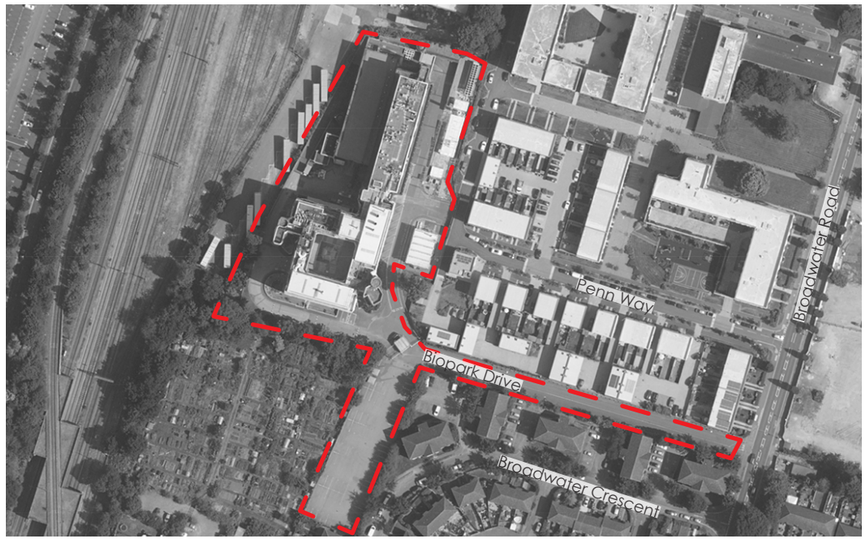
2.6 Emerging Development



^ Site Aerial View



^ Site Aerial View



^ Site Aerial View

Site Boundary



^ View 1: Looking North to Site

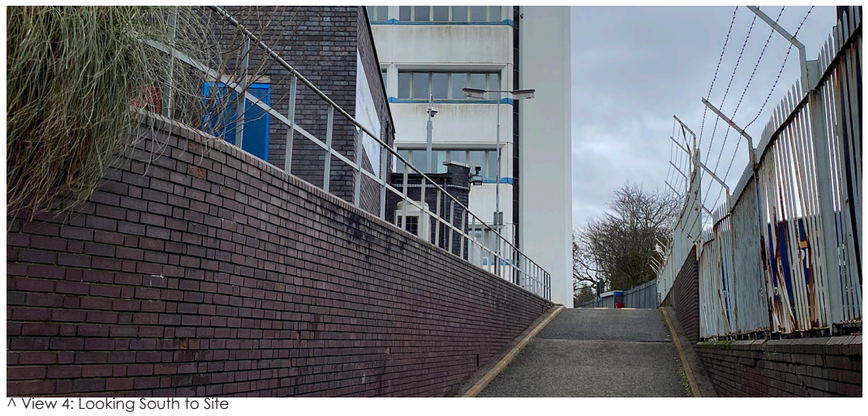




^ View 2: Looking South to Site



^ View 3: Looking West to Site



^ View 4: Looking South to Site

2.1 The Site

The site is located at Broadwater Road, Welwyn Garden City and is approximately 1.24 hectares (3.06 acres) in size. The irregular shaped parcel of land comprises a Research and Development complex, including laboratory and associated office space, that was formerly owned and used by the University of Hertfordshire.

The existing buildings include laboratories with 5 industrial storeys and 2 levels of basement. Combined with a 2 storey plant space on the roof, this gives a total building height of approximately 30.51m. Along the eastern boundary there are ancillary buildings such as outhouses and plant rooms.

Site Boundary



1.



2.



3.



4.

Photographs of Existing Building

1. Access road to south of existing building leading to servicing and below ground parking
2. Parking area adjacent to allotments looking south
3. Parking area adjacent to allotments looking north
4. View south from existing building looking towards allotments
5. Eastern access road for servicing
6. View of existing building from Penn Way



5.



6.



1. Roche factory scheme (ref. N6/2010/1776/MA - approved in March 2011 for redevelopment to provide 209 units)

Photographs of Existing Building



2.



3.



4.



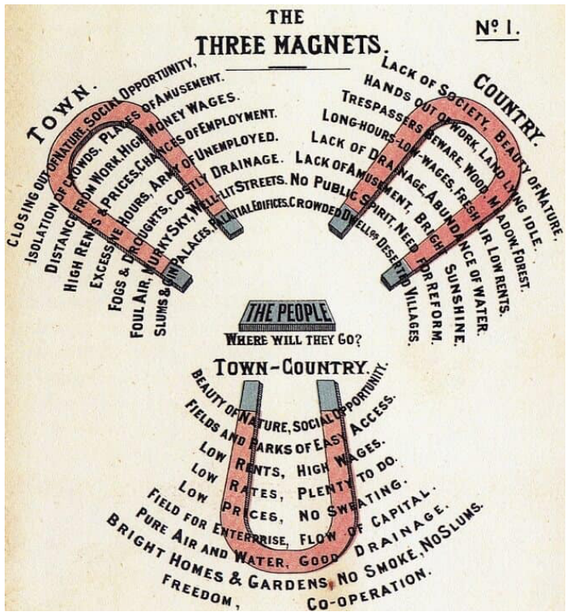
5.



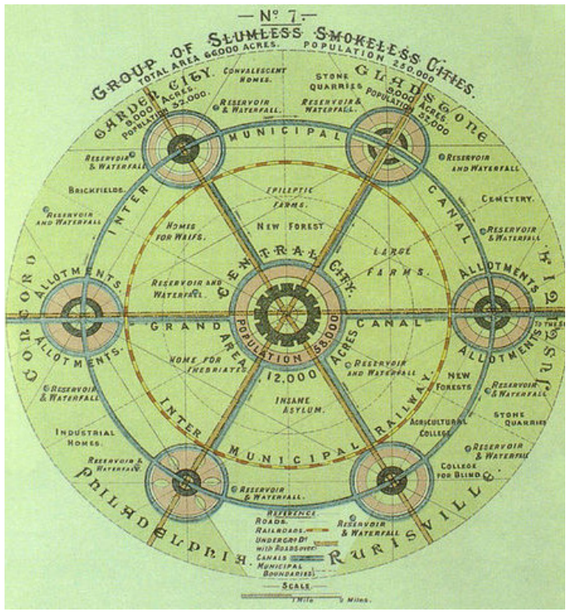
6.

1. View to north east from existing building
2. Upper basement parking level
3. Parking access ramp, western boundary
4. Stair core to existing building
5. Lower basement parking
6. Entrance to lower level parking

Garden City Movement



^ Garden City Movement, The Three Magnets



^ Ebenezer Howard's vision for a 'Group of Slumless, Smokeless Cities'. Image: SPUR

Sir Ebenezer Howard (1850-1928) published his book 'Garden Cities of To-morrow' in 1902 which first proposed the Garden City Movement; a series of new planning principles for the urban design of cities.

The fundamental principle of the movement was self-sufficient communities within green belt areas that had proportioned areas for housing, industry, agriculture and commerce.

Designed in a concentric pattern with six radial boulevards on a site of 6000 acres, the total population of the city would be 32,000 people. The centre of the town would feature the public aspects of the city: public parks, hospitals, library, museums, town halls & theatres etc. This central area accessed by 6 radial routes would be bisected by a principle railway. The outer concentric circles are prescribed for housing and agricultural uses.

The idea is zoning, i.e. division into allotted spaces with the intention to increase the cities relationship with nature.

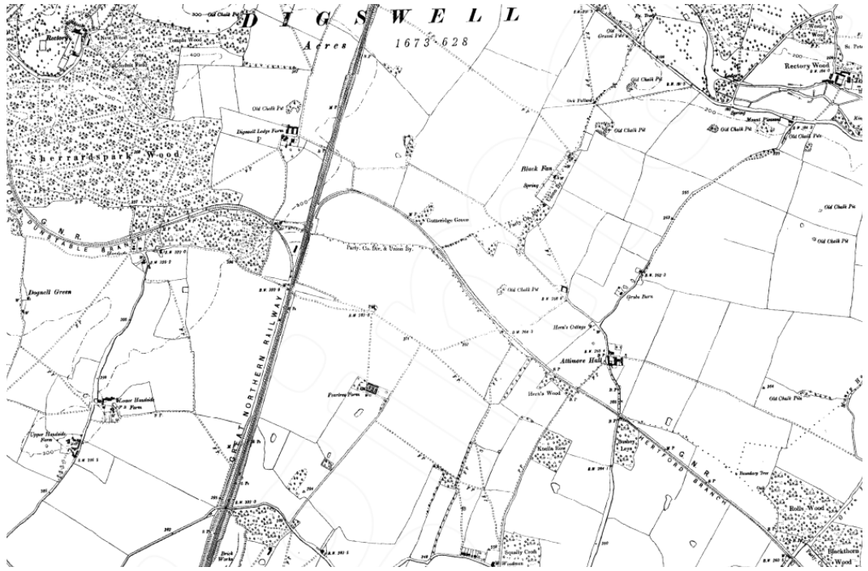
The Howards Garden city model was tested on two towns : Letchworth and Welwyn.

The Garden City Principles are:

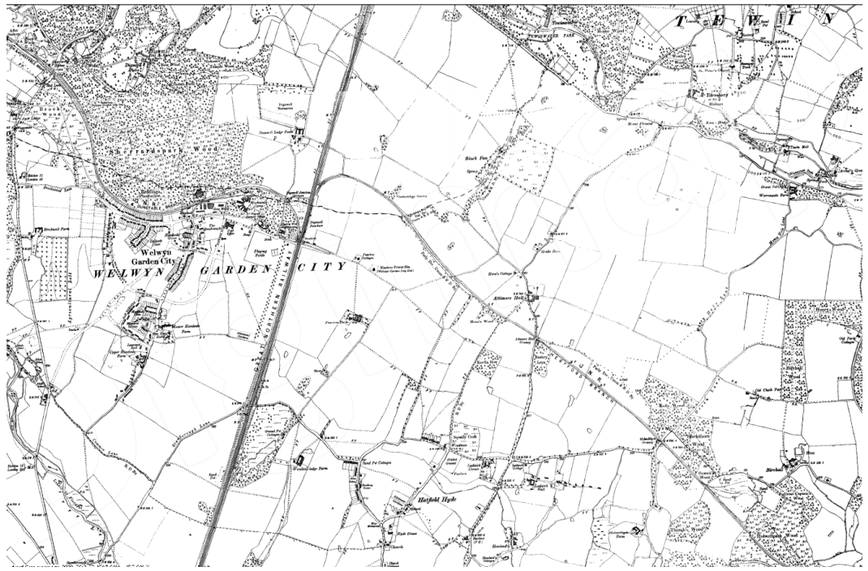
- Land value capture for the benefit of the community. The site has been private land for a longtime however community value will be raised though its openness and integration with surroundings.
- Strong vision, leadership and community engagement.
- Mixed-tenure homes and housing types that are genuinely affordable.
- Beautifully and imaginatively designed homes with gardens, combining the best of town and country to create healthy communities, and including opportunities to grow food.
- Development that enhances the natural environment, providing a comprehensive green infrastructure network and net biodiversity gains, and that uses zero-carbon and energy-positive technology to ensure climate resilience.
- Strong cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods.
- Integrated and accessible transport systems, with walking, cycling and public transport designed to be the most attractive forms of local transport.

2.2 Historical Context

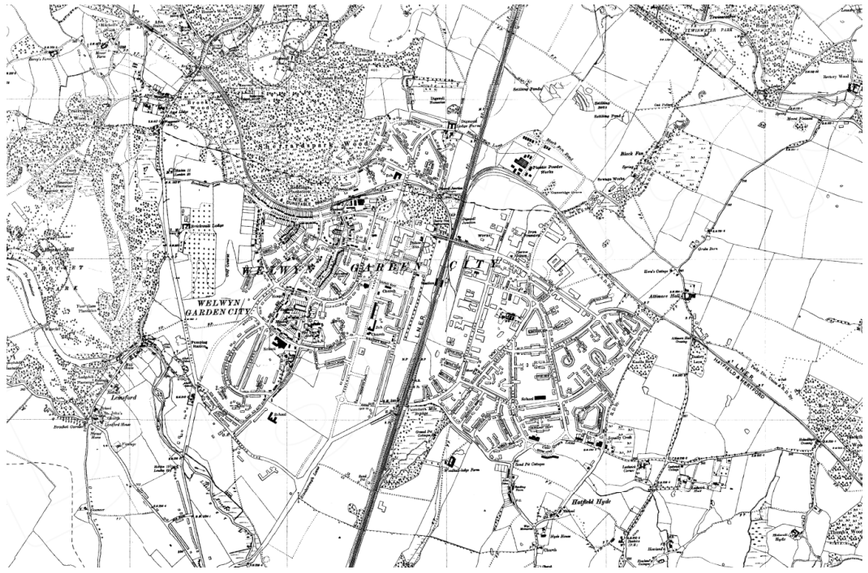
< Historical Maps



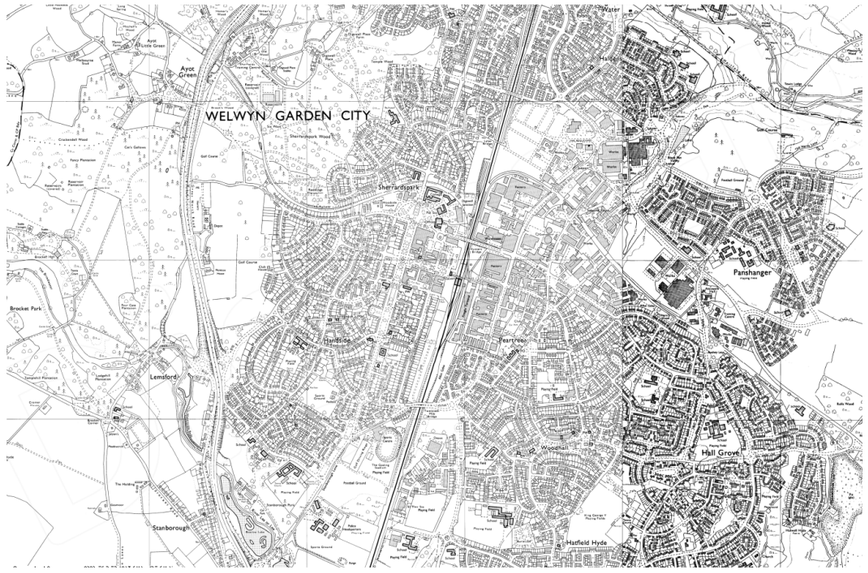
1890



1920



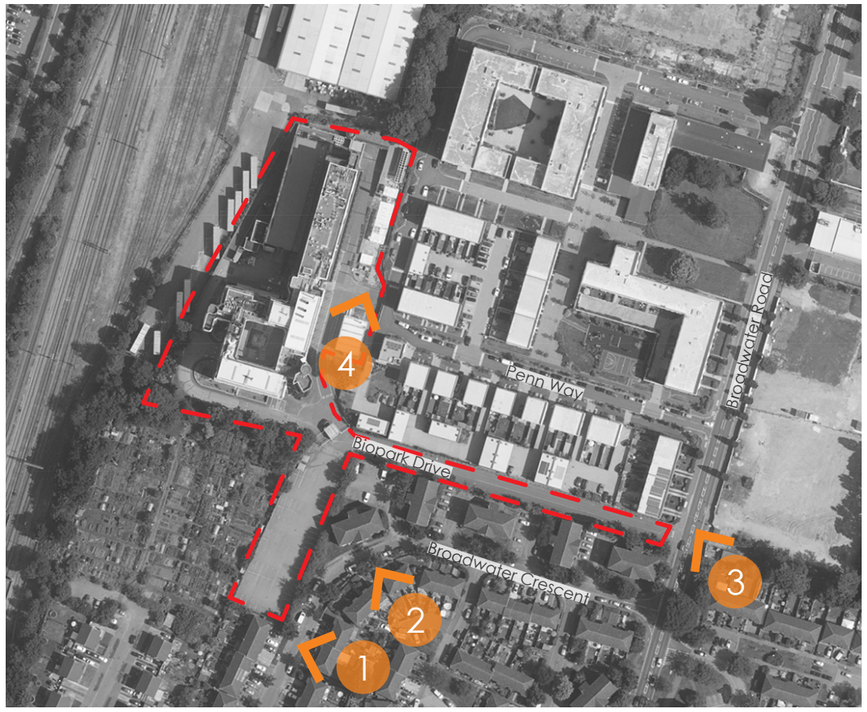
1950



1980



^ Architect Louis de Soissons' masterplan



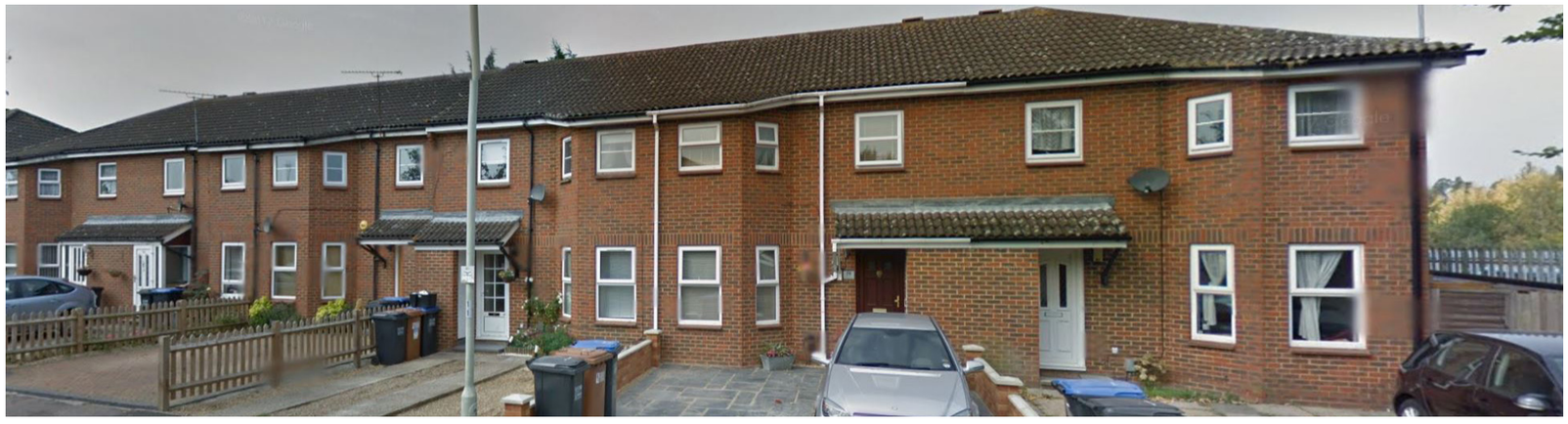
^ Site Aerial View



^ 3. Three storey houses Broadwater Road



^ 4. Two storey houses with undercroft parking Penn Way



^ 1. Two storey houses Broadwater Crescent



^ 2. Three storey flats Broadwater Crescent



^ Three storey houses Penn Way



^ Three storey flats Broadwater Crescent



^ Three storey flats Broadwater Crescent



^ Housing within the Garden City

2.3 Local Vernacular

The local building typology is largely residential with red brickwork and heights ranging from two to four storeys. Immediately to the north of the site is a large, single storey warehouse building.

The surrounding architecture is varied and reflects the evolution of the area over time. It ranges from the original Garden City design over the railway line, to the more recent development, close to the site, in Penn Way. The material palette used for this development consists of red and grey brickwork for the two/three storey townhouses and white render for the four storey flat blocks. In Broadwater Crescent the housing consists of two storey red brick terraced houses and three storey flat blocks. Adjoining the allotments, Corals Mead has a series of two storey, detached, red brick houses with off-street parking.



1. Parkway: Welwyn Garden City Neo-Georgian architecture



2. Wheat Quarter: Art deco industrial buildings with masonry apartments





3. Griffin Place (Former Roche buildings): Art deco, minimalist industrial buildings to be redeveloped for residential use



SITE: BioPark laboratories: White render, glass, metal, masonry industrial building (refer to section 2.1 for further details)



5. Broadwater Crescent and vicinity: Red brick residential buildings with pitched roofs



4. Mirage development, brick and rendered apartment blocks

2.4 Context Study

The material choices and architectural precedents are inspired by those found in the local area. Namely:

1. Parkway
2. Wheat Quarter
3. Griffin Place
4. Mirage development
5. Broadwater Crescent & vicinity

The following pages provide local buildings studies for these areas and illustrate how decisions have been made, whilst explaining the concept for the proposed materials palette.





1. Parkway

The spine of Welwyn Garden City, and the area that the style of the Garden City movement is most prevalent in, is Parkway. Buildings were designed and constructed between 1920-1948 in the Neo-Georgian style, consisting of red brick façades, white-framed sash windows, mansard roofs and stone porticos and plinths. The areas between are green with tree-lined boulevards.









< Existing Shredded Wheat factory

2. Shredded Wheat Factory & Wheat Quarter

The Shredded Wheat factory by Louis de Soissons is a Grade II listed landmark building within the area and its modernist design and industrial silos are distinct in comparison to the Georgian Arts and Crafts architecture found elsewhere in the town. As part of the Wheat Quarter development, the building will refurbished and used as a community/ leisure and employment space.

The new build blocks of the development have been positioned to provide large areas of communal landscaping, in keeping with the garden city design ethos. A palette of red brick, buff brick, metal and glass is proposed for the facades.



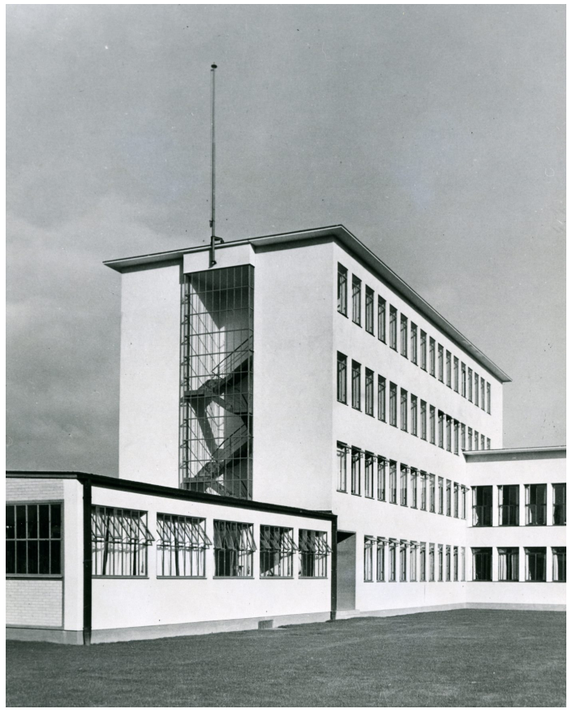
^ Proposed Wheat Quarter development



^ Proposed Wheat Quarter development



^ Location of Wheat Quarter development shown in yellow









3. Former Roche buildings, archive photos



3. Griffin Place, proposed conversion of Roche buildings



4. Mirage development



4. Mirage development

3-5. Griffin Place, Mirage development & Broadwater Crescent

The buildings closest to the site are mostly for residential use, except for the distribution site to the north, which consists of a large warehouse building.

Griffin Place is home to the former Roche Products Factory, which is a Grade II listed building with an industrial art deco aesthetic. The building is painted concrete with large ribbon windows and pilotis, and it will be converted for residential use following planning consent. Elements of the Roche Factory, the curved facade and art deco ribbon glazing, have been used to inform the design of block F.

The Mirage Development is a Taylor Wimpey scheme, situated between the applicant site and the Roche building. It consists of red brick and white rendered apartment blocks with full height windows that have spandrel panels in bright, primary, colours.

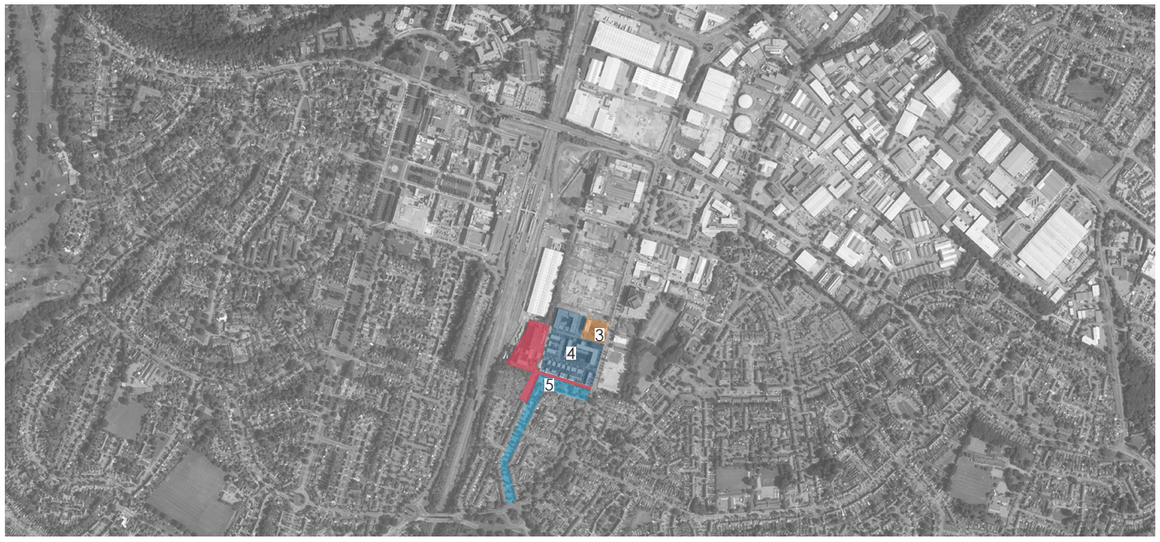
Broadwater Crescent and the vicinity consist of red brick houses and apartments with pitched roofs. These are broadly inspired by the garden city aesthetic seen across the railway line.



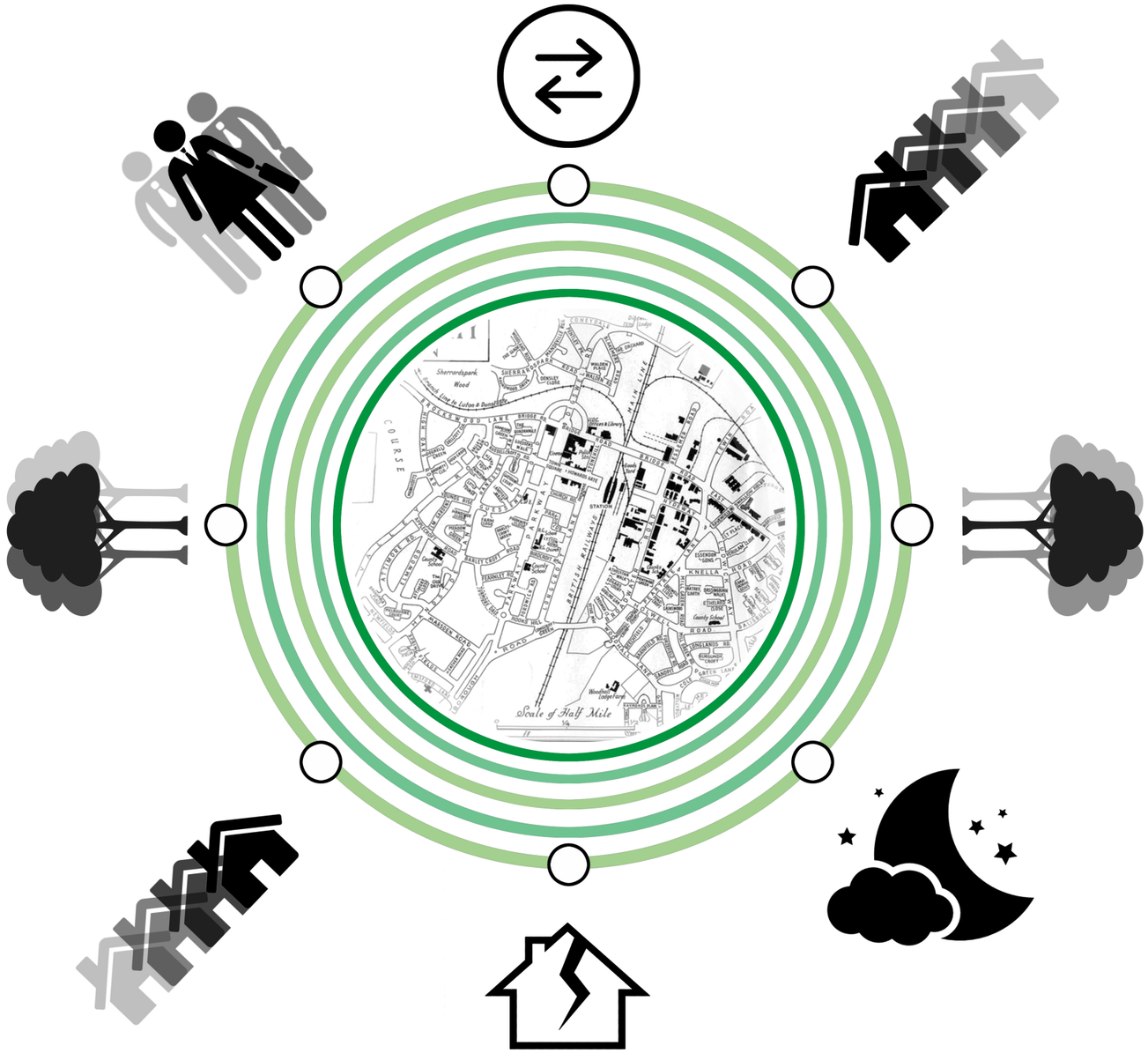
4. Mirage development



5. Broadwater Crescent: typical residential architecture



2.5 Planning Context



Vision and Objectives for Welwyn Garden City

In the Draft Welwyn Hatfield Local Plan (currently under examination), Welwyn Hatfield Borough Council has identified a series of challenges facing the area:

'The town has a growing population and a need for more homes...Now a need to consider how a higher density development area can be accommodated'.

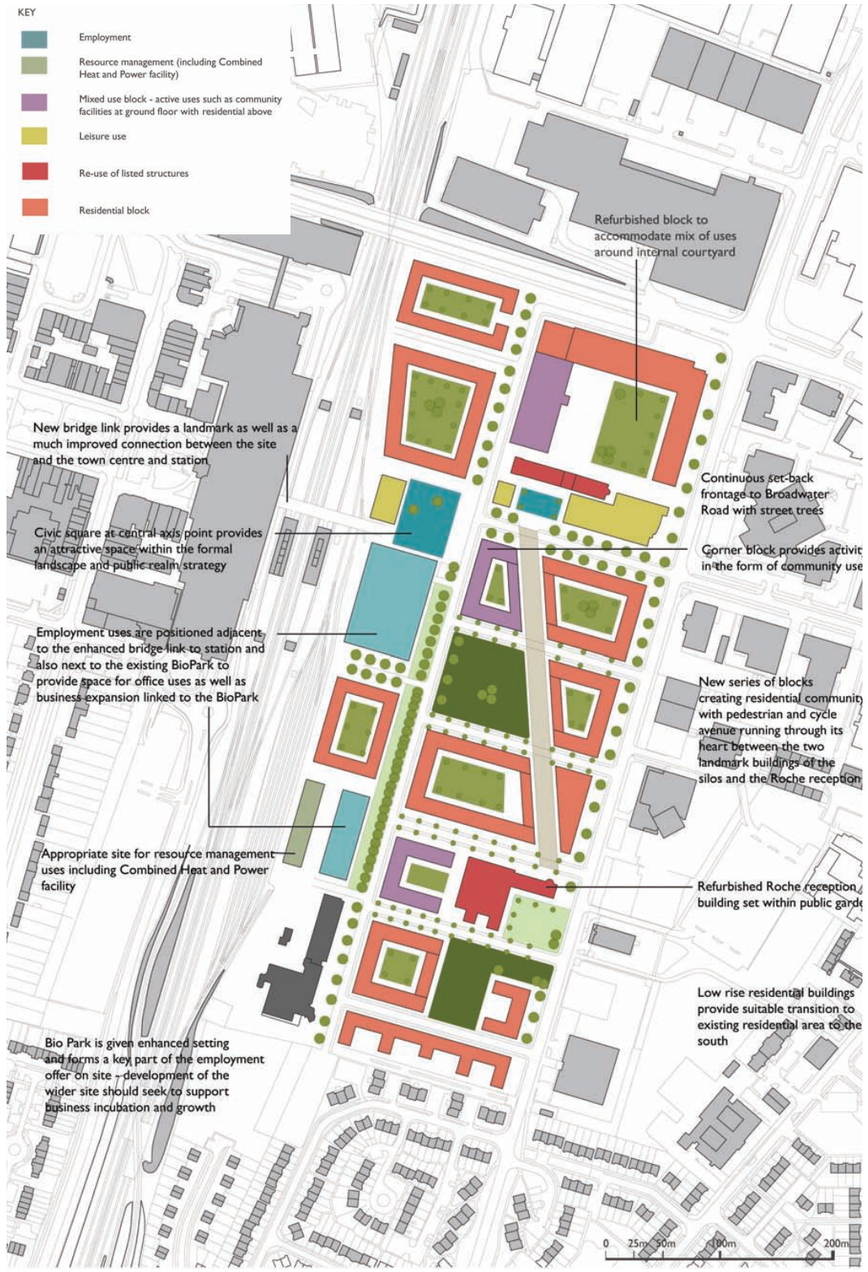
'The town centre needs to remain competitive with other sub regional retail centres but suffers from the lack of a strong evening economy'

'Much of the social housing stock is ageing at a similar rate'

'Town is famed for its central grand landscaped boulevard and network of green spaces that are integral to the layout and design of the garden city. These areas need to be protected'

'The east-west divide inherent in the original masterplanning of the town persists limiting connectivity between the town centre and neighbourhoods to the east'

These concerns have been considered and the relevant responses made central to the design ethos of the scheme.



