Street Typologies

Streets of all classifications must encourage use of streets as social spaces. Streets are space for people, nature, and active lifestyles, rather than just roads.

Minimum width for entire pedestrian network (accounts for footways and footpaths) must be 2m if to be adopted unless it can be justified otherwise.

Primary street

The primary street will form the backbone of the development, providing east-west connections between Coldhams Lane and Cherry Hinton Road. The primary street must be a distinctive urban space that combines infrastructure for nature, SuDS, walking, cycling and public transport alongside vehicle traffic.

Below ground infrastructure must be carefully co-ordinated to avoid clashing with, or needlessly restricting, tree planting. This is a particular consideration for the gas main diversion, which requires 6m easements for tree planting.

The primary street must be designed to be adopted. It must feature a deep, planted verge which includes semi-mature, large tree planting, natural habitat and social spaces. This verge is to be adopted by Cambridge City Council.

It must also:

- Accommodate a regular bus service and include locations for bus stops
- Include dedicated cycle routes at least 2m wide
- Have a design speed no faster than 20mph
- Allow for connections to future airport development.

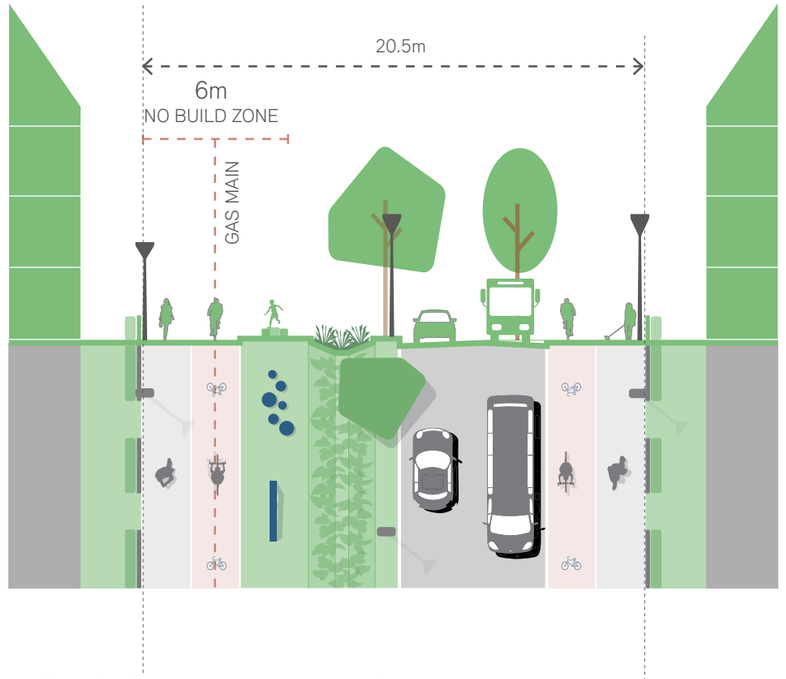
Secondary streets

The secondary street will provide vehicle connections between the new secondary school and the local centre. It must be designed to adoptable standards and must include street trees.

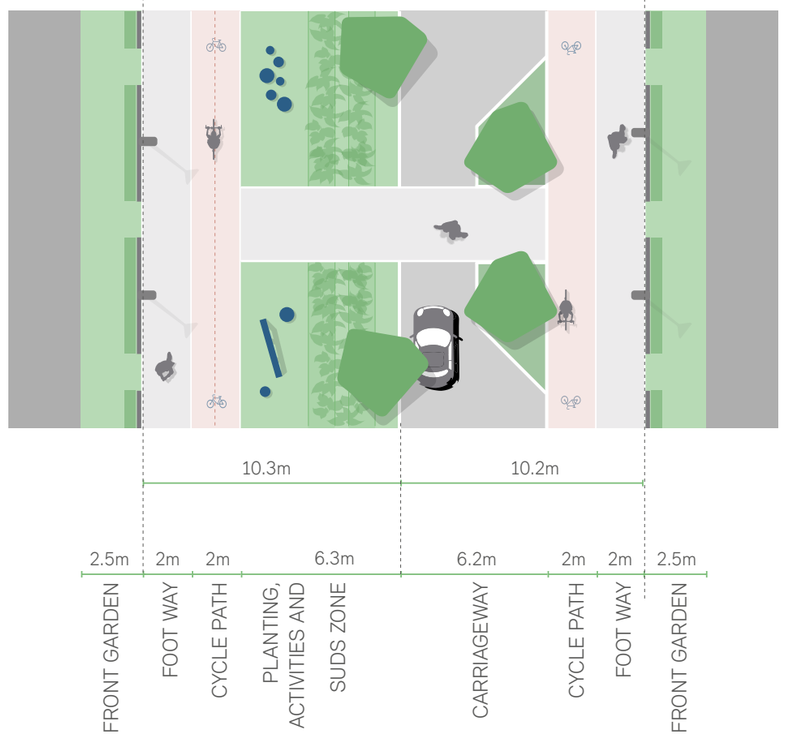
It must also:

- Include dedicated cycle routes at least 2m wide
- Have a design speed no faster than 20mph
- Accommodate possible future bus use
- Allow for connections to future airport development.

