

Design Code: Section 6.0

Nature & Public Spaces

Introduction

This section of the Design Code sets out the key elements of the existing green infrastructure to be retained, the required landscaped buffer zones, the constraints associated with ecology on the site, issues associated with existing watercourses and proposed surface water drainage and required provision for biodiversity.

It also sets out the key elements of the public open space within the scheme. This includes the overall strategy for the distribution of the different categories of open space and linking routes between, the strategy for a range of play provision to suit different age groups, provision for structural planting, the tree strategy across the development, street furniture and lighting. It also looks at how the network of Sustainable Drainage features needs to be integrated, together with boundary treatments and maintenance and management of the landscape areas

6.0 NATURE & PUBLIC SPACES

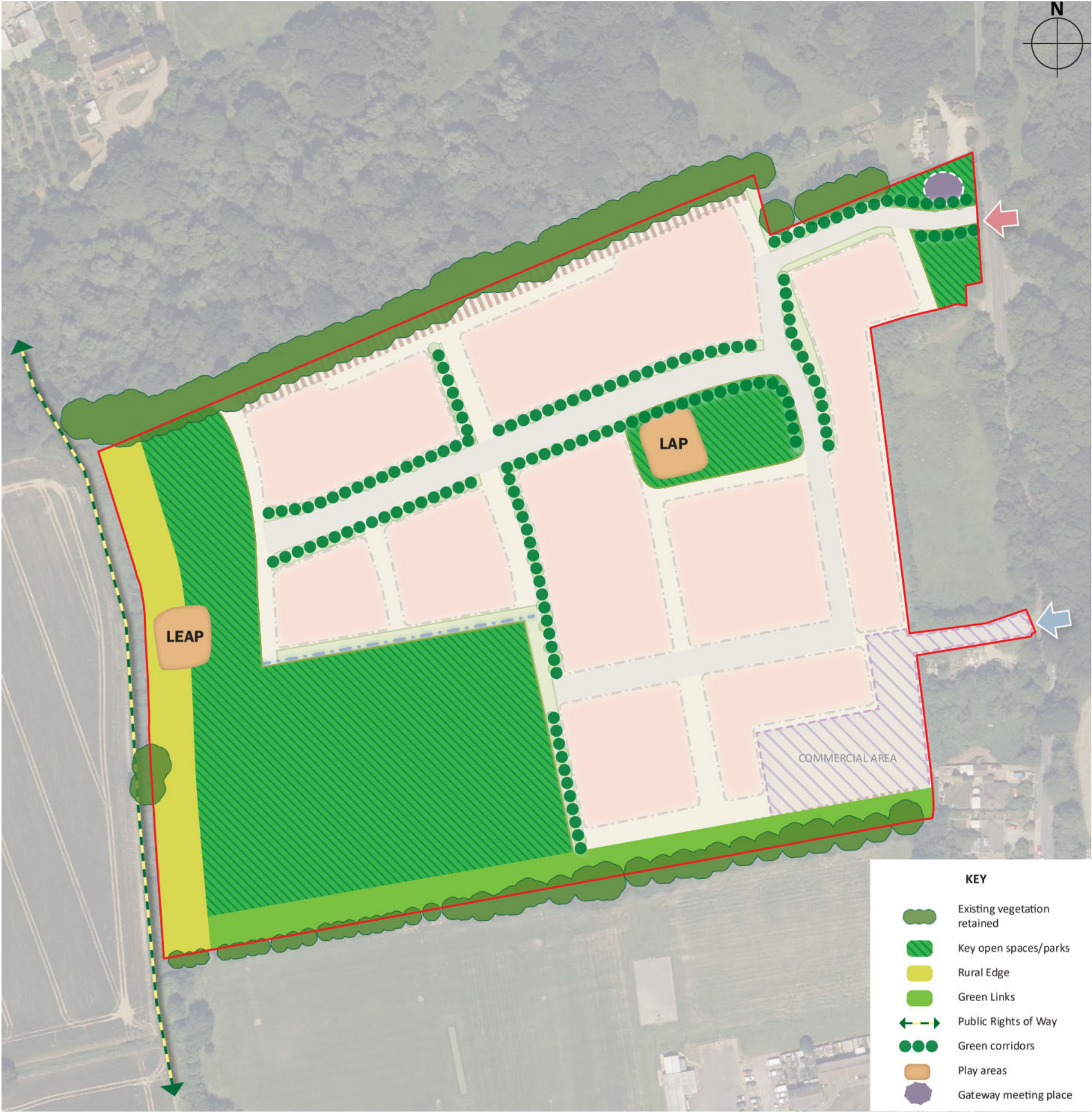
6.1 Introduction, Acknowledgement of Network of Spaces in Wider Environment

The protection and enhancement of the natural environment including habitats and species is a fundamental requirement of both national and local planning policy. Existing natural landscape and vegetation within the site is generally associated with internal boundaries as well as an area of unmanaged scrub located within the north eastern corner of the site.

Development proposals will seek to minimise any adverse impacts on the existing natural environment and instead aim to integrate natural green areas through a network of spaces across the wider scheme that will provide benefits including health and wellbeing, biodiversity, climate, and flood mitigation.

This will be achieved through the following principles:

- Integrate the surrounding natural environment into development proposals providing a number of benefits including improved health and wellbeing, wildlife and biodiversity opportunities and climate and flood risk mitigation.
- The retention of existing on-site vegetation including trees, hedgerows and woodland planting where possible to avoid the loss and/or fragmentation of important and valuable habitats and species and the erosion of the natural environment.
- Where adverse impacts are unavoidable, appropriate mitigation and/or compensation measures should be considered which could include:
 - o the creation of new/replacement habitats and features
 - o the restoration and enhancement of existing habitats and features, for example through positive management



Proposed green infrastructure plan

KEY	
	Existing vegetation retained
	Key open spaces/parks
	Rural Edge
	Green Links
	Public Rights of Way
	Green corridors
	Play areas
	Gateway meeting place

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6.2 Biodiversity

Habitats

The modified grassland fields are poor quality habitats likely to support a limited assemblage of protected and notable species. The hedgerows and trees on the boundary of the site are considered of local value and are likely to support a range of species.

Protected Species

The site is known to support hazel dormouse *Muscardinus avellanaris* within the surrounding hedgerows and woodland to the north. Clearance of suitable dormouse habitat will be conducted under a European Protected Species License (EPSL) and/or approved method statement and the proposal seek to mitigate the loss of scrub and hedgerow through the inclusion of scrub and hedgerow planting within the scheme. This will be secured through the EPSL.

The site is also known to support roosting bats within existing buildings and commuting/foraging bats within surrounding hedgerow habitat. Two buildings within the site are known to contain bat roosts, for one single common pipistrelle *Pipistrellus pipistrellus* and one single soprano pipistrelle *Pipistrellus pygmaeus*. Habitat connectivity will be maintained around the site, particularly to the west and northern boundary which are the most species rich buildings will demolished under an EPSL which will include suitable mitigation for the loss of the bat roosts.

Signs of badgers were identified on the site and further details are not provided in order to protect and potential badger setts. Two weeks of monitoring were completed in 2021 to establish activity levels and badgers were not identified. Further monitoring has been recommended prior to work to ensure the status remains unchanged.

The site is suitable to support nesting birds and suitable nesting habitat will be removed therefore mitigation and enhancement will be included. This include preworks checks for nesting birds prior to vegetation clearance and/or building demolition between March and August (inclusive) along with new planting to increase nesting opportunities around the site.

The site is suitable for supporting common and widespread reptile species and as such, enhancements have been recommended to secure the potential reptile populations within the new scheme. During works, habitat manipulation and displacement are considered suitable options due to the large amount of habitat being retained and the small amount of suitable habitat to be removed.