^ Extract from the SPD



^ Extract from the SPD

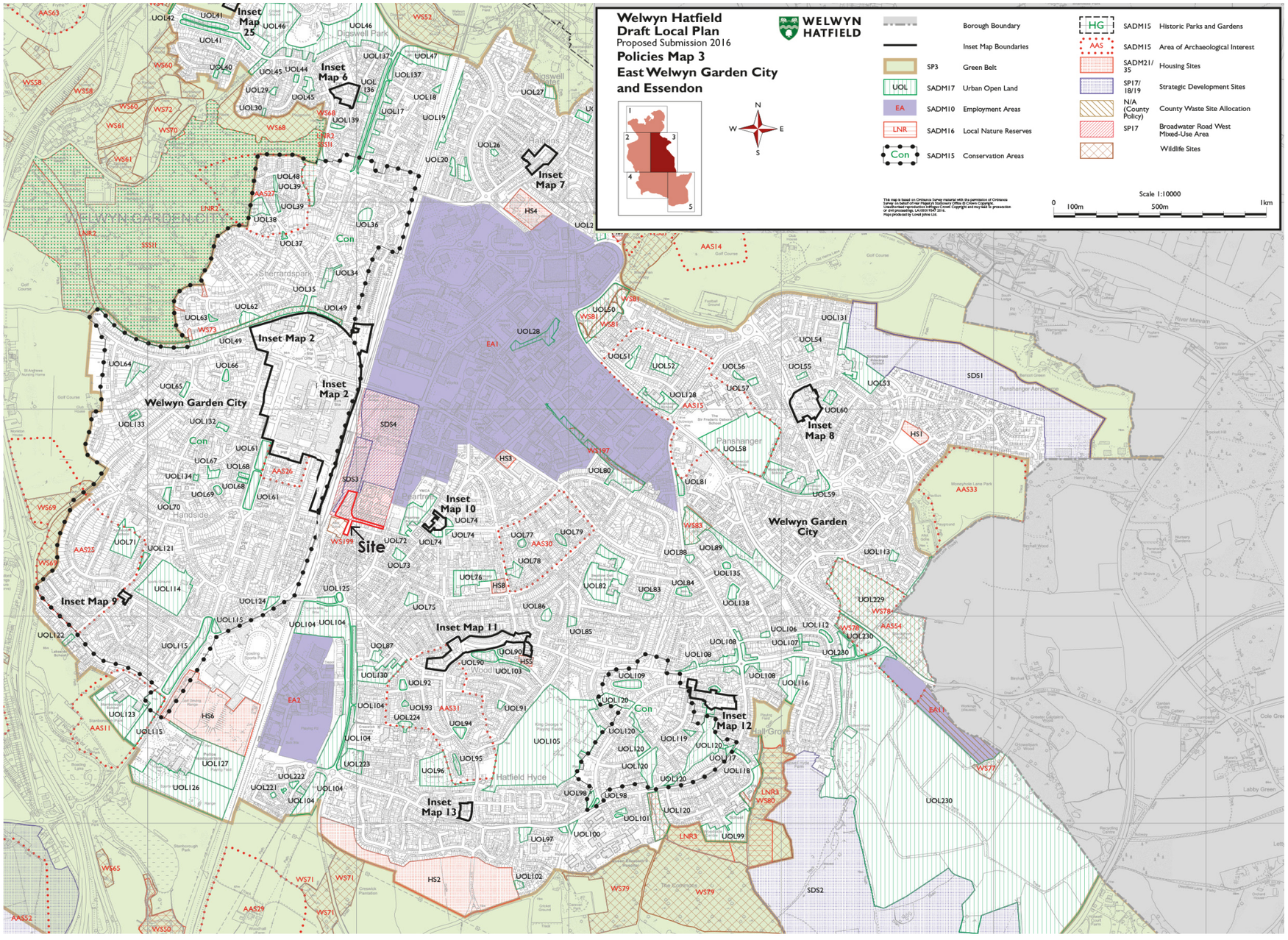
Broadwater Road West SPD

The site lies within the Broadwater Road West Opportunity Area. The Broadwater Road West Supplementary Planning Document (SPD), December 2008, has the following vision:

'To deliver an energetic and pioneering scheme of development which integrates the spirit of the garden city with the very best of high quality 21st Century design, seizing the opportunity to enhance the local environment and create a sustainable supported neighbourhood of an appropriate scale, which successfully integrates with the local community.'

The diagrams adjacent outline the main policies of the SPD for the Broadwater Road West area.

The site sits just outside the masterplan for the SPD and was not identified for redevelopment in the opportunity area. Nevertheless, it is located at the southern end of the proposed north-south green boulevard.



^ Draft Local Plan Polices Map 3



^ Broadwater Road Site allocation plan



^ Listed building with Shredded Wheat site



^ Shredded Wheat factory

Industrial Zone

Within the Broadwater Road West Opportunity Area, there are two Grade II listed buildings which will have a visual consideration for the proposed scheme:

1) Former Roche Products Factory- Grade II
1938-40 by Otto R Salvisberg of Zurich in association with C Stanley Brown.

2) Shredded Wheat Factory - Grade II
1925. Architect Louis de Soissons.

In the past, the area had a predominantly industrial character and usage. This is reflected in the utilitarian architecture of the existing buildings on the site and the warehouses immediately to the north. The local emerging context, The Wheat Quarter, marks a notable change from the industrial use to the creation of a mixed use development providing new homes, employment space and community use.



^ Former Roche Products Factory



^ Shredded Wheat factory

2.6 Emerging Development



^ Extract from the Wheat Quarter Design & Access Statement

Emerging Development - Wheat Quarter

The Wheat Quarter is the most recent development to come forward broadly based on the principles of the Broadwater Road West SPD.

The scheme has been designed by a team led by Collado Collins Architects, and is centred around the Grade II listed Shredded Wheat Factory by Louis de Soisson.

Following the grant of planning permission for a residential-led mixed-use development of 800 units in November 2017 (ref. N6/2015/0294/PP), Planning Permission (ref. 6/2018/0171/MAJ) was more recently granted in February 2019 for the redevelopment of the site for a residential-led mixed use development of 5-9 storeys.

The proposal has a north-south split, divided by the existing Hydeway Road.

The scheme will deliver the following:

- 1,340 Residential units
- 414 Affordable housing units (31% of total)
- 114 extra care homes
- 497m^2 health centre
- 883m^2 offices
- 590m^2 retail
- Alterations to Grade II listed building and retained silos to provide 5,279m^2 flexible floor space, 2057m^2 art centre, 1,235m^2 gym, 1,683m^2 restaurant/cafe/bar, 671m^2 nursery
- 1170 Car Parking Spaces



^ Proposed Site Plan



^ Extract from the Wheat Quarter Design & Access Statement



^ Extract from the Wheat Quarter Design & Access Statement

Emerging Development - Wheat Quarter

The scheme has been designed around the Garden City Principles by Sir Ebenezer Howard with 'Development that enhances the natural environment, providing a comprehensive green infrastructure network'.

Alongside these principles, public art installations have been used to diversify the character of the communal spaces and create focal points of public interest in the developments.

Architectural Character:

The proposed aesthetic of the blocks is contemporary with industrial influences. A palette of light yellow and red stock brick has been used, which references the existing context.





3.0

DESIGN EVOLUTION

3.1 Constraints & Opportunities

3.2 Site Strategy

3.3 Wider Context

3.4 Project Timeline

3.5 Design Iterations to Date

3.6 Public Consultations

3.1 Constraints & Opportunities



^ Site plan showing constraints

Constraints

1. Sunlight

The main part of the site is roughly rectangular in shape with the long axis of the site running parallel to Penn Way/Broadwater Road at an angle of circa. 15 degrees from due north. Site layout should utilise south, east and west orientation for homes and avoid north aspect dwellings. Taller elements will be orientated east-west to minimising overshadowing.

2. Train Noise

The railway lines immediately to the west of the site provide a significant level of noise pollution which needs consideration. Taller buildings positioned on the Site's perimeter will help to screen amenity spaces from external noise.

3. Industrial Uses

The building to the north of the site is still in use as a warehouse distribution centre with HGV parking located alongside the western boundary of the site. Vehicular noise together with the operating hours of the warehousing needs to be considered.

Key

- Sun path
- Train Noise
- Former Roche Products Factory- Grade II
- Shredded Wheat Factory - Grade II

N

4. Welwyn Garden City Conservation Area & Hatfield Park & Garden

The Welwyn Garden City Conservation Area lies to the west of the railway lines. Although the railway lines and sidings provide significant separation, distant views from this area to the site need to be carefully considered. Views from Hatfield House park & Gardens have also been considered. The views are assessed within Bidwell's Townscape & Visual Impact Assessment.

5. Listed Buildings

The listed buildings are positive assets to the local area and any development should not have a detrimental impact on the settings/views of these buildings.

6. Existing residential properties - consideration of amenity impact such as daylight/sunlight and overlooking

6. Existing residential properties

Consideration of amenity impact such as daylight/ sunlight and overlooking.



^ Site plan showing opportunities

Opportunities

1. Pedestrian Connections

The Site has the opportunity to improve connections from the neighbouring residential areas to the railway station and the heart of the town centre. A strong north -south link can be established with the emerging Wheat Quarter development further improving the pedestrian legibility of the area.

2. Street Improvements

Improving the environment of Biopark Drive for all residents to create a welcoming entrance to the site and the surrounding residential properties. Car parking will be hidden within the basement or building undercrofts further enhancing the street scene and providing more opportunity for green landscaping.

3. Courtyards & Amenity

The creation of safe, sheltered and secure communal amenity spaces to foster the creation of a strong, local community. Each interconnected courtyard will have a distinct identity and provide places for play and quiet relaxation.

Key

Pedestrian Links

Views

Courtyard Amenity

N

4. Edges and Natural Surveillance

The proposal provides natural surveillance to Penn Way creating a safer pedestrian environment for residents throughout the day and beyond the office hours of the previous use.

5. Provision of a Local Community Use

The placing of a community use at the heart of the site will further encourage social interactions and help to create a sense of belonging for new residents.

6. Extensive Views

The site provides the opportunity to maximise views from the site for new residents to both the east and west and also to the south across the allotments.

7. Brownfield site

The redevelopment of previously developed land with a use more in keeping with its surroundings.

8. Site size and existing building

The site has capacity to accommodate buildings of height whilst moving the existing mass away from residents on Penn Way.

3.2 Site Strategy

Design Aspirations



1. Foster the creation of a new healthy community



2. Achieve Garden City principles



3. Encourage the integration of the Wheat Quarter to the wider residential area



4. Utilise the site's sustainable location near the town centre and railway station



5. Improve access and permeability from the site to the town centre



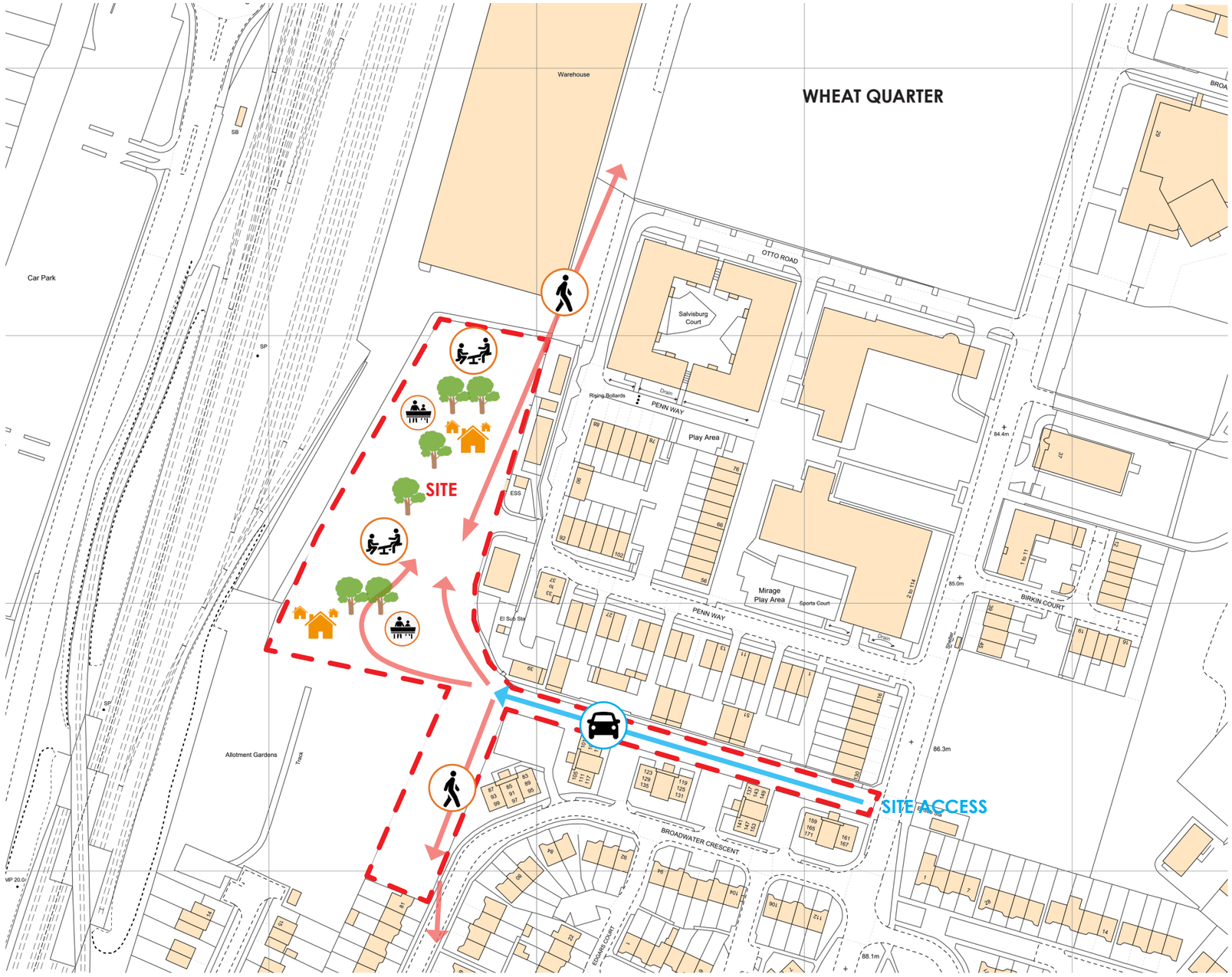
6. Provide safe, attractive amenity space



7. Deliver new homes across mixed tenures and housing types



8. Enhance the site and its surrounding street environment



Site Strategy

Broadwater Gardens: A new residential community

Access & Circulation

The site provides the opportunity to create new pedestrian links to the emerging Wheat Quarter and the town centre beyond.

Permeable Layout

A proposed site layout of courtyard blocks provides the opportunity to create linked landscaped spaces increasing site permeability. The current site layout has limited permeability, this is evident in local, distant views to the site.

Housing Typologies

The design utilises flat blocks together with townhouses to sensitively integrate it within the existing fabric of the town.

Community Use

A residents' gym and ancillary coffee shop is proposed at the heart of the site to help promote social interactions and create a new, strong local community.

Amenity Space

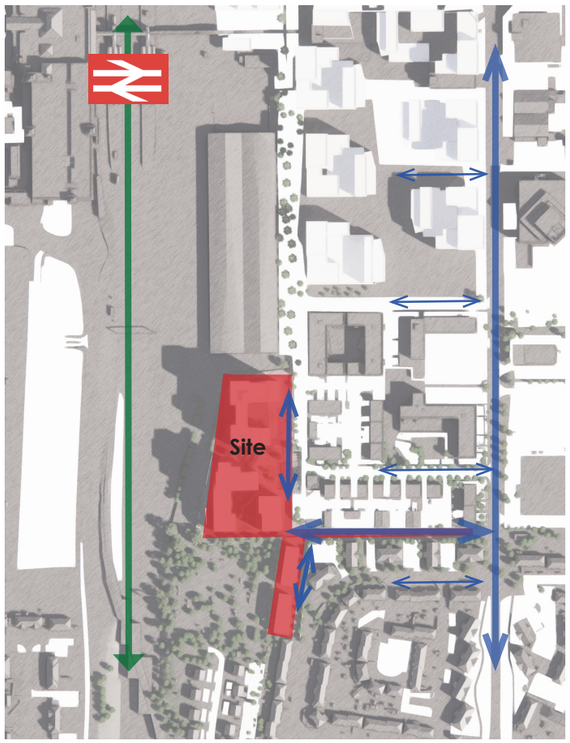
New landscaped gardens will ensure residents have direct contact with nature. The gardens will offer residents the opportunity to meet neighbours or let children play together within a safe environment.

Redistribution of building mass

Moving the mass towards the railway will create a positive impact for residents in Penn Way

3.3 Wider Context

Transport Connectivity

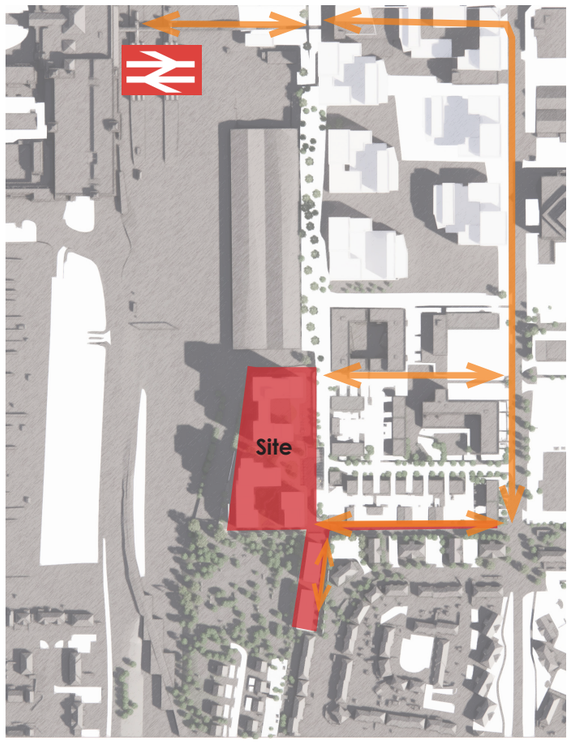


The site has a dedicated road, called Biopark Drive which accesses Broadwater Road, the diagram above shows the vehicle linkages to the main road and the rail link to London and the North.

Vehicle links

Train links

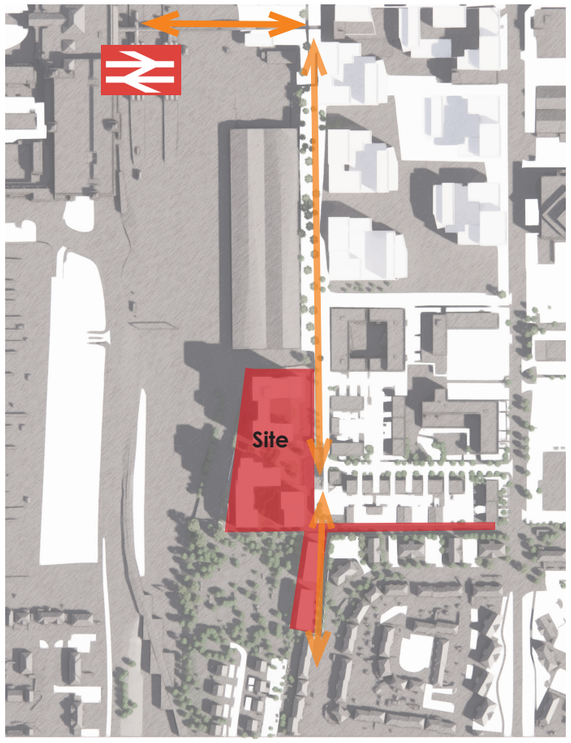
Existing Pedestrian Connectivity



Currently access to the railway station and the town centre is via Broadwater Road. The station and town centre are an approximate 10 minute walk.

Pedestrian route

New Pedestrian Connectivity



The Wheat Quarter, currently under construction, provides the potential to create a much shorter walking route to the station and town centre via the north-south link connecting Penn Way. The potential also exists to extend this route beyond the site to the neighbouring residential properties in Broadwater Crescent.

Pedestrian route

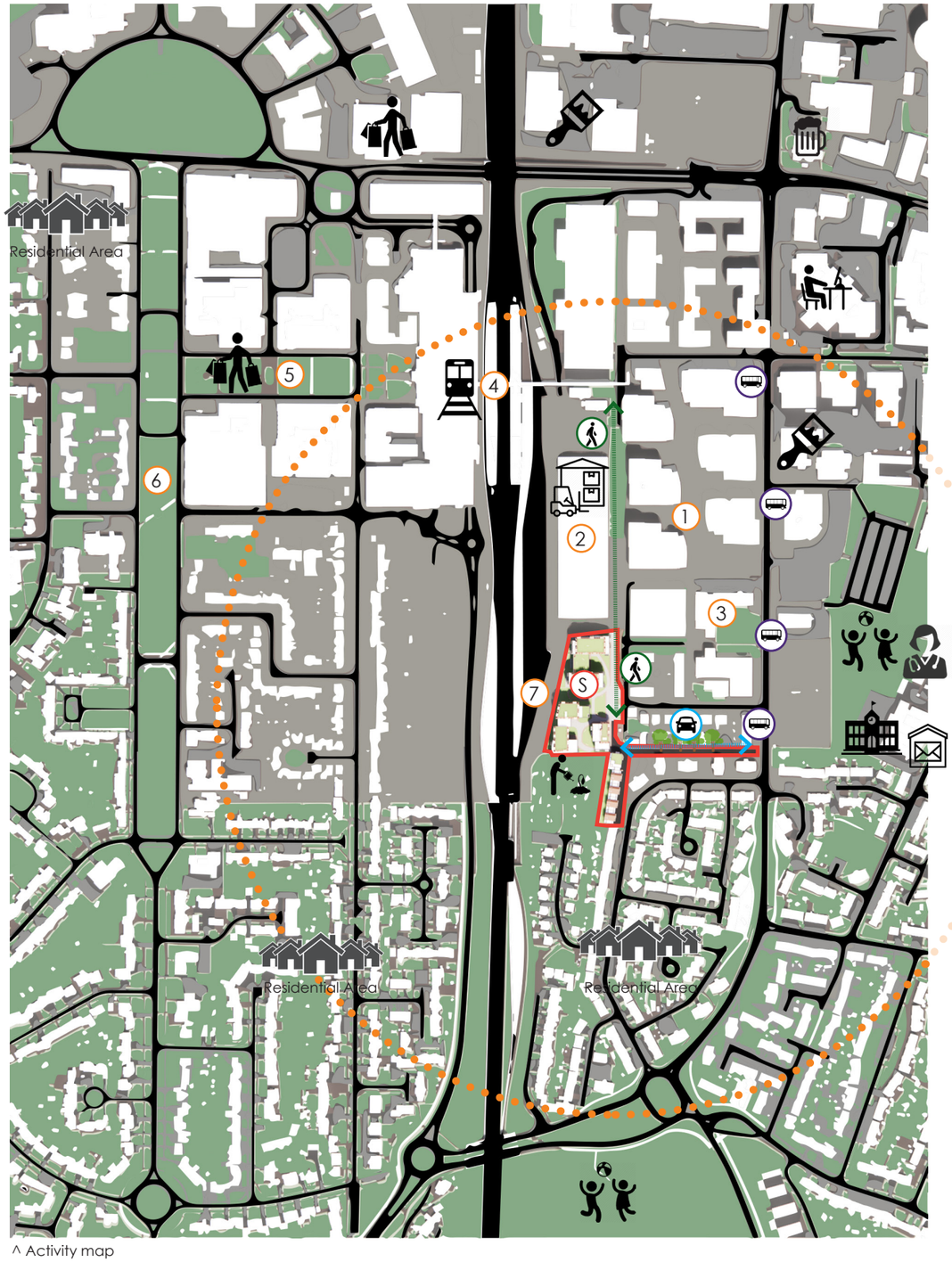
Public Transport



A bus stop is located at the entrance to the site, the 601 provides regular access to Welwyn Garden City, Hatfield, St Albans and Borehamwood. With further routes available on Bridge Street, 5 mins walk away. Trains provide access to the Thameslink and Great Northern network.

Bus Stop -route 601

Mainline Railway



^ Activity map

Amenities

The site is a short 10 minute walk from the town centre located on the other side of the railway lines. Once the Wheat Quarter development is built, there is the potential for the walk to be shorter as residents would no longer have to walk along Broadwater Road to access the railway bridge. The desired new north-south connection to the Wheat Quarter will be a pleasant, inviting landscaped route. The site has easy access to retail amenities in the town centre as well as larger retail stores on the edge of town. The town, with its garden city ethos has an abundance of easily accessible parks and open spaces. Residents will also have access to landscaped gardens on the site.

- S Broadwater Gardens
- 1 Wheat Quarter
- 2 Warehouse Site
- 3 Former Roche Factory Development
- 4 Welwyn Garden City Train Station
- 5 Town Centre
- 6 Parkway
- 7 Trailer Park

- Bus Stop
- Vehicular Access to Broadwater Gardens
- Pedestrian Links to Broadwater Gardens
- Train Station
- Residential Area
- School
- Doctors
- Park
- Warehousing
- Offices
- Large Retail/DIY Store
- Shops
- Post Office
- Pub
- 10 minutes' walk approx. from site



Future Development

Connectivity

The Wheat Quarter establishes the principle of open courtyards and green, public, pedestrian links to the train station. The Site is located immediately south of the Wheat Quarter and can play an important role in connecting the existing residential neighbourhoods to the new quarter, the train station and the town centre.

The Wheat Quarter provides new community uses; improving connections to these spaces and the proposed landscaped amenity would ensure the new development becomes readily integrated within the existing community and the fabric of the town.

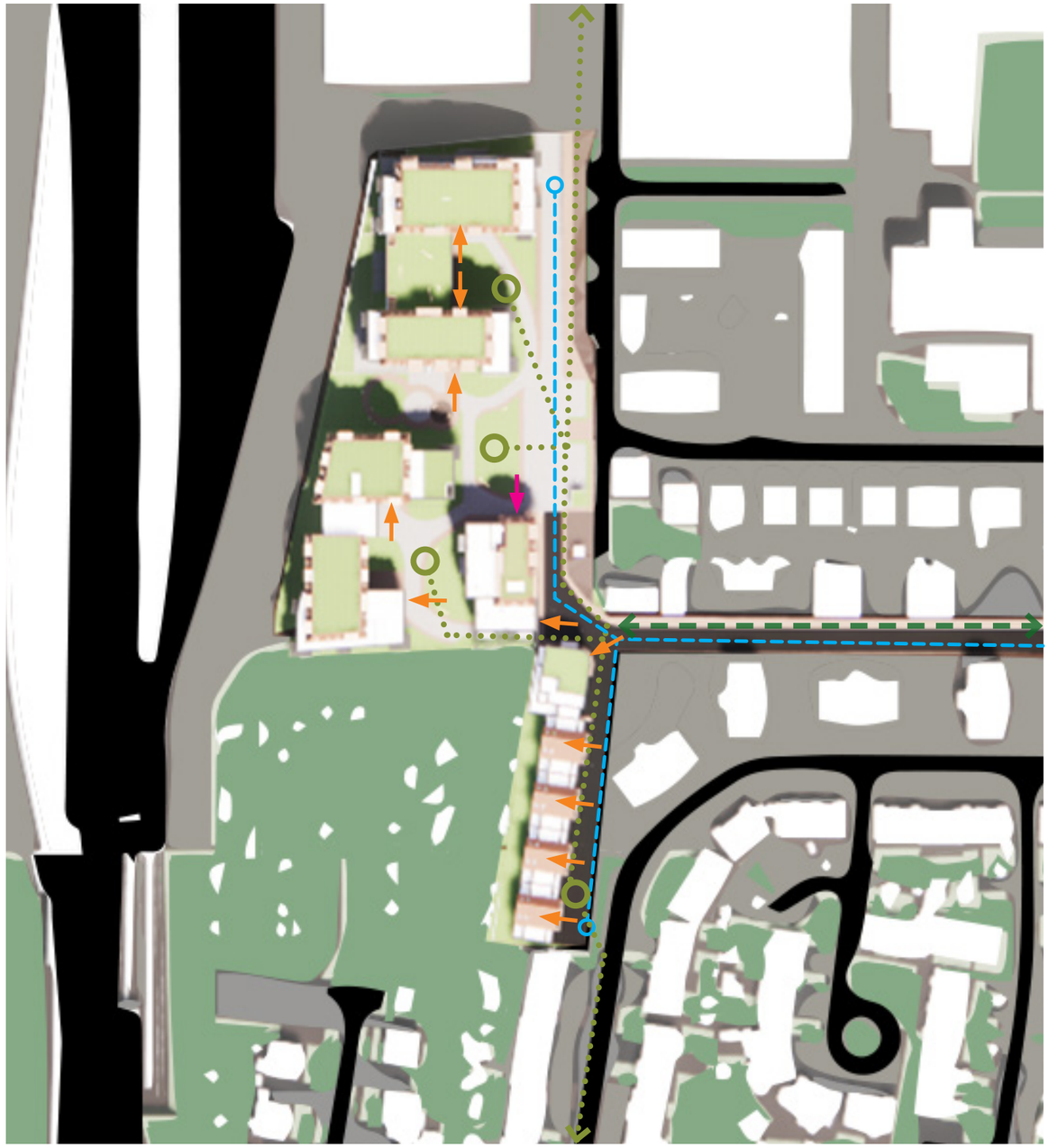
The warehouse site will become the sole remaining industrial use in the area. The eventual redevelopment of this site will have a positive impact on pedestrian routes by removing HGVs from the local road network. The proposals for our site present the opportunity for a strong north-south link to be provided to the Wheat Quarter. The proposed communal courtyards are designed to extend onto Penn Way creating a landscaped boulevard route lined with street trees towards the Wheat Quarter. An alternative pedestrian route will also be explored via Penn Way which will safely guide pedestrians to the main central landscaped route through the Wheat Quarter.

Emerging Heights

The Wheat Quarter consists of a series of blocks up to a maximum of 9 storeys, respecting the height of the existing listed building. The Biopark site performs a pivotal role in the transition from the taller emerging context to the existing two and three storey houses. The housing typologies proposed; flatted courtyard blocks, smaller flat blocks and townhouses also reflect this transition.

Key

- Site Boundary
- Distribution Centre
- Wheat Quarter
- Pedestrian Link



Safe, Attractive Amenity Space

The principle of the landscaping is to create a series of communal gardens within the scheme to reflect the ethos of the Garden City movement. A series of interconnected landscaped courtyards are proposed that will open and extend to Penn Way.

