13.0 Sustainability

The applicant is committed to building sustainable developments which incorporate the following. There will be ongoing reviews of technology during and after the application in order to ensure that the most efficient combination of design and technology are incorporated:

- Efficient form factor integral to the massing design.
- Maximum integration of Photovoltaics using all available roof and canopy areas.
- Using latest technology (Solshare or similar) to distribute PV generation to apartments
- Overheating and renewables to be integrated into, and inform, the architectural language. Elements include brise soleil, south facing oversailing balconies, louvred screens integrated into the window system. All in order to reduce high angle solar gain whilst maintaining good views and daylight.
- All heating and hot water will be from Ground or Air Source Heat Pumps. The applicant commissioned a feasibility for Ground Source (minimum 14 bore holes) but due to the urban nature of the site, the 6m sewer easement, and the proximity to the railway line, Ground Source may not be achievable. Further ground condition assessments are required.
- MVHR
- Triple Glazing
- Targetting EPC A to all units
- Circa 30% reduction in carbon emissions against Building Regulations
- Review against Leti guidance, currently incorporating:
    - Form Factor
    - Areas of renewables
    - Window/wall areas
    - Balance Daylight and overheating
    - Include external shading
    - Include openable windows
    - Fossil Free fuels
    - Demand Response
    - Metering
    - Disclosure
- Integrating green landscape into the design for maximum BNG and UGF

ACORN green

Homes and buildings – functional, healthy and sustainable.

Resources – efficient and resilient.

Lifespan – made to last.

14.0 Landscape - Nature & Public Spaces

jpa ACORN
Matthew Wigan Associates

ILLUSTRATIVE LANDSCAPE PLAN | 1:500 at A3

01 Slab and sett paving to Marketplace - with stone feature paving to entrance and feature banding
02 PCC Block paving to parking and access zones
03 Contrasting block paving surface to carriageway
04 Block paving to Public Realm Route with feature banding
05 Cycle stands
06 Secure cycle hub with biodiverse green roof
07 Raised planter edge with bench seating
08 Timber screen with climbers to boundary
09 Cafe seating
10 Play equipment
11 Existing trees to be retained
12 Proposed trees
13 Proposed enhancement planting to boundary
14 Planting beds with flower rich perennial planting
15 Grass surface within play area, with sensory planting to margins and in and around any 'rain garden' features
16 Planting beds designed to act as 'rain gardens', with porous substrate and flower rich, moisture tolerant planting
17 0.9m railings to front gardens
18 1.5m railings to Play Area, with self closing gates
19 Climbers trained to facades and pillars of buildings
20 Front gardens - green roofs to cycle / bin stores, and water butts

ced and optimised.

Public spaces – safe, social and inclusive.

14.1 Landscape - Routes & Circulation

Routes and Circulation

- The Public Realm Route provides link from village centre to the primary school on Southvale Road, and residential areas beyond. Attractive paving with inlaid patterns helps to reinforce the route to school. The new footway improves access to and from existing on street parking on Collins Street.
- The direction of paving within the Market Place help direct pedestrians towards the Public Realm Route.

Avenue tree planting

Private spaces demarcated with planting

Directional paving pattern

Community & Neighbourhood Spaces

- The Mews Street to the south of Block B wil be surfaced in attractive PCC setts and cobbles, permeable where possible, defining the area as a pedestrian priority space.
- Paving patterns to help define the carriageway and parking spaces within the Mews Street. Planting beds would help to soften building facades, with trees and climbers.
- A new neighbourhood play area with low key natural play features / equipment and sensory planting would provide a space for residents to socialise together, and would provide a link between the Mews Street and the Public Realm Route.