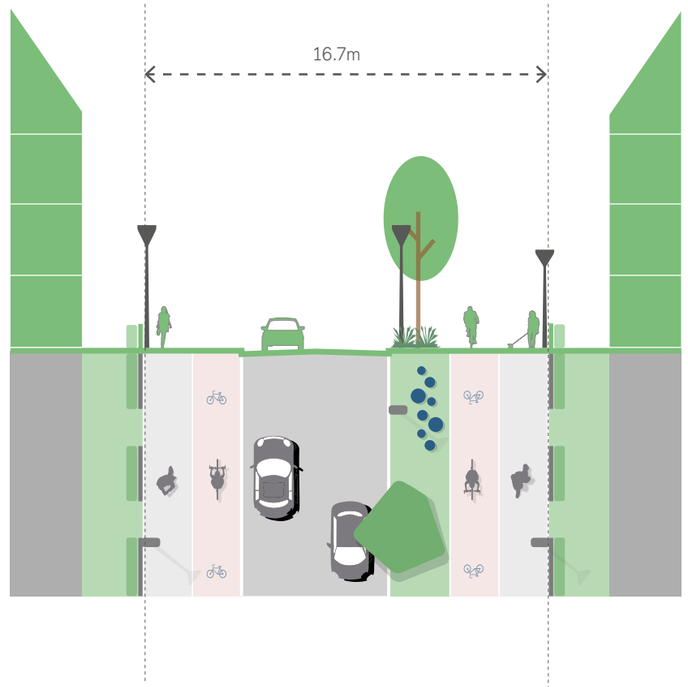
Primary Street - Typical section and plan



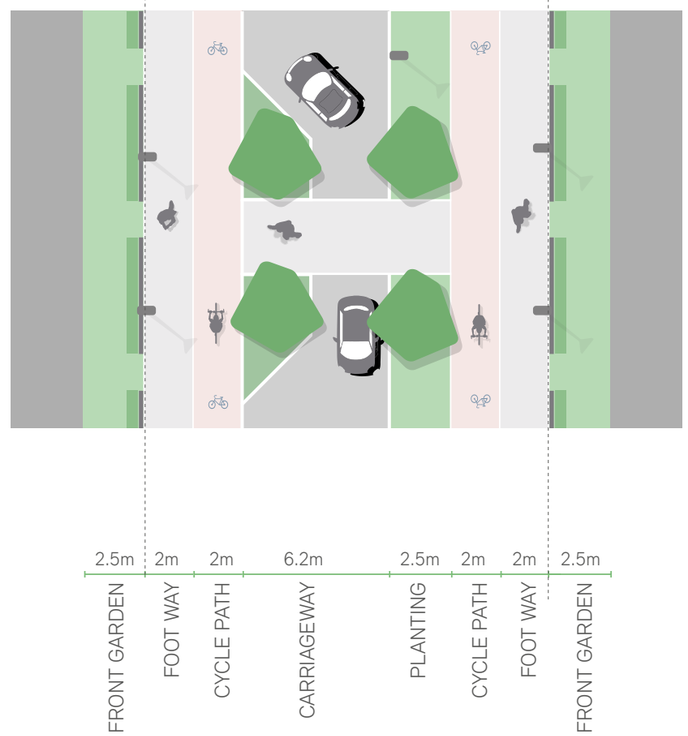
Primary Street - Raised table and tree pit "gateway"



Secondary Street - Typical section and plan



Secondary Street - Raised table and tree pit "gateway"



Tertiary streets

Tertiary streets lead off the primary and secondary streets. These routes should form small service loops that are laid out to minimise vehicle junctions onto the major streets. This is to help reduce disruption to pedestrians, cyclists, and landscape planting.

The carriageway of each service loop must be designed to an adoptable standard for the use of waste collection vehicles.

The design speed of all tertiary streets must no faster than 15mph. The lowest order of tertiary street should be used wherever possible – emphasising the use of shared surfaces and pinch points in the carriageway width.