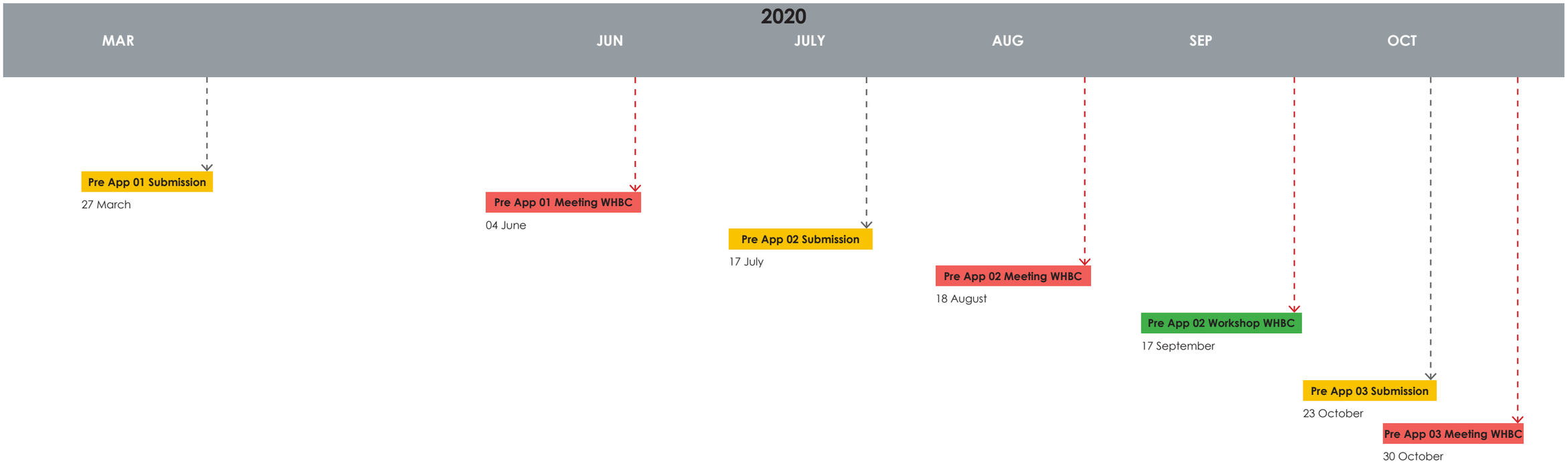
The site building layout will create a variety of quiet and relaxing landscaped spaces shielded from railway noise. The northern block has an eastern orientated courtyard extending to Penn Way.

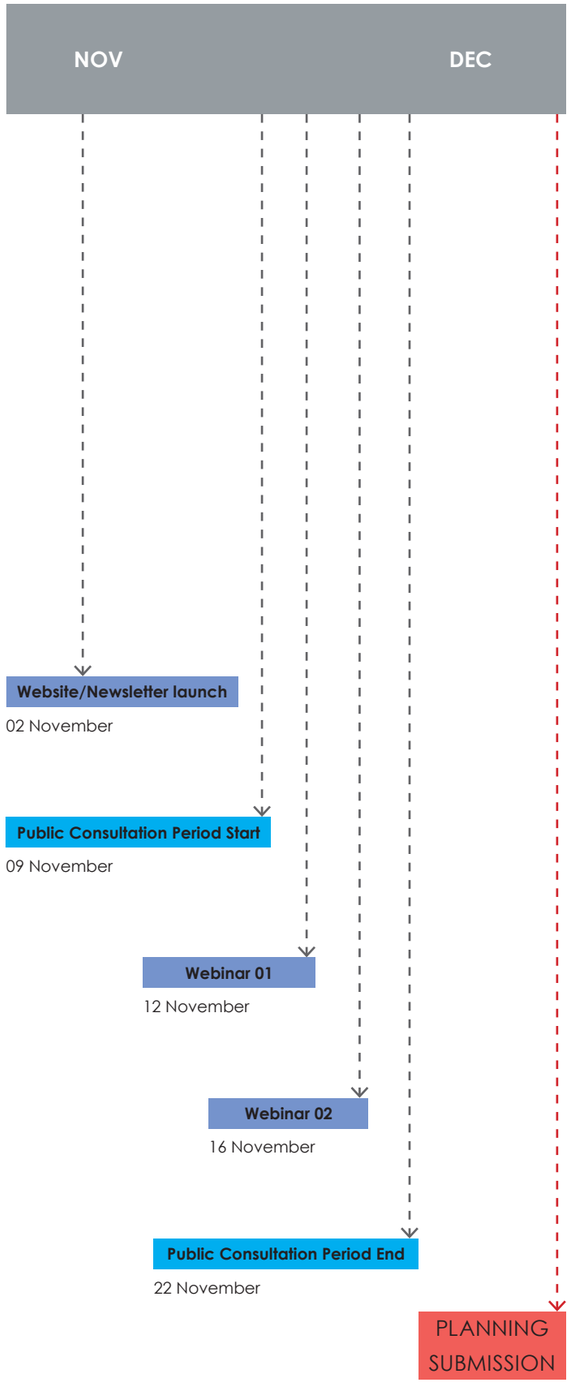
The courtyard blocks are separated via an east - west garden ensuring maximum daylight/sunlight penetration to the landscaped areas throughout the day. The southern block's courtyard opens to the allotments, providing extensive views for the residents.

Each courtyard will have a unique identity with areas set aside for play and quiet relaxation. A community use- gym/ coffee shop is proposed at ground floor overlooking the main central garden. This will act as a local hub providing a place for residents to meet, chat and share a coffee. The access road to the site will be enhanced by the planting of street trees and traffic calming features to create a pleasant and inviting pedestrian route to new residents.

Key

- Boulevard Route
- Pedestrian link
- Vehicular access
- Community use entrance
- Residential entrance


2020
MAR
JUN
JULY
AUG
SEP
OCT
Pre App 01 Submission
27 March
Pre App 01 Meeting WHBC
04 June
Pre App 02 Submission
17 July
Pre App 02 Meeting WHBC
18 August
Pre App 02 Workshop WHBC
17 September
Pre App 03 Submission
23 October
Pre App 03 Meeting WHBC
30 October



3.4 Project Timeline

Project Progress

The project commenced with the first pre application meeting on the 4th June 2020, which, due to Covid-19, was held remotely with WHBC. All correspondence since has been made online.

Following the second pre application meeting, it was agreed that a further design workshop with the council would be beneficial in resolving key design features. The final pre application meeting was then held on 30th October 2020.

Public Consultation was then held in the form of a website, newsletter and two webinars, which engaged with both the community and stakeholders. The consultation period was held open for two weeks, to allow for a significant period of time for feedback. Key items could then be addressed in this planning application submission.

Key Dates and Meetings

- 04 June 2020 Pre Application 01 Meeting WHBC
- 18 Aug 2020 Pre Application 02 Meeting WHBC
- 17 Sep 2020 Pre Application 02 Design Workshop WHBC
- 30 Oct 2020 Pre Application 03 Meeting WHBC
- 02 Nov 2020 Website Launch, Consultation Newsletter issued to community and stakeholders
- 09 Nov 2020 Public Consultation period start
- 12 Nov 2020 Community Webinar 01
- 17 Nov 2020 Community Webinar 02
- 22 Nov 2020 Public Consultation period end



^ Pre App 01 Massing



^ Proposed Massing

3.5 Design Iterations for planning application

Scale
The scheme has greatly reduced in scale since the first pre application, where it ranged from 3 to 15 storeys. Following discussions with WHBC the proposed scheme is now 2 to 9 storeys, with a gradual step up across the site from south to north. This is based on the Broadwater Road SPD, emerging development, context, heritage and townscape analysis and housing demand.

Appearance
The elevations and materiality have developed to incorporate design features from the local context i.e. red brickwork, mansard roofs, and art deco glazing.

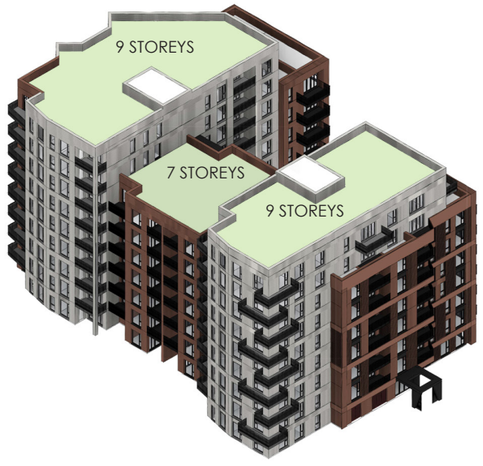
Layout
The site has been better utilised since preliminary design iterations, to take advantage of sunlight, access, and views- all of which have been improved. Green links and optimum daylight conditions have been designed in following site analysis from the project team.

Stage	Site Layout	Massing & Height	Total Units	Key Design Features & Design Response	Summary of Feedback from Welwyn Hatfield Borough Council
Pre Application 1		3 to 15 storeys: Blocks A&B - 7 to 15 storeys; Blocks C&D - 6-13 storeys; Block E - 5 to 7 storeys; Block F&G - 3 to 4 storeys 	340	• 3 to 15 Storeys • 5 apartment blocks which increase in height from south to north • Courtyard landscaping • Basement car park entered from the west of Blocks A&B via a road which wraps around Blocks C&D, and E	• Concern over the heights and their dominance in the current context and in the locality of heritage assets. The existing building heights should not be exceeded. • The character needs exploring as the scheme develops in terms of the Garden City aesthetic • Principle of the height distribution across the site is not objected to • A row of 2-3 storey terraced housing is advised to the south of the site • A reduction in the number of setbacks would refine the massing • Marketing evidence required that B1b use is no longer suitable
Pre Application 2		2 to 9 storeys: Blocks A&B - 7 to 9 storeys; Blocks C&D - 6-9 storeys; Block E - 5 to 7 storeys; Block F - 2 to 4 storeys; townhouses - 2 to 3 storeys 	297	• Townhouses introduced following WHBC feedback • Overall height reduced to 2 to 9 storeys • 4 apartment blocks • Contextual references made in materiality (red brickwork) and art deco features of Block E and F • Basement parking now entered from the east of Blocks A&B to allow for improved ground floor landscaping and dwelling layout • Marketing Report shows B1b use is inappropriate for location	• Heights are an improvement but still may appear overbearing and bulky • HTVIA shows little impact on heritage assets and proposal is not visible/of limited visibility • The Garden City aesthetic should be developed e.g. mansard roofs • Design is interesting and less ‘busy’ • Potential issue with proximity between townhouses and existing apartment block • Height of townhouses and adjacent existing houses should be reviewed • View from train line is key

Stage	Site Layout	Massing & Height	Total Units	Key Design Features & Design Response	Summary of Feedback from Welwyn Hatfield Borough Council
Pre Application 2 Workshop		2 to 9 storeys: Blocks A&B - 7 to 9 storeys; Blocks C&D - 6-9 storeys; Block E - 5 to 7 storeys; Block F - 2 to 4 storeys; townhouses - 2 to 3 storeys 	297	• Tiled mansard roofs introduced to Blocks A-E, and more red brickwork is proposed throughout, developing the Garden City aesthetic • Mansard roofs reduce the overall massing of the scheme • Distances and heights provided for townhouses and neighbouring buildings, showing there is little impact on privacy or scale • Train journey views provided demonstrating an improved massing • Parking numbers increased to 0.63 ratio	• The mansard roofs look good and better integrates the scheme. It is advised that the detailing is considered • Block E mansard angle to be continuous • Block C appears too tall from train line, suggest reduce by 1 storey • Praise for the high quality design and greatly improved massing and scale • Height will require justification • A white brick with darker tones may work better with the red brick and black metal • Art Deco windows of Roche should be explored and developed further • Height of townhouses was accepted. Further information on distances required. • Car parking ratio is an improvement and can be justified against WQ and drive towards car-free developments

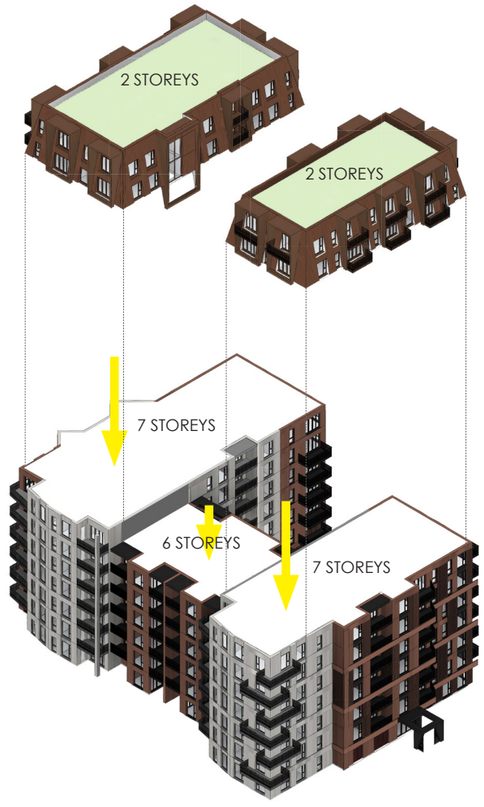
Stage	Site Layout	Massing & Height	Total Units	Key Design Features & Design Response	Summary of Feedback from Welwyn Hatfield Borough Council
Pre Application 3		2 to 9 storeys: Blocks A&B - 7 to 9 storeys; Blocks C&D - 6-8 storeys; Block E - 5 to 7 storeys; Block F - 2 to 4 storeys; townhouses - 2 to 3 storeys 	289	• Block C lowered by 1 storey • Density has been reduced: number of units reduced from 297 to 289 • A white brick with darker blend has been introduced to blocks A-D • Legibility of entrances between A & B has been improved • Block E glazing has been further developed, taking precedent from Roche building • Block E mansard roof angle has been made continuous, improving the view from the north • Block F entrance has been improved similarly to Block E • Parking layout has been improved	• Historic England are comfortable with verified views • Design improvements welcomed and supported • Material details would be good to see with planning application. Precedent images would be accepted otherwise • A tile with a camber is preferable over a plain tile • Reduction in height supported • White brick blend approved of • Materials used on garage doors and front doors to townhouses is good. Main entrances should be celebrated more • Good number of dual aspect units • Good variety of amenity spaces • Guttering detail to be submitted with planning application • Comparative views from train line (proposed and existing) would be useful, as well as image to show shift of mass from East
Planning application		2 to 9 storeys: Blocks A&B - 7 to 9 storeys; Blocks C&D - 6-8 storeys; Block E - 4 to 7 storeys; Block F - 2 to 4 storeys; townhouses - 2 to 3 storeys 	289	• Materials to ground floor of Blocks F & G have been revised following SBD concerns over climbing aids • Units have been developed following daylight comments • Rainwater drainage strategy has been developed • Mansard tile to have a camber • Further views, elevations and plans included to show existing-proposed comparisons • Entrance celebration response	N/A

Blocks A&B



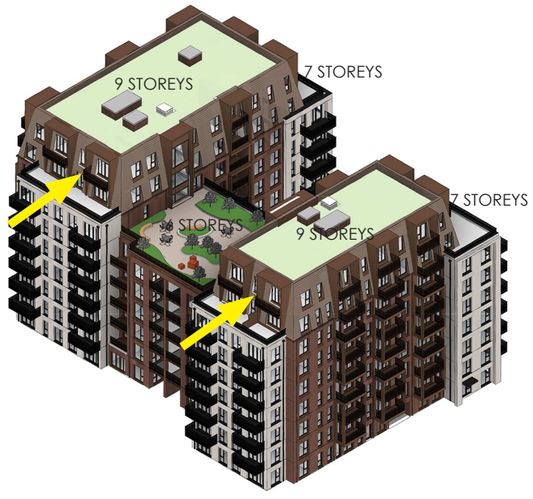
1

Pre-app 02 Massing - 9 storey massing



2

Massing reduced to create lower datum at 7 and 6 storeys



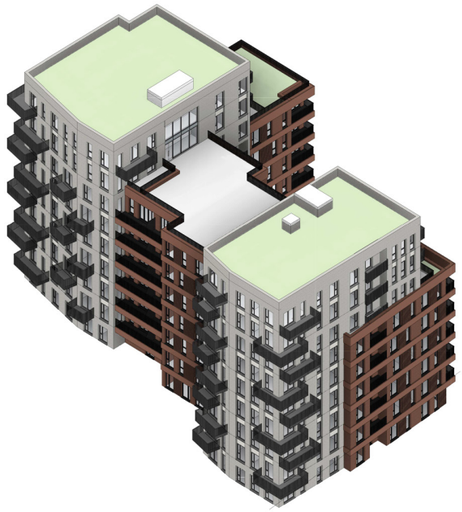
3

Two storey mansard introduced on cores A & B to create more subservient elevation

White and red brickwork switched to make red brickwork more dominant and better reflect the local vernacular

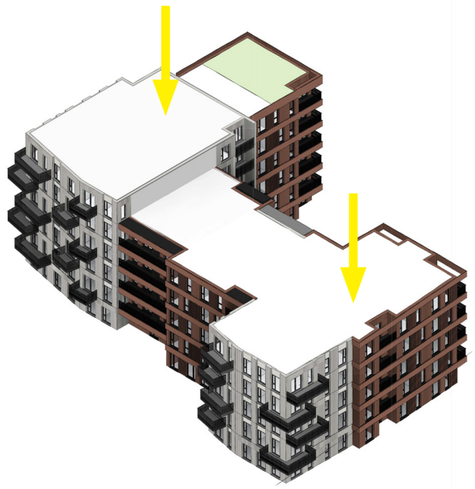
Mansards set back from east and west facades

Blocks C&D



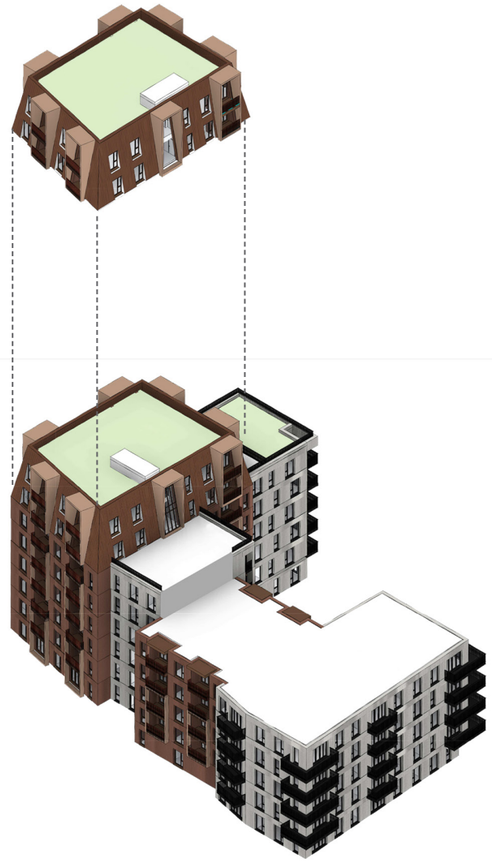
1

Pre-app 02 Massing - 9 storey massing and datum



2

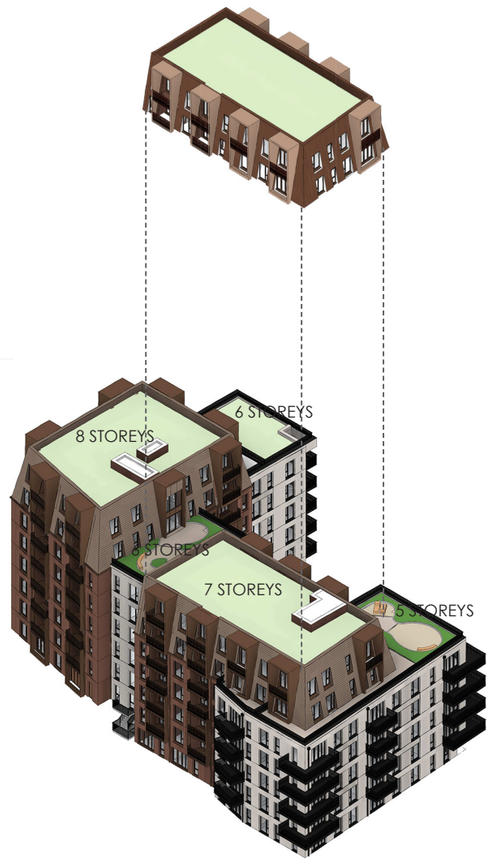
Massing dropped to create lower datum at 6 and 5 storeys



3

Two storey mansard introduced on Core C to create more subservient elevation

White and red brickwork switched to make red brickwork more dominant and reflect the local vernacular

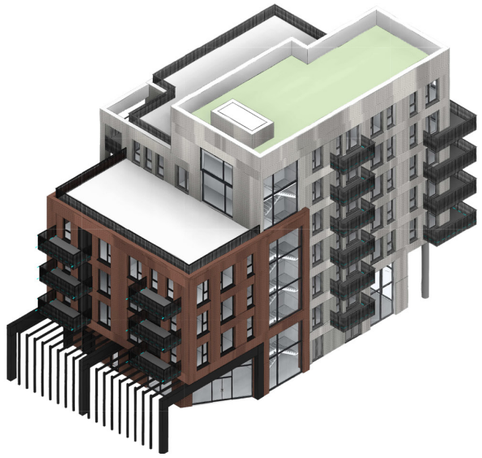


4

Two storey mansard introduced on Core D to create subservient upper floors within the elevation

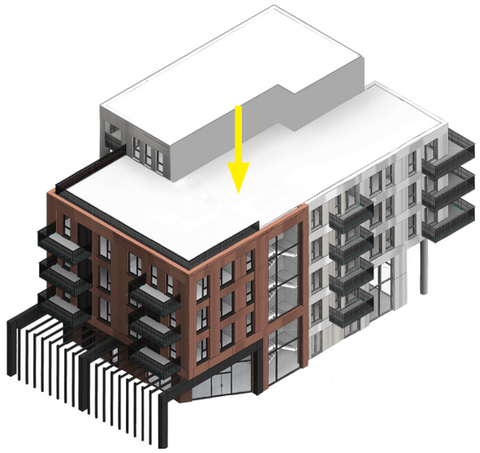
Stepping back from the South elevation to create a more sensitive relationship to the allotments

Block E



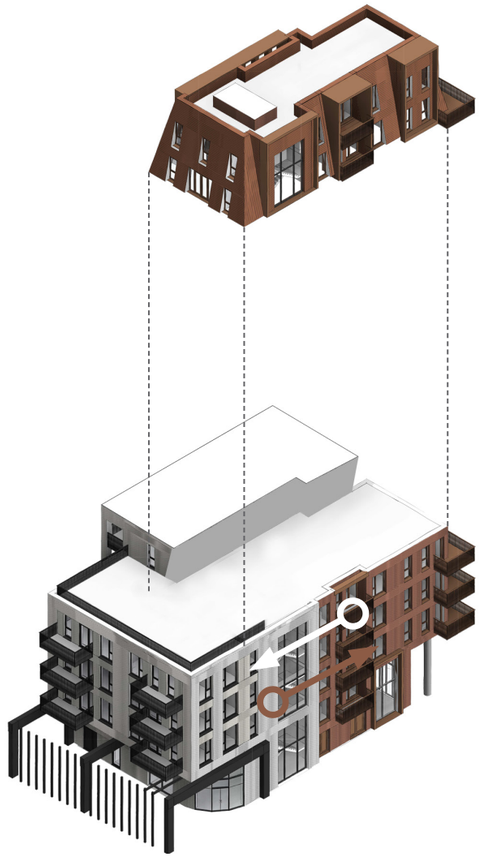
1

Pre-app 02 Massing - 7 storey massing and datum



2

Massing dropped to create lower datum at 5 storeys



3

Two storey, subservient mansard introduced to upper floors

White and red brickwork switched making the red brickwork more dominant within the elevation to emulate the local vernacular



4

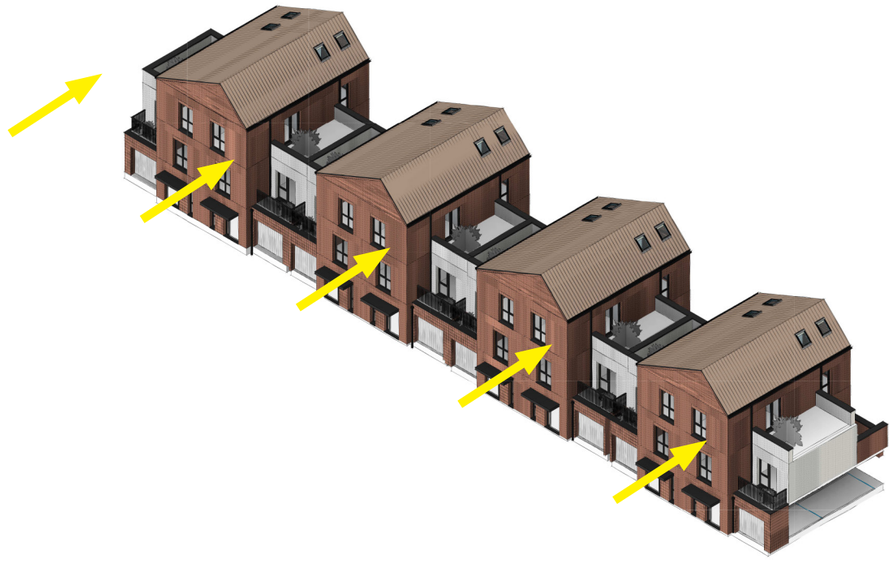
Current proposal

Blocks F&G (Townhouses)



1

Pre-app 01 Massing - 3/4 storey massing consisting of 2 no. apartment blocks



2

Pre-app 02 & 03 Massing

2/3 storey townhouses introduced to break up the mass and create more views through to the allotments beyond. Red multi brick with terracotta roof tiles draw on elements of the Garden City residential buildings. White brick 2 storey elements, provide visual relief in between houses.



3

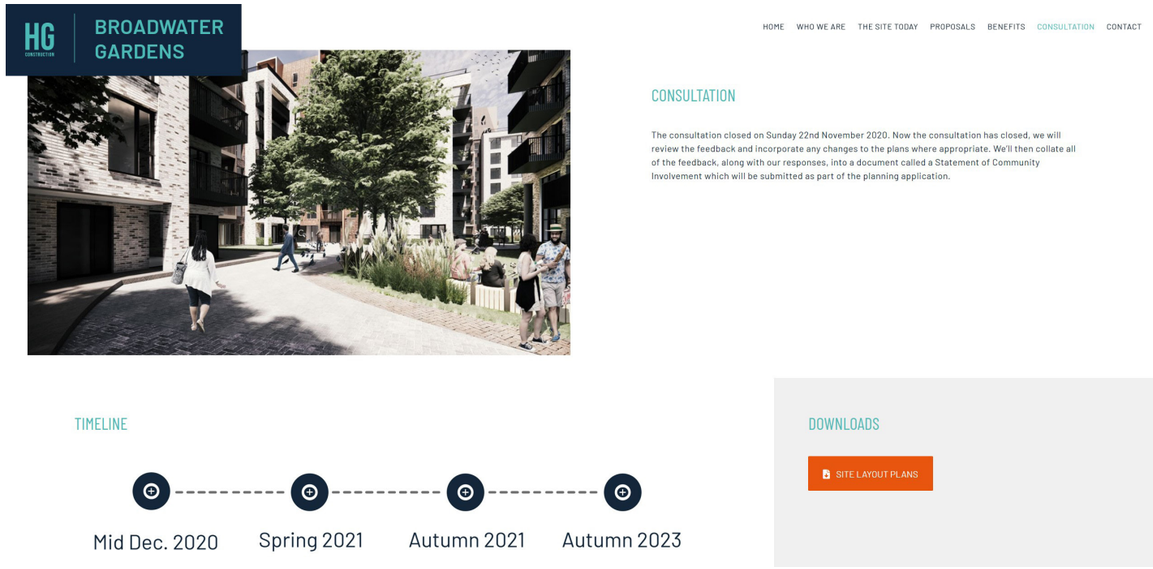
Pre-app 02 & 03 Massing

3/4 storey curved corner apartment block proposed with Art Deco influences from surrounding heritage asset at the Roche building. White brick and dark metal accents pick up features of the Roche building and create a feature block on the entrance to the site.

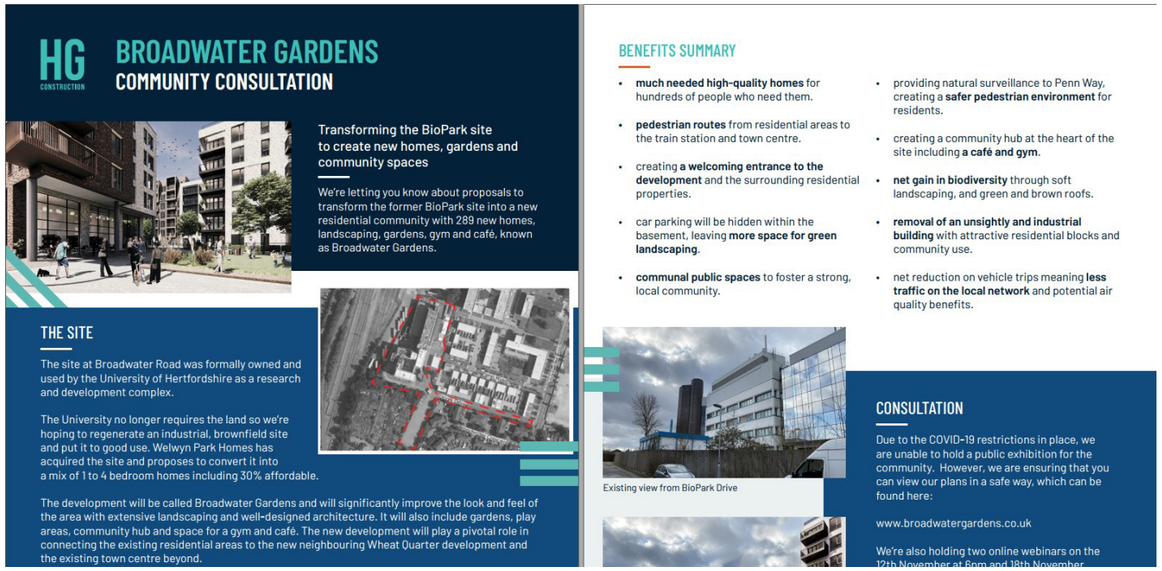


4

Current proposal



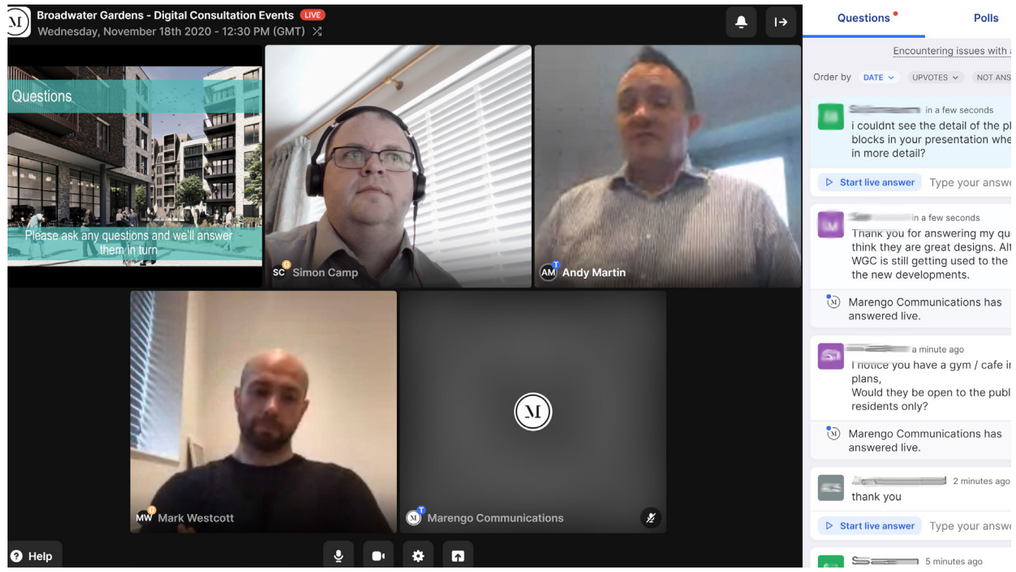
^ Broadwater Gardens website, www.broadwatergardens.co.uk



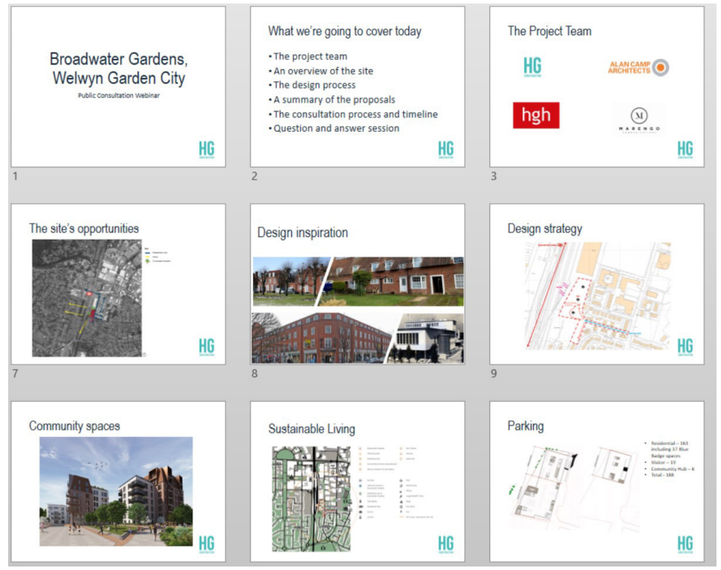
^ Community newsletter



^ Welwyn Hatfield Times press release



^ Screenshot from interactive Public Webinar



^ Webinar presentation content

3.6 Public Consultations

The National Planning Policy Framework encourages community involvement prior to planning applications and WHBC have adopted a Statement of Community Involvement to similar effect. Despite the Covid-19 restrictions in place, the communications consultant, Marengo Communications, developed a strategy to ensure that feedback can still be received on the pre-application design proposals. The comments could then be addressed in the current proposal.