The play area would include natural play elements

Small trees such as Cercis c. 'Avondale' where space is restricted

Paving materials help to define pedestrian spaces, carriageways and parking bays

Rainwater butts provided to front gardens to provide attenuation and water storage

The Mews would be softened with planting beds and climbers

Sensory play elements

14.2 Landscape - Market Place Landscape Principles

Market Place

- Attractive new paving enhancing the setting of the market building and station approach. Feature paving with inlaid lettering would mark the entrance to the space.
- A flexible layout is designed to accommodate the weekend farmer's market.
- The replacement bike hub will provide secure cycle storage, and would be enhanced with a biodiverse green roof.
- A raised planter with flower-rich planting and new trees, would incorporate seating opportunities.
- Paved areas broken up into zones with banding, subtly denoting areas around the commercial unit, access to station platform, and the start of the Public Realm Route. Permeable paving units would be used where possible,

Flexible paved areas for weekend market stalls

Entrance feature paving

Raised planter with seating opportunities

Planting for Biodiversity

- Tree planting to provide shade and habitat and food sources for wildlife. New tree planting along the Public Realm Route provides an enhancement to the setting of Collins Street.
- Ornamental planting areas including a high proportion of flowering species with value for pollinators.
- Climbers to building facades, providing nesting sites and habitat for birds, and night scented species favoured by moths
- Extensive areas of biodiverse and flower-rich green-roof planting,
- Flower-rich rain garden planting, with tree and perennial species tolerant of fluctuating soil moisture

Typical tree species:
Acer campestre 'Streetwise'
Acer x freemanii 'Autumn Blaze'
Acer platanus
Amelanchier 'Robin Hill'
Betula pendula
Crataegus l. 'Crimson Cloud'
Ginkgo biloba

Typical climber species:
Hydrangea petiolaris
Parthenocissus henryana
Lonicera p. 'Graham Thomas'
Jasminum officinale 'Clotted Cream'

Typical flower-rich planting species:
Achillea millefolium
Dryopteris affinis
Cistus purpurea
Euphorbia x martinii
Eurybia divaricata
Geranium 'Rozanne'
Hakonechloa macra
Helleborus argutifolia
Hylotephium spectabile
Libertia grandiflora
Phlomis russeliana
Sesleria autumnalis
Tulipa turkestanica
Verbascum chaixii