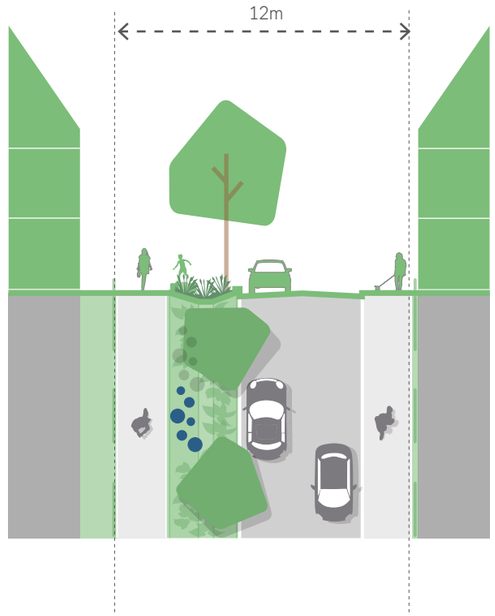
Shared surfaces should be used where streets cross or line neighbourhood parks.

Routes located off the adopted service loop should be designed to be managed and should incorporate visitor parking with charging points, natural planting and SuDS drainage.

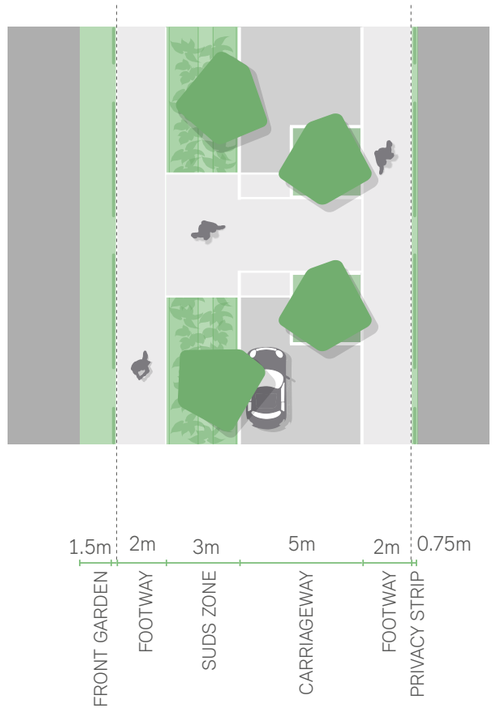
Green and Blue Features

	Primary street	Secondary street	Tertiary street
Street trees	Yes, large species	Yes, medium species	Context driven, medium to garden species
SuDS	City adopted swale	City adopted swale	City/privately managed rain gardens, swales, permeable surfaces

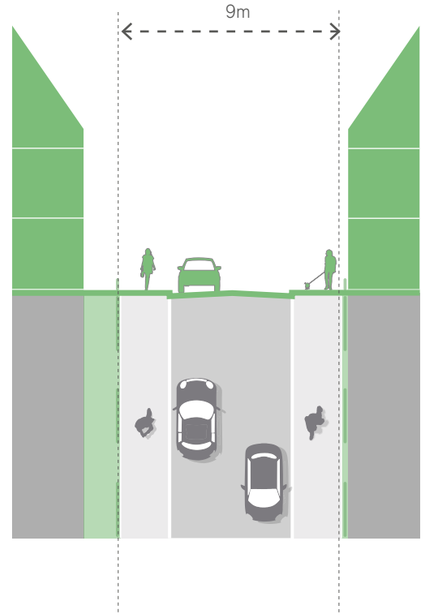
Tertiary Street 1 - Typical section and plan



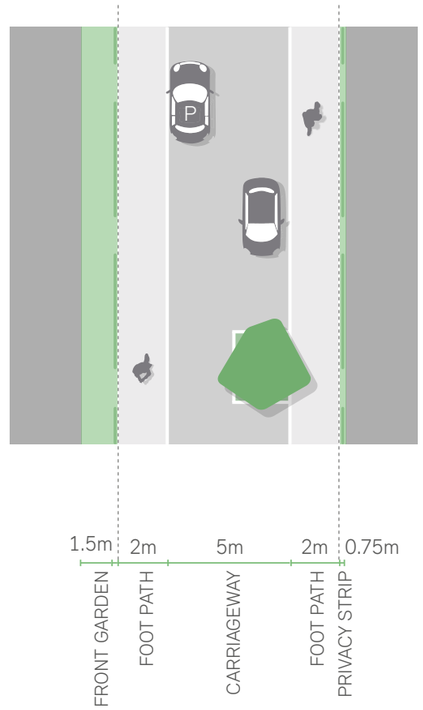
Tertiary Street 1 - Raised table and tree pit