The site is suitable for supporting common amphibian species such as common toad *Bufo bufo* and eDNA surveys were completed in 2021 on the on-site pond and surrounding ponds where access was available, with negative results. An Ecological Mitigation and Enhancement Strategy has been completed for the site to ensure that impacts are mitigated and the site is enhanced for biodiversity. This includes the inclusion of bat and bird boxes, green corridors, green links, wood piles, additional planting to compensate for the loss of habitat, enhancement of existing habitats and input into lighting design to ensure habitat corridors remain unlit.



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6.3 Green Infrastructure Considerations

Policy GI SP1 of the Arun Local Plan 2011-2031 sets out the Green Infrastructure requirements for development sites and stipulates that the existing GI network must be considered at an early stage of the design process. Development must be designed to protect and enhance existing GI assets and any connections between them to ensure a joined-up network.

Arun districts GI network comprises a range of multifunctional green spaces and inter-connecting links. These spaces include wildlife sites, parks and gardens, areas of countryside, woodland areas, ponds and watercourses, outdoor sport and recreation provision and local green spaces including footpaths, cycleways and recreational routes.

GI considerations as part of the development proposals for the site will be carefully designed to create a series of interconnected green spaces which will link into the existing GI infrastructure network. Safe and attractive public spaces and routes must be provided across the scheme that should allow pedestrians and cyclists to move around the development in a safe and attractive environment. The following design principles will be considered as part of the GI proposals to support the residential development.

- Creation of a network of public open space designed to create a sense of place and link into the existing surrounding GI network
- Enhancement of public access for recreation within the site and linking to surrounding the countryside
- Establishment of landscape frameworks that reflect the local landscape character, contributing to the creation of high-quality development edges
- Enhancement of existing and the creation of new habitats providing opportunities for improving local biodiversity within the site
- The reinforcement of existing hedgerow and tree planting around the site boundaries including a new woodland hedgerow to create a green edge to the proposed sports pitches
- Where possible the retention of health trees and hedgerows to bring quality and a mature landscape character into the development
- Ensure appropriate management and maintenance arrangements are in place and consider how maintenance requirements may be minimised through careful design, where this does not conflict with other design objectives.



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Soft landscape palette

The proposals seek to build on the existing landscape fabric through the introduction of enhanced native boundary tree and hedgerow planting, specimen parkland trees within the open spaces, formal street tree planting, marginal and wetland planting, short and long grassland and ornamental shrub planting.

The species selection is appropriate to the local growing conditions, intended purpose and level of maintenance using a range of species to provide long, medium and pioneer species. Species selection will favour native species and cultivars wherever practical and be chosen and managed such that they promote local wildlife and biodiversity, in particular habitats for birds, invertebrates, bats, reptiles and amphibians.

A palette of tree, shrub and grassland species would be used to provide a rich and varied planting scheme. Defining species would be used to provide interesting points of focus.

Evergreen shrub planting would provide softening to vertical structures such as walls and fences, with self-clinging climbing shrubs also used to reduce the visual effects of these hard enclosures. Clipped evergreen hedgerows would provide an informal boundary treatment to frontages. Cottage and garden type planting would provide seasonal interest through its colour, texture and scent, whilst also contributing to the rural domestic character of the residential frontages.

Hard landscape palette

A simple palette of hard landscape materials and street furniture are used to compliment the specific purpose and location within the development, using materials that are durable and compliment the local palette of materials and the proposed townscape character.

Concrete paviors will provide an informal 'lane' character within selected residential areas and prominent road junctions that slow traffic and create a more friendly pedestrian environment. Other traffic calming such as raised road surfaces which will also serve to make the residential streets safer with an emphasis on slowing traffic speeds.

Boundary treatments & enclosures

A range of robust boundary treatments would be used to provide secure means of enclosure where necessary, principally to rear gardens using a mixture of close board timber fencing and masonry walls where they affront the public realm. Front gardens will be enclosed by less formal treatment including railings and / or clipped low hedgerows to provide a softer edge and allow natural surveillance onto the street.



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6.4 Open Space Provision

As part of the development schedule for the site, proposals include 4.07ha of Green Infrastructure, which will provide a range of functions including the following:

- **Open Space and Amenity Areas** – A network of connected open spaces will be provided across the site integrating the residential development into the sites landscape setting creating a sense of place. These new open spaces will allow for informal recreation uses including new recreational routes which will link into the wider movement network on Arundel Road.
- **Landscape Vegetation** – Site proposals include for new native tree and hedgerow planting along site boundaries as well as a new woodland hedgerow along the northern edge of the proposed formal sports pitches. This will enhance the existing boundary vegetation whilst strengthening wildlife habitats and biodiversity net gain opportunities.
- **Formal Play Provision** – New sports pitches will be provided within the southern part of the site which will connect with the proposed remodelling of the Angmering Sports Hub to the south. A new children's play area will also be provided on the site in the form of a LEAP.



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6.5 Play Strategy

The play strategy for the schemes play areas will seek to provide a range of opportunities for a range of age and ability groups of children. These will aim to provide imaginative, fun, challenging play opportunities for local children, provided in a safe and naturalistic style.

The formal play equipment will accord with recognised standards (such as BS1176 and BS1177) and will be constructed to provide safe surfacing around all items. The formal items will seek to provide a range of physical challenges, such as strength, balance, sliding, climbing, turning/twisting and swinging.

The play equipment will likely be of timber/wooden construction, with other elements such as grassy mounds, sand and boulders also included.

Sensory and imaginative play will also be present, with noise, touch and texture providing interest and variety of play experience. Planting will compliment this, with scented, colourful and textured planting providing links to the schemes nature connections. Seasonal changes will be marked by flowers, colour and fruit. Contact with nature will also include local insects as well, with flowering plants attracting bees and butterflies to the areas. Areas for quiet imaginative play will allow children to explore their own stories and play thoughts in a safe and quiet environment.

Younger children will be provided a safe, soft space to explore natural elements, whilst under the guidance and care of the parents who'll be able to rest and enjoy their children's enjoyment.



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6.6 Play Provision

Local Areas of Play (LAP)

LAPs will be accommodated throughout the development and must have the following characteristics and features:

- Aimed at toddlers and young children up to age 6
- Minimum of 100m² activity zone
- Positioned so that there is a LAP within 1 minute/ 100m walking distance of home
- Be at least 5m away from the forward-most part of dwellings that face the LAP

LAPs should primarily consist of playable landscape features but also include low key play equipment for toddlers to enjoy with their parents quietly relaxing nearby.

Local Equipped Areas of Play (LEAPs)

LEAPs must have the following characteristics and features:

- Aimed at mixed ages
- Minimum 400m² activity zone
- Positioned so that there is a LEAP located within 5 minutes/ 400m walking distance from any dwelling.
- Be at least 20m from the nearest property boundary.

LEAPs provide an area of open space specifically designated and laid out with features and equipment for children who are beginning to go out and play independently but close to home. Each LEAP should provide a stimulating and challenging play experience, including at least six items of play equipment/play experiences, naturally landscaped areas and adequate space for informal kick about and run around space.



LAPs facilitate play provision for toddlers and younger children



LEAPs aim at children of early school age, 4-8 years old.

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6.7 Structural Planting

The design guidance for structural planting draws directly on the Design & Access Statement and Landscape and Visual Impact Assessment (LVIA) approved as part of the outline application.

Structural landscape elements include:

- Retained and augmented woodland blocks
- Retained and augmented woodland edge and scrub
- New woodland edge, scrub and habitat creation
- Avenue and street trees
- Boundary planting
- Structural planting to Open Spaces

The existing framework of boundary hedges and planting, woodland belt vegetation and retained trees will be strengthened to help re-establish a strong landscape structure that would be in-character with the wider landscape character of hedgerows, small woodland blocks and scattered settlement of Angmering and form the basis of the scheme's Green Infrastructure as already described.