Biodiverse green roof planting

Climbers to building facades

Flower rich perennial planting

14.3 Landscape - Market Place

jpa ACORN
Matthew Wigan Associates

Granite feature paving to Market Square entrance

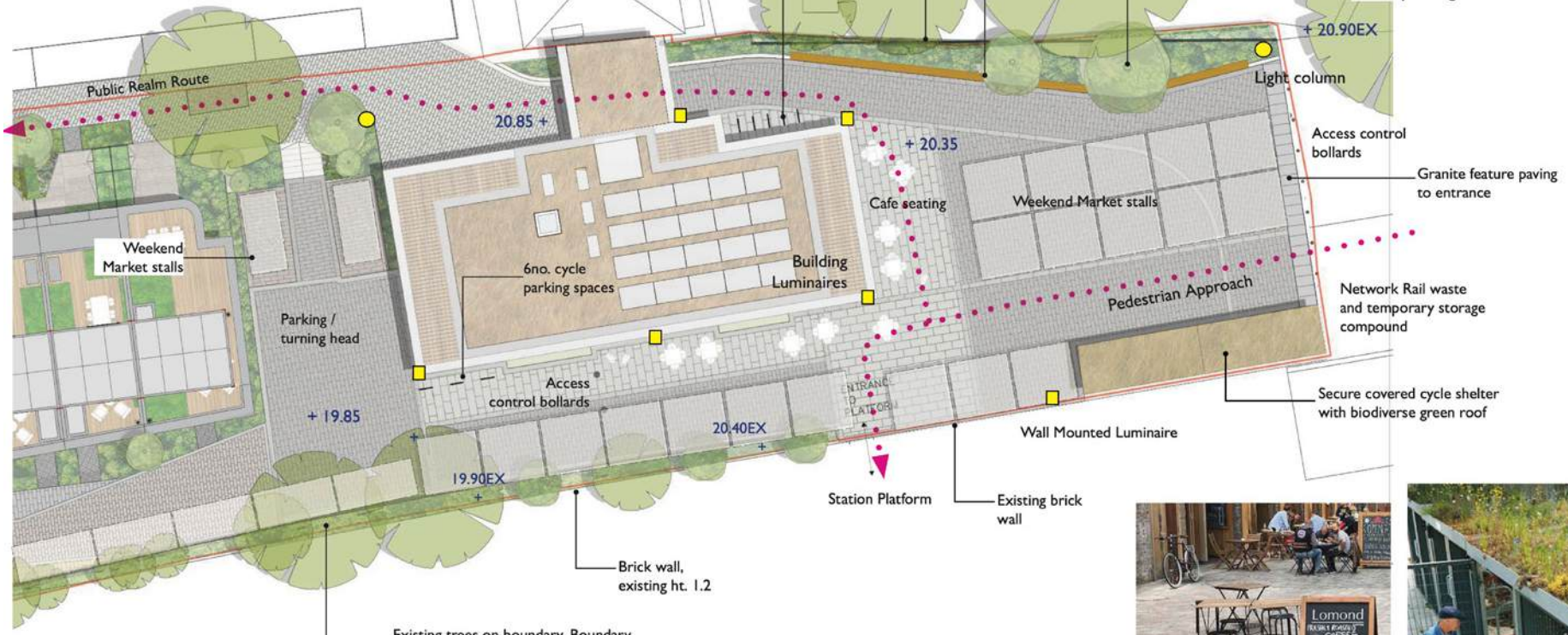

Planting bed with timber screen and seating on corner


Dark to mid-grey permeable paving broken up into zones through the use of lighter coloured banding, with larger units helping to define cafe seating areas


Block paving to be permeable where possible


Circulation zones and seating areas defined through the use of flush kerbs and contrasting unit sizes (Clink St, London)