Broadwater Gardens has undergone both community and stakeholder consultation prior to this planning application in the form of:

- Statement of Community Consultation
- Letter to stakeholders, 2nd November 2020
- Community newsletter, 2nd November 2020
- Website; www.broadwatergardens.co.uk, 2nd November 2020
- 2 no. webinars in place of public exhibitions; 12th November 2020 and, 17th November 2020
- Public consultation period of 2 weeks to allow for adequate feedback following the launch of the newsletter and website. The period lasted between 9th- 22nd November 2020.

The feedback to questionnaires and the design responses have been tabled on the following pages.

Question	Summary of Public Response / Feedback	Design Response
Q1 Do you support our proposals to transform the currently derelict BioPark site?	Reasons from 'Yes' responses: • Excellent, tasteful proposal • Much needed homes • Good use of derelict site • Good development, although noise issues from train line should be considered Reasons from 'Yes with reservations' responses: • Concern over height (9 Storeys) in relation Garden City Principles and privacy of existing residential buildings • Parking ratios seem low • Cycle storage appears low • More electric charging spaces are encouraged • Impact on local infrastructure • Noise from train line • Flat roof design • Solar energy should be increased Reasons from 'No' responses: • Impact on local infrastructure • Height/Scale and Garden City principles • Houses are favoured over flats • Parking ratios seem low • Capacity of railways may not cope with new development • Removal of commercial space • Lack of renewable technology being used and low carbon materials	**Height & Scale** The maximum height of the development will not exceed the height of the existing Biopark buildings, including plant space. The scheme ranges from 2 storeys in south nearest the 2/3 storey existing housing on Broadwater Crescent and increases to 9 storeys in the north, nearest the 9 storeys emerging Wheat Quarter scheme. This massing will be appropriate for the context and will provide much needed housing for Welwyn Garden City. The mansard roof design of the apartment blocks takes precedent from the Garden City aesthetic and also reduces the apparent mass of the scheme through this tapering effect. **Housing Type & Mix** Houses were favoured over apartments, in the south part of the site, the furthest distance away from the route to the train station. Each house will have two car parking spaces. Due to the proximity of the rest of the site to the station, and the demand for new homes, the site capacity to accommodate tall buildings and therefore higher housing densities, apartments have been proposed in the remaining area. The homes will be of high quality design and the majority are dual aspect, with some even triple aspect. A 10% of the total dwellings will be affordable, with a split between shared ownership and affordable rent. **Parking** The scheme is following the Borough's drive to become more car-free and sustainable, with a residential parking ratio of 0.76, 20% of which will be for electric vehicles. The ratio exceeds the approved Wheat Quarter south proposals which is 0.63 spaces per unit. As the site is in walking distance to the train station, and will have plenty of cycle parking (1 space per dwelling minimum), there are other more sustainable transport provisions available to future residents. **Noise** The Acoustic Consultant's report has identified the areas on site which will be exposed to the most noise, this is from the West (train line) and the North (distribution site). The windows along these façades will have appropriate glazing as well as acoustic trickle vents for ventilation when windows are closed. At ground level, acoustic fencing will be provided in the boundary treatment, which will create a solid buffer to landscaped areas and ground floor homes. The remainder of the development to the east and south, will be shielded by the built form on the north and west. **Sustainability** The scheme is proposing that more than 10% carbon savings will be achieved is from renewable technology, such as PV cells on the roofs, as passive measures such as community heating, nautural ventilation and thermal saving windows . As previously mentioned, 20% of the car parking spaces will have electric charging points. Please see section 4.5 for further details.
Q2 Do you agree with the principle of redeveloping an existing derelict building and reducing the massing overall?	• Regeneration of derelict site is welcomed by most • Provision of green space is supported • Concerns over height and Garden City principles • Height should be within height of existing Biopark building • Commercial usage is was favoured in one response	

Question	Summary of Public Response / Feedback	Design Response
Q3 What do you like about the proposals or what could we do differently?	Two negative responses: one did not approve of the gym or cafe, one did not provide any recommendations Positive feedback included: • Support for open spaces • General redevelopment is good Suggestions included: • Provision of a swimming pool • Donation of land to the community • Reduction in height • More houses and fewer flats • More parking and more electric car spaces • An addition to local infrastructure, such as school or GP surgery • At least 25% affordable housing • Emphasis on sustainability • Restrict purchasing to residents and restrict subletting	**Impact on Local Infrastructure** Due to the mix, the scheme is relatively low occupancy with 12% of the total units being over 3 Bed. This therefore means that there will be fewer families and in turn children. The local infrastructure such as schools, libraries and doctors surgeries will be supported in accommodating the new population through the provision of financial contributions paid for by the Applicant. The contributions will go towards upgrading existing or funding new facilities. . The Wheat Quarter scheme is due to provide additional uses such a nursery, café and gym. Broadwater Gardens will have a community hub located in Block E, which will be a flexible space for a café and gym.
Q4 Do you have any other ideas or suggestions?	Most suggestions have been mentioned previously and include: • Improvements to local infrastructure • Emphasis on housing provision to be for local residents with a high proportion of affordable • Lowering of height to 4-6 storeys • Emphasis on sustainability	





4.0

THE PROPOSAL

4.1 Layout, Use & Scale

4.2 Appearance & Materials

4.3 Landscape & Amenity

4.4 Parking, Access & Servicing

4.5 Energy, Sustainability & Comfort

4.6 Residential Qualitative Review

4.7 Proposed Views





4.1 Layout, Use & Scale

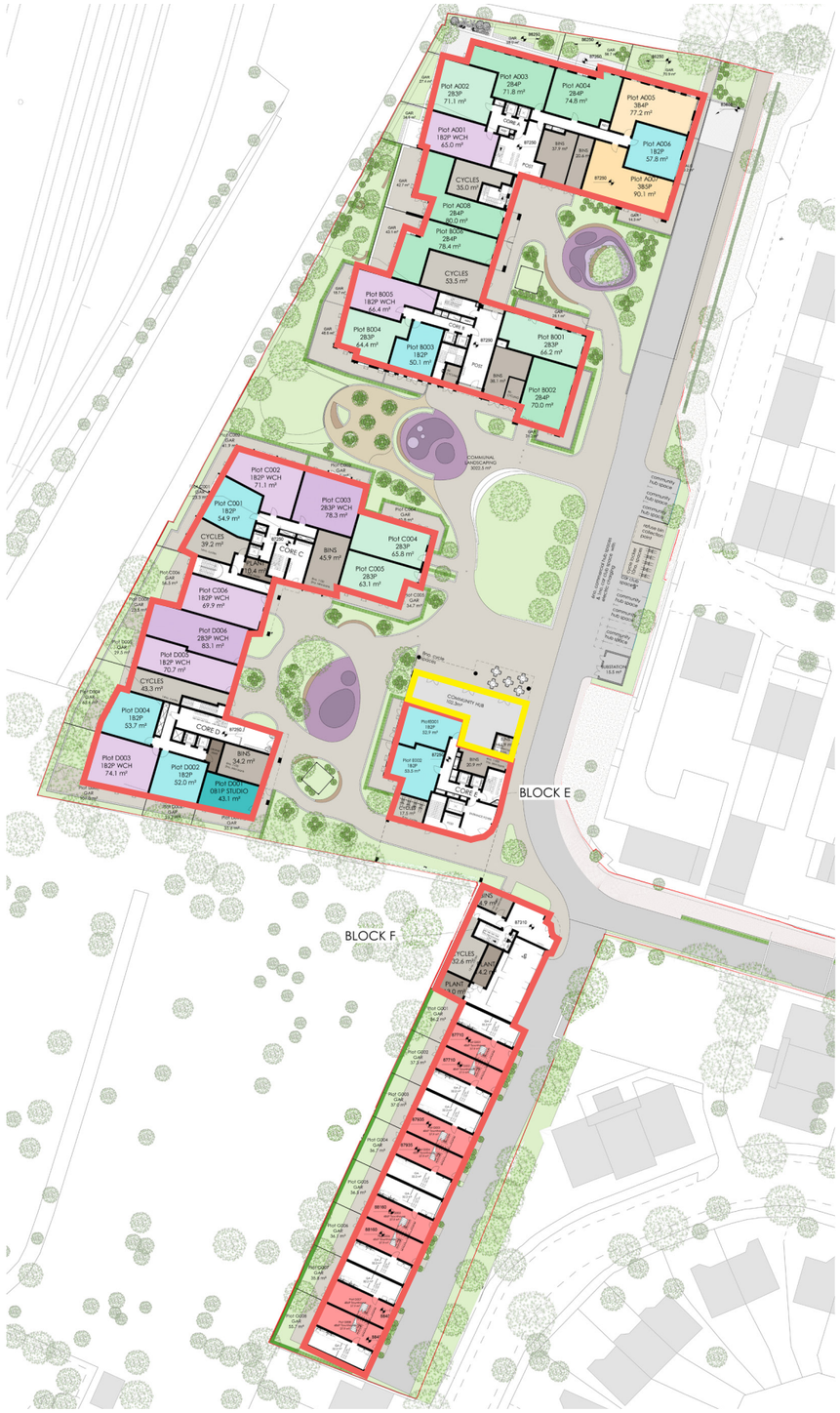
Broadwater Gardens consists of 6 apartment blocks (A-F) and 1 row of terraced housing (G). The proposed scheme will utilise and extend the existing basement for car parking provision, freeing up the ground floor for extensive landscaping. The site layout has been designed with consideration of daylight, access, views and amenity space.

The dwellings meet national space standards and Building Regulations Part M, and incorporate appropriate private amenity spaces.

The development is proposed at 2-9 storeys which is distributed across the blocks as follows:

- Blocks A & B: 7-9 storeys
- Blocks C & D: 6-8 storeys
- Block E: 5-7 storeys
- Blocks F : 2-4 storeys
- Block G, Townhouses : 2-3 storeys





Proposed Uses

Broadwater Gardens will be a majority residential development, with some community use (Class E/F.2)at ground level. A Community Hub of 102.3m^2 (excluding commercial bin store), is located in Block E at ground floor, which will be a flexible space, accommodating the likes of a gym and café.

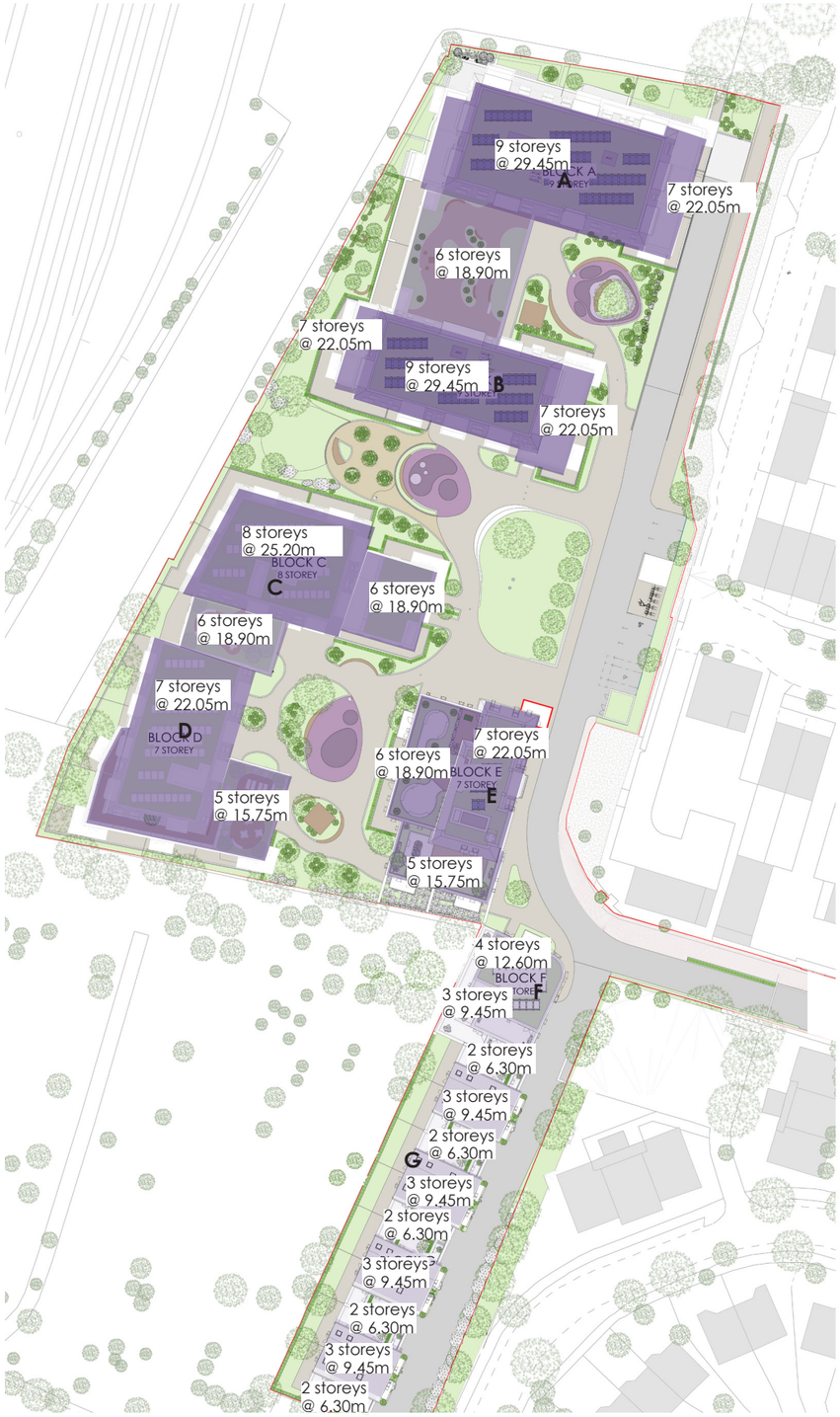
The proposed scheme has a total of 289 homes, with 29no. (10%) proposed to meet Part M4(3) standards for wheelchair users. All other dwellings will meet Part M4(2). The affordable housing provision is 29 dwellings (10%) at a split of 31% Social Rented and 69% Shared Ownership

The proposed mix is as follows:

Occupancy	**Number**	**Percentage**
Studio	12	4%
1B 2P	90	31%
1B 2P WCH	27	9%
2B 3P	58	20%
2B 3P WCH	2	1%
2B 4P	66	23%
3B 4P	16	6%
3B 5P	10	3%
4B 6P House	8	3%
TOTAL	289	100%

The proposed GIA is broken down as follows for both the residential and commercial areas, including the basement car park levels:

Block/Area	**Residential GIA (m^2)**	**Commercial GIA (m^2)**
Basement Level 01	5,969.9	n/a
Basement Level 02	2,073.1	n/a
A&B	11,962.4	n/a
C&D	8147.7	n/a
E	2,466.0	112.4 (incl bin store)
F	688.3	n/a
G	1,553.3	n/a
TOTAL	32,860.7	112.4



^ Proposed massing, heights are taken from ground level

Proposed Building Heights

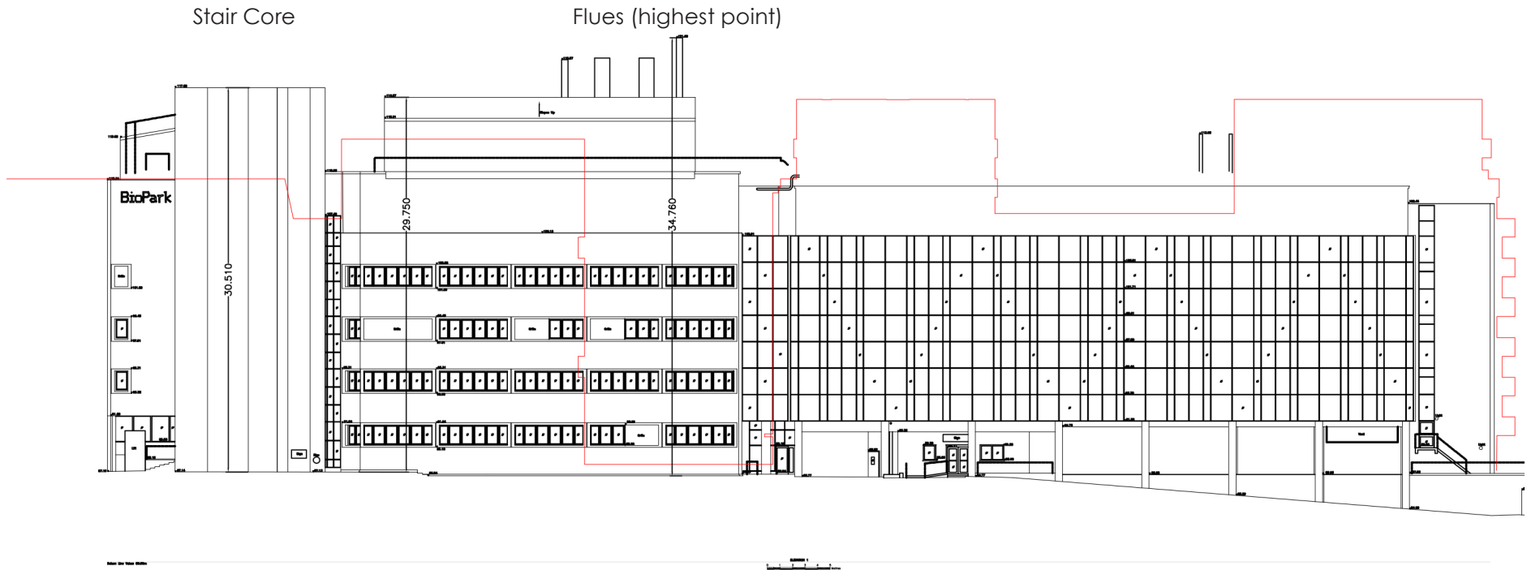
The proposed massing steps from 2 storeys to 9 storeys, from the south to the north of the site. This is in line with the Broadwater Road SPD strategy, with regards to the height progression across the area.

Taller massing has been located towards the north of the site, further away from the lower housing which exists nearby to the south. The site layout ensures that there will always be a naturally well lit landscaped area at any given time of day, as the sunlight moves from east to west. The setbacks provide optimum views looking westwards out across Welwyn Garden City.

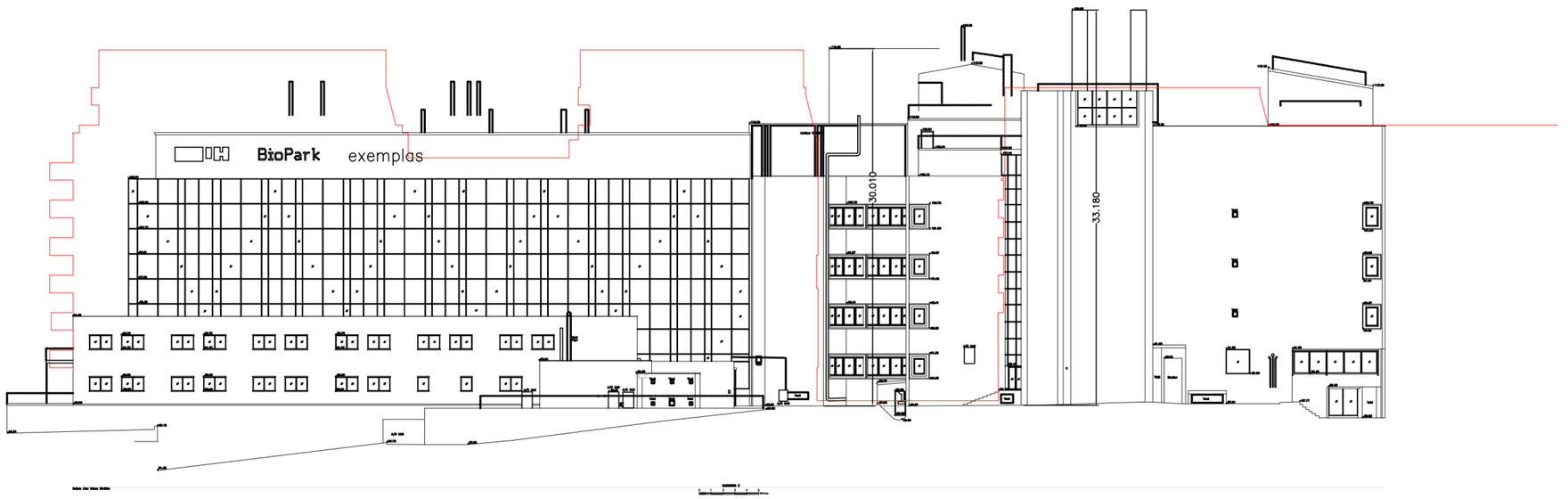
Block F is 2 to 4 storeys high, linked to a series of townhouses varying between 2 and 3 storeys in height. The neighbouring housing located on Broadwater Crescent is 2 storeys, this therefore respects the existing heights in the area.

The existing Biopark building, with its substantial plant rooms, is a maximum of 30.51m high. The proposed development will be approximately 1m lower than this, at the tallest blocks, which includes roof level ancillaries such as lift overruns.

The proposed scheme is 29.45m at the highest point (roof parapets). The tallest elements are positioned to the north of the site. Towards the south, the building height drops to 7.16m. There are a number of breaks in the massing to allow new views and light through.



^ Existing east elevation with proposed building overlaid in red



^ Existing west elevation with proposed building overlaid in red

Existing Elevations

The existing building is currently tallest towards the south of the site, where it is 30.51m at the stair core. A number of flues and plant rooms also add to the bulk of the mass, bringing the highest point to 34.76m.

The massing does not step down greatly across the site, and therefore obstructs any views from east to west. The positioning of the highest elements at the south of the site blocks a lot of daylight onto properties around Penn Way and BioPark Drive during the latter half of the day.

Key:

Proposed Building



^ Proposed massing

Massing Strategy

The proposed scheme has been designed to break up the existing massing of the site. Through the creation of landscaped courtyards between blocks, variations in height and mansard roofs, the proposed massing increases permeability through the site as well as light penetration. Only 34.7% of the site is proposed for development, which ensures that the Garden City principles are celebrated and a significant improvement to the site's biodiversity is made.

The majority of the height is to the north and west of the site, which provides a buffer between the remainder of the development and the railway line and warehouse site. This also removes the current bulk from the east, giving breathing space to the existing dwellings along Penn Way.

Although the existing building is five storeys high, the large floor to ceiling heights and extensive roof plant, bring the maximum height of the laboratories to approximately 30.51m, excluding flues. This equates to approximately 10 residential storeys. The roof plant is a solid visual element that reads as part of the main structure.

Emerging new development to the north of the site, in the form of The Wheat Quarter, has been approved for a range of storeys with the highest being 9 storeys. This context has been taken into account when deciding upon the appropriate strategy. The proposed scheme is 2/3 storeys in the south, adjacent to the 2/3 storey residential buildings on Broadwater Crescent, and rises to 9 storeys in the north west. This stepped massing allows for optimum sun penetration into the landscaped areas and the apartment interiors. The apartment blocks have been designed to promote the number of dual aspect dwellings and deep flat layouts have been avoided.



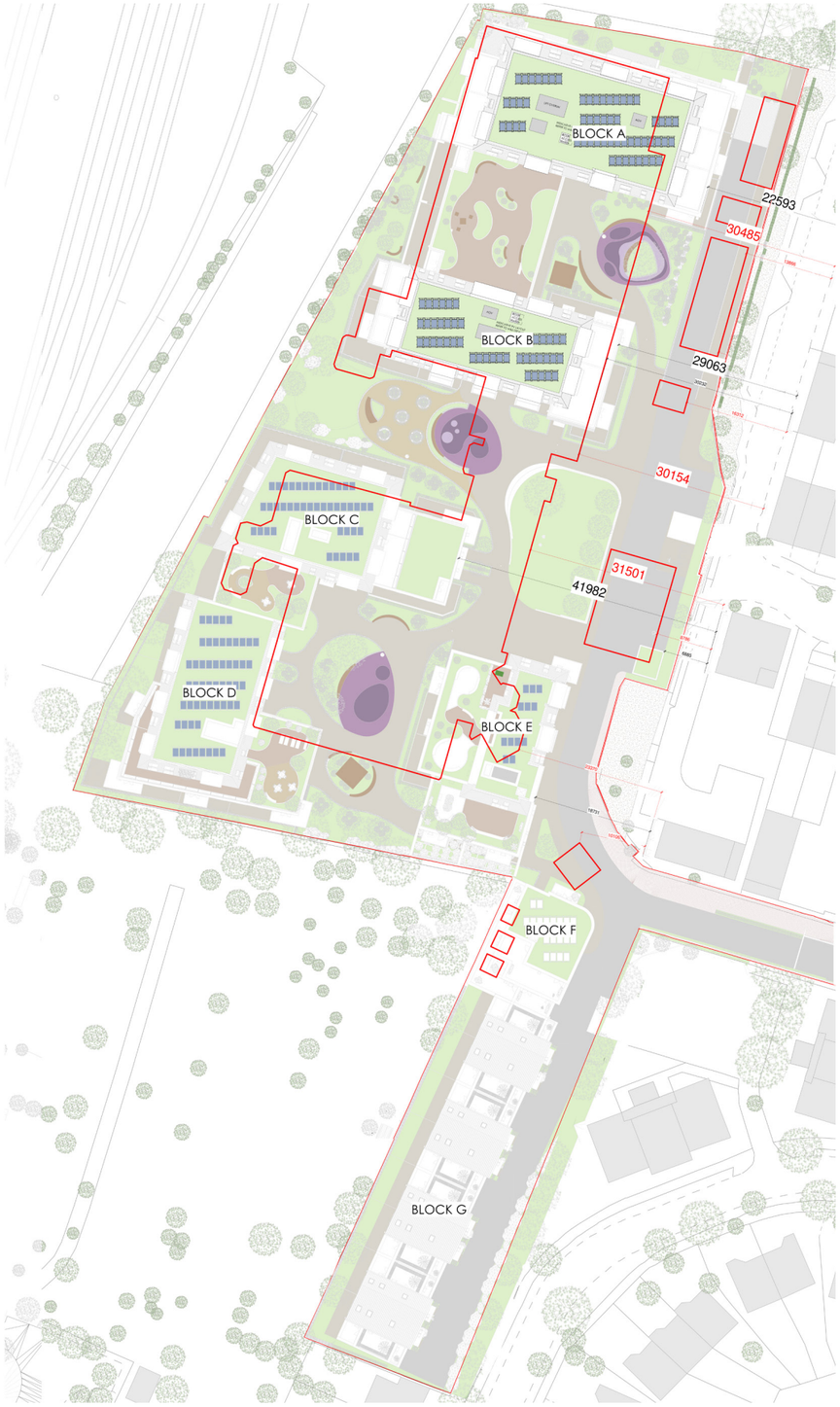
^ Existing & proposed massing overlay - view from south-west

Existing Buildings



^ Existing & proposed massing overlay - view from south-east

Existing Buildings



^ Site Roof Plan to show Biopark buildings overlaid over the proposal

Existing & Proposed Massing

In the 3D views adjoining, the existing massing is shown in red with the proposed massing overlaid. The images show that the proposed massing responds to the existing massing, concentrating taller elements to the north-west corners of the blocks.

The courtyard layout of the blocks improves visual permeability allowing distant views through the site particularly from the east and west. The creation of townhouses respects the surrounding family homes providing a transition from the taller massing to the north, the emerging Wheat Quarter, and the two storey homes of Broadwater Crescent. The stepping of massing within the main site has also been simplified to create a refined series of usable roof terraces.

The existing Biopark buildings have been overlaid, on the adjacent proposed site plan, as a wireframe. It demonstrates the change in mass in terms of scale and distribution across the site. The proposed scheme has both reduced the overall bulk on the site and introduced more views through, as previously mentioned.

The distances to the existing residential buildings is shown in red (Biopark) and black (proposed). Overall, the distances have increased by 10.48m-33.20m for the proposed scheme and, in some areas, the mass has been totally removed.

Key:

- Biopark Buildings
- X — Biopark dimension
- X — Proposal dimension



4.2 Appearance & Materials

The scheme has been developed with inspiration from the surrounding heritage assets and Welwyn Garden City principles.

Key architectural features range from industrial black framed windows and art deco curves, to the more domestic mansard roofs and bronze dormers. The balance between the industrial and residential aesthetics is representative of the site location, it being within the the historic industrial area of Broadwater Road West and yet neighbouring a number of residential developments. The material palette of red multi brick, white brick and terracotta tile, ensures that the scheme blends well within its context whilst elevating the area through contemporary design.

The following pages explain the key design principles for each block in further detail.