Structure planting should be used to enhance the existing vegetation, create robust boundary treatments (in particular with the site frontages to Water Lane, countryside edge and relationship with the National Park) and create identity and definition for the different character areas, streets and spaces and assist with legibility and wayfinding. A variety of plant species and layers should be used but all planting should be designed for biodiversity and wildlife value as well as delivering sensory and seasonal interest.

A palette of suitable robust and resilient plant species will be used for all planting. This must include native species that are already present on the site and in the adjoining woodland and that are appropriate to the local microclimate and landscape character. Generally, the character of planting should be more formal and ornamental through the entrance and central spine to the development, becoming more informal and native in the woodland edge and parkland edge character areas.

New tree and shrub planting in for ecological enhancement / habitat creation will contain a variety of native species to provide new foraging resource for species including dormouse, birds and badger. Important food resources for dormouse include hazel, broom, gorse, hawthorn and blackthorn. Native fruit species such as crab apple, cherry and quince can also be used within the street scene to create foraging resources for birds.

Within the housing areas, structure planting will include tree lined streets to break up the built forms and provide shade and structure. Along with trees in open spaces and private gardens, these will create a tree pattern within the site.



Tree lined streets to break up the built forms and provide shade and structure.



Existing boundary hedges enhanced in line with the character of the wider landscape.



Planting designed for biodiversity and wildlife incorporated into SuDS infrastructure.



Structure planting to create identity and definition for the different character areas.

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6.8 Tree Strategy

The tree planting strategy will seek to compliment the urban design, special arrangement of buildings, street hierarchy and the defined character areas.

Species have been selected to provide:-

- Local distinctiveness
- Native species (where appropriate)
- Seasonal changes and annual phases of interest
- Climate change and biosecurity resilience
- Appropriate scale and size according to location

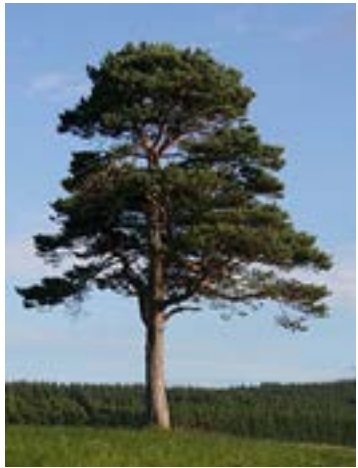
To ensure the tree population thrives in the future a range of native, naturalised and ornamental species have been selected. These will seek to be robust, with regards to climate change and future pests & diseases.

The palette of species will compliment and define the character areas, the street hierarchy will also be further demarcated by the selection of trees.

To ensure that future pest and diseases do not decimate future tree populations, variety and breadth of species of trees will be employed in the tree planting strategy; single species avenues and groups will be avoided.

The street hierarchy will be characterised by the following species:-

- Primary street species: Lime, Hornbeam, Norway Maple, Italian Alder and London Plane
- Secondary street species: Field Maple, Tulip Tree, Birch, Pear and Maple (cultivar)
- Lanes: Apple, Birch, Cherry, Whitebeam, Snowy Mespil, Maple (cultivar), Rowan and Pear
- Open space areas: English Oak, Elm (DED resistant), Alder, Horse Chestnut, Lime, London Plane, Pine, Willow and Poplar



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6.9 Lighting

Lighting should be incorporated into the development to complement the buildings and public realm and to emphasise the links between areas. A coordinated and consistent palette of fittings should be used to reflect the identity of the development and minimise clutter. Fittings should be selected to provide appropriate lighting levels to contribute to the safety of highway users and promote personal security and the perception of personal security for pedestrians.

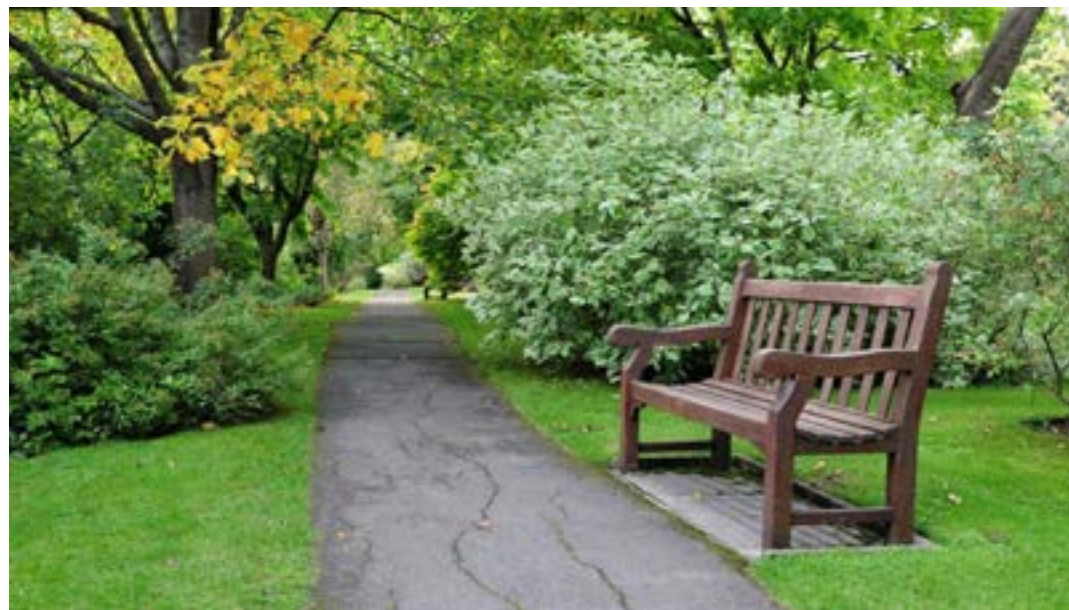
Lighting of public areas must be fit for purpose, of an adoptable standard, energy efficient, simple and contemporary in style, sustainable, cost effective and have suitable access for ongoing maintenance where sited in adoptable highway areas. The day time appearance of fittings is an important consideration and lighting should be designed to reflect the human scale, located with respect to all users and avoid street clutter.

Feature lighting should be considered to enliven public spaces and demarcate features. The overall lighting design shall create visual interest through contrast in lighting levels and highlight key landmarks where appropriate.

Lighting levels shall reflect the hierarchy of streets and spaces, guiding pedestrians along well-connected routes. The scale of columns and luminaires should fit the scale of the street in which they are used.

Lighting columns should be located in furniture corridors along streets and the positioning of lighting must not compromise tree and shrub planting areas. Lighting units must be used that are ecologically sensitive, providing zero upward light pollution.

The lighting plan will ensure the retained hedgerows, ancient woodland edge, scattered trees and new landscape planting are not subject to increased lighting levels as a result of the proposals. The green infrastructure network across the site will be maintained as dark corridors to provide habitat for nocturnal species including badger, bats, hedgehogs and dormice.



Design Code: Section 7.0 Homes, Buildings & Uses

Introduction

This section of the Design Code sets out the required space standards, levels of accessibility, privacy and amenity space standards, building typologies and plot components for the proposed new homes.

7.0 HOMES, BUILDINGS & USES

7.1 Space Standards

All of the proposed new homes will be designed to meet Nationally Described Space Standards (NDSS).

This scheme will deliver 42no. M4(2) and 6no. M4(3) dwellings.