Raised planting bed



Movable outdoor cafe seating


Biodiverse green roof to cycle hub

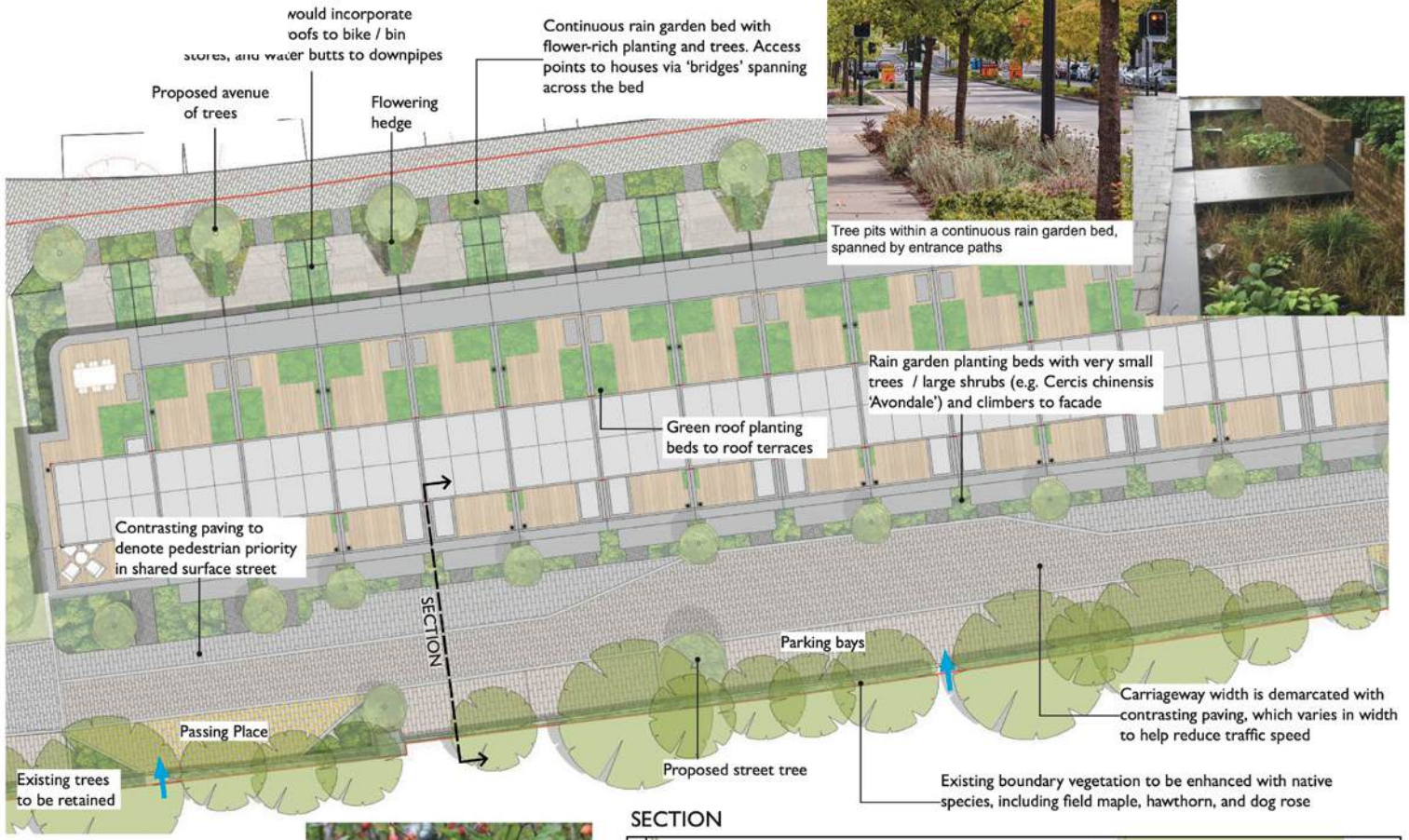
14.4 Landscape - Mews Street

Planting beds break up the carriageway, providing greenery, and narrowing the street to encourage drivers to slow down. (Slow Streets Sourcebook, Section 3)

Contrasting permeable block paving used to reduce the apparent carriageways width, and reduce traffic speed, without impeding access by emergency vehicles. (Slow Streets Sourcebook, Section 4)

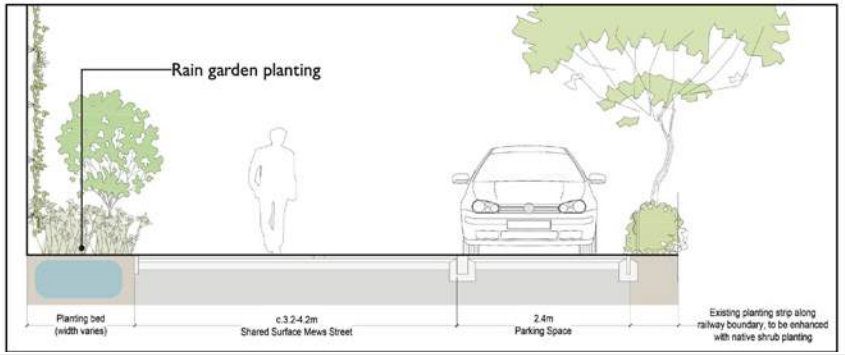
Planting beds incorporating climbing plants trained to buildings

Existing vegetation along railway boundary to be enhanced with additional native planting