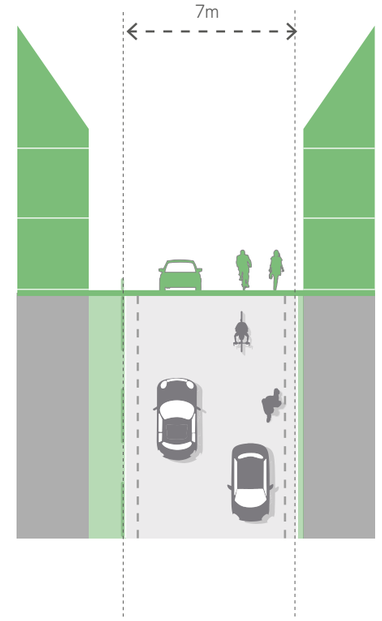
Tertiary Street 2 - Typical section and plan



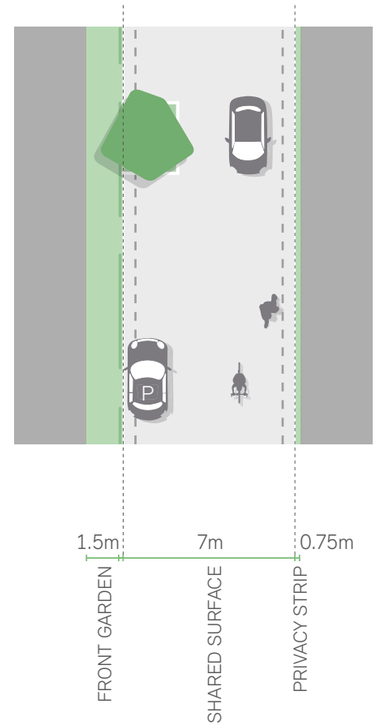
Tertiary Street 2 - Build out tree pits



Tertiary Street 3 - Typical section and plan



Tertiary Street 3 - Build out tree pits



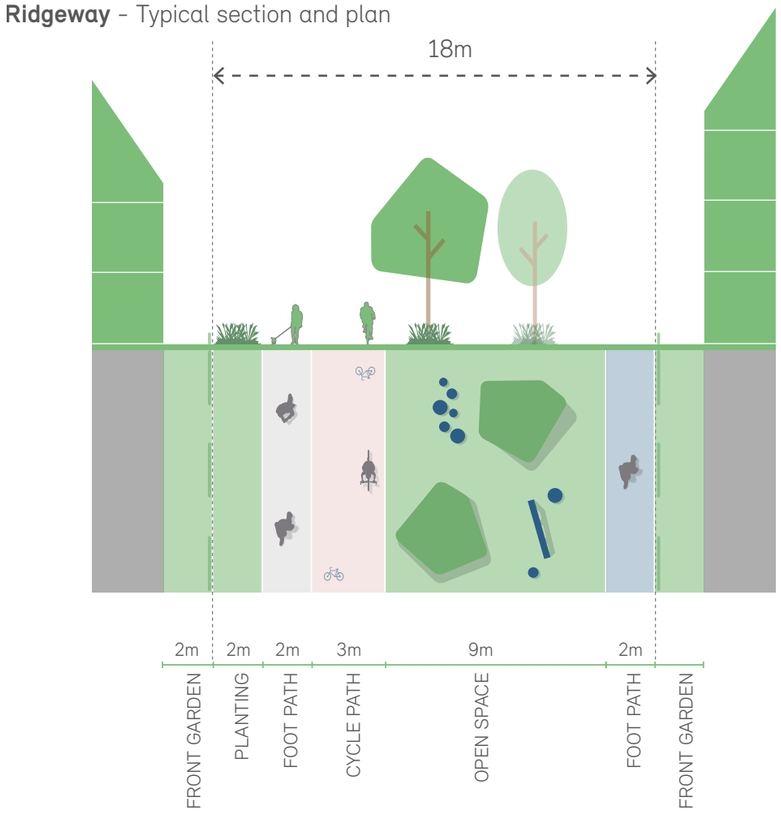
The Ridgeway

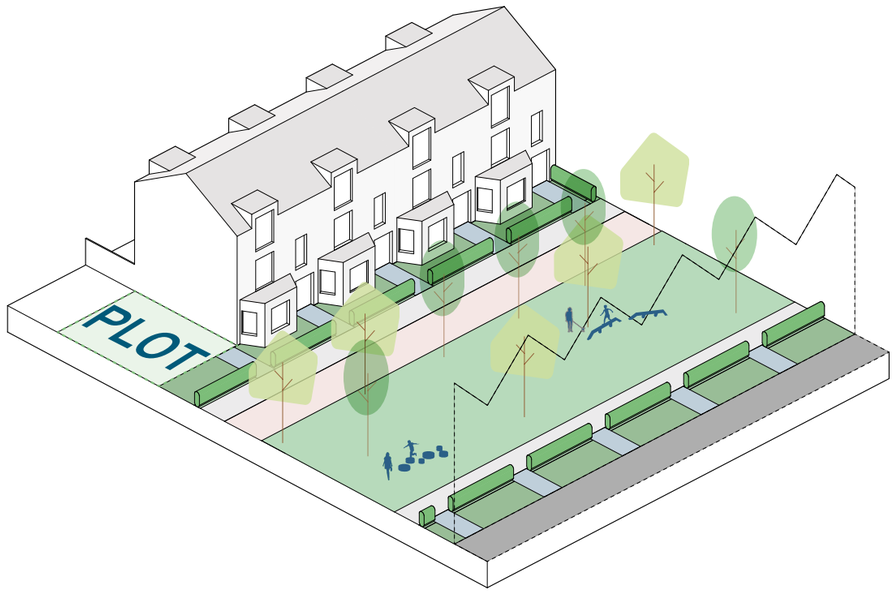
The Ridgeway follows a natural ridgeline in the topography of the site. It is a dramatic green spine, providing a safe, traffic free landscaped street leading from Teversham Drift to the secondary school. It must provide walking and cycling infrastructure set in a landscape of semi-mature tree planting, natural habitats, and social spaces.

The Ridgeway:

- Should be aligned with the nearby church towers of Cherry Hinton and Teversham
- Secondary school entrance must terminate the northern point of The Ridgeway - and the building must act as a focal point
- Must be a traffic-free (motor vehicles), planted, and sociable street.

Ridgeway - Typical section and plan





Abode at Great Kneighton **Proctor Matthews Architects**

The Avenue, Saffron Walden **Pollard Thomas Edwards**

Knights Park, Cambridge **Pollard Thomas Edwards and Alison Brooks Architects**

Street design matrix

A matrix has been prepared setting out the design specifications that should be used for each adopted street typology. The design intent is to create a walkable and low speed environment.

The junction radii and design speeds listed here should be treated as maximums, rather than targets.

Kerb heights should be 125mm to all primary/secondary streets, 25mm high to all tertiary streets,/ motor vehicle accesses and 6mm at pedestrian/cycle crossings.