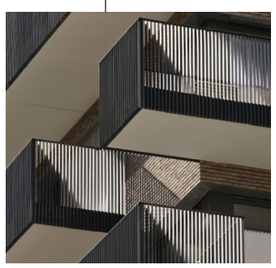
West Elevation Blocks A&B, C&D, Elevation Principles



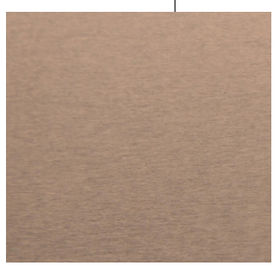








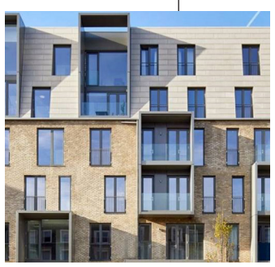
^ Projecting Balconies



^ Brushed Bronze Metal



^ Red Brickwork



^ Framed balconies



^ Light Brickwork

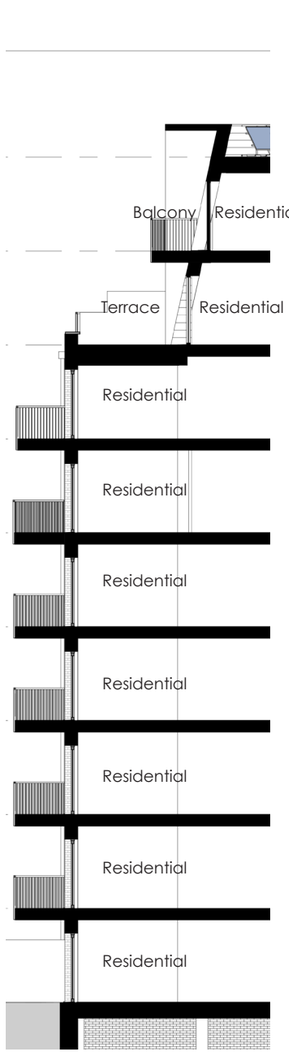


^ Tiled Mansard

Bay Studies, Blocks A&B

Materials Key

1. Red Brickwork, Stretcher Bond
2. Light Brickwork, Stretcher Bond
3. Brushed Bronze
4. PPC Aluminium 'Black' Metal Window
5. PPC Aluminium 'Bronze' Metal Window
6. PPC Dark Black Metal Railings
7. PPC Bronze Metal Railings
8. Red Brickwork, Vertical Stack Bond
9. Light Brickwork, Vertical Stack Bond
10. PPC Projecting Canopy
11. PPC Slatted Garage Door
12. Terracotta Tile



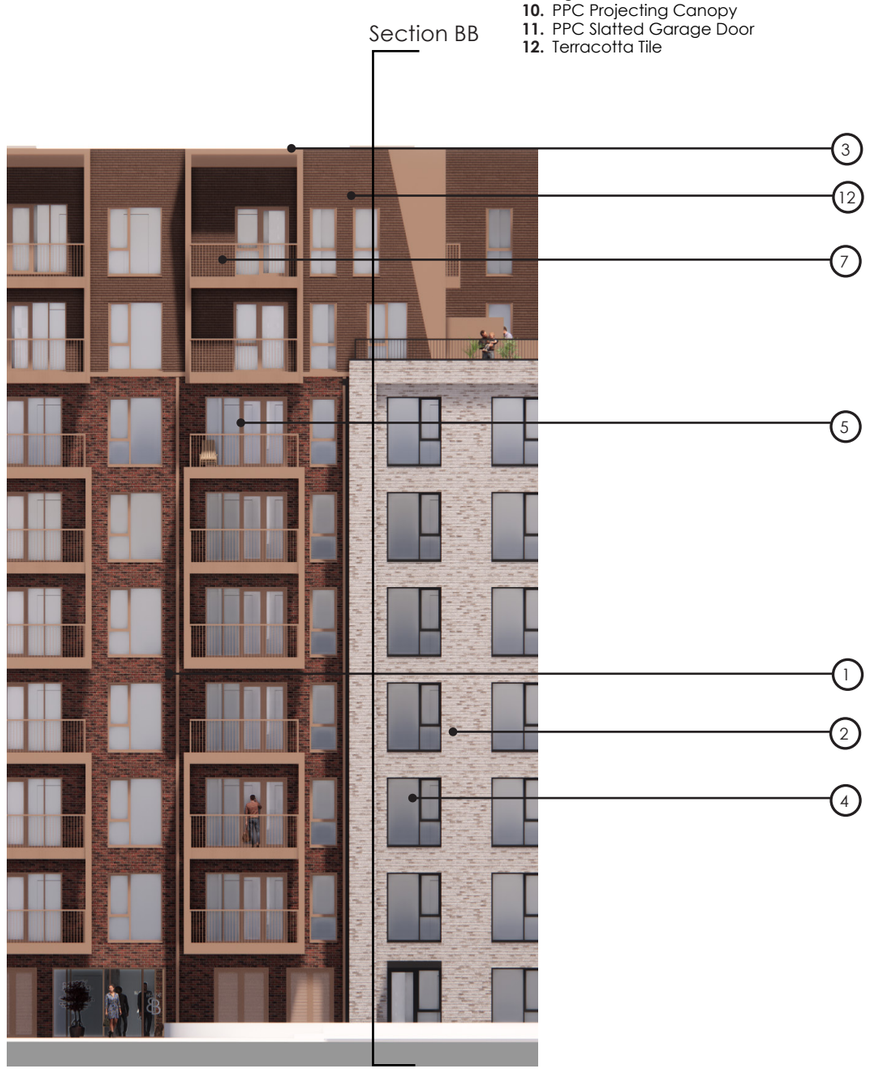
^ Section AA



^ Block A West Elevation



^ Section BB



^ Block B South Elevation



Detail Studies, Blocks A&B : Mansards



^ Block A South Elevation within courtyard



^ Block A mansard with amenity dormers



^ Block A private and communal amenity



^ Rainwater goods are proposed in colours to match the external openings, in order to accent and compliment the building form. A neat bronze box gutter trims the edge of the tiled mansard.

Materials Key

1. Red Brickwork, Stretcher Bond
2. Light Brickwork, Stretcher Bond
3. Brushed Bronze
4. PPC Aluminium 'Black' Metal Window
5. PPC Aluminium 'Bronze' Metal Window
6. PPC Dark Black Metal Railings
7. PPC Bronze Metal Railings
8. Red Brickwork, Vertical Stack Bond
9. Light Brickwork, Vertical Stack Bond
10. PPC Projecting Canopy
11. PPC Slatted Garage Door
12. Terracotta Tile

Bay Studies, Blocks C&D

Materials Key

1. Red Brickwork, Stretcher Bond
2. Light Brickwork, Stretcher Bond
3. Brushed Bronze
4. PPC Aluminium 'Black' Metal Window
5. PPC Aluminium 'Bronze' Metal Window
6. PPC Dark Black Metal Railings
7. PPC Bronze Metal Railings
8. Red Brickwork, Vertical Stack Bond
9. Light Brickwork, Vertical Stack Bond
10. PPC Projecting Canopy
11. PPC Slatted Garage Door
12. Terracotta Tile

Section AA



^ Section AA

^ Block C East Elevation

Section BB



^ Section BB



^ Block D West Elevation

Detail Studies, Blocks C&D : Balconies

Materials Key

1. Red Brickwork, Stretcher Bond
2. Light Brickwork, Stretcher Bond
3. Brushed Bronze
4. PPC Aluminium 'Black' Metal Window
5. PPC Aluminium 'Bronze' Metal Window
6. PPC Dark Black Metal Railings
7. PPC Bronze Metal Railings
8. Red Brickwork, Vertical Stack Bond
9. Light Brickwork, Vertical Stack Bond
10. PPC Projecting Canopy
11. PPC Slatted Garage Door
12. Terracotta Tile



^ Both inset and cantilever balconies to create variation and for privacy



^ Bronze frames surrounding inset balconies within red brick



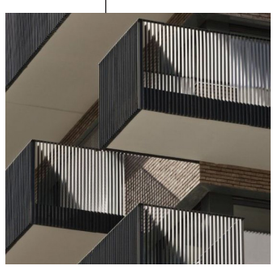
^ Black metal corner balconies to match black frames within white multi- brick

East Elevation Block E, Elevation Principles





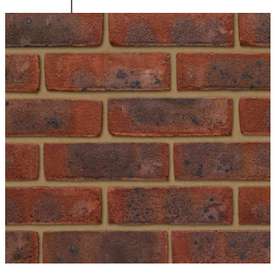
^ Roche building precedent



^ Projecting Balconies



^ Light Brickwork



^ Red Brickwork

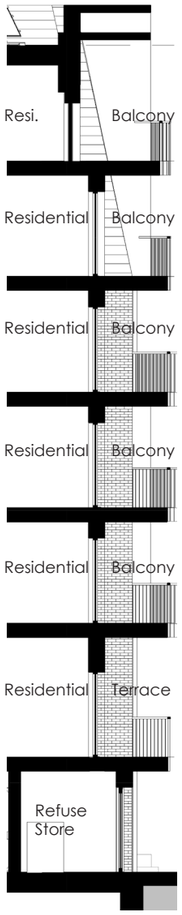


^ Tiled Mansard

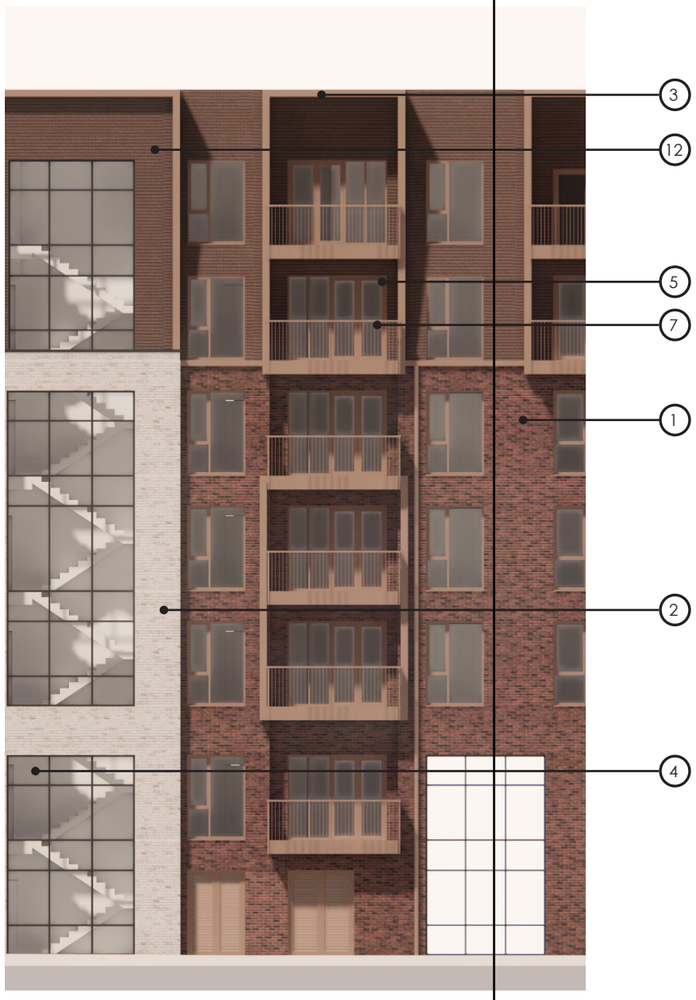
Bay Studies, Block E

Materials Key

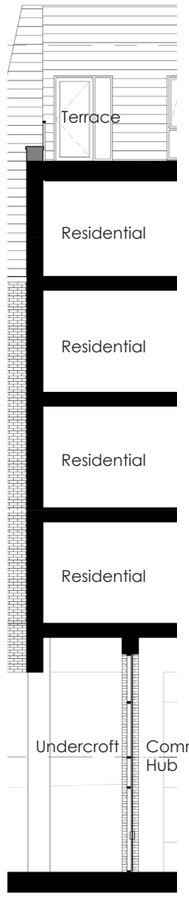
1. Red Brickwork, Stretcher Bond
2. Light Brickwork, Stretcher Bond
3. Brushed Bronze
4. PPC Aluminium 'Black' Metal Window
5. PPC Aluminium 'Bronze' Metal Window
6. PPC Dark Black Metal Railings
7. PPC Bronze Metal Railings
8. Red Brickwork, Vertical Stack Bond
9. Light Brickwork, Vertical Stack Bond
10. PPC Projecting Canopy
11. PPC Slatted Garage Door
12. Terracotta Tile



^ Section AA



^ Block E West Elevation



^ Section BB



^ Block E North Elevation

East Elevation, Block F, Elevation Principles

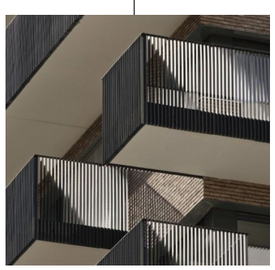




^ Slatted Garage door



^ Light brickwork



^ Projecting Balconies





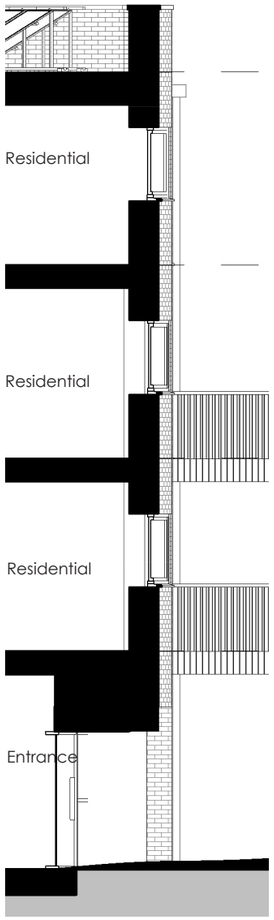
^ Art Deco Precedents

Bay Studies, Block F

Materials Key

1. Red Brickwork, Stretcher Bond
2. Light Brickwork, Stretcher Bond
3. Brushed Bronze
4. PPC Aluminium 'Black' Metal Window
5. PPC Aluminium 'Bronze' Metal Window
6. PPC Dark Black Metal Railings
7. PPC Bronze Metal Railings
8. Red Brickwork, Vertical Stack Bond
9. Light Brickwork, Vertical Stack Bond
10. PPC Projecting Canopy
11. PPC Slatted Garage Door
12. Terracotta Tile

Section AA

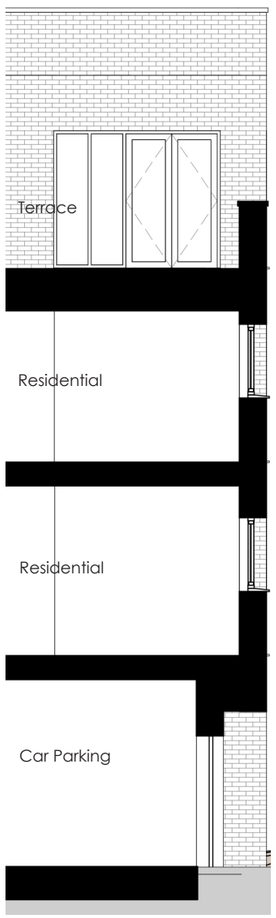


^ Section AA

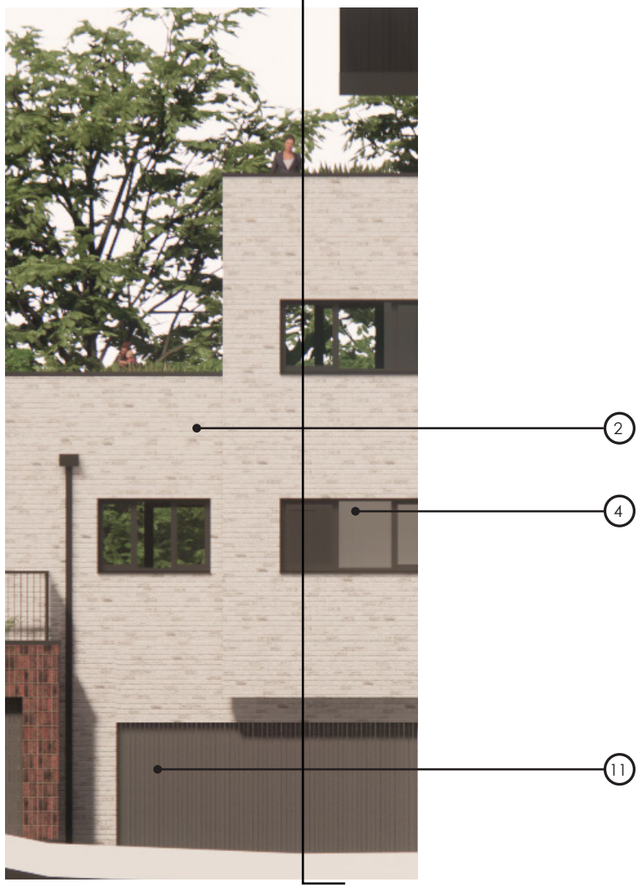


^ Biopark Drive, Bay Elevation

Section BB



^ Section BB



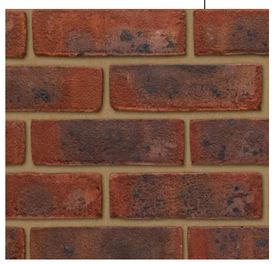
^ Eastern Façade, Bay Elevation

East Elevation, Townhouses (Block G), Elevation Principles





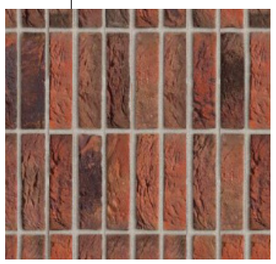




^ Red brickwork



^ Light Brickwork



^ Red Brick Vertical Stack Bond

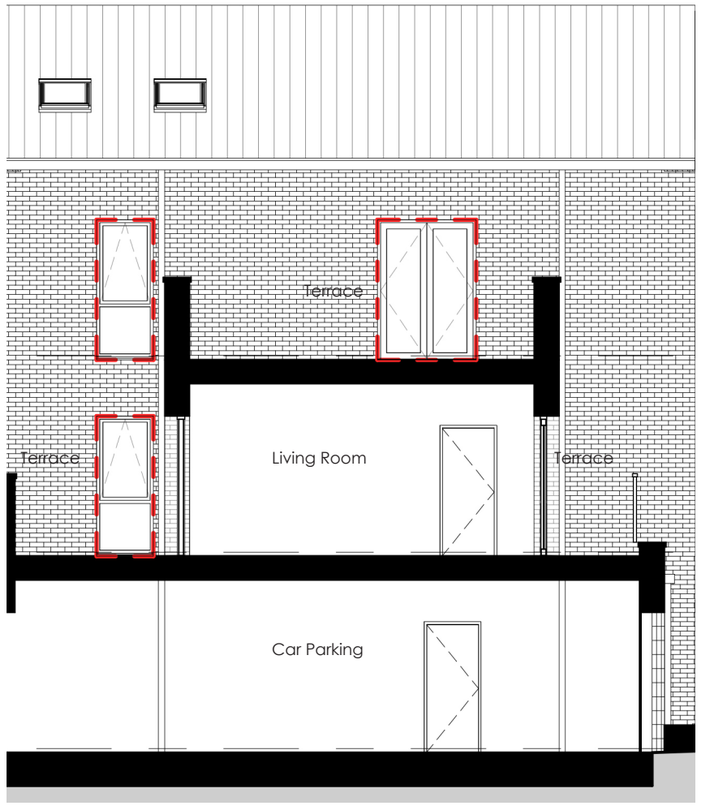


^ Slatted Garage door

Bay Studies, Townhouses (Block G)

Materials Key

1. Red Brickwork, Stretcher Bond
2. Light Brickwork, Stretcher Bond
3. Brushed Bronze
4. PPC Aluminium 'Black' Metal Window
5. PPC Aluminium 'Bronze' Metal Window
6. PPC Dark Black Metal Railings
7. PPC Bronze Metal Railings
8. Red Brickwork, Vertical Stack Bond
9. Light Brickwork, Vertical Stack Bond
10. PPC Projecting Canopy
11. PPC Slatted Garage Door
12. Terracotta Tile



^ Section AA



^ Eastern Façade, Bay Elevation



Block A



Block B



Block C



Block D

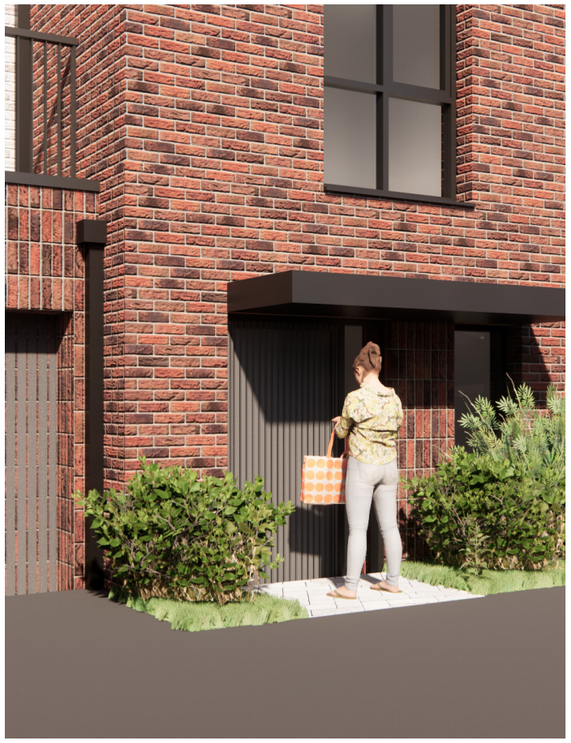
Entrance Studies



Block E



Block F



Block G (Townhouses)

Residential entrances to each of the flatted blocks have been positioned to ensure residents can easily navigate the site and feel safe accessing their homes. Each entrance will have clear signage and lighting. Entrance areas will be flooded with natural daylight via full height glazing.

The entrance to Block E occupies a key visual location at the end of the access road, BioPark Drive. The design of the entrance references the architecture of the local Art Deco Roche Building and creates a welcoming double height space. The entrance provides a larger lift to easily accommodate the movement of cycles to the basement by all residents.

The entrance to Block B has been designed to create both a visual and physical connection between the northern landscaped courtyard and the east-west garden spine at the centre of the site.

In both the apartments and townhouses, residents will be protected from inclement weather by the inclusion of either a canopy or a recessed entrance. Private residential entrances will be separated from main routes and communal landscaping by defensible zones.

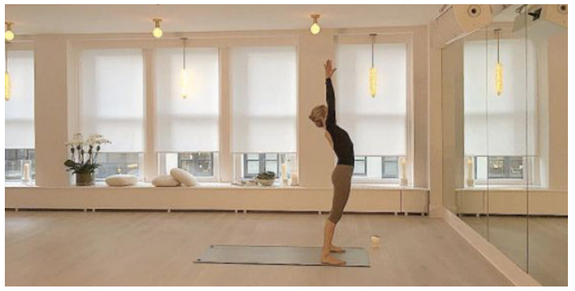

hello!



^ Proposed floor plan



^ Double height space



^ Studio space



^ Coffee shop

Community Hub

The quantum of development on the site supports the inclusion of a community hub, a place where residents can meet and a new living/working community can be fostered. The community hub is located in a prominent position at the entrance to the site. The flexible space is double height, with the potential for a mezzanine floor, and triple aspect providing extensive views to the surrounding landscaped gardens. A potential use is a gym with a small coffee shop, for socialising. The undercroft of the building provides shelter to outdoor seating where parents can sit and supervise their children whilst playing.

Key Features

- Double height, with potential for mezzanine
- Triple aspect
- Tall glazing- maximising daylight
- Covered seating area with views of landscaped gardens
- Provides natural surveillance to gardens
- Clear internal height to u/s of slab = 5.98m

Servicing

A loading bay is provided adjoining the landscaped gardens located on BioPark Drive (see diagram in Section 4.4). A separate commercial bin store is provided located off the access road.

Car & Cycle Parking

A total of 6no. surface car parking spaces are provided for the community hub including one wheelchair bay. Two short term visitor cycle spaces are located beneath the undercroft with good natural surveillance. A single long term cycle space will also be provided.



4.3 Amenity

Communal Amenity

The principle of the landscaping is to create a series of inter-connected communal gardens at the heart of the scheme to reflect the ethos of the Garden City movement. The existing buildings and hard-standing for car parking and vehicle movement means there is no space for amenity. The demolition of the buildings offers the opportunity to create extensive amenity areas and vastly improve biodiversity on the site.

The proposed site building layout will create a variety of quiet and relaxing landscaped spaces shielded from railway noise. The northern block has an eastern orientated courtyard extending to BioPark Drive.

The courtyard blocks are separated via an east - west garden ensuring maximum daylight/sunlight penetration to the landscaped areas throughout the day. The southern block's courtyard opens to the allotments, providing extensive views for the residents, and provides a green/natural envionment link.

Each courtyard will have a unique identity with areas set aside for play and quiet relaxation. The Community Hub (gym/ coffee shop) at ground floor will overlook the main central garden. This will provide a local place for residents to meet, chat and share a coffee.

BioPark Drive will be enhanced by the provision of hedgerows and climbers along its length to create a pleasant and inviting pedestrian route to new residents.

Amenity Type	**Area m ²**
Private Amenity	3950.1
Communal	3968.8
Combined Amenity	7918.9
Average per home	27.4

Site Coverage

Site Area =	12392.4m²
Building Footprint GF =	4295.4m²
Site Coverage =	34.7%



^ Communal Terrace Blocks A&B



^ Communal Terrace Block C



^ Communal Terrace Block D



^ Communal Terrace Block E



^ Site Plan, Amenity

Communal landscaping

Landscaped areas are located between and around each block ensuring amenity space is easily accessible. The site block layout also means the spaces achieve good daylight/sunlight levels throughout the day. These areas will encourage biodiversity through planting and tree provision, as well as accommodating play space for children. By providing large amounts of green space, Broadwater Gardens will uphold the Garden City design concept.

Key Features

- Unified, coherent public realm
- Opportunities for wide variety of amenity uses
- Large community lawn area located at the heart of the development provides opportunities for play, seating and community activities.
- Orchard Hideaway located along the western boundary provides edible fruit for the local community
- Outdoor dining area
- Herb planting integrated into the raised planting beds in key locations providing “pick on the way “ style foraging

Residents’ communal terraces

Communal terraces are provided throughout the blocks, making efficient use of the available roof space. The terraces will have provision for seating, play space and attractive planting for the residents to enjoy. These areas will all also have the advantage of providing panoramic views of Welwyn Garden City and the Hertfordshire countryside beyond.

Each communal terrace will encourage social interaction between residents; this will help foster the formation of a strong community within each building.

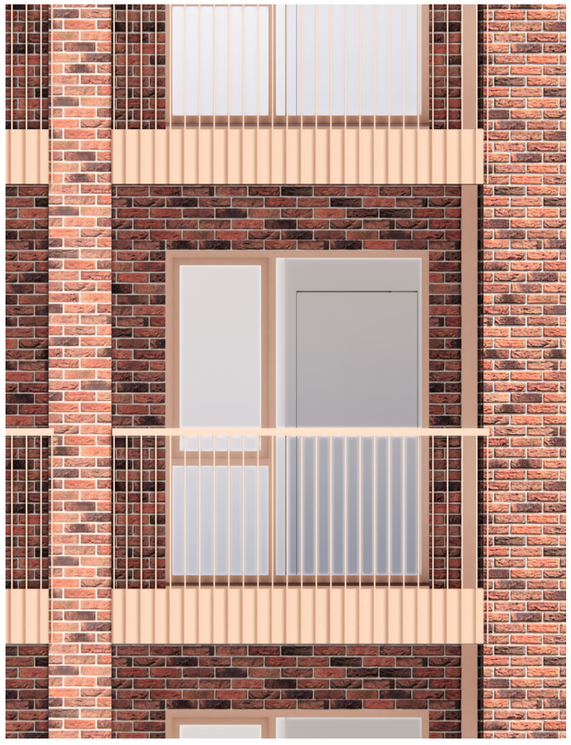
Extensive soft planting will create a natural environment, capturing the garden city principle of access to open space and nature for all.

Key Features

- Roof Terraces provided on various levels to increase quantity of amenity space
- Communal terraces have blue roofs
- Garden Rooms specifically for residents
- Raised planters incorporate ornamental planting and large specimen shrubs provide shelter as well as greening the building facades from wider views
- Formal and informal seating provided, along with sun beds in sunny areas



Private Terrace



Fully Recessed Balcony



Semi Recessed Balcony



Projecting Balcony

Private Amenity

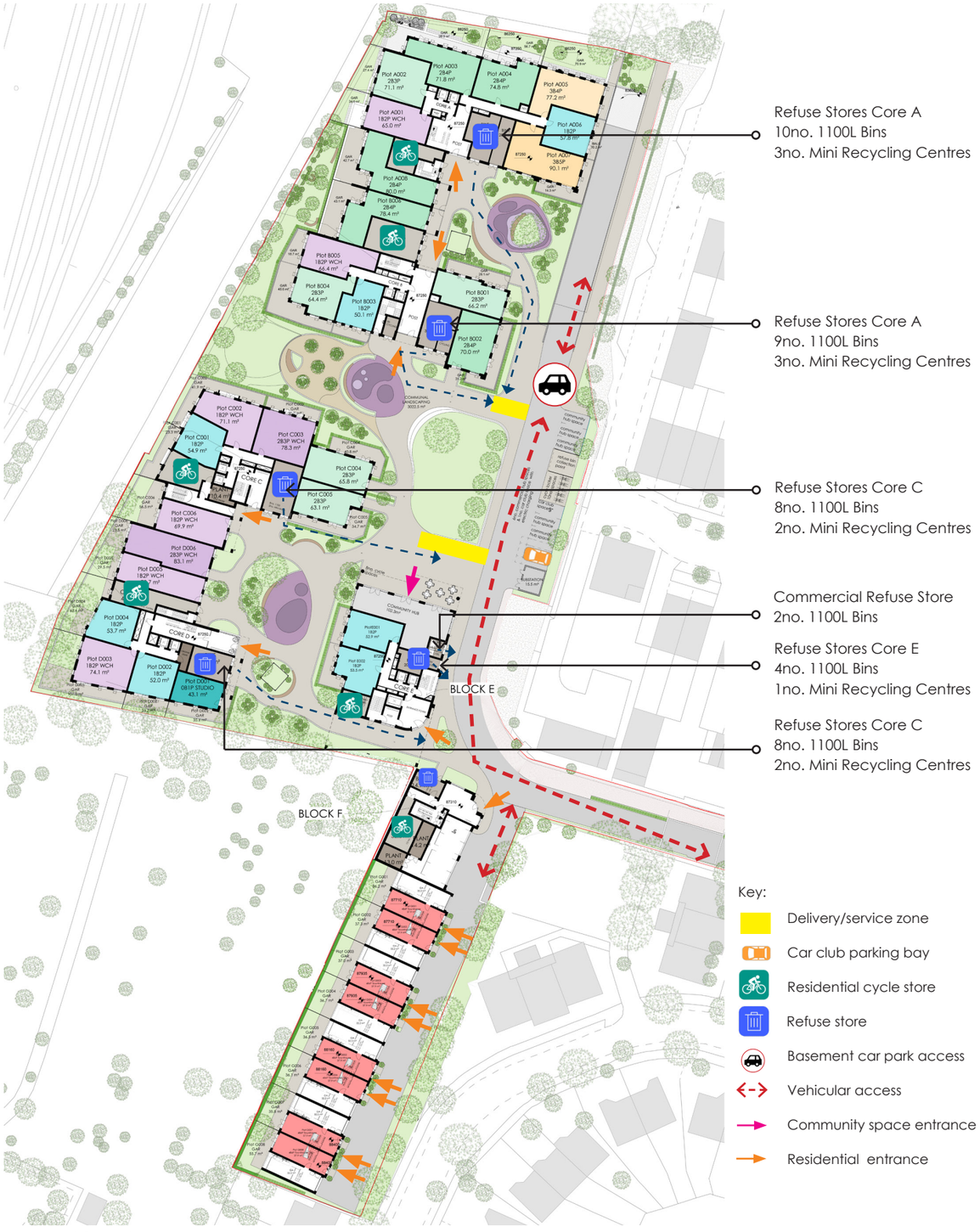
As well as communal gardens and roof terraces each home will have access to private amenity in the form of either a balcony or terrace.

Balconies

- Fully recessed balconies - These provide privacy and solar shading/protection from wind to residents
- Semi recessed balconies - These provide privacy and some solar shading/ protection from wind to residents.
- Projecting Balconies - In the more private areas of the site, cantilevered balconies have been provided. These allow for greater views and sun exposure.

Private Terraces

The terraces provide larger areas of private amenity and are either fully exposed or sheltered by balconies above.



^ Proposed Ground Floor

4.4 Parking, Access & Servicing

Access

Pedestrian and vehicular access to the site will be via BioPark Drive. Residential entrances can be easily accessed via pedestrian paths within the landscaped areas. Basement car parking is accessed via BioPark Drive which terminates as an access ramp to the basement.

Residential Refuse

Cores A & B, C, D & E have refuse and recycling stores located at ground floor. Residents exit the entrance cores and the refuse store is within close proximity. Resident travel distances do not exceed 30m. On collection day refuse or recycling bins are collected and emptied via BioPark Drive. On cores A, B, C & D bins will be moved to the central hard landscaped area or the street for collection. Bin stores have been provided with 1500mm wide double doors and level access routes. Cores E and F have refuse and recycling stores located within the 15m bin drag distance to the street. The houses will each have a 240L refuse and 240L recycling wheelie bin stored within each undercroft space. On collection day residents will move the bin to the hard-standing collection area located along the street in-front of the houses. The refuse vehicle will reverse a maximum of 12 metres along the street and the bin drag distance from the hard-standing area to the vehicle will not exceed 15m. Please refer to tracking drawings and the Transport Assessment produced in support of the application by i-Transport.