Tree pits within a continuous rain garden bed, spanned by entrance paths

SECTION

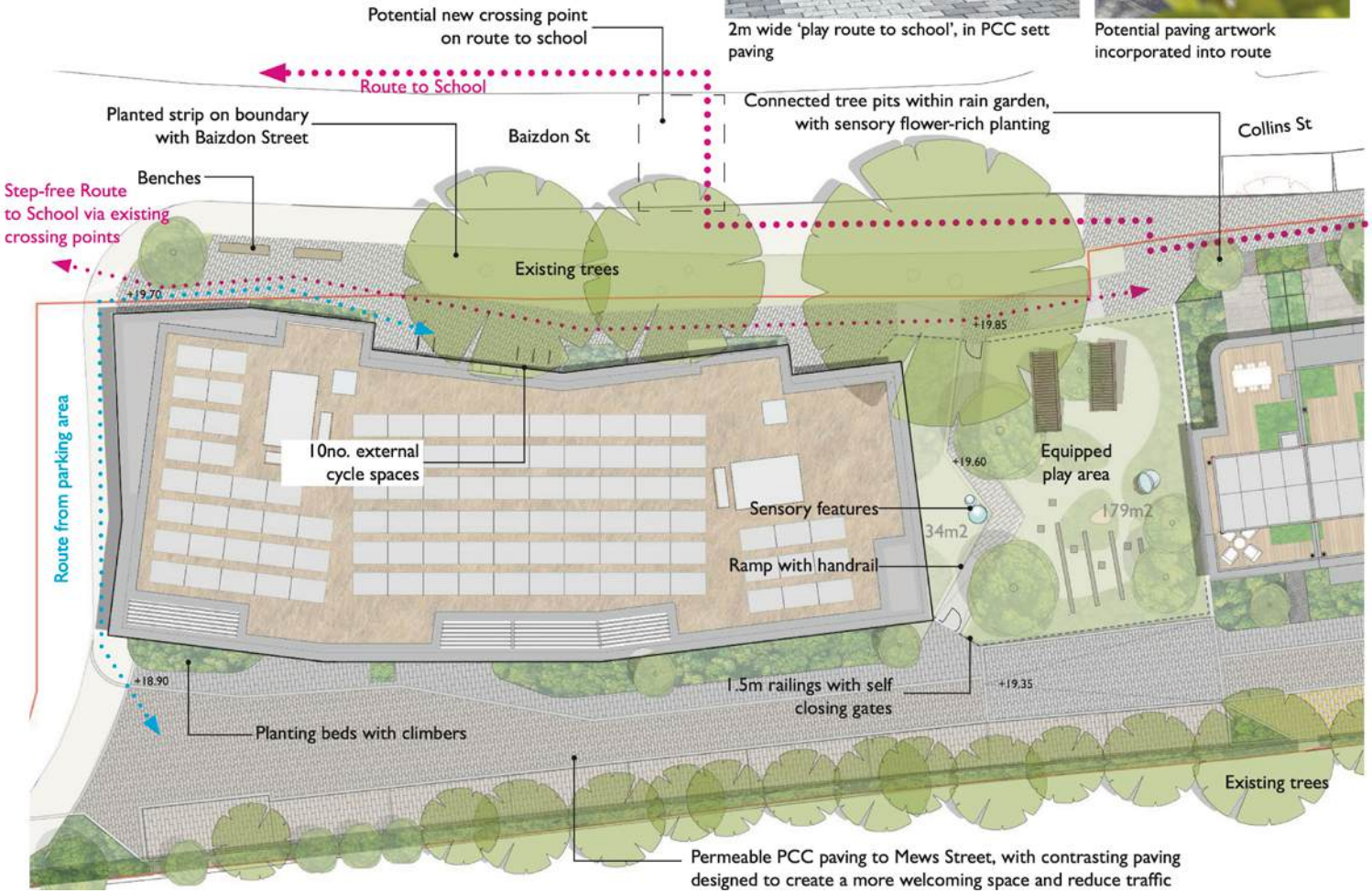


14.5 Landscape - Block C Frontage

2m wide 'play route to school', in PCC sett paving

Potential paving artwork incorporated into route

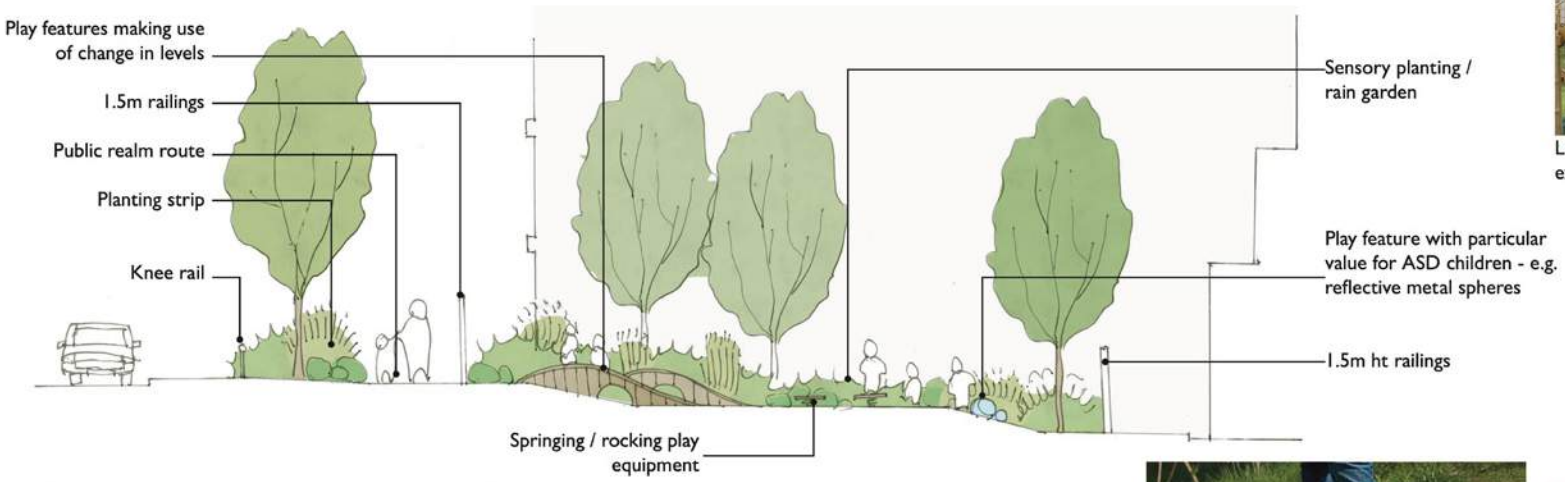
1.5m ht railings to perimeter of play space



Stepping and jumping equipment, integrated with rain garden

Wildlife-friendly planting, stimulating exploration of nature

14.6 Landscape - Play Space & Play Route



Levels changes incorporated into play experience

Features for sensory stimulation, ASD children

Informal play boulders

Active rocking equipment for solitary play or small groups

CASE STUDY - FUN ROUTES TO PLAY

Sustrans' guide *Routes to play* [1] makes some recommendations on ensuring children and young people can play actively and travel independently around the areas in which they live. Stimulating lightly trafficked routes for instance with artworks, paint on the path's surface and natural play features can offer excellent opportunities for spontaneous and creative play and can encourage children to walk to school, the park, shops or visit friends. Transport for London's Legible London initiative also aims to simplify wayfinding and improve access to play spaces for people on foot.

14.7 Landscape - Indicative Lighting Plan

14.8 Landscape - SuDS

Site Layout 1:250 @ A1

Zuidelijke Wandelweg, Amsterdam

Three Mills Green, Newham

Rain garden planting beds
Play area rain garden
Extensive (biodiverse) green roof

Extensive (biodiverse) green roof

Chandler Court, Bristol

Rain garden planting beds

Play area rain garden

Areas would be designed to drain quickly, with no standing water. Vegetation and landform contribute to the natural play experience.

Rainwater butts provided to front gardens to provide attenuation and water storage