Table 1 - Minimum gross internal floor areas and storage (m²)

Number of bedrooms(b)	Number of bed spaces (persons)	1 storey dwellings	2 storey dwellings	3 storey dwellings	Built-in storage
1b	1p	39 (37) ²			1.0
	2p	50	58		1.5
2b	3p	61	70		2.0
	4p	70	79		
3b	4p	74	84	90	2.5
	5p	86	93	99	
	6p	95	102	108	
4b	5p	90	97	103	3.0
	6p	99	106	112	
	7p	108	115	121	
	8p	117	124	130	
5b	6p	103	110	116	3.5
	7p	112	119	125	
	8p	121	128	134	
6b	7p	116	123	129	4.0
	8p	125	132	138	

Minimum internal and gross floor areas table (DCLG NDSS 2015)

7.2 Accessibility

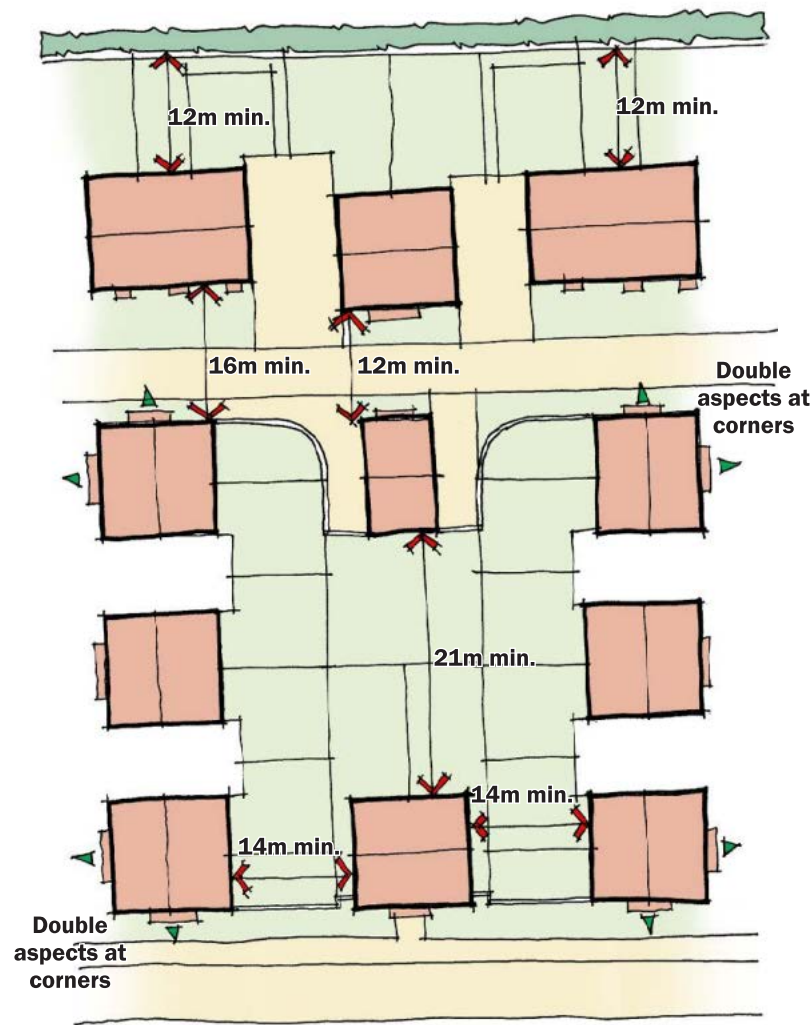
At least 10% of the total number of dwellings will be designed and constructed to meet Building Regulation M4(2) as accessible homes. This will ensure that the dwellings are adaptable and meet the diverse needs of future occupants.

10% of the homes within the overall development will also be designed and constructed to meet Building Regulation M4(3) achieving full wheelchair accessibility.

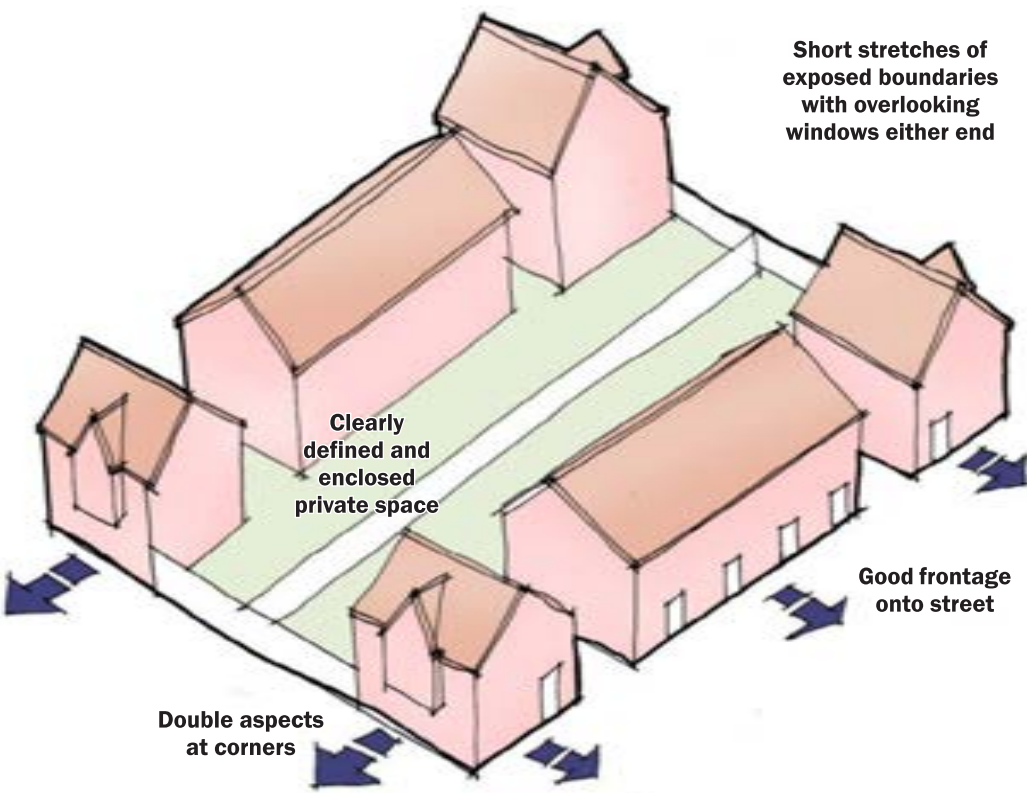
7.3 Block Principles

In accordance with good practice and in compliance with the interface distances of the Arun Design Guide the following distances will be considered in the emerging master plan. This will see corners considered to ensure active frontages face the public realm and garages are not placed in locations that have a negative impact on the street scene. the following interface distances will be considered.

- Back to back - 21m
- Back to flank - 14m
- Front to front - 16m
- Back to boundary - 12m
- Rear gardens - 10.5m min and average.