Commercial Refuse

The community hub ill have a separate refuse store, bins will be collected from BioPark Drive. Bin drag distances do not exceed 15m.

Fire Vehicles

A pump appliance can access the buildings via BioPark Drive. The vehicle can turn within the hard landscaping at the centre of the site. Horizontal dry risers have been provided within the landscaping based on advice from the fire consultant, BB7. The townhouses will be accessed via the pump vehicle reversing a maximum of 20m along the street in-front of the houses to access a dry riser provided within the street.

Servicing

A servicing bay has been provided within the hard landscaping at the centre of the site. This space will also serve as a drop- off taxi space and delivery space for residents. The commercial unit will also use this bay.

Deliveries

Post for residential properties will be delivered to secure letter boxes at the ground floor of each core. For other deliveries, delivery vehicles can use the loading bays located in the central landscaped area. The townhouses will each have individual letter boxes.



^ Proposed Basement, Level 01

^ Proposed Basement, Level 02

Car Parking

On-site parking will be provided to support the increase in new homes. The full Car Parking Strategy can be found in the Transport Assessment by i-Transport. The existing basement will be extended to provide access from cores A, B, C, D & E. A total of 199no. spaces are provided in the basement including 29no. wheelchair spaces and 22no. visitor spaces. Block F will have 4no. garage car parking spaces and the houses each have 2no. undercroft parking spaces. 1no. car club space is proposed at street level ensuring accessibility to all residents. The community hub is provided with 6no. surface car parking spaces including one wheelchair bay.

Type of Space	No.
Basement Standard Residential	148
Basement Wheelchair Residential	29
Basement Visitor	22
Surface Residential	20
TOTAL RESIDENTIAL	**219**
Surface Standard Commercial	5
Surface Wheelchair Commercial	1
TOTAL COMMERCIAL	**6**
Car Club Bay	1
TOTAL PARKING	**226**
Ratio	**0.78**

A total of 40no. standard bays and 4no. wheelchair bays within the basement will have provision for electrical charging points. At surface level the car club space, one commercial space and one space within the garage of Block F will have charging points. In total, this equates to 47no. spaces approximately 21% of all spaces. Half of this total, (10% of overall total) will be actively fitted from the outset with the remaining being passively fitted to allow for future connection.

Long-term & Surface Level Cycle Parking

In line with Welwyn Hatfield's SPD cycle spaces have been provided at a rate of one space per home. In total this equates to a requirement for each building as follows:

Residential Core	No.
A & B	146
C & D	101
E	29
F	5
Townhouses	8
TOTAL	289

Cycle stores have been provided at ground floor on each core to allow easy access for families. The remainder of cycle spaces have been provided in the basement via a mixture of Josta and Sheffield stands. A larger lift has been provided in Block E allowing easy cycle access to the basement. Visitor cycle parking has been provided in the basement, a total of 29 spaces have been provided equating to approximately 10% provision.

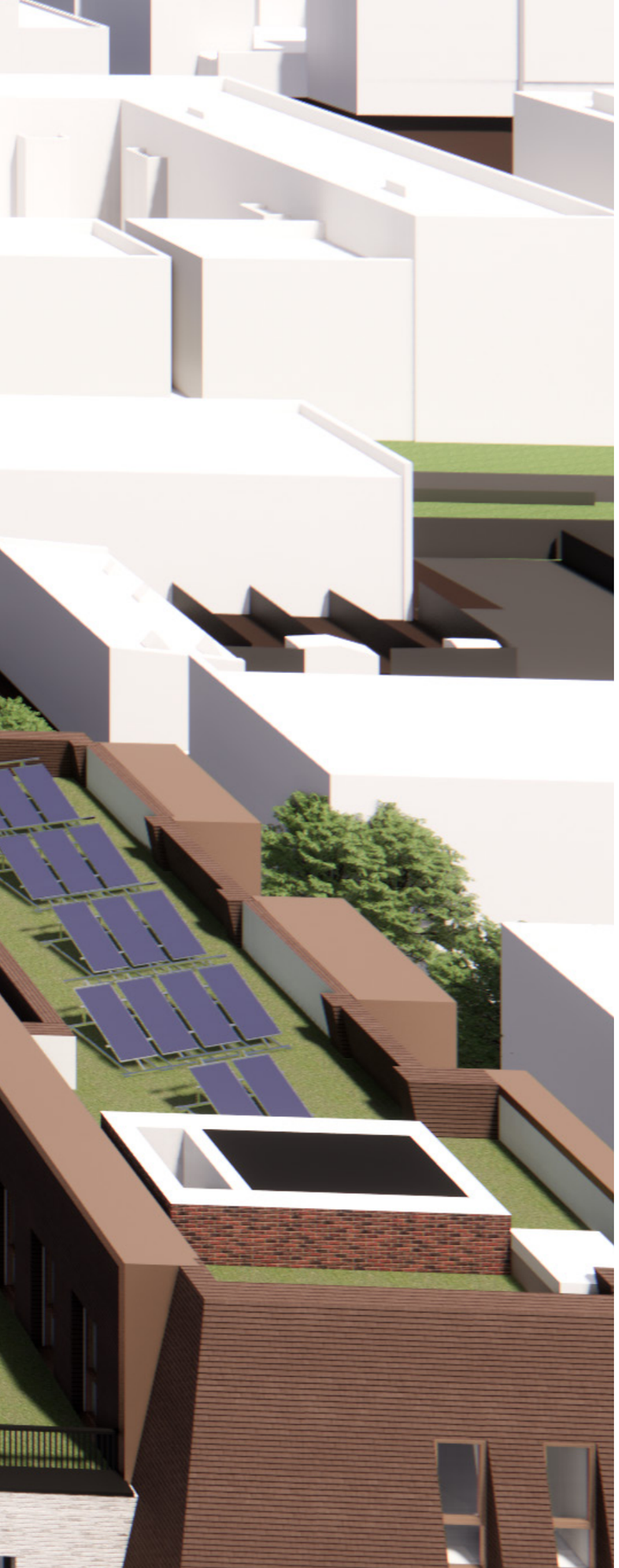
Commercial Cycle Parking

The size of unit being provided for the Community Hub requires the following cycle spaces:

Type	No.
Short Term	8
Long Term	1
Total	9

Secure short-term spaces are located beneath the building undercroft with the long term space provided within the commercial unit.





4.5 Energy, Sustainability & Comfort

Broadwater Gardens will follow the national strategy for Carbon saving and sustainability; and will aim to become a comfortable place to live in terms of noise, daylight and air quality. First and foremost, the strategy will be passive design through the architecture, layout and building fabric.

In the following pages, the strategy will be outlined and further details can be found in each consultant report. The key areas are as follows:

- Energy & Sustainability
- Drainage
- Air Quality & Ventilation
- Acoustics
- Daylight & Sunlight
- Ecology & Biodiversity (See Section 5.4)

Energy & Sustainability



The scheme will aim to be energy efficient and sustainable in line with local policy requirements. The national strategy is to design with Carbon saving in mind and this will be achieved in the following areas:

Transport
There is a drive towards car-free development in Welwyn and the residential parking is therefore proposed at a 0.76 ratio, with 20% of the spaces for electric vehicle charging. There is also secure cycle storage at a rate of one space per dwelling. This will not only encourage residents to travel via bicycle or public transport but will also discourage visitors from driving into the development. Please see the transport report for further details.

Water & drainage
Water usage and drainage will be key to both the internal and external design. The aim is for each user to not exceed 125L of water per day and detail design will provide further specification for this. The surface water runoff has been carefully considered in the landscape design. An attenuation basin is located between Blocks B and C and there will be permeable paving throughout. At roof level, terraces will have blue roof construction in order to further attenuate the water runoff and green roofs will be provided at the highest levels on each apartment block. The FRA and Drainage Strategy provides further information.

Fabric
The building envelope will play a key role in maintaining good thermal and acoustic comfort as well achieving good air tightness. The SAP assessor has provided target values for each element of the building fabric in order to achieve an energy efficient scheme when the energy sources have been taken into consideration. Party walls will have full fill cavity insulation to ensure that there is zero heat loss within. The aim is to exceed Building Regulation values in terms of U-values and acoustics.

Heating, services, and renewable technology
The scheme will have an Energy Centre located within the basement, which will serve the apartments for heating and hot water. The heat source will be gas, and the townhouses will have individual gas boilers. There will be an MVHR system within dwellings to ensure there is a good level of background ventilation. Low energy lighting has been proposed throughout the scheme. It is calculated that more than 10% of carbon saving can be achieved through passive measures such as thermal glazing, and from renewable technologies and Photovoltaic Panels are proposed for each block at the highest roof levels.

Waste
Broadwater Gardens will have a site waste management plan due to the scale of the development, this will ensure that refuse and recycling is dealt with in an efficient and reliable way. Each block will have a dedicated refuse store and recycling centre and it is proposed that each kitchen has a 30L recycling bin.

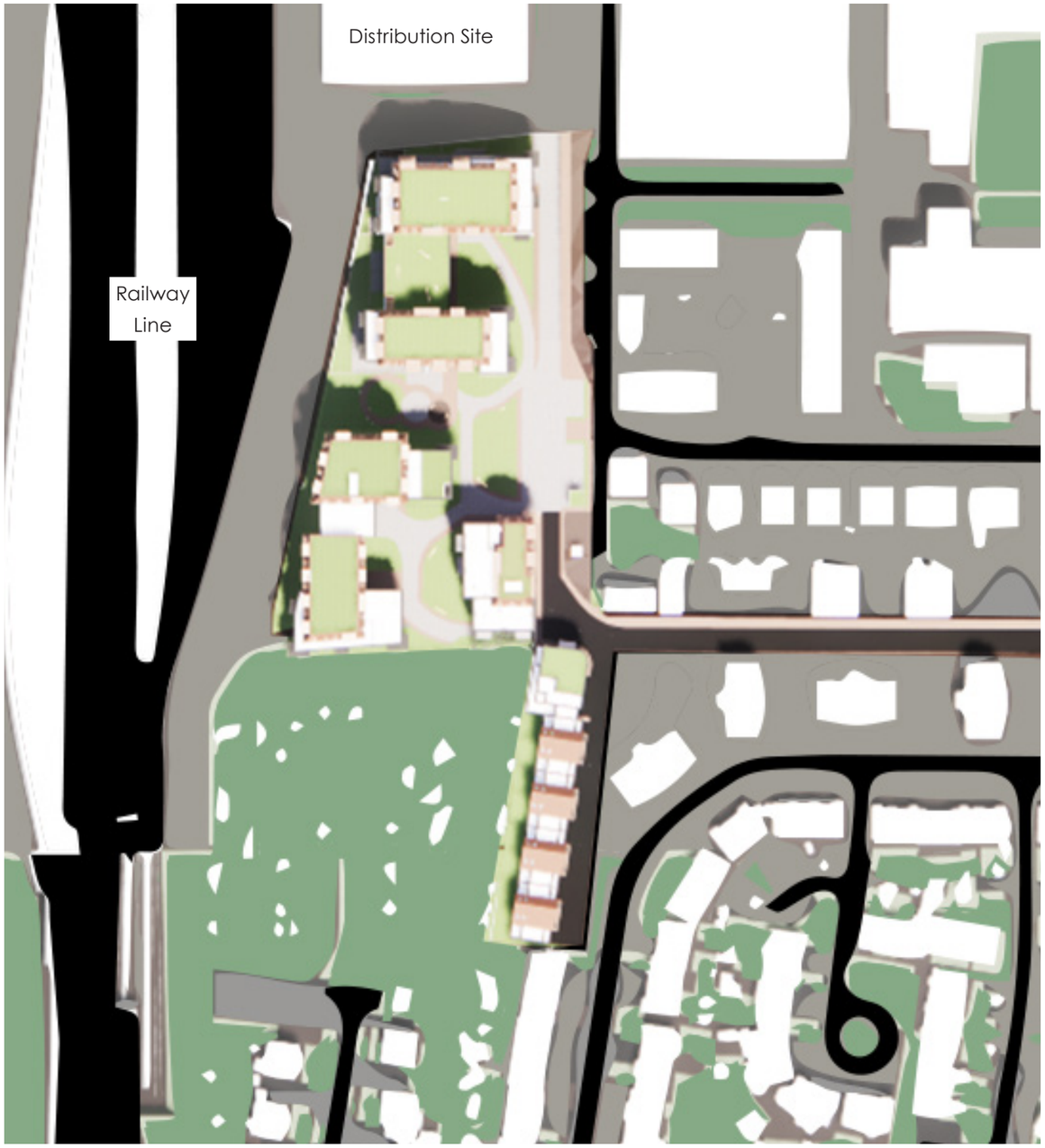
Landscape & ecology
The minimum requirement is for a 10% net improvement in biodiversity habitat. At over a 750% gain, the scheme far surpasses this due to the industrial nature of the current site use. Please refer to Section 5.4 and the ecology report for further details.

Air Quality & Ventilation

An air quality assessment has assessed the potential for air quality impact at the construction and operational stages. Both the Environment Agency and the Local Authority monitor and regulate sites which may cause air pollution. The assessment shows that the end users will be at low risk to any potential existing poor air quality. The main existing source for the proposed development is from the trains using the adjacent railway line.

The Environment Agency regulated 'at risk' sites are not within 500m of the site, and therefore do not pose any significant risk. Predicted NO2 and fine particle concentrations levels are below the limit values and are therefore not a risk. The overall air quality around the site is considered to be good. Please refer to the air quality assessment for further information.

A Mechanical Ventilation with Heat Recovery (MVHR) system is proposed in order to provide a good level of background ventilation when windows are closed. Each dwelling has been designed to have at least one openable window per room and, where possible, many living spaces are dual aspect which promotes natural cross ventilation. Due to potential noise from the railway and the northern distribution site, acoustic trickle vents have been advised to the North and West façades. The majority of circulation spaces will have an openable window for passive ventilation, in order to avoid overheating.



Acoustics

The biggest noise sources are from the railway line and the distribution site to the north. This means that the dwellings on the western and northern areas of the site will be at most risk to noise, and therefore will most likely need to keep their windows closed at certain times of the day. In order to ensure these dwellings still get adequate ventilation, acoustic trickle vents are advised.

To keep noise levels acceptable in ground floor amenity spaces, an acoustic defence is proposed along the boundary to the north and west in the form of a solid boundary treatment. The courtyard spaces and dwellings to the east and south of the site will have adequate noise levels, due the building form creating an acoustic buffer to these areas.

Daylight & Sunlight



The buildings have been designed to optimise both the daylight received within the development and to improve the light to the surrounding properties.

Key design features include:

- Opening up the eastern side of the site by introducing a central landscaped area, where previously this had been occupied by building mass. This improves the daylight to neighbouring properties;
- 21m breaks between blocks which allows light and views further into the site and prevents overshadowing. Landscaped areas are located between blocks with a variety of orientations, allowing residents to have a number of sunlit amenity spaces all year round;
- A large number of multi-aspect units, with any single aspect units being located on the east, south and west facades;
- Full height windows to maximise the amount of light penetration and the amount of sky visible from within dwellings;
- Living areas which are no deeper than 6m, allowing light to reach to the back of rooms.

The scheme has been assessed to BRE Guidelines, to test the daylight/sunlight within the proposed development. The assessment, carried out by Anstey Horne, finds:

- The vast majority of proposed units will receive good levels of daylight and sunlight that is above the BRE guideline values;
- The proposed buildings will not cause any significant daylight and sunlight impact on neighbouring properties. Nearly all of the rooms will be above BRE guideline values whereas those that aren't will not experience a significant adverse impact;
- The amenity areas will experience high levels of daylight and sunlight throughout the day.

Please refer Anstey Horne's report for further details.





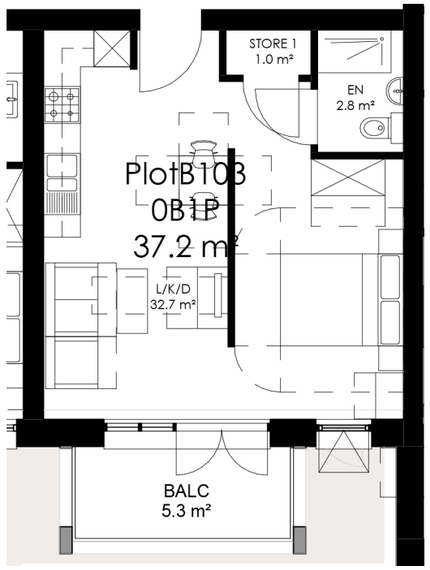
< 2 Bed 4 Person Flat Interior, Block B

4.6 Residential Qualitative Review

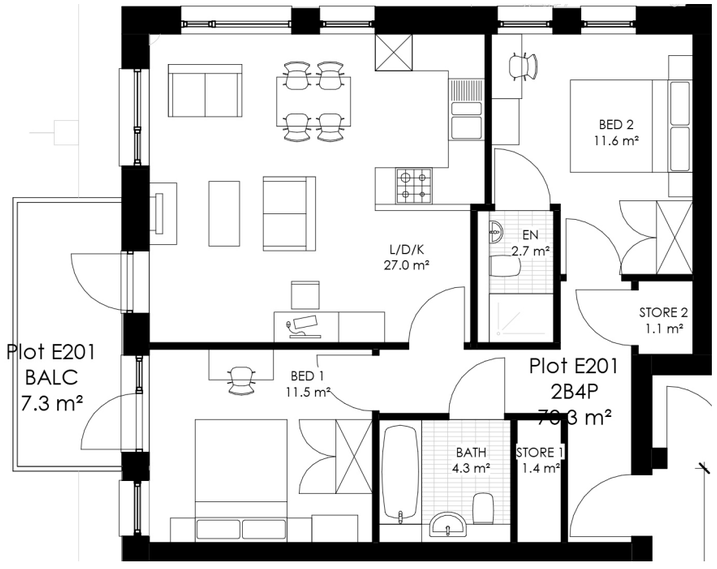
The apartments and houses have been designed to comply with national standards and policy, as well as local guidance which will improve the standard of living for the future residents. The following areas will be discussed in further detail:

- Residential Typologies
- National Space Standards
- Building Regulations, Part M & accessibility
- Building Regulations, Part B & Fire
- Secured by Design

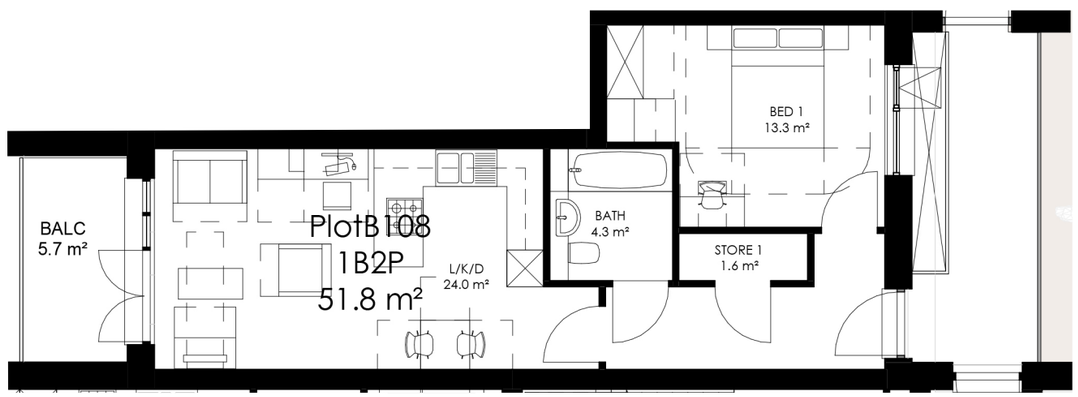




^ Typical Studio Flat



^ Typical 2 Bed 4 Person, Flat



^ Typical 1 Bed 2 Person, Deck Access Flat

< 2 Bed 3 Person Flat Interior, Block D

Residential Typologies

The buildings provide a high quality mixture of studios, one, two, three, and four bedroom family homes. A variety of typologies have been provided including deck access homes and townhouses. The mix provided will help to establish a new community within Welwyn Garden City, attracting both families and young professionals. Play space for varying ages has been designed into the landscape proposals and there are communal roof terraces for additional amenity. In line with WHBC guidance, 10% of the units will be wheelchair adaptable, complying with Building Regulations, Part M4(3).

The dwellings have been arranged to a maximum of 8 homes per core per floor, for the majority of the development. There are significant number of dual and triple aspect homes and any single aspect homes face south, east, or west. In each block the larger two bed and three bed family dwellings have been designed to be dual aspect. On upper floors the massing of the blocks has been stepped to create further dual aspect flats. All apartments have been designed to meet National Space Standards.

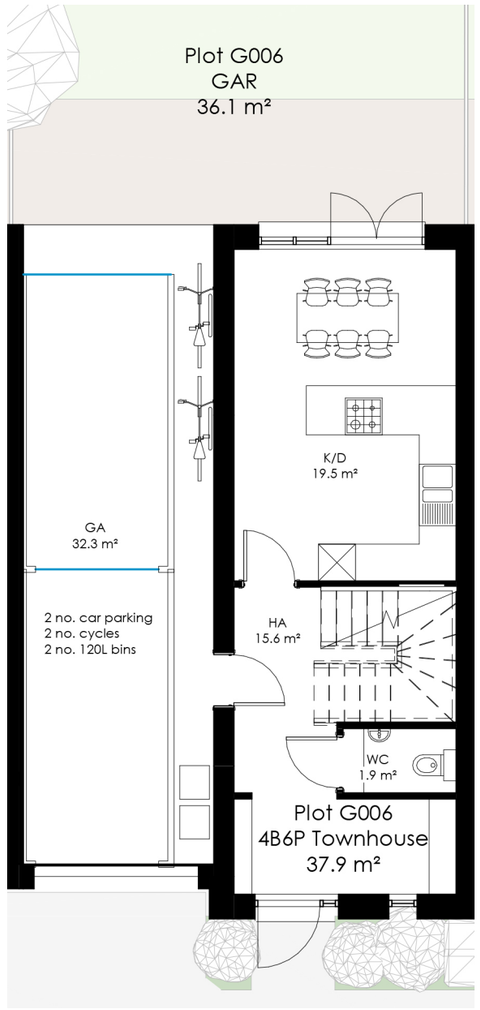
National Space Standards

The majority of the apartment layouts for the private and shared ownership homes will be open plan to maximise the sense of space. Affordable rent flats have a more traditional layout with rooms located off a main entrance lobby. Floor to ceiling windows are proposed to all dwellings to provide optimal daylight/sunlight to residents. Indicative furniture layouts have been shown to all flats to show that rooms are well proportioned and suitably designed for their function as either a single or double bedroom or living /kitchen/dining room. Storage has been provided in line with National Space Standards.

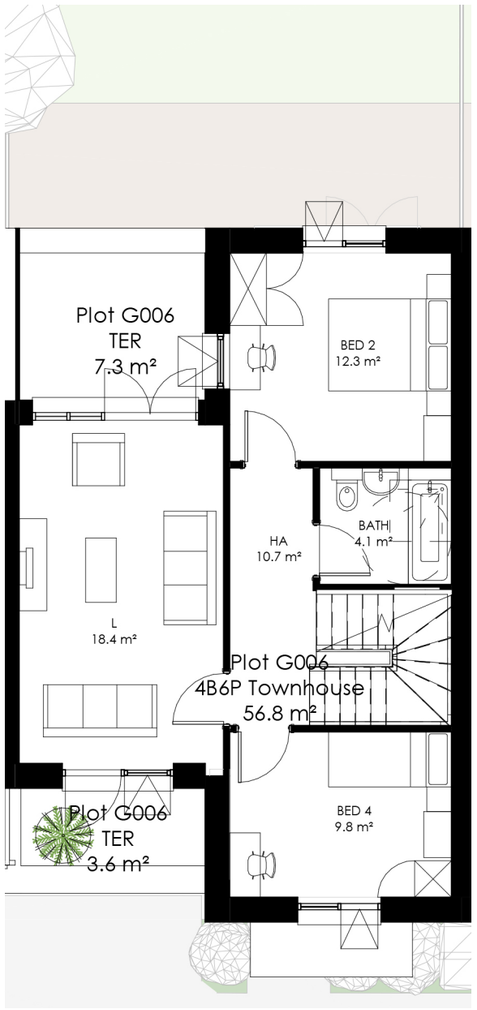
All homes have been provided with a private terrace or balcony accessible from the living/ kitchen/dining room; in some units the master bedroom also has direct access to the terrace. All flat areas and room areas meet or exceed the National Space Standards.



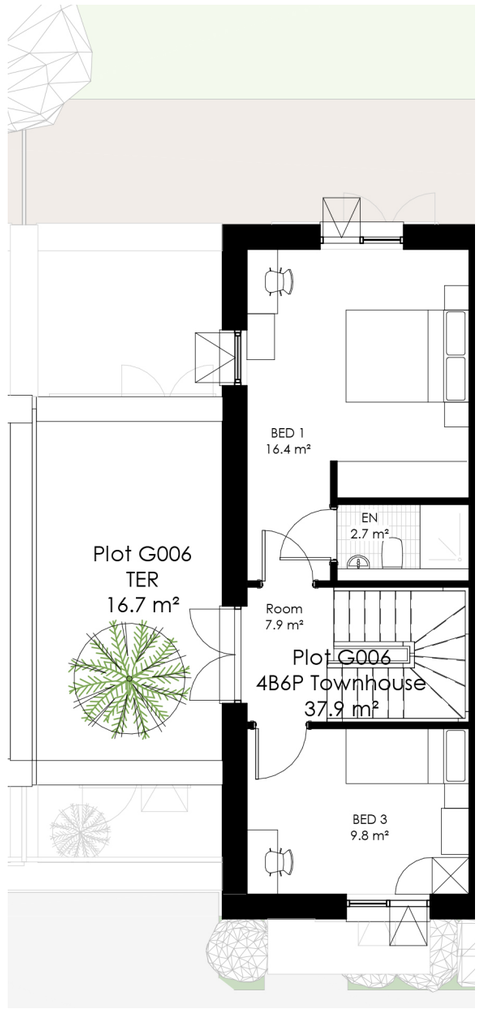




^ Typical 4 Bed 6 Person, Townhouse, Ground Floor Plan



^ Typical 4 Bed 6 Person, Townhouse, First Floor Plan



^ Typical 4 Bed 6 Person, Townhouse, Second Floor Plan

< 4 Bed 6 Person House Interior, Block G

Double Bedroom

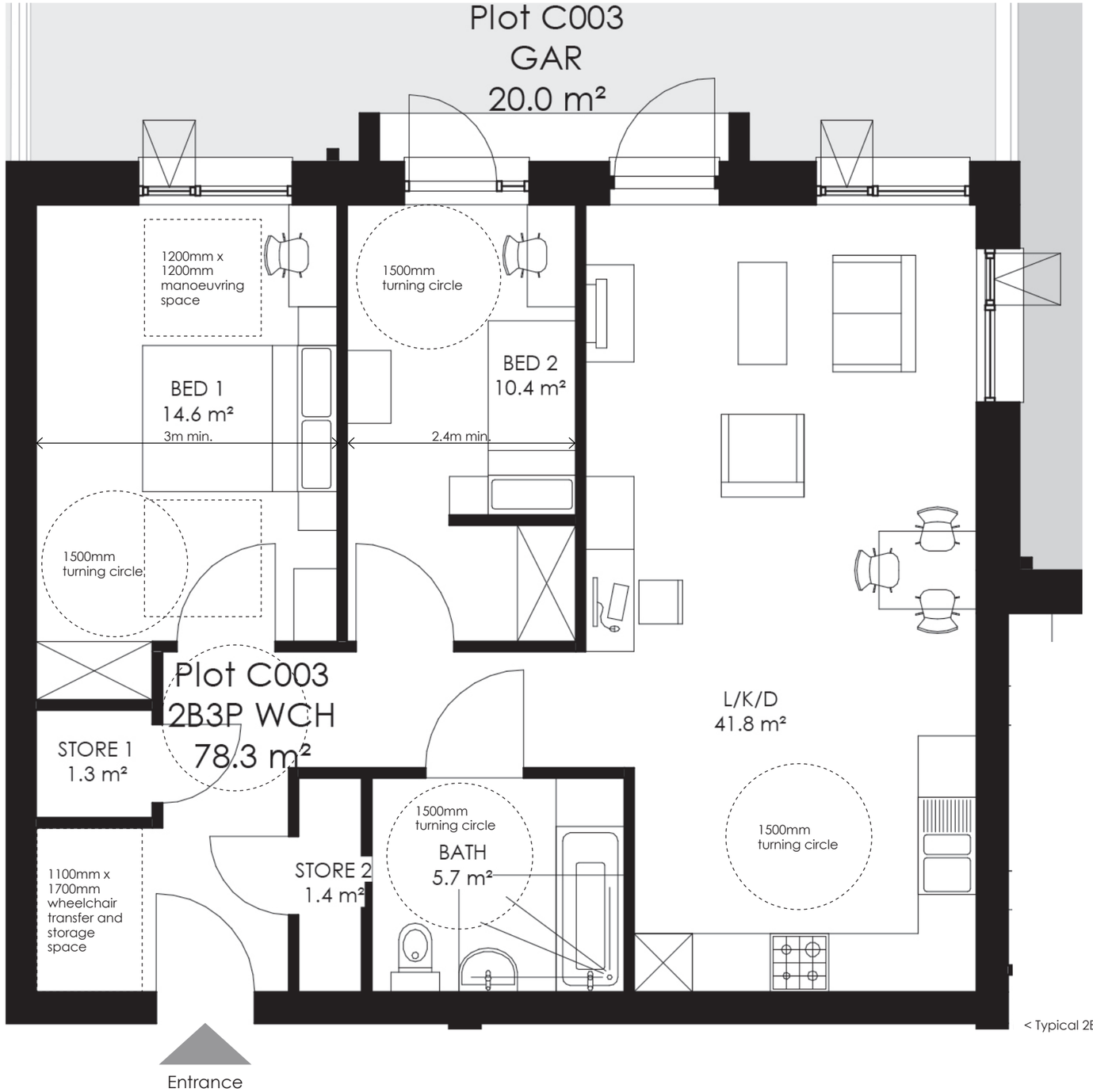
- min. 13.5m²
- min. 3m wide
- 1000mm clear access zone to both sides of bed and foot of bed
- 1200mm x 1200mm manoeuvring space on both sides of the bed

Single Bedroom

- min. 8.5m²
- min. 2.4m wide
- 1000mm clear access zone one side of bed

Bathroom

- Wheelchair adaptable bathroom capable of fitting a level access shower



< Typical 2B 3Person WCH Flat

Living/Kitchen/Dining

- min. 27m²
- open plan kitchen and dining
- min. clear access zone of 1500mm in front of and between kitchen units and appliances

Wheelchair transfer

- min. 1100mm x 1700mm space
- Power socket within the space

Building Regulations, Part M & accessibility

Building Regulations, Part M

In accordance with WHBC guidance, 10% of the residential dwellings have been designed as wheelchair adaptable units based on Building Regulations Part M(2015 incorporating 2016 amendments): Access to and use of buildings, Volume 1: Dwellings. Wheelchair flats have been provided across all tenures and have been located in Blocks A to E. The adjoining flat layout describes the principles of wheelchair adaptation for a typical two bedroom, three person flat. Adaptable units will have the following:

- Provision of wheelchair charging/transfer zones close to front entrance doors
- Door openings having at least 850mm clear width
- 1500mm clear turning circles in every room
- Larger access space between furniture, using the recommended dimensions from Part M
- Wheelchair accessible bathroom layouts, with potential for level access showers
- Door nibs to be a minimum of 300mm to the leading edge

Wheelchair car parking provision

A total of 29no. blue badge parking spaces have been provided. These have been distributed around each basement core, and one is located at ground level for access to the Community Hub.

Accessibility

The landscaping and buildings on the site have been designed to ensure accessibility for all users and residents. Potential users and visitors, regardless of age or any disabilities, will be able to access and navigate through the buildings and the proposed public realm. The design has been developed with consideration of national legislation including The Building Regulations Part M (2015 Edition incorporating 2016 amendments), the Equality Act 2010 (Disability) Regulations and BS8300:2001.