14.9 Landscape - Urban Greening Factor of 0.446 Achieved *

* = This result does not include climbers owing to the fire risk posed by them

Site Layout 1:250 @ A1

Climber Elevations 1:250 @ A1

Urban Greening Factor Calculator

Surface Cover Type	Factor	Area (m²)	Contribution	Notes
Semi-natural vegetation (e.g. trees, woodland, species-rich grassland) maintained or established on site.	1		0	
Wetland or open water (semi-natural; not chlorinated) maintained or established on site.	1		0	
Intensive green roof or vegetation over structure. Substrate minimum settled depth of 150mm.	0.8	167	133.6	With diverse native and flower rich perennial planting
Standard trees planted in connected tree pits with a minimum soil volume equivalent to at least two thirds of the projected canopy area of the mature tree.	0.8	1113	890.4	Includes existing trees within site boundary (626m2) and proposed trees (436m2), using projected trees canopies at 25 years (Hilliers Nurseries)
Extensive green roof with substrate of minimum settled depth of 80mm (or 60mm beneath vegetation blanket) – meets the requirements of GRO Code 2014.	0.7	621	434.7	With diverse native planting
Flower-rich perennial planting.	0.7	373	261.1	Attractive diverse mix of flowering perennials and spring bulbs with known value for pollinators
Rain gardens and other vegetated sustainable drainage elements.	0.7	77	53.9	Rain gardent within play area. Other potential rain gardens (see drg. 0004) are included within 'Flower rich perennial planting.'
Hedges (line of mature shrubs one or two shrubs wide).	0.6	116	69.6	
Standard trees planted in pits with soil volumes less than two thirds of the projected canopy area of the mature tree.	0.6		0	
Green wall –modular system or climbers rooted in soil. NB - Subject to fire consultant confirmation.	0.6	326	195.6	
Groundcover planting.	0.5	270	135	
Amenity grassland (species-poor, regularly mown lawn).	0.4	111	44.4	
Extensive green roof of sedum mat or other lightweight systems that do not meet GRO Code 2014.	0.3		0	
Water features (chlorinated) or unplanted detention basins.	0.2		0	
Permeable paving.	0.1	1570	157	
Sealed surfaces (concrete, asphalt, waterproofing, stone).	0	1463	0	
Total contribution			2375.3	
Total site area (m²)			4768	
Urban Greening Factor			0.498175336	
Urban Greening Factor EXCLUDING CLIMBERS ON BLDGS			0.445532718	

Existing / Proposed

Proposed Trees (indicative list)

25 year Spread*	Abbreviation	Species
6m	Ac. pl	Acer platanoides
	Ac. AB	Acer x freemanii 'Autumn Blaze'
	Be. pe	Betula pendula
4m	Ac. SW	Acer campstre 'Streetwise'
	Cr. CC	Crataegus laevigata 'Crimson Cloud'
	Gi. bi	Ginkgo biloba
3m	Ma. Ev	Malus 'Evereste'
2.5m	Am. RH	Amelanchier 'Robin Hill'
	Ce. ch	Cercis chinenis 'Avondale'

* source: Hillier Nurseries (hillier.co.uk)

N

0m 10m 20m

1:250

Rev	Date	Revision Notes / Status	Drawn	Checked
01	06.12.23	General updates	WB	MW
02	14.12.23	General updates	WB	MW
03	02.08.24	General updates	WB	MW
04	22.08.24	Rain garden areas, climbers restricted to lower storeys	WB	MW
05	24.08.24	Minor amendment	WB	MW
06	15.10.24	Elevations updated, revised calculation	WB	MW
07	18.10.24	Permeable paving	WB	MW
08	07.11.24	Minor amendment	WB	MW

Title: Urban Greening Factor
Site Layout and Elevations

Project: Blackheath Station
Drg no: 2106-MWA-00-XX-DR-L-0002
Rev: 08 Status: P
Scale: 1:250@A1

Date: 23.11.22
Client:

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15.0 Artificial Ecological Refugia

BLOCK B - NORTH ELEVATION

KEY:
- SWIFT NESTING BOX (20NO.)
- BAT BRICK (21NO.)
- HEDGEHOG CONNECTIVITY GAPS (3NO.)
- DEADWOOD PILE (1NO.)

TOTAL: 45NO.

BLOCK B - SOUTH ELEVATION

PLEASE NOTE: ARTIFICIAL ECOLOGICAL REFUGIA/HABITAT FEATURES ARE LOCATED INDICATIVELY. DETAILED POSITIONS SUBJECT TO PLANNING CONDITIONS.