Example of perimeter block and separation distances



Block principles diagram

7.0 HOMES, BUILDINGS & USES

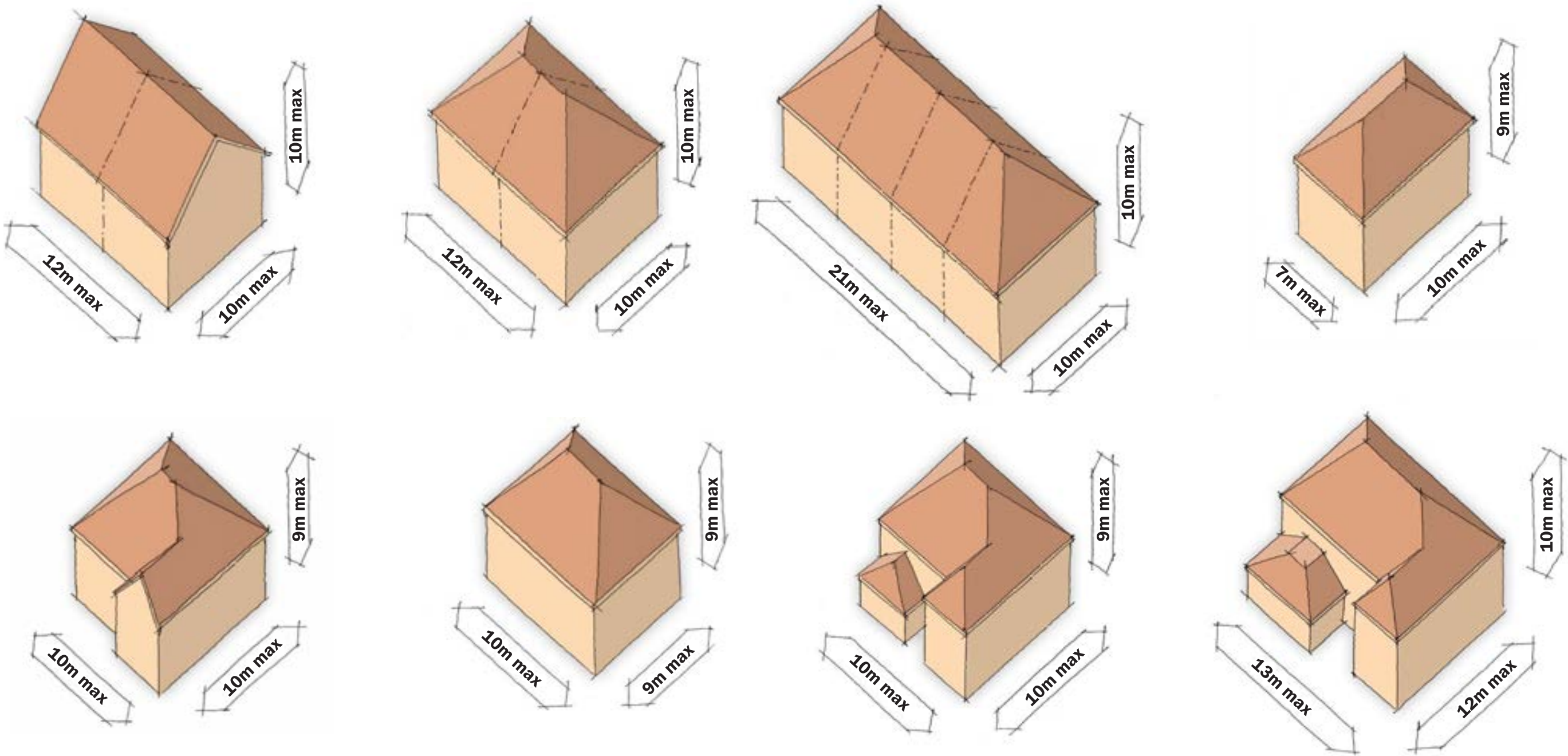
7.4 Housing Typologies and Distribution

A range of new homes will be provided within the development to ensure a mixed and diverse new community. This will include one and two bedroom apartments and two, three and four bedroom houses.

Building typologies should be appropriate to their location and interfaces. They must also reflect the nature of Arundel and how development has evolved in the area. In addition, there are policy requirements that infer an appropriate mix of smaller and larger properties.

This scheme will deliver:

	AFFORDABLE	PRIVATE
ONE BED	8	
TWO BED	21	16
THREE BED	17	29
FOUR BED	2	67
TOTAL	48	112



7.0 HOMES, BUILDINGS & USES

7.5 Plot Components

These comprise the following:

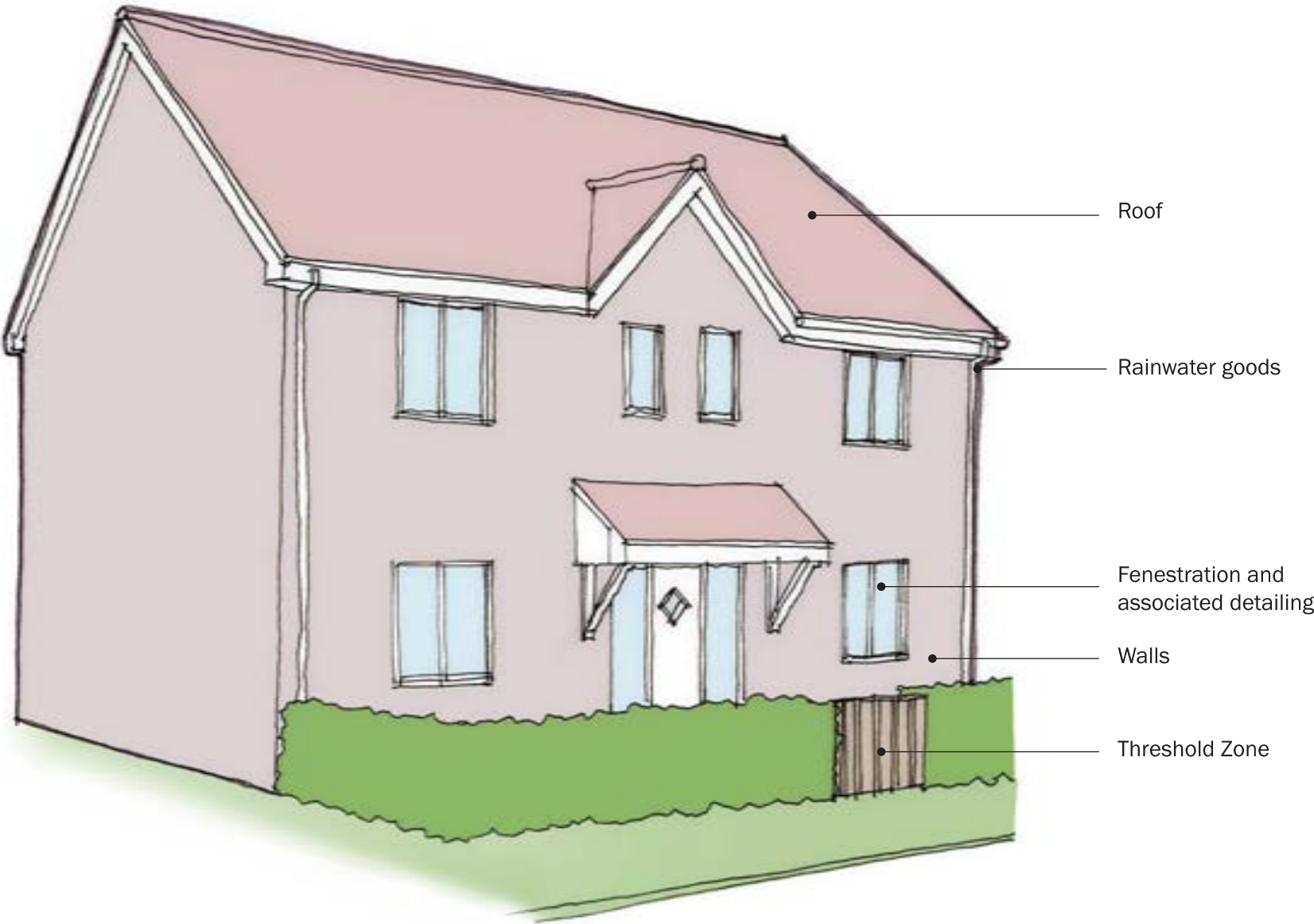
- Dwelling Typology
- Boundary Typology
- Parking Typology
- Set-back

Plot and building feature principles:

- Richness and texture in primary materials
- Carefully composed fenestration pattern with well-proportioned windows
- Key accent and focus buildings in prominent locations designed to incorporate elements of design which contrast with, while complementing the calm and ordered neighbouring buildings
- Key building components such as windows, doors, rainwater goods and roof details selected and designed to create a well-ordered elevational composition
- Entrance thresholds and front boundaries designed to be an integrated part of the streetscape and ordered transition from private to public realm

The plot frontage also has defining elements which comprise the following:

- Public/private threshold – Front garden / privacy margin, porch, front door, meters
- Walls
- Roof
- Fenestration and associated detailing



Key plot frontage elements



Threshold zone



Red Multi Brick



Plain Red Brick



Render



Tile hanging



Timber / render gables



Red roof tiles



Brown roof tiles



Grey roof tiles

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HOMES, BUILDINGS & USES

Threshold Zone

This zone provides defensible space between the public realm and ground floor accommodation within dwellings:

- The nature of this zone will vary with the respective character areas
- In the Primary Avenue character area, it will comprise either shallow front gardens or privacy margins. Where brick boundary walls are incorporated these should be in the same brick as the main dwelling
- In the Parkland Edge character areas gardens will generally be deeper
- Porches should be designed as an integral part of the overall elevational composition with sufficient depth to provide shelter
- Pitched roof porches should match the material on the main roof of the main dwelling
- Flat roofed porches should be metal standing seam or be from a proprietary manufacturer. Poor quality GRP porches should be avoided
- Utility meter boxes where possible should be located on inner flank walls of porch structures, recessed porches, or otherwise concealed from view
- Front doors should be recessed where possible to emphasise the entrance and create depth within the elevation
- Front doors should be of high quality, of appropriate materials and be in keeping with the character of the dwelling



Walls

Wall materials should generally be selected in accordance with the following principles:

- Generally, a maximum of two wall materials on any one building
- Primary wall materials, principally brick should provide a richness and texture
- Brick should be the main material for general buildings, particularly in the Primary Avenue character area
- The specification of the brick type and colour should give subtle variation across the building elevations
- Bricks should be selected in a range of complementary tone
- Contrasting materials to general surrounding buildings can be used at key locations. This could include the use of brick detailing or render to upper floors
- Focus or accent buildings could also incorporate blue brick headers within a bonding pattern as a feature
- Occasional use of weatherboarding may also be considered
- Detailing should be complementary to the wall material and make reference to local building traditions



7.0

HOMES, BUILDINGS & USES

Roof

The design of roofs and associated elements should response to the following principles:

- Roof pitches should be between 35 and 52 degrees
- The roof pitch should be consistent along a terrace
- Obtrusive boxed eaves should be avoided
- Traditional verge details should be generally used
- Where barge boards are used, they should be of shallow section and black or dark colour
- Where chimneys are incorporated, they should be in the same facing brick as the building
- Vents and flues should be architecturally integrated, taken to chimneys as terminals or located on rear roof slopes wherever possible

Dormer Windows:

- Should be integral to the composition of the building elevation in terms of design and positioning
- Should be sized proportionally to the roof slope within which they are site
- Should generally be located within the bottom third of the roof slope
- Should be taller than they are wide to maintain a vertical proportion
- The number and proximity of dormers which break the eaves line should be limited to avoid excessive rainwater pipes on the building elevation
- Gabled dormers should use a consistent pitch and material to that of the main roof
- Hipped dormers should be carefully detailed to avoid oversizing of hip and ridge tiles
- Flat roof dormers should have a standing seam metal finish or be by a proprietary manufacturer.

Rainwater Goods:

- Rainwater goods should be carefully integrated within the overall composition of a building or street elevation
- Rainwater goods including guttering and downpipes will preferably be black in colour
- Deepflow gutter sections should be used to avoid the need for falls along fascias.



Fenestration and Associated Detailing

The arrangement of windows and associated features within the building elevations should generally accord with the following principles:

- Windows should generally be of a casement style
- The design of windows, frame sections and casements should result in a vertical emphasis
- There should be a clear hierarchy of fenestration with ground floor windows generally being taller than those above
- Window openings should have a minimum reveal depth of 85mm
- The colour of window frames within the walls to a building or group of buildings should be consistent
- Equal sight lines should be achieved within the window design wherever possible.

Bay windows:

- Should be located and sized to be appropriate to the elevation within which they are sited
- Frames and corner posts should be sized to ensure they are neither too bulky nor too flimsy
- The material on pitched bay roofs should be the same as the main roof
- Flat bay roofs should be finished in standing seam metal or by a proprietary manufacturer
- Poor quality GRP roofing to bay windows should be avoided.



Design Code: Section 8.0

Resources & Lifespan

Introduction

This section shows how the development can conserve natural resources by being efficient and resilient, and creating a sustainable scheme that minimises carbon emissions.

To maintain the place for the future, the scheme should add to residents' quality of life and be able to adapt for changing needs.

8.0 RESOURCES & LIFESPAN

8.1 Energy Hierarchy

In accordance with Planning Policy the development will be designed in line with the Energy Hierarchy approach to sustainable construction.



As this hierarchy demonstrates, designing out energy use is weighted more highly than the generation of low-carbon or renewable energy to offset unnecessary demand. Applied to the development, this approach is referred to as ‘fabric first’ and concentrates finance and efforts on improving U-values, reducing thermal bridging, improving airtightness, and installing energy efficient ventilation and heating services.

This approach has been widely supported by industry and government for some time, particularly in the residential sector, with the Zero Carbon Hub and the Energy Savings Trust having both stressed the importance of prioritising energy demand as a key factor in delivering resilient, low energy buildings.

Be Lean

The design of a development - from the masterplan to individual building design - will assist in reducing energy demand in a variety of ways, with a focus on minimising heating, cooling and lighting loads. Key considerations include:

- **Building orientation – maximise passive solar gain and daylight**
- **Building placement – control overshading and wind sheltering**
- **Landscaping – control daylight, glare and mitigate heat island effects**
- **Building design – minimise energy demand through fabric specification**

Be Clean

The design and specification of building services to utilise energy efficiently is the next stage of the hierarchy, taking into account:

- **High efficiency heating and cooling systems**
- **Ventilation systems (with heat recovery where applicable)**
- **Low energy lighting**
- **High efficiency appliances and ancillary equipment**

Be Green

Low carbon and renewable energy systems form the final stage of the energy hierarchy and can be used to directly supply energy to buildings, or offset energy carbon emissions arising from unavoidable demand. This may be in the form of:

- **Low carbon fuel sources – e.g. biomass**
- **Heat pump technologies**
- **Building scale renewable energy systems**
- **Small-scale heat networks**
- **Development-scale heat networks**



Target 20% reduction in CO₂ over Building Regs.



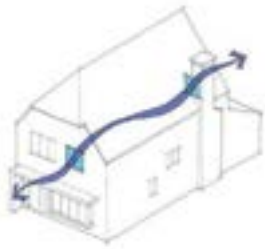
Trees and landscaping to enhance biodiversity. Potential for food-growing areas.



Enhanced insulation and airtightness.



Potential for photovoltaic roof panels.



Cross ventilation to help cool house in Summer.



Bicycle storage closer to the house than vehicle parking. Electric charging points for cars.



Separation of refuse and recycling.



Water use limited to 105 litres per person per day.



Dwellings located outside of flood zones and benefits from SuDS strategy.

8.0

RESOURCES & LIFESPAN

8.2 Energy Efficiency

Energy consumption can be reduced by passive design features that ensure that the building systems and equipment are utilising energy in the most efficient manner possible. Improving energy efficiency is principally addressed through the buildings themselves through various measures outlined in this statement.

However, the occupant also has a more active part in reducing energy by ensuring efficient operation of the dwelling.

The occupant of the dwelling will be provided with all necessary literature and guidance relating to the energy efficient operation of fixed building services. All dwellings will be provided with modern gas-fired heating systems, with controls enabling different temperature profiles in a minimum of two defined zones, a measure which serves to avoid unnecessary heating of spaces when not required - for example, bedrooms and living rooms with differing hours of occupancy.

8.3 Water Saving

Water will be managed effectively to reduce the water consumption associated with the proposed development.

Water efficiency measures including the use of efficient dual flush WCs, low flow showers and taps and appropriately sized baths will be encouraged with the aim to limit the use of water during the operational phase of the development.

8.4 Neighbourhood Energy Design / Microclimate

Passive Design, Orientation, Overheating, Effect of wind,

In order to ensure energy use is minimised from the outset, where practical the proposed dwellings have been designed with regard to the principles of passive design, including consideration of building orientation and site placement to maximise the potential for solar gain.