Centre lines should not be included on any streets.

Shared surface & mews street both require a 0.5m hard paved maintenance strip on both sides if to be adopted.

Homes must be in a 400m walking distance of a bus stop, primary school or defined centre.

The first 5m of a private drive must be 5.5m wide.

The Local Highway Authority will seek to adopt a shared surface serving a maximum of 12 dwellings.

	Primary street	Secondary street	Tertiary street
Speed limit	30	30	30
Design speed	20	20	15
Width	6.2m	6.2m	Varies, refer to sections
Footway/cycleway	2m footways + 2m cycleways both sides	2m footways + 2m cycleways both sides	
Verge	Yes	Yes	
Bus access	Yes	Yes	No
On-street parking	Yes but not delineated	Yes but not delineated	Yes but not delineated
Traffic calming	Yes	Yes	Yes
Utilities	Beneath footway/cycleway	Beneath footway/cycleway	Beneath footway/cycleway
Centre line radii	30m	30m	20m
Street lighting	6m columns	6m columns	5m columns
Junction spacing			
Junction visibility	2.4 x 25m	2.4 x 25m	2.4 x 17m
Junction radii	6m	6m	To suit tracking
Direct vehicular access	No	No	Yes
Kerb height	125mm	125mm	25mm
Centre line	None	None	None
SuDS	Swale	Swale	Mixed
Shared surfaces	None	None	Mixed (serving no more than 12 homes)

Knights Park, Cambridge **Pollard Thomas Edwards and Alison Brooks Architects**

Tree-lined street. Clay Farm, Cambridge

Accordia, Cambridge **Grant Associates and Feilden Clegg Bradley Studios**

Play strategy

The Design Code aims to create a playable public realm which is socially, physically and emotionally engaging.

The formal play strategy for Cherry Hinton North must work on 3 levels:

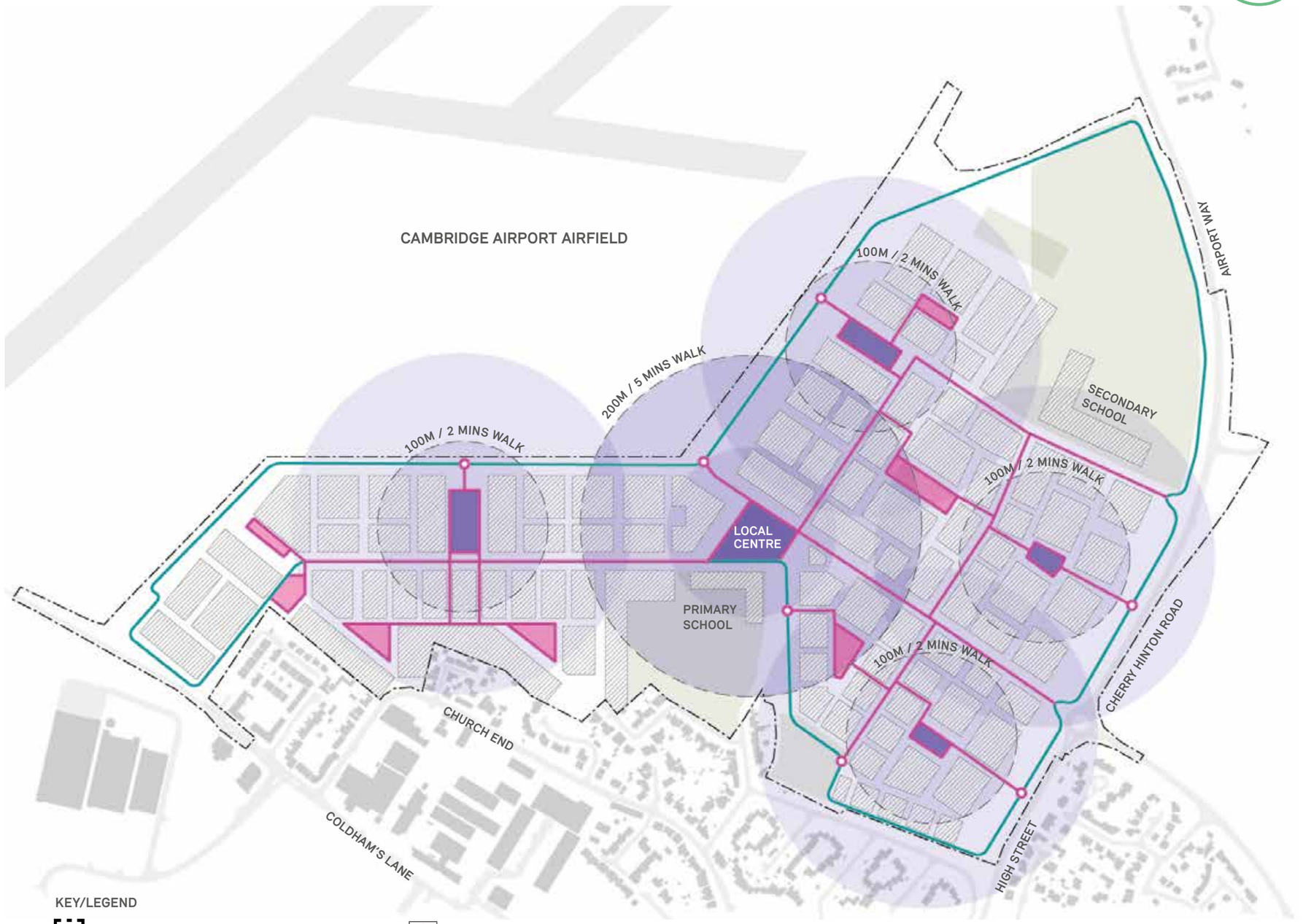
- Street Play
- Neighbourhood Play
- Destination Play.

These should be added to by trim/play trails, allotments, and playing fields.

This strategy must form a network of play opportunities to provide play near to every home. The provision is diverse and integrated within streets and spaces with an emphasis on play for all ages, groups, and abilities.

A play toolkit should be used to control the quality and character of play space and its equipment.

A youth and children's play strategy is a requirement of the outline planning permission and must follow the principles set out above.



Natural play space

Public spaces

Public spaces should include combinations of activities that help bring people together including play, social meeting, resting, and enjoyment of nature. They should be able to safely combine necessary movement routes with social activities without having to resort to fenced enclosures.

Street

Streets must include focal points for a mix of social activities, nature, and doorstep play. These can range from a focal tree or simple piece of seating to a combination of landscape and play features.

Neighbourhood

Neighbourhood parks should provide a public landscape focus for each neighbourhood. The edges of each park must be defined by building frontages. Each park must follow the Living Infrastructure principles and contain activities to attract people to them including playing, meeting, resting, food growing, foraging, and being in nature.

Destination

The Local Centre forms the main focal point for all play and social gathering.

Parkland edges should connect the development to the local agricultural landscape. They should be inspired by Cambridgeshire's 'fen edge chalkland' landscape traditions and must be laid out to provide SuDS landscapes integrated with natural planting and informal play.

Design to avoid railings

Drainage features must feel engaging and be fully integrated in the natural landscape and public ream. They must not be enclosed by railings.