PROPOSED SITE ROOF PLAN

16.0 Summary

- An **attractive place to live, work and play**
- A scheme that puts **positive place-making and landscape** at the heart of the design
- A design that delivers a **new public square** and enhances the farmer's market, provides safe pedestrian route to and from school, on-site play space, new street trees and planting **increasing local biodiversity**
- A mixed-use development of **45no. high quality family homes**, including on site affordable family homes
- A scheme that promotes healthy lifestyle, walking to school, the station and surrounding streets **providing excellent links to the village and all its facilities** and the heath beyond
- A scheme that is individually and intelligently **designed to the highest quality**, ensuring a positive impact and contribution to the local surroundings, creating a **true sense of place** and an inclusive community where occupiers and nature can grow and flourish
- A place that is **socially environmentally and economically sustainable**

Context – enhances the surroundings.
Identity – attractive and distinctive.
Built form – a coherent pattern of development.
Movement – accessible and easy to move around.
Nature – enhanced and optimised.
Public spaces – safe, social and inclusive.
Uses – mixed and integrated.
Homes and buildings – functional, healthy and sustainable.
Resources – efficient and resilient.
Lifespan – made to last.

17.0 Who We Are - Acorn Property Group


Trilogy


The Liner


Brandon Yard


Cubis Bruton


Brooks Dye Works


Newham's Yard


The Links

different by design

ACORN PROPERTY GROUP IS AN INDEPENDENT DEVELOPER SPECIALISING IN BESPOKE RESIDENTIAL-LED & MIXED-USE SCHEMES ACROSS THE SOUTH WEST OF ENGLAND, LONDON AND SOUTH WALES.

Over the last 25 years we have established a position as specialists in medium sized, award-winning sustainable developments. With a focus on brownfield catalytic regeneration, each of our developments has its own unique identity and character, providing a refreshing alternative to the templated approach of other developers.

Staying true to our `different by design' ethos and Acorn Green principles, we put creativity and sustainability at the forefront of everything we do, designing every scheme around its individual merits.

15.1 Who We Are - JPA

JPA have established themselves as one of Britain's leading practices in housing, with 56 national design awards, including:

The Hind House (2008) in Wargrave was short-listed for the Stephen Lawrence Award for the best new building under £1M in the 2009 Stirling Prize Awards. It won an RIBA regional Award in 2009
The Pooley House won the RIBA 'Downland Prize' in 2012
The Watson House won an RIBA Regional Award in 2011 and was shortlisted for the RIBA 'Manser Medal'
The Trewarren House in Pembrokeshire won an RIBA Regional Award in 2013 and the Gold Medal for Architecture in Wales
Winner of two RIBA Awards in 2016.
RIBA Award in 2017
Shortlisted for RIBA Award 2019
Double winner at the Housing Design Awards 2020
RIBA National Award in 2021
RIBA National Award in 2022
Neave Brown Housing Award Finalist 2022

In 2016, JPA featured twice on the Grand Designs 'House of the Year' Awards.

John Pardey Architects were voted as one of Britain's top ten practices for one-off houses in Grand Designs magazine 2012 and rated as one of the top six residential architects in the UK in the Sunday Times in 2014. John served on the national Commission for Architecture and Built Environment (CABE) and the RIBA National Awards Panel. He is the author of four books on architecture and has a further book due for publication in 2023.

John Chaired the 'Grand Designs/ RIBA House of the Year Awards' broadcast over 4 weeks on Channel 4 in November 2019.

Lovedon Fields, Near Winchester, 60 units for Hab Homes
Finalist for Neave Brown Housing Awards 2022

Withdean Road, Brighton, 3 units for Baobab Developments. RIBA South East Award 2017

Cumnor Hill. Near Oxford, 5 units for Hab Housing

Lawn Road, Belsize Park Conservation Area, 72 units for Fairview Homes

Above: Example JPA projects

Proposed CGI - Block A Market Building

Proposed CGI - Block A Market Building

Proposed CGI - Block A Market Building