Within the proposed development layout, orientation and massing have been designed to maximise (within reason) passive solar gain. Wherever feasible, the buildings are orientated with a southern bias, promoting useful solar gains throughout most of the day. Glazing will be specified with a solar transmittance value (g-value) to strike the balance between useful solar gain in winter and unwanted solar gain in summer.

Through optimising for solar gain, all dwellings will additionally benefit from good daylighting levels, thereby reducing the use of internal lighting and promoting well-being.

Materials with high thermal inertia – including traditional masonry construction – take a number of hours to warm up in the conditions normally associated with the interior of domestic properties. By slowly extracting heat from the air inside a dwelling, they offer a heat sink and reduce overheating risk. The heat absorbed is then emitted during the night, offering a small amount of passive heating. The overall effect serves to smooth out the heat profile within the dwelling thus reducing the need for instantaneous heating and cooling.

Due to the measures described to reduce internal heat gain, natural ventilation provided through window openings and the opportunity for cross ventilation will allow sufficient air exchange rates to purge any heat build-up. Active cooling systems are therefore not proposed.

These measures will serve to ensure that the development builds in resilience to a potentially changing climate over the lifetime of the buildings and minimises the overheating risk that can be exacerbated by the drive to better insulated, more airtight homes if not considered within the design and construction process.



8.0 RESOURCES & LIFESPAN

8.5 Healthy Place-making

As part of the Vision for the proposed development and in accordance with East Dorset Council's requirements, the scheme will use a variety of dwelling types and create spaces to encourage a mixed community at different life stages. From a single young person looking for their first home, through to the elderly couple hoping to downsize, the proposed environment will create a series of spaces that can be used by all and are sustainable to accommodate future needs.

The dwellings will deliver on the needs of a post-Covid world – flexibility of internal layout; allowance for home-working; provision of a quiet study (space in bedrooms by or near a window); optimal natural lighting; visual connection to the outside world and nature; and access to amenity space – balcony, private garden or public open space.

The proposed scheme seeks to deliver opportunities for people to lead healthier lives. The site is located within walking and cycling distance of a wide variety of existing facilities and amenities, and these movement methods will be encouraged over the use of the car. The proximity of green spaces and the variety of residential house types will all help to achieve a strategy for healthy place-making.

Key aspects of the principles for healthy place-making of the scheme include:

- Enable exercise in normal patterns of daily life.
- Provide easy access to education, accessible facilities and available green spaces.
- Limit the causes and effects of vehicle emissions.
- Provide safe, sociable and productive public environments.
- Good urban and transport design.

Some of these principles have already been addressed by the location of the site. However, as the scheme progresses, there are further urban design decisions that can be made to help ease the challenge of health conditions caused by a modern lifestyle.

Shopping - exercise

Due to its location with local shops and facilities in the surrounding area, the proposed site offers the opportunity to function as a “Walkable Neighbourhood”. A Tesco Express is located just to the north-west, whilst other shops are available in the nearby villages and towns. Some of these offer a home shopping service helping to minimise shopping trips.

Education - exercise

The site is well located for nearby schools, accessed by a good network of pedestrian and cycle routes. These will be further enhanced as part of the proposed scheme. Although some car drop-off and pick-up is inevitable, the good accessibility around the site by means other than the car will help limit its use. The proposals will encourage “Safe-routes-to-school” and “Walking bus” strategies.

Employment - exercise

The employment areas around Bournemouth Airport are within easy walking and cycling distance of the site to the east.

The new bus route through the site allows for commuting into Ferndown, Bournemouth, Poole and Christchurch.

To help alleviate traffic and avoid the stress of commuting to work, homeworking will also be encouraged.

Leisure - exercise

The site will provide additional extensive areas of open space to those already available, providing a variety of formal and informal outdoor activities, including play areas and “Play-on-the-way” which will also be integrated with the “Safe-routes-to-school” and “Walking bus” strategies. As many of the play spaces as possible will allow for disabled play.

The site also benefits from easy and direct access to the countryside to the south via the public footpath network or the River Stour to the south.

Air quality

The aim for the design is to limit the causes and effects of vehicle emissions by providing alternatives to private car use through walking or cycling to destinations both within the site and those nearby. The use of the bus for longer journeys will also be encouraged.

The landscape buffers around the development site will help to reduce noise and emissions from passing traffic.

Due to the comparative ease of pedestrian/ cycle access to nearby local centres over that of the car, the proposals should minimise any additional traffic.

Loneliness and isolation, through limited social interaction and fear of crime

The proposals for the site will provide a number of safe, sociable and productive public environments which will contribute to a lively social environment both on the site and within the wider community.

The open spaces will create places to meet allowing interaction with a wide variety of other users wishing to utilise the area for community use, events or celebrations. The open spaces will not only be used by occupants of the development but will provide a wider community focus. The connectivity plan below shows how many of the links across the site pass through the open spaces, creating many opportunities for interaction between various age groups and demographics.

The scheme will be designed to accord with the principles of ‘Secured by Design’ and minimise the fear of crime.

The inclusion of private rear gardens and amenity space offer the benefits of outdoor activity and the means for healthy food production.

Interaction of vehicles, cycles, pedestrians

The movement plans show how the layout of the scheme has been designed to minimise any potential conflicts between cars and pedestrians. All vehicular traffic is directed towards the spine road and out to New Road or Christchurch Road, whilst pedestrians and cyclists use a more permeable network with more direct routes towards the north-west, south and east.

It is proposed that, apart from the Primary Avenue, the site will be limited to a maximum traffic speed of 20 mph and generally promote a pedestrian priority and cyclist environment, which will assist in creating a safe environment for people of all ages.



8.0

RESOURCES & LIFESPAN

8.6 Social Interaction

To enable the vision of a thriving and mixed community, the homes will be designed to meet the needs of 21st Century living for a variety of potential occupants. The mix of new homes is in accordance with East Dorset Council's preferred mix and provide a diverse range of accommodation which will appeal to first time buyers, downsizers and young families with a predominance of smaller family homes.

Single Young Person

- Apartments and smaller houses
- Walk, cycle or public transport to work
- Walk to the pub or bus into nearby villages or towns