Street

King's Crescent **Henley Halebrown**

Neighbourhood

King's Crescent **Henley Halebrown**

Destination

Tumbling Bay Playground **LUC Landscape Architects**

South Gardens **Maccreanor Lavington**

King's Crescent **Henley Halebrown**

Bridget Joyce Square rainpark **Robert Bray Associates**

Cultural sociability

The network of public spaces must make connections between each other and the surrounding area – including consideration for future developments. Public spaces must work alongside public buildings and the movement network to encourage and support community cohesion and foster social interaction.

1. Supporting new and future communities
- Neighbourhood Parks should facilitate smaller gatherings providing infrastructure for events
- Public spaces adjacent to the airfield should allow easy connections to future developments on the airfield site.

2. Supportive public spaces
- Public spaces which serve community facilities must provide adequate opportunity to stop, rest and enjoy social interaction. Trees/structures should be provided to shade and shelter these places
- Public spaces and places must be welcoming and accessible to all genders, ages and abilities
- Public spaces and public realm finishes must provide flexibility in use and allow for spaces for markets or community gatherings adjacent to the focal buildings, namely schools and amenity buildings.

3. Supporting social cohesion
- Public spaces and places must be welcoming and accessible to all
- Future community growth and emerging need should be considered e.g. by allowing flexibility for future cultural uses to be added within the local centre.

4. Supporting the local community
- The development must be integrated within the local area via attractive walking, cycling and bus routes.
- Planned community uses, services and activities should help support existing uses and needs within the local community, and avoid undermining current services through duplication.
- Local needs and requirements should be defined, and detailed proposals developed, through local engagement.

Active lifestyle

The design of outdoor environments must support improved physical health and mental well-being. This includes promoting walking as the first choice for all internal trips, play and exercise, and access to nature.

An active lifestyle framework which is connected across the site should ensure opportunities for play and recreation to suit all ages are integrated with the streets and public spaces. Designs must create socially inclusive and accessible public spaces that are welcoming and safe for everyone.

1. Recreation for all
- Recreation spaces should provide a variety of types, catering for a multi-generational experience.
- Play should follow inclusive play principles, including physical, creative and social play, and engage all of the senses.

2. Doorstep play
- Seek to provide easily accessible and overlooked space for play and social interactions immediately outside or close to the front door
- It must be considered not to create nuisance for the adjacent properties and should be natural play if possible
- These well-overlooked spaces can positively support the gradual increase in young peoples' confidence to meet others and navigate their immediate neighbourhood.

3. Play along the way
- Should ensure that a network of play weaves like a thread through the site with key focus elements creating play
- Opportunities should be explored within the streets to build in storage for playing out supporting residents to temporarily close their streets for community use.

4. Destinations for all
- Seek to design accessible public spaces that are welcoming, enjoyable and safe for everyone
- This should promote creative and sustainable design solutions prioritising access and inclusion for everyone who lives, works and plays in the community and local area.

5. Biophilic trim trails
- The trim trails which circumnavigate the site should design out any level or materiality changes that create perceived or physical barriers for individuals
- Designs must increase everyday opportunities to access and connect with nature, creating biophilic opportunity.

Materiality and elements

Public spaces

The design of public spaces including street networks must be brought together using a small and coordinated palette of materials and details.

The definition of key spaces should be supported by the use of surfaces and planting. Designs should emphasise the overall shape, sense of enclosure, and multi-use nature of the space, rather than highlighting e.g. vehicle use.

The combination of surfaces, planted landscape and signage should be coordinated with surrounding building designs to create a sense of place such as visual gateways, activity, and calm.

Lighting

The lighting palette for the scheme should be muted in nature, concealing itself into landscaping where possible. Lighting is a detailed subject, and as such a lighting strategy needs to be developed in the future to specify equipment and look into the specifics of lighting surfaces, avoidance of glare and other detailed issues.

Lighting design must mitigate the effects of artificial light pollution spill. This includes glare on existing and future homes. Lighting design should refer to the Institute of Lighting - Guidance Note: The Reduction of Obtrusive Light (GN01/21)

Artificial lighting must be designed to minimise affecting wildlife habitats, features and green corridors with essential 'task' lighting, such as along cycleways, limited to the minimum for safe travel and either being responsive to use by people or turned off completely for part of the night.

Direct lighting of, or light spill on to, retained mature trees and hedgerows which have the potential to support bat roosts and/or bat foraging and commuting features, must be avoided.