Building Regulations, Part B & Fire

The fire strategy for Broadwater Gardens has been developed to comply with Building Regulations, Part B (Volumes 1&2), 2019 edition, and BS 9991 – Fire safety in the design, management and use of residential buildings. The outline strategy will be further developed during detail design. The key areas addressed in the strategy are summarised below. Please refer to the fire consultant's report for further details.

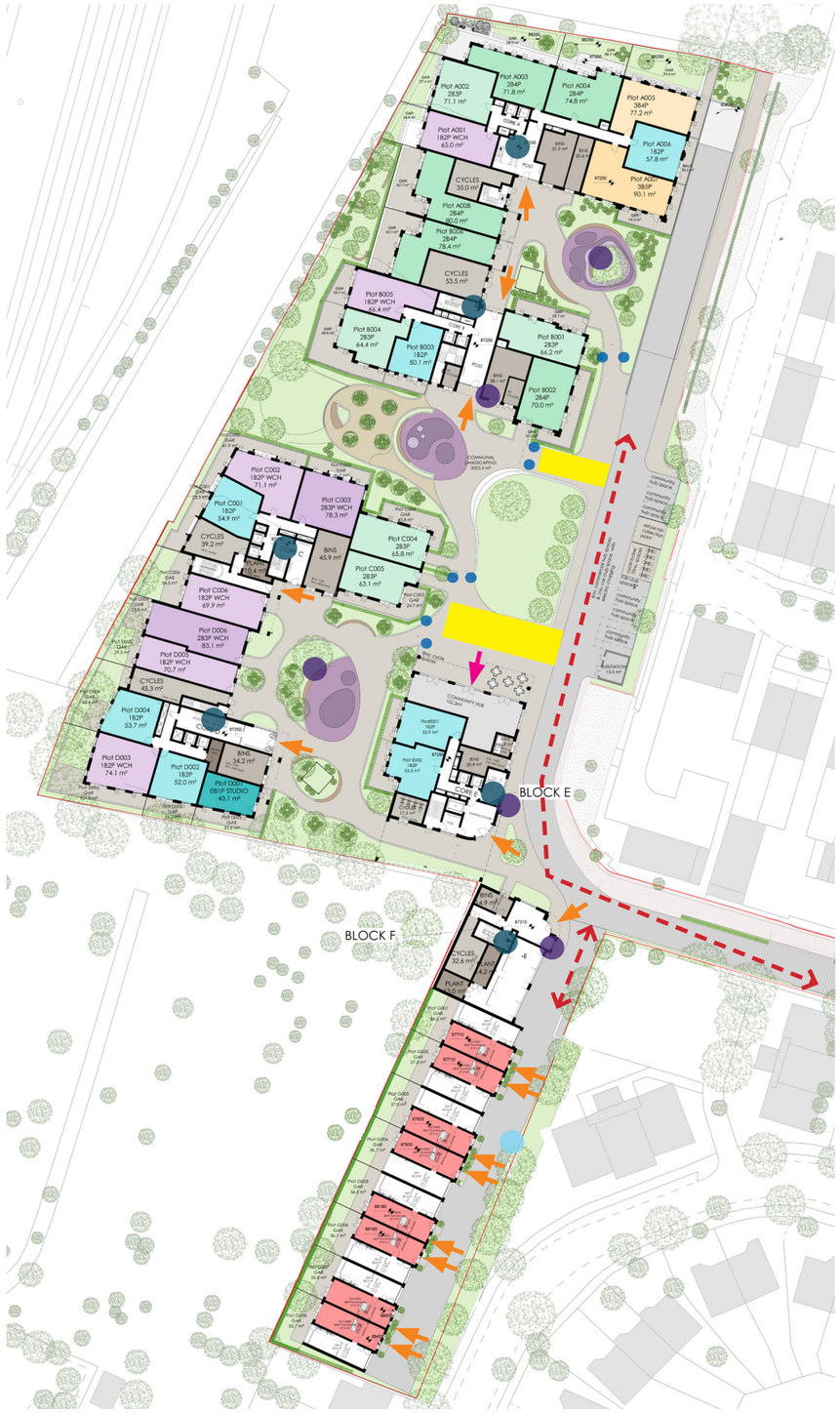
Evacuation principle
For the residential accommodation, the stay put strategy is the primary evacuation method. The blocks and houses will have full fire compartmentation to 60 or 90 minutes depending on the storey height. This therefore supports this strategy. The apartments will have automatic fire detection with ventilated corridors and lobbies. Both the ancillary areas and the Block E Community Hub will operate on a simultaneous evacuation strategy.

Fire detection & alarm system
Apartments and entrance halls will have a minimum Grade D1, LD2 fire detection and fire alarm system. Open plan apartments will have Grade D1, LD1 fire detection and fire alarm system. The common corridors and lobbies of Blocks A-F will also have smoke ventilation actuators. Compliant alarm systems will be provided for residential ancillary areas, car park and Community Hub. The Townhouses will adopt a simultaneous evacuation strategy. Manual call-points will be located in non-residential areas with 45m walking distance and when activated, will not trigger alarms in the residential areas.

The life safety systems will be provided with a secondary power supply during a fire condition, in accordance with BS 9991. This includes smoke ventilation, emergency lighting, firefighting lift/ shaft, fire detection, alarm systems and sprinkler suppression system.

Means of escape
Apartments will have sprinkler systems which allows travel distances from the furthest room to the entrance door to be a maximum of 20m. Blocks A to E will have sprinkler systems in both the residential and ancillary areas, which permits travel distances of up to 15m from stair core to unit entrance. Where this distance has been exceeded, e.g. Block E, L02-L04, a 0.8m^2 smoke shaft has been located at the end of the corridor. Non-residential areas like the car park and Community Hub, will have commercial sprinkler systems.

Protected stair cores in Blocks A to E discharge directly either to the external space or to a protected route out of the building. Block F is considered a small single stair building, as the top floor level is under 11m. This block will have a sprinkler system and each flat will have an internal protected entrance hall. Block G (Townhouses) will have internal protected stairs to 30 minutes' fire rating. Appropriate emergency signage and lighting will be provided to guide occupants to places of safety. These will comply with British Standards and the revised Part B guidance (May 2020).



^ Proposed Ground Floor

Smoke ventilation

Common residential lobbies from stair cores will have a 1.5m^2 natural smoke shaft and a 1.0m^2 AOV will be located at the head of each stair. Ancillary areas will be ventilated appropriately, either via a ventilated lobby if accessed internally or through the external wall if accessed via louvered doors.

The basement car park will be ventilated via a combination of natural and mechanical means. A vent is located between Block D and E within the landscaping boosted by a jet fan system below. The basement stairs are separated from the main residential stairs by fire rated partitions. The car park is also separated from the lift/stair core by a ventilated lobby.

Limiting fire spread

The building materials will provide appropriate compartmentalisation between dwellings, ancillary spaces and the Community Hub. The fire rating of each element will depend on the top storey height. This will be in accordance with Building Regulations Part B and BS EN 13501. External fire spread will be assessed in terms of the proximity of the building elements to the boundary in detail design stages, but has been considered during the planning stage also.

Fire Service access

Areas within the landscaping have been designated as vehicle loading/servicing areas in order to ensure that a pump appliance can be within 18m of a dry riser inlet. Dry riser inlets have been located 18m away from a dry riser outlet (i.e. stair core) and 18m from a fire appliance parked position. The pump appliance tracking specification has been used to determine these locations within the site. It has been proposed that Blocks A & D will have dry riser inlets located within the landscaping in order to meet the guidance. Blocks A to E have compliant firefighting shafts. A pumping appliance is required to reach to within 45m of all points in Blocks F & G. To comply with this, an additional dry riser mains hydrant is proposed near Block G. Further discussion will be had with the Fire Service during detail design.





^ Proposed Ground Floor

Secured by Design

Ensuring that the scheme has good safety and security for both the future residents, visitors and neighbours is a major priority. A meeting was held on, 4th November 2020, with a member of the Hertfordshire Constabulary in order to review the design and work towards meeting the Secured by Design guidance; Homes 2019 and Commercial 2015. Following this, the proposed scheme has established the following design features.

All accessible external openings are proposed to be PAS 24 and third party accredited, in order to ensure that the maximum security is achieved. Any potential climbing aids to external openings from an accessible level have been avoided, such as projecting façade materials or robust climbing planting.

Across the site, a small amount of low energy lighting, that is either wall or column mounted, will provide a good uniformity of light, giving residents the feeling of safety when walking through. The lighting should be located on around all roads and paths.

All entrances will have access control, including the vehicular entrance to the basement car park. Cycle stores will also have access control, and an anchorage point for bikes to be locked within. Residents from one block will not be able to enter other blocks with authorised access, and a means of control will be in place both for the main cores and to the basement stairs. Post boxes will either be located externally or within a secure lobby, to ensure that trades will not have access to the rest of the building without authorisation. In the event of a fire, all external doors will have a means of release. The communal roof terraces will be for residents only and these will be access controlled. All furniture at this level will preferably be secured or not easily moved.

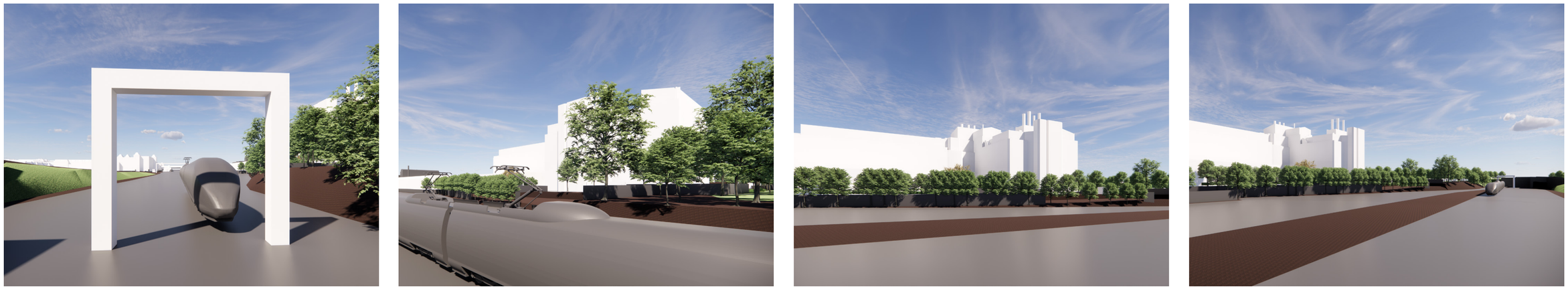
Boundaries will be treatment specifically to their function. All private gardens will have a minimum 1.8m high boundary and any gates will be lockable, in order to ensure optimum security. Any alleyways will be well lit, to prevent people/activities going unseen. Within the communal landscaping at ground floor, there is an orchard area to the west of Block A&B. This area will require a boundary treatment of 1.8m high where it borders private gardens, and a low level 1m high demarcation fence is sufficient for the remaining perimeter. The orchard will have a gate for resident access and up-lighting will ensure a safe environment within. Bollards have been placed near to loading bays, to deter vehicles from entering the landscaped areas.



4.7 Proposed Views

The following pages demonstrate how the proposal will appear within its context. Views have been taken from various key locations, both from within the site and from further afield.

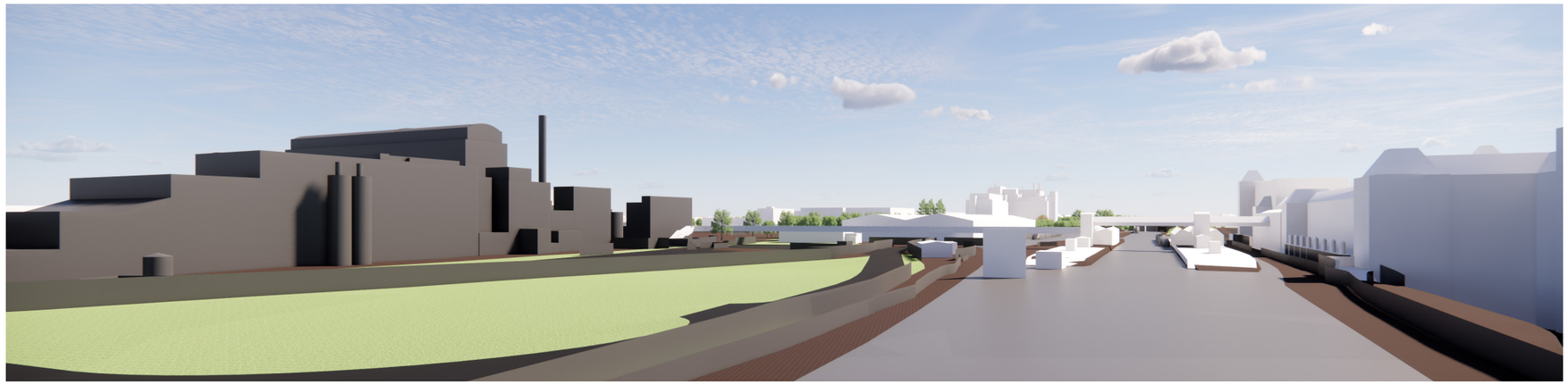
Train Journey, Existing & Proposed

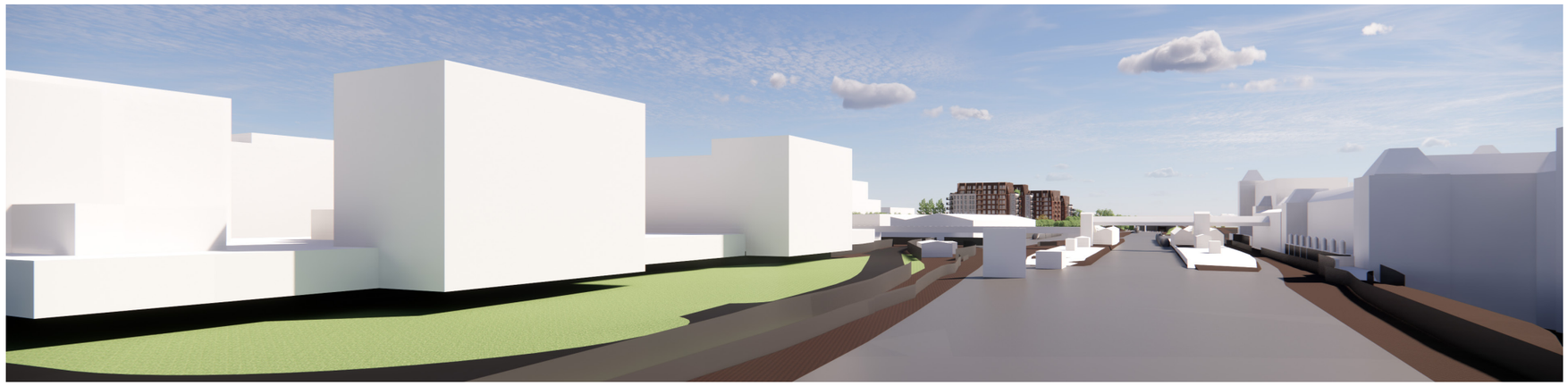


Existing



Proposed





Train Station
Pedestrian Bridge



^ View Location Key

Approach to the Site- Biopark Drive

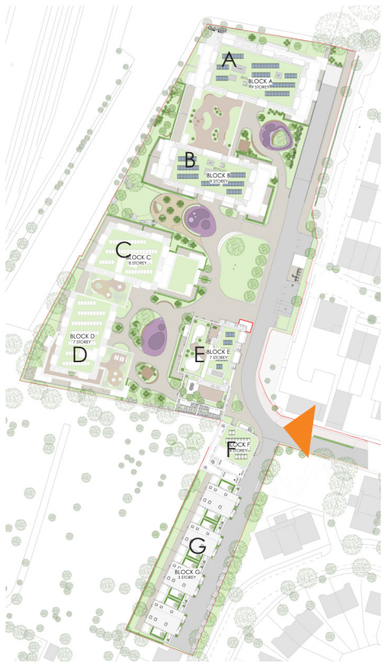




^ View Location Key

Approach to the Site- Biopark Drive

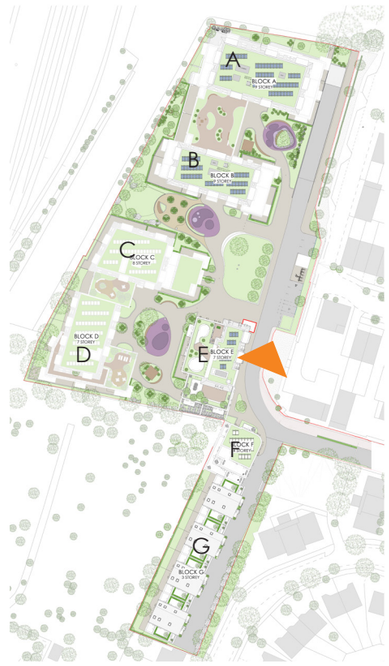




^ View Location Key

North-South Link

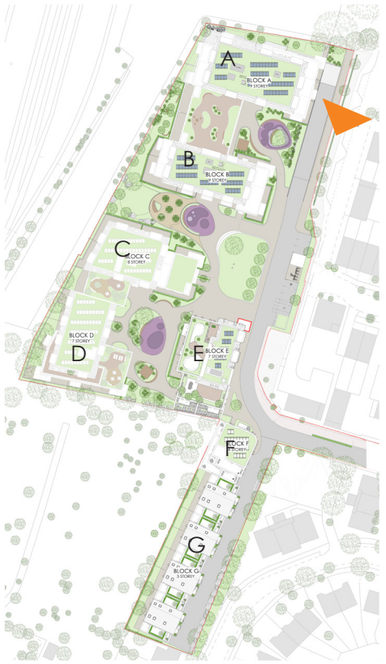




^ View Location Key

North- South Link

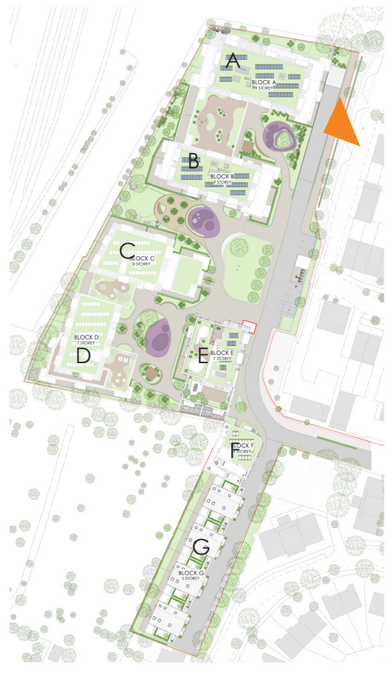




^ View Location Key

Entrances to Courtyards





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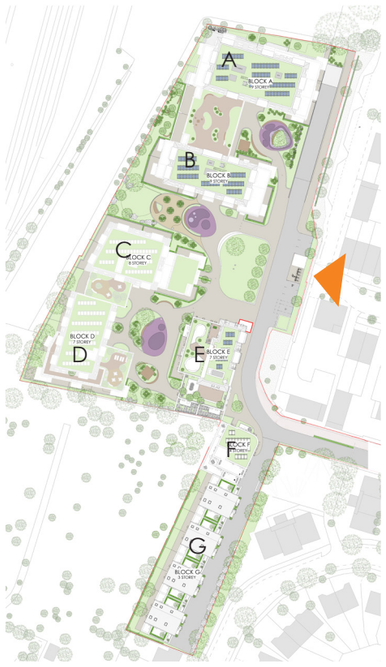
Central Courtyard





^ View Location Key





5.0

LANDSCAPING

5.1 Landscape Introduction

5.2 Garden City Principles and Wider Connections

5.3 Site Considerations and Opportunities

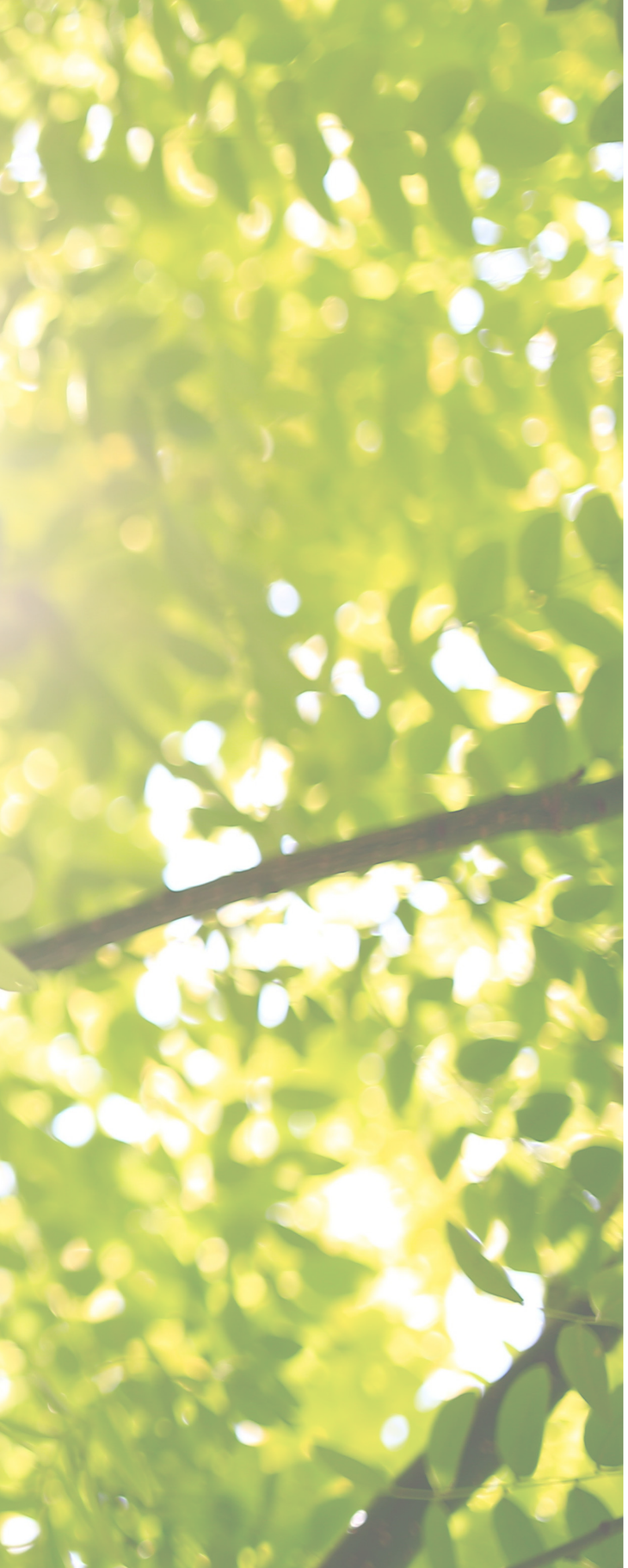
5.4 Landscape Strategy

5.5 Planting Palette

5.6 Hard Materials and Street Furniture

5.7 Landscape Maintenance and Management

BMD



5.1 Introduction

This chapter focuses on the landscape design for Broadwater Gardens, covers an analysis of the constraints and opportunities, sets out the design approach, provides a palette of soft and hard materials and maintenance strategy.

5.2 Garden City Principles, Design Objectives and Wider Connections

Garden City Principles

We have looked to draw from the Garden city principles that inspired Welwyn Garden City and those within the TCPA's framework for 21st century Garden Cities to assist with the design of the Broadwater Garden landscape, these are:

"Beautifully and imaginatively designed homes with gardens in healthy communities"

"Opportunities for residents to grow their own food, including allotments"

"Strong cultural, recreational and shopping facilities in walkable neighbourhoods"

"Well connected and biodiversity rich public parks; high quality gardens; tree-lines streets; and open space"

"Integrated and accessible transport systems"

Design Objectives

The landscape design will be informed by the Garden City principles, specific objectives for the design of the public realm include the following aspirations:



The public realm must be user friendly and beautiful with a timeless quality that promotes a true sense of place.



Provide a clear hierarchy of pedestrian and cycle routes within the site, promoting safe and accessible spaces with the aspiration to connect to the wider community of Welwyn Garden City.



The landscape should create a new network of habitats, to include use of sustainable urban drainage systems and landscape enhancements, which as a result provides a biodiversity net gain.



Open space that creates opportunities for play and recreation all of which contribute to the health and wellbeing of the community. Where possible provide edible landscapes for harvesting, creating a sense of ownership within the community.



Wider Connections

Due to the strategic location of Broadwater Gardens, there is an aspirational opportunity to provide pedestrian / cyclist routes through the proposals, connecting to the wider community by creating a dedicated route to the town centre. The proposed scheme is designed to enhance the connectivity of the site via the following routes:

- Pedestrian Connection north, through The Weave park to the Wheat Quarter being delivered on the Former Shredded Wheat Factory site, and on into the railway station and town centre.
- Pedestrian Connections through the adjacent residential schemes, allowing for free movement of people and to remove the landlocked nature of the site.
- Pedestrian Connection to adjacent residential development to the south, allowing the wider community to use and commute through the site to the town centre.



5.3 Site Considerations and Opportunities

Broadwater Gardens offers an opportunity for new high quality amenity space and extensive public realm, integrating the Garden City principles. Analysis of the site has identified several considerations and opportunities.



Key

- Site boundary
- Vehicular route
- Pedestrian route
- Play area
- SuDs basin / grass amphitheatre
- Basement car parking
- Existing trees
- Proposed orchard trees
- Communal roof gardens

Considerations

Connectivity
Currently the site has no public access or routes through and acts as a barrier to thoroughfare from surrounding residential housing.

Basement Car Park
A proportion of the public realm lies above a basement car park, careful consideration required to ensure all planting has sufficient soil volume to establish and thrive.

Vehicle Access
Consideration of how we improve and promote safe access particularly for pedestrians and cyclists into the site via Biopark drive with the use of materials and planting.

Refuse and Emergency Vehicle Access
Careful consideration is needed for how we integrate turning heads into the public realm safely, without allowing them to dominate public realm.

Site Boundary Interfaces
With the site bordered by a variety of different uses, careful consideration is needed regarding suitable integration of the proposals with the surroundings.

Sunlight
Careful consideration of plant and tree species, suited to the various sunny and shady aspects of the public realm.

Biodiversity
Currently the site is of negligible ecological value as the site is predominantly hard surfaced.

Community Parking
Consideration of integrating parking for the community hub within the public realm to ensure it is not over dominant.



Opportunities

Public Realm
Excellent opportunity to provide unified, connected and free flowing areas of public realm for use by the residents and wider community.

Connectivity
The strategically located site offers the opportunity to connect with existing and future adjacent residential developments, providing new routes through the site.

Edible Landscape
Opportunity for edible landscape features, integrated into the public realm, with a dedicated area for an orchard.

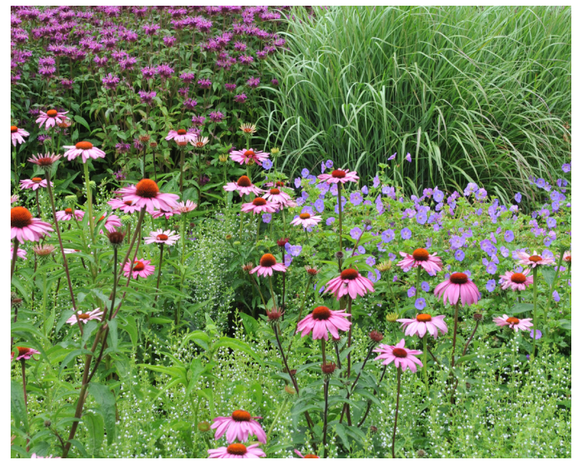
Play
Opportunity for 3 Integrated and connected door step play spaces, in key locations of the public realm, offering varied play opportunities for local children of different ages.

Vehicle Access
Opportunities to improve the existing vehicle entrance with hedge planting, climbers to boundaries and improved materials, providing a softer and greener entrance contributing to a strong sense of arrival.

Communal Roof Gardens
On the buildings there are opportunities for resident access only communal gardens with seating and planting.

Biodiverse Green and Brown Roofs
Opportunity to include green and brown roofs enhancing the bodiversty.

Biodiversity
Enhancing the natural environment, with high quality green infrastructure, provides opportunity for increased biodiversity and habitat creation with benefits to the wider community.

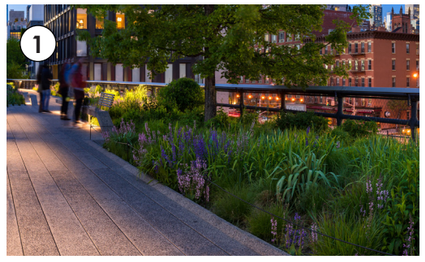


5.4 Landscape Strategy

The following section sets out the key design principles that have been used to guide the design of the landscape for Broadwater Garden, drawing down on Garden City principles and the site opportunities identified. These are as follows:

- Creation of beautiful spaces that are integral to the character of the development.
- Ensure the scheme is designed for all, promoting community, inclusion and accessibility.
- Improve the connectivity to both the north and south, to enhance connectivity within the Broadwater Road West Opportunity Area and Welwyn Garden City.
- Integrate the site more effectively with the surrounding residential area
- Balance the needs for pedestrians, cyclists with the creation of safe and welcoming environment for use of these more sustainable travel modes.
- Create multi-functional external spaces with interest and activity for residents
- Significantly increase natural habitats and biodiversity across the site
- Provide high quality open space reflecting the Garden City principles and maximising integration with the built form
- Respond to the requirements of planning policy and supplementary guidance in terms of design quality and green infrastructure
- Enhancing wayfinding and legibility through the development
- Creating a sense of privacy and buffer to the public realm for the residential units, private terraces, amenity spaces and roof terraces.





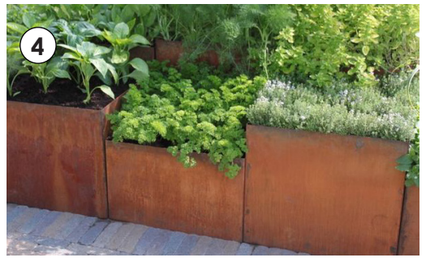
Public Realm
Unified and seamless public realm through the heart of the development provides formal and informal green infrastructure for the benefit of residents and the local community.



Main Access
Improved 4.8m wide carriageway and 3.1m wide footpath / cycleway with hedgerows and climbers providing greening to the main entrance and enhancing the sense of arrival.



Residential Street
Minimum 4.8m wide shared surface street with planting enhancing the existing boundary. There is potential for future footpath connection along the eastern boundary.



Communal Roof Gardens
Residential accessed communal gardens with seating and planting.



Play Strategy
Three dedicated doorstep play spaces within the public realm for use by the residents and wider community.



Private Terraces and Gardens
Every apartment and house has access to private terrace, balcony or garden. On the ground floor, these spaces will provide residents with the own space, defined by hedgerows , fencing or both. Where space permits ornamental trees are proposed, providing seasonal interest within the private gardens.



Orchard Hideaway
Tucked away is a community orchard set amongst meadow grassland with seating and fruiting trees for harvesting by the community.



Outdoor Dining and Edible Landscapes
Outdoor seating with tables, edible herb and apple tree planting for use by the community.

5.4.1 Public Realm

- Unified public realm that reads as one flowing space rather than individual areas, enhancing legibility and wayfinding.
- Large community lawn area located at the heart of the development provides opportunities for play, seating and community activities.
- Trees are proposed within the public realm to provide shading during the summer months.
- Orchard Hideaway located along the western boundary provides edible fruit for harvesting by the local community.
- Seamless transition from podium (above basement car park) and ground floor allowing for integrated SuDs features.
- Accessible outdoor dining area, amongst edible planting over looking SuDS feature, provides more formal seating for the community.
- Herb planting integrated into the raised planting beds in key locations providing "pick on the way" style foraging and harvesting opportunities.
- Attenuation basin with sculpted sides creating a small informal amphitheatre providing seating and play opportunities.
- Raised planters across the basement areas ensures suitable soil volumes for grass, shrub and tree planting.
- Where private ground floor terraces front on to public realm, railings with hedgerows are proposed creating a secure and semi - private space.