Married Couple

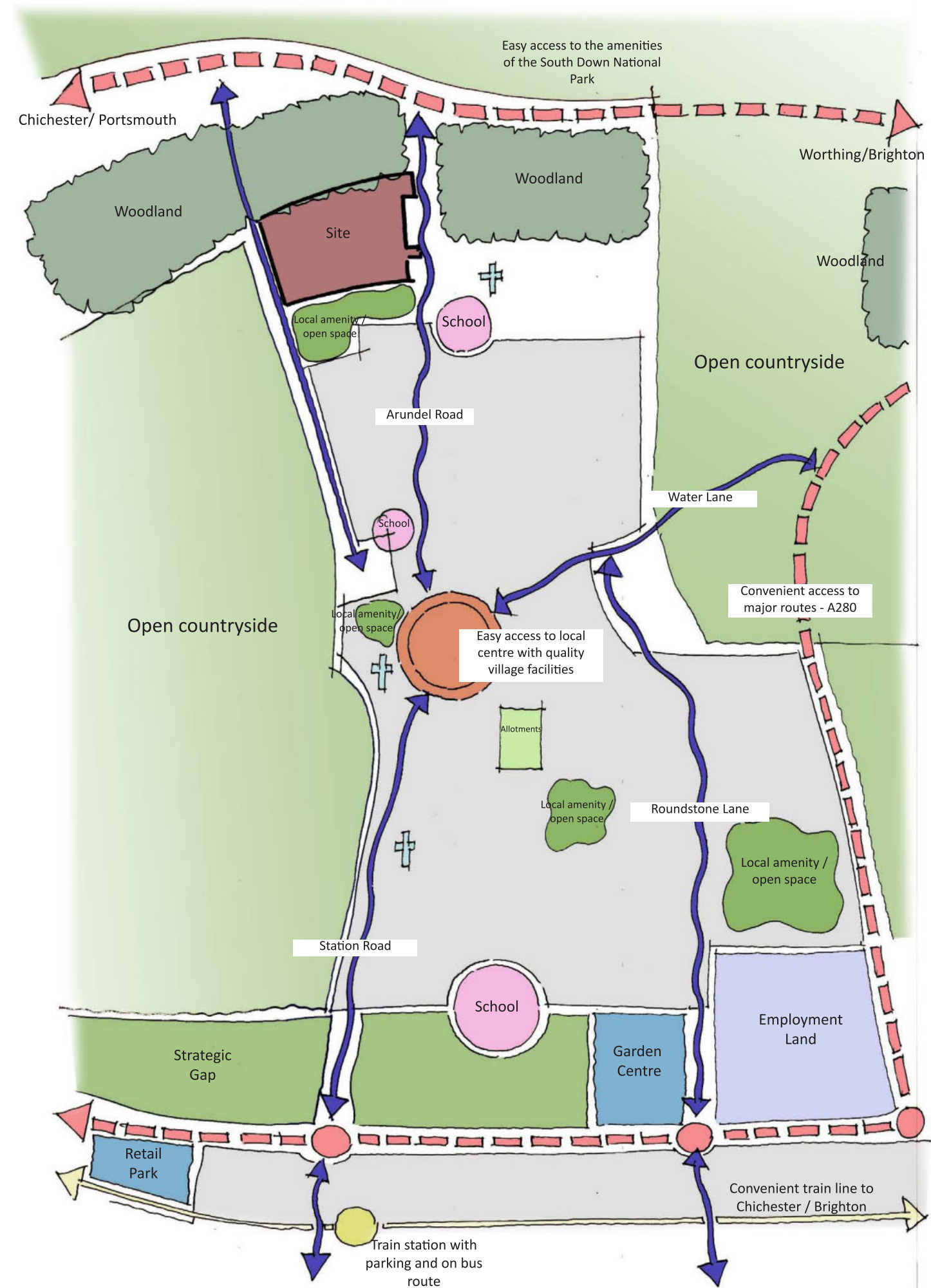
- Small house with garden, potential to start a family
- Early morning or evening jog, longer walk or run at the weekends
- Public transport to work - walk or cycle
- Commute to work - easy access to road network
- Homeworking

Family with Children

- Larger house with garden, allowing for future expansion
- Homeworking
- Walk or bus to school
- Play areas
- Community events and after school clubs
- Commute to work - easy access to road network
- Walking and cycling with the family at weekends, exploring the woodlands, visiting the SANG

Elderly Couple

- Smaller house with small garden
- Bus route with access to nearby amenities
- Walk to the shop
- Hobby spaces within the home
- Community events and societies



Design Code: Section 9.0 Implementation & Submission Requirements

Introduction

Future Reserved Matters planning applications will be assessed against this Design Code by Arun District Council as part of their consideration of the scheme to ensure delivery of the design quality required.

All proposals should follow the requirements and supporting design guidance set out within this document.

9.0

IMPLEMENTATION & SUBMISSION REQUIREMENTS

9.1 Implementation and Submission Requirements

Arun District Council will review the emerging Reserved Matters planning applications against the content of this Design Code document to ensure that the guiding principles and mandatory requirements are adhered to in the development of scheme proposals.

9.2 Conclusion

This Design Code masterplan is submitted in response to the outline planning consent for application reference A/122/19/OUT.

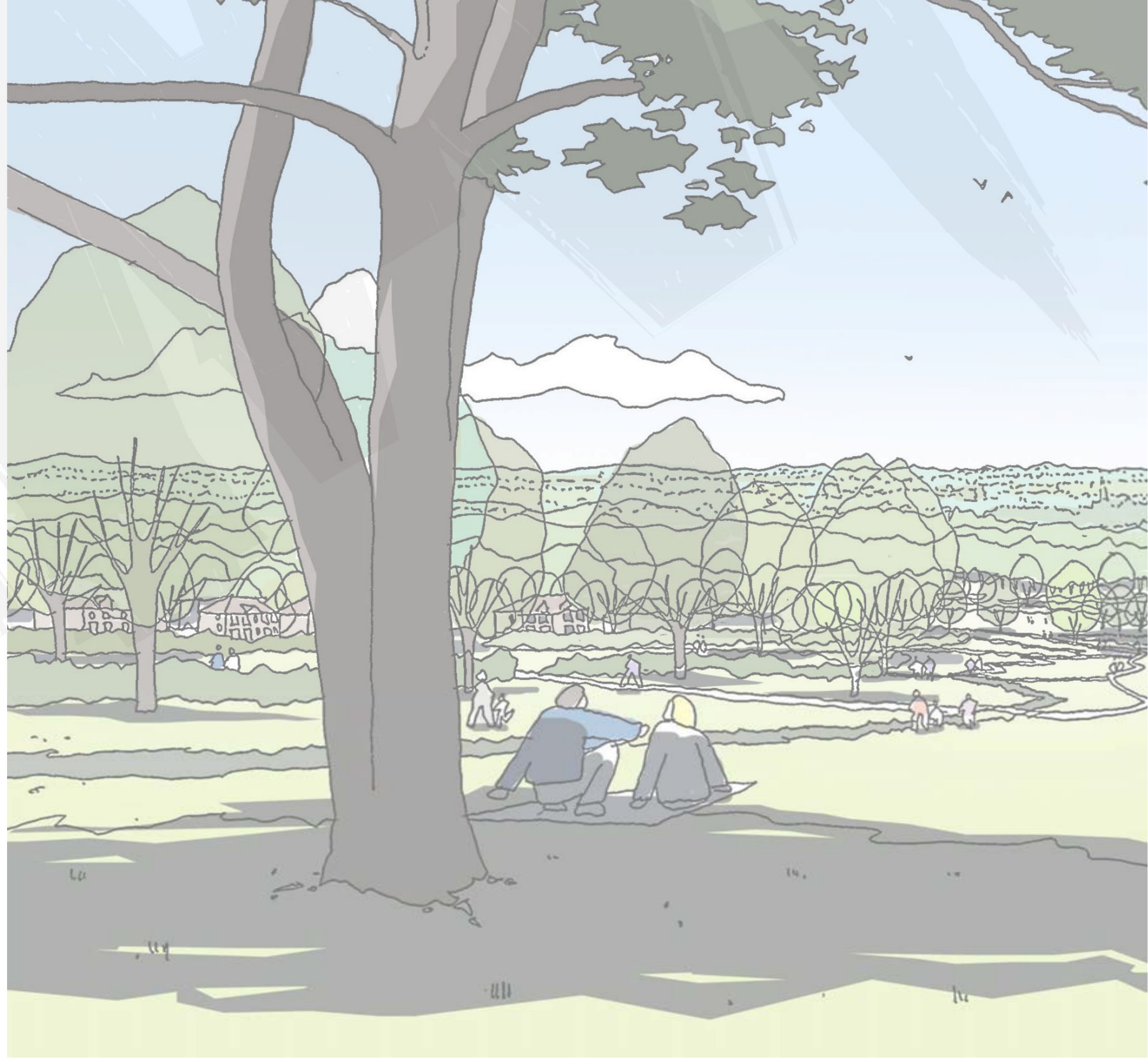
The Design Code masterplan sets out the design requirements and guiding design principles for this part of the allocation land to ensure a coherent approach across the overall site to ensure the vision conceived at outline application stage is delivered and a special sense of place is created with a high quality of design.

The Design Code masterplan has developed the principles established in the Design & Access Statement which set out the design objectives for the project. Careful consideration has also been given to the National Design Guide's 10 principles. These include:

- Character areas
- Street hierarchy
- Building typologies
- Key buildings
- The approach to parking
- Structural planting
- Street furniture
- Lighting and the public realm.







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