Key

1. Raised lawn
2. Feature tree
3. Seating steps
4. Street trees
5. Doorstep play spaces
6. Seating area with fruiting trees
7. Orchard hideaway
8. Raised walls with ornamental planting and hedgerows
9. Attenuation basin and Informal amphitheatre
10. Seating with back and arm rests on raised walls
11. Ornamental tree planting
12. Footpath / Cycleway
13. Vehicle ramp to basement car parking
14. Amenity shrub planting
15. Climbing plants to Block E trellis

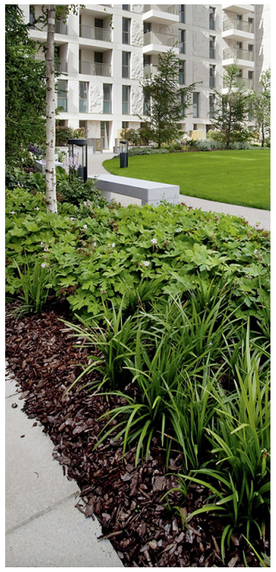




Raised lawn to the centre of the public realm ^



Raised planters with embedded seating ^



Ornamental buffer planting ^



Flowering trees offer seasonal interest ^



Seating amongst wildflower ^



Fruiting trees for local community ^

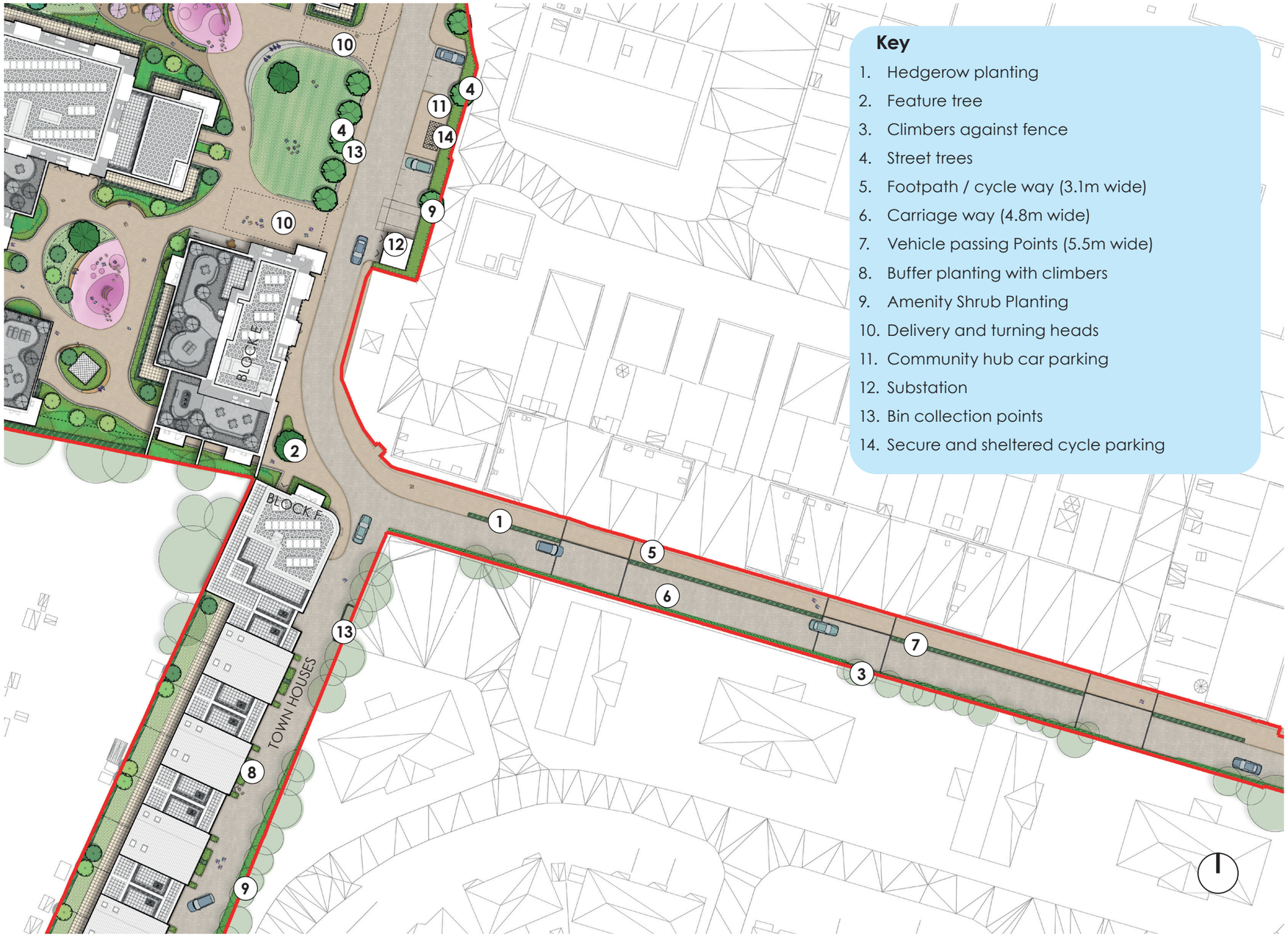


Raised planters offering informal seating ^

5.4.2 Main Access and Residential Street

Shared Surface Entrance

- 4.8m wide vehicle carriageway with wider passing points up to 5.5m wide.
- 3.1m shared cycle / footway, this doubles up as secondary emergency vehicle access point.
- Community hub parking and car club space conveniently located adjacent to the community hub.
- Greening of the main access and community hub car parking area with climbers to boundary fencing.
- The use of concrete paving and banding to soften and breakup the ground plane helping to promote safer driving and pedestrian friendly entrance.
- Accessible, secure and sheltered visitor cycle parking is proposed near the community hub adjacent to surface car park area.



Key

1. Hedgerow planting
2. Feature tree
3. Climbers against fence
4. Street trees
5. Footpath / cycle way (3.1m wide)
6. Carriage way (4.8m wide)
7. Vehicle passing Points (5.5m wide)
8. Buffer planting with climbers
9. Amenity Shrub Planting
10. Delivery and turning heads
11. Community hub car parking
12. Substation
13. Bin collection points
14. Secure and sheltered cycle parking

Residential Street

- 4.8m wide shared surface access to the 8 townhouses.
- Ornamental and hedge planting provides a buffer between housing facades and shared surfaces.
- Climbers to terrace frontages provides vertical greening to the streetscape.
- Potential to provide footpath / cycle way connection to the adjacent residential development.
- Low level shrub planting along the eastern boundary complements the existing trees of the adjacent scheme.
- 2.1m high timber fence with native hedge is proposed along allotment boundary, for security and privacy to the rear of Townhouses.



Timber boundary treatments ^



Ornamental buffer planting ^



Shared surfaces ^



Street tree planting ^



Formal hedgerows to private terraces ^



Climbers to facades and boundaries ^

5.4.3 Roof Gardens

Communal Roof Gardens

- Roof Terraces provided on various levels to increase quantity of amenity space.
- Garden rooms specifically for residents.
- Raised planters incorporate ornamental planting and large specimen shrubs to provide shelter as well as greening the building facades in wider views.
- Formal and informal seating provided, along with sun beds in sunny areas.
- Small trees / large shrubs provide vertical greening and wind mitigation.

Biodiversity Roofs

- Extensive green and brown roofs also provided to a variety of finished roof levels.
- Extensive roofs inaccessible to residents but contributing to biodiversity gain and additional attenuation for rainwater.



Private Terraces and Balconies

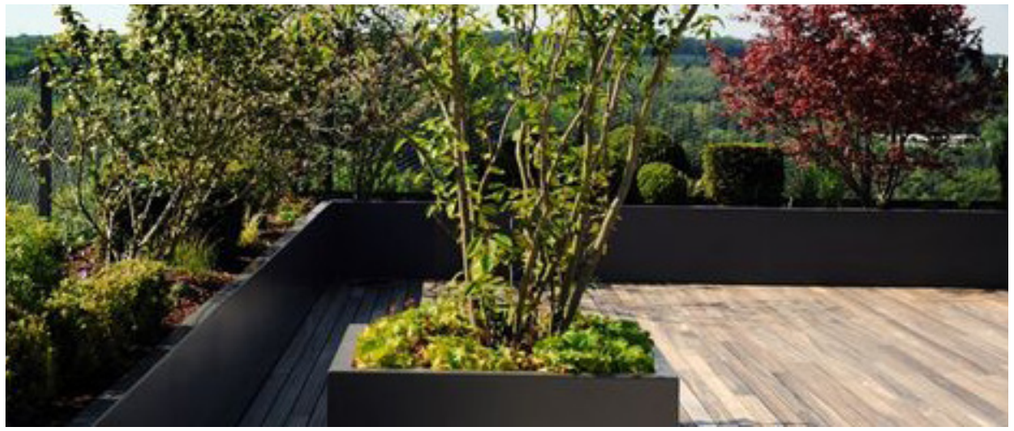
- As well as communal areas, all residents have access to a private terrace, gardens or balcony which will contribute towards the greening of the facades.

Roof Gardens to Terraced Houses

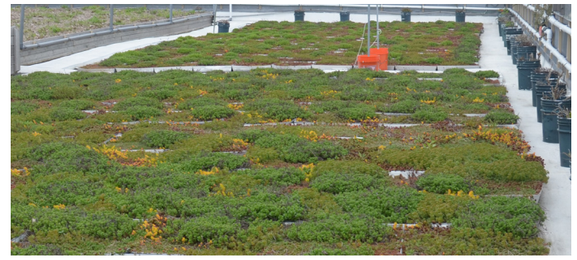
- Each house has private terraces on multiple levels, to the top floor terraces are separated by raised planters with hedgerows providing privacy and greening of the facades.



Raised planters with ornamental planting ^



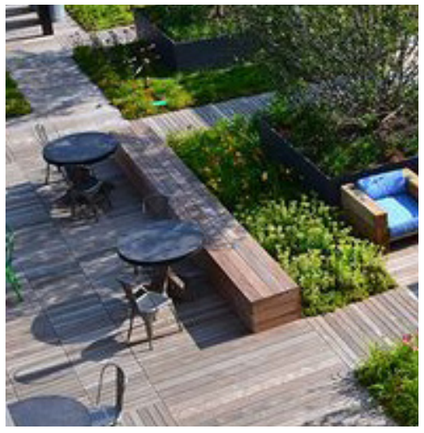
Planters to the edges of terraces ^



Biodiverse roofs to tops of buildings ^



Loungers utilising sunny aspect ^



Outdoor dining ^



Ornamental trees and shrubs ^

5.4.5 Play Strategy

Play
Strategically placed within areas of public realm we are providing three doorstep play areas totalling **260m²** of formal play space. There are also opportunities for more informal play through the scheme.

Doorstep Play

- For use by residents and wider community, they are Intended for children up to the age of 6,
- Will be designed to have a unified "Sensory" theme with individual character and play equipment offering a wide range of opportunities for local children.
- With clear circulation routes and suitable ground materials allows for children of all abilities to play.
- Located off the main pedestrian routes, positioned to be well overlooked with a mix of sunny and shady conditions.
- Ample amounts of seating with arm and back rests will be provided within and close to the play spaces to accommodate for parents and carers of all abilities.

Informal Play

- Large raised lawn offers opportunity for informal play.
- Attenuation basin with sculpted sides creating a small informal amphitheatre providing play opportunities.
- Orchard Hideaway provides opportunity for informal play and educational tool.
- Seating areas with tables adjacent to the central play space provides opportunities for community play (board games, chess etc) for all ages and abilities.

Key

1. Doorstep play space
2. Informal amenity lawn
3. Grass amphitheatre
4. Orchard hideaway





Natural play ^



Interactive play ^



Sensory play ^



Play trails ^



Sculptural play ^



Playful surfacing ^

5.4.6 Biodiversity and Ecology

Biodiversity
Whilst we admire their colours, fragrances and appearances, plants also play an important role for biodiversity, providing much needed food for butterflies bees, birds and other invertebrates.

Across the proposals we are looking to introduce wildlife friendly initiatives:

- New Tree planting
- Biodiverse green and brown roofs
- Fruiting trees and shrub planting
- RHS approved pollinator ornamental planting
- Flowering meadow grassland
- Species rich native hedgerows

All of the above contributes towards a biodiversity net gain of over 700% and introduces wildlife into the development.

Alongside the above, bird and bat boxes will be integrated into the facades of buildings where appropriate, along with hibernacula and hedgehog friendly fences to allow their movement, refer to the Ecological Impact Assessment for further details.











5.5 Planting Palette

The Intention for the planting across Broadwater Gardens has been to introduce a broad variety of species, that are resilient to drought, pests and diseases as well as contribute towards biodiversity, seasonal interest and wellbeing. This chapter sets out the principles and illustrative palette.

5.5.1 Tree Planting

Tree species have been selected for their form, ornamental interest and seasonal variation, remaining native where possible and ensuring diversity for resilience to disease and climate change. Trees have been postioned at appropiate distances from buildings to accommodate for growth and long term viability

Feature tree Planting
Large feature trees have been specified in key locations of public realm providing immediate impact and presence.

Ornamental Tree Planting
Ornamental trees will be planted throughout the public realm providing seasonal interest, dappled shade and valuable resource for wildlife.

To the right is a sample of trees species selected, for further details refer to planting plans BMD.20.044. DR.P301-P304 and Planting Schedule BMD.20.044. SP.P001.

Full sun
Partial sun
Shade
Attracts bees
Attracts birds
Edible plant


Tilia cordata 'Greenspire'


Pyrus calleryana 'Chanticleer'


Betula pendula


Amelanchier × grandiflora 'Robin Hill'


Prunus padus


Prunus 'Spire'


Carpinus betulus 'Frans Fontaine'


Acer Campestre 'Streetwise'

5.5.2 Ornamental Planting

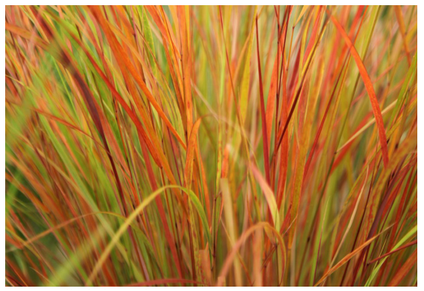
The planting will be designed to respond to the landscape context of the site and surrounding area. It will:

- Play an important aesthetic role, helping to define and reinforce the character of the development and area
- Respond to the proposed architectural character
- Meet the specific site conditions
- Ensure a change in scenery from season to season
- Provide biodiversity benefits through the use of wildlife friendly species

To the right is a sample of species selected, for further details refer to Planting Plans BMD.20.044. DR.P301-P304 and Planting Schedule BMD.20.044. SP.P001.


Ceanothus thyrsiflorus repens


Polystichum setiferum 'Herrenhausen'


Anemanthele lessoniana

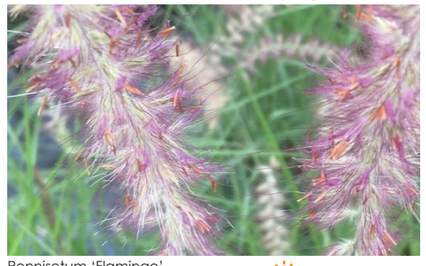

Hakonechloa macra


Osmanthus burkwoodii


Cornus alba 'Elegantissima'

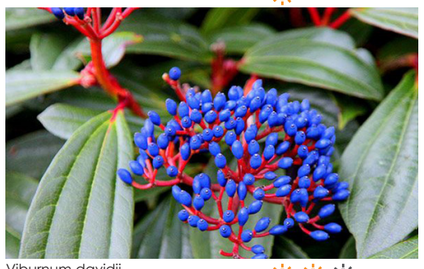

Sarcococca confusa


Stachys byzantina

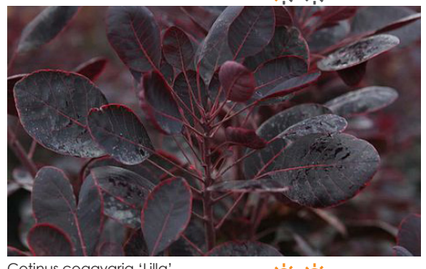

Pennisetum 'Flamingo'


Asplenium scolopendrium

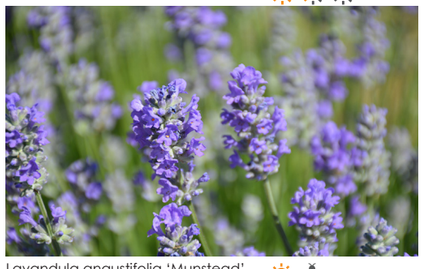

Euonymus fortunei 'Emerald Gaiety'


Viburnum davidii


Mahonia eurybracteata 'Soft Caress'


Cotinus coggygria 'Lilla'


Aster × frikartii 'Mönch'


Lavandula angustifolia 'Munstead'

Full sun
Partial sun
Shade
Attracts bees
Attracts birds
Edible plant

5.5.3 Vertical Planting

Vertical planting forms an integral part of the landscape, combining hedgerows, tree planting and climbers create a multi-layered landscape and a green setting, softening and grounding built form.

Climbers
Climbers will be used on building facades, along the access road, adjacent to the community hub parking and on a pergola to Block E, to soften the built form throughout the development.

Trailing Plants
On the upper communal gardens trailing species will be selected with the Intent of cascading over the parapet to soften edges.

Hedgerows on private terraces
Along the edges of upper floors terraces hedgerows will provide multi-level greening to the facades.

Large Shrub Planting and Small trees
Within the communal gardens on the upper levels large robust shrubs or small trees are proposed contributing towards greening of the buildings.

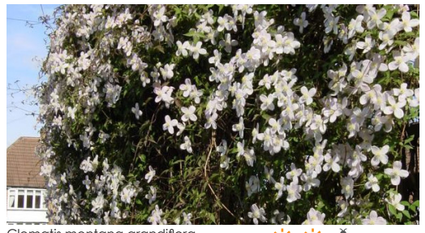
To the right is a sample of species selected, for further details refer to Planting Plans BMD.20.044. DR.P301-P304 and Planting Schedule BMD.20.044. SP.P001.

Full sun
Partial sun
Shade
Attracts bees
Attracts birds
Edible plant

Climbers


Parthenocissus quinquefolia


Wisteria sinensis


Clematis montana grandiflora


Jasminum nudiflorum

Trailing Plants


Aubrieta deltoidea


Lonicera japonica 'Halliana'

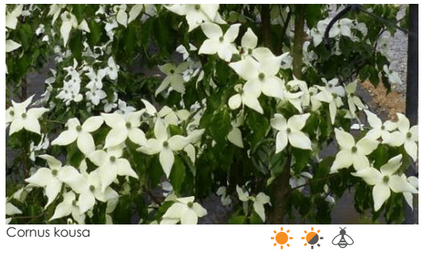

Rosmarinus prostratus


Trachelospermum jasminoides

Hedgerows


Ilex crenata

Large Ornamental Shrubs and Small Trees


Cornus kousa


Cercidiphyllum japonicum


Pyrus salicifolia 'Pendula'


Acer palmatum

5.5.4 Species-Rich Native Hedgerows

Along the northern, southern and western boundaries of the development, new lengths of species-rich native hedgerows are proposed to improve biodiversity habitat, whilst providing an efficient mechanism for delineating space and formalising boundaries.

5.5.5 Single Species Hedgerows

Around private terraces on the ground, between carriageways and footpaths along the main access and to the frontage of the terrace houses.

5.5.6 Edible Planting

There are opportunities to integrate edible species through the scheme in designated areas, comprising herb mixes ready to pick through spring and summer. Apple and pear trees provide a healthy eating opportunity in late summer / autumn.

To the right is a sample of species selected, for further details refer to Planting Plans BMD.20.044. DR.P301-P304 and Planting Schedule BMD.20.044. SP.P001.

Full sun
Partial sun
Shade
Attracts bees
Attracts birds
Edible plant

Species-Rich Native Hedgerows


Ligustrum vulare

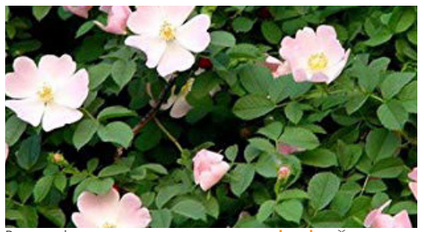

Ilex aquifolium


Crataegus monogyna


Corylus avellana


Prunus Spinosa


Rosa arvensis

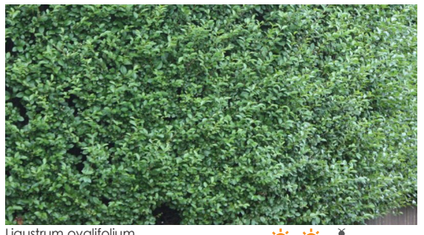

Rosa canina


Viburnum opulus

Single Species Hedgeows

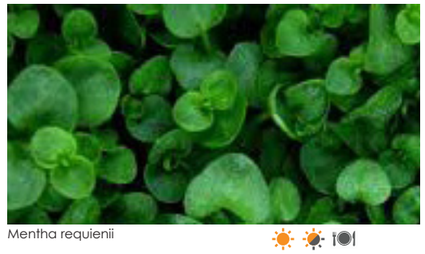

Lonicera nitida


Ilex crenata


Ligustrum ovalifolium

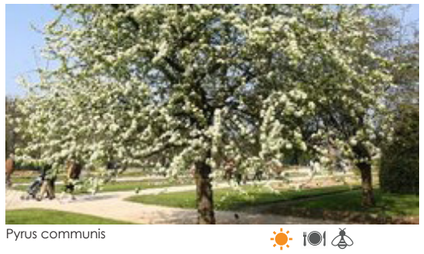

Osmanthus burkwoodi

Edible Planting


Mentha requienii


Thymus serpyllum


Malus domestica ‘Discovery’


Pyrus communis

5.6 Hard Materials, Street Furniture and Boundary Treatments

5.6.1 Hard Materials

The hierarchy of materials proposed contributes to defining key public and private spaces and provides articulation to the shared access routes. The materials selected have been informed by the function of each space providing longevity and quality to the hard landscapes and contributing to their character.

For further details on location, refer to General Arrangement Plans BMD.20.044.DR.P101-P104.



Concrete Permeable Paving Type 1
Location: Roads and highways
Type: Permeable block paving
Colour: Mixed buff



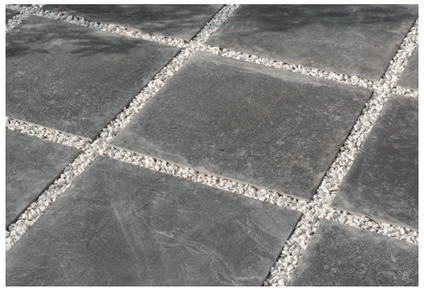
Concrete Permeable Paving Type 2
Location: Footpaths and cycle ways
Type: Permeable block paving
Colour: Mixed Greys



Concrete Permeable Paving Type 3
Location: Commercial breakout space
Type: Permeable flag paving
Colour: Mixed Grey and buff



Concrete Permeable Paving Type 4
Location: Private terraces
Type: Permeable flag paving
Colour: Buff



Concrete Permeable Paving Type 5
Location: Roof gardens
Type: Permeable block paving
Colour: Mixed Greys



Resin Bound Gravel
Location: Seating area
Colour: Buff



Composite Timber decking
Location: Roof garden



Concrete Steps
Location: Raised lawn



200mm Wide Paving Band
Location: Vehicle access road
Type: Permeable block paving
Colour: Dark Greys



Play Surface
Location: Play areas
Type: Wetpour
Colour: Mixed



Raised Wall
Location: Public realm
Type: To match adjacent building
Colour: To match adjacent building



Raised Planter Edging
Location: Roof garden
Type: Aluminium

5.6.2 Street Furniture

The selection of street furniture will complement the overall character and design of each space with a focus on contemporary design and a unified material palette.

The street furniture's material palette helps to lend unity to the overall scheme whilst subtle variations in form enhance the character definition of the public realm and support the functions of individual areas.

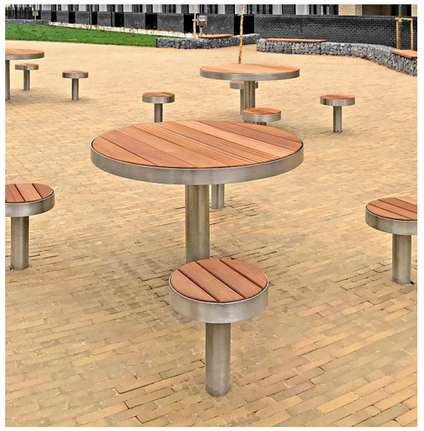
For details on location, refer to General Arrangement Plans BMD.20.044.DR.P101-P104.



Freestanding benches
Location: Orchard Hideaway
Type: Timber



Wall mounted benches
Location: Public realm and roof gardens
Type: Timber



Seating with tables
Location: Public realm and roof gardens
Type: Metal/ Timber



Timber Cube Seating
Location: Roof gardens
Type: Timber



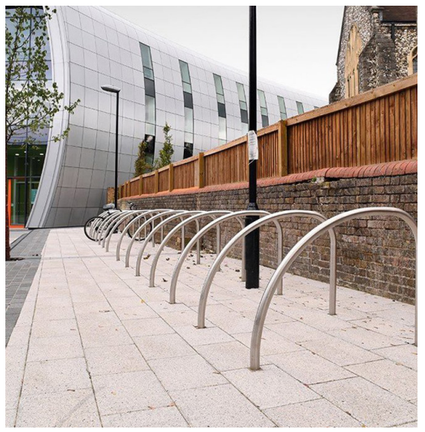
Bollards
Location: Public realm
Type: Timber



Sun Beds
Location: Roof gardens
Type: Timber



Bins
Location: Public realm
Type: Timber



Cyclestand
Location: Public realm
Type: Metal



5.6.3 Boundary Treatments Ground Floor

Fencing has been selected for its intended purpose to either restrict / control access, provide acoustic mitigation or for aesthetic purposes. Where feasible fences are softened by ornamental planting, hedgerows and climbers.

Where required hedgehog holes will be provided through timber fencing,

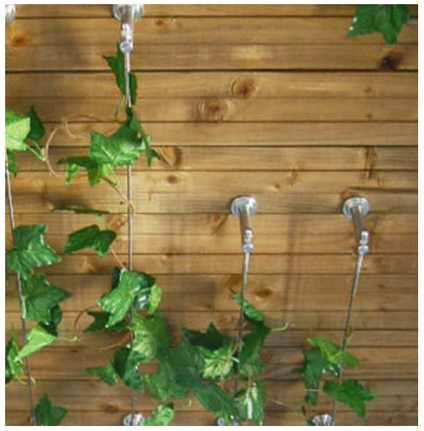
The adjacent diagram illustrates the site wide boundary treatment proposals for the ground floor, for details for balconies and roof terraces refer to architects information.



1.8m High Timber Fence
Location: Between private rear gardens



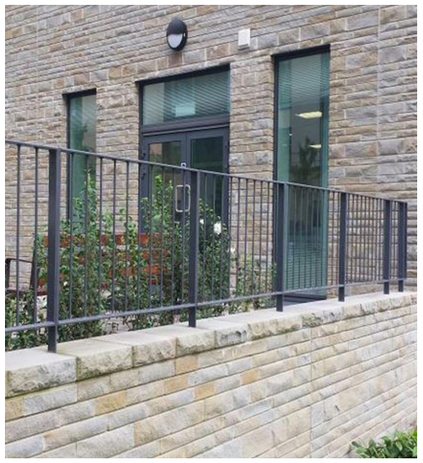
2.1m High Timber Fence
Location: Allotment interface



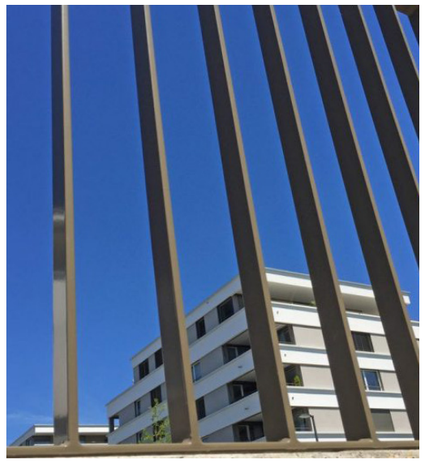
1.8m High Timber Fence with stainless steel wire system for climbers
Location: Main entrance



Solid Timber Fence (Varied Height)
Location Railway boundary
Type: Timber



Metal Railing to top of wall
Location: Private terraces and public realm



1.1m metal railing
Location: Site boundaries

5.7 Landscape Maintenance and Management

Aims and Objectives
The establishment and future success of the landscape is largely dependent on the standard and frequency of the subsequent maintenance and management it receives. This section sets out the strategy for the management and maintenance of the landscape within the proposed development.

The key objectives for management and maintenance of the landscape include:

- To facilitate an efficient and sustainable landscape management and maintenance regime through the lifetime of the development;
- To provide a safe, high quality external environment for all site users;
- To maintain a robust and visually appealing landscape setting;
- To ensure that the landscape developes in a manner commensurate with the original design intentions; and
- To ensure the successful establishment and continued growth of the planting proposed.

The adjacent table sets out a list of typical annual maintenance operations.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
General Operations												
Weeding												
Watering												
Litter removal												
Removal of fallen leaves												
Re-firming plants (as required)												
Pest and disease control												
New Trees												
Check condition and treat (as required)												
Structural pruning (as required)												
Top up mulch (for the first three years and three years after replanting)												
Apply fertiliser												
Replace damaged/vandalised/unhealthy stock (annually)												
Shrub and Herbaceous Planting												
Pruning (timing dependant on species)												
Top up mulch (for the first three years and three years after replanting)												
Apply fertiliser												
Thin out planting												
Cut back herbaceous (subject to species)												
Lift/divide herbaceous (subject to species)												
Replace damaged/vandalised/unhealthy stock (annually)												
Amenity Grass												
Mowing (as required)												
Replace damaged or worn grass areas by seeding and top dressing												
Grassland												
Regular mowing in first growing season, as required (twice yearly there after)												
Replace damaged or worn grass areas by seeding and top dressing												
Review and remove areas of encraahing scrub												
Check for nesting birds prior to any management works												
Biodiversity Roof												
Removal of unwanted debris and litter												
Inspection and clearance of gutter and drains												
Replace damaged/vandalised/unhealthy stock (as required)												
Apply fertiliser												
Hard Landscape Areas												
Weeds control in hard surfaces												
Gullies etc. - keep clear (as required)												
Fencing - check condition and repair												

Long term Management
Management and maintenance regimes will need to be reviewed regularly with the appropriate consultant and contractor to ensure that the objectives are being achieved in the most efficient and expedient manner and to ensure that high standards are being maintained.

Maintenance operations and schedules will be reviewed and refined over the plan period to suit changes such as the specific growing needs of particular species or groups of plants and variations in climatic conditions such as periods of drought or storms etc. This will be the responsibility of the on-site management.







6.0

CONCLUSION

6.1 Conclusion


BLOCK
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6.1 Conclusion

Broadwater Gardens will generate **289 high quality homes** on the brownfield site of BioPark, contributing greatly to Welwyn Garden City's housing demand. The scheme has been designed to improve the existing site by creating permeability, reducing the bulk of the current laboratory buildings, and by providing an aesthetically pleasing **landscape-driven** residential development.

The scheme strongly upholds the **Garden City Principles** by:

- The redevelopment of brownfield land for the benefit of the community
- Ensuring there is community engagement during the design process and a strong vision from the outset
- Generating **mixed-tenure** homes, with a good proportion of these being affordable
- Proposing a **Community Hub** which will stimulate the creation of jobs and be a social place to meet
- Proposing **green links** to the north and south, enhancing the route to the railway station
- Designing homes based around the landscaped courtyards with communal orchards for growing food
- Imaginatively drawing on contextual design features in a contemporary way, such as tiled mansard roofs and red brickwork
- Creating a scheme that promotes low carbon technology with a **750% net biodiversity gain**

The scheme consists of **four apartment blocks and eight townhouses**, and each has its own character which has been inspired by both the Welwyn Garden City architecture and the locally celebrated art deco modernist structures; such as the Roche and Shredded Wheat buildings.

Broadwater Gardens will not only be a wonderful place to live, but will also improve the area for its neighbours by creating leafy views through the site, where previously there were none, and by increasing the connectivity to other destinations in Welwyn, both visually and physically.

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