Street furniture

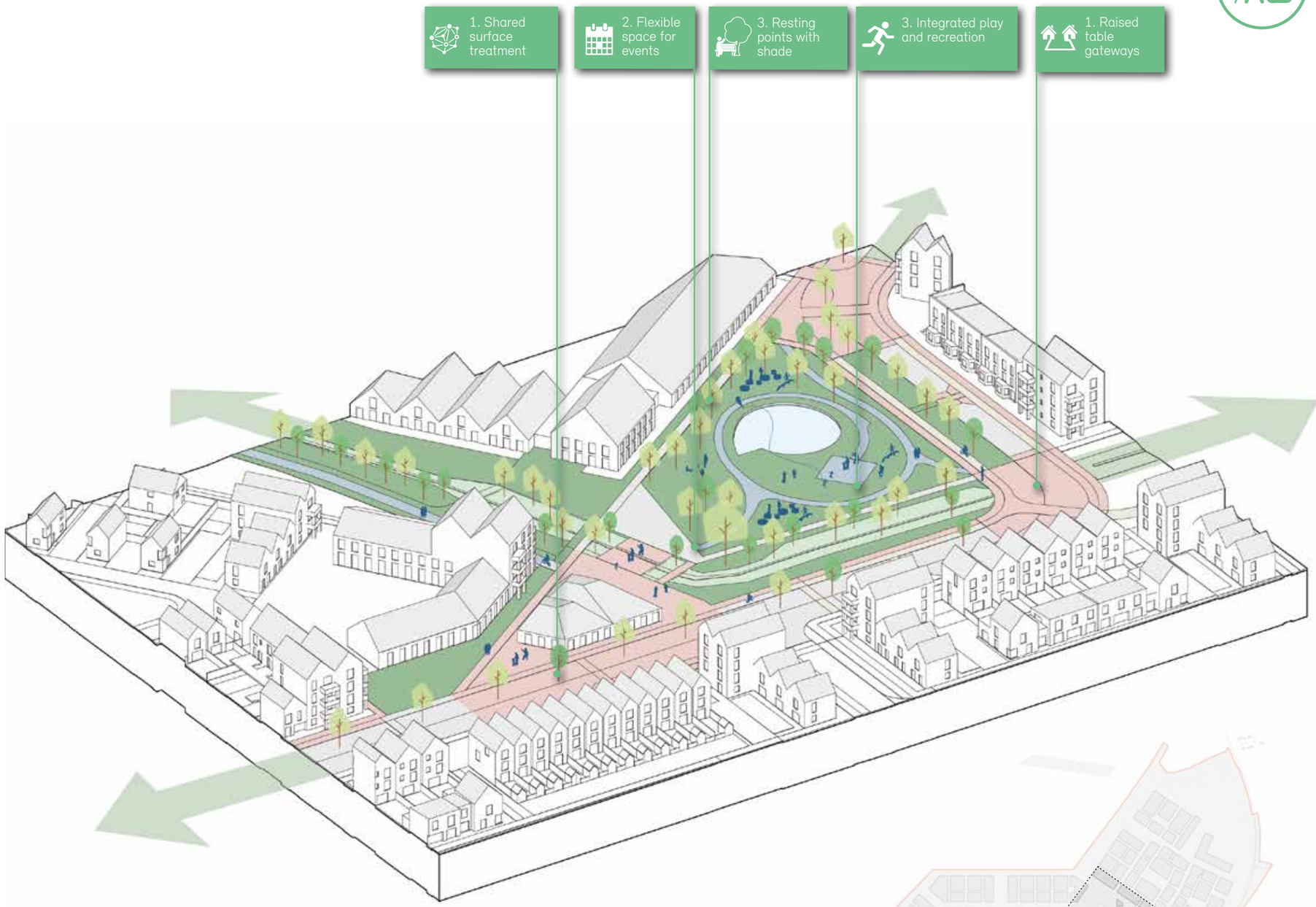
Street furniture should have a simple but elegant aesthetic and emphasise the use of natural hard-wearing materials.

Wooden benches should be used for seating, and should be nestled into planting beds.

Public art

Public art should be located at focal points and key nodal points.

Public art can form part of the play strategy, creating special moments within the street and landscape.



Designing hard surfaces

With the exception of Market Square, large areas of hard surfaces should be minimised or avoided. Where this is not possible, trees should be included to provide summer shading and cooling.

Material palette

Hard surface materials should have natural tones, incorporating subtle variation, and reflect a walking and cycling prioritised environment:

Using the material palette:

- Materials must be used in a consistent way to avoid a patchwork appearance
- Paving colours and textures must be chosen to work harmoniously alongside surrounding building finishes. These combinations and laying patterns must be tested with sample panels
- Where paved shared/unified surface treatments occur, any required demarcation within the space should be handled by the incorporation of subtle changes in paving direction, texture or kerb levels. Significant variations in colour or tone should be avoided.

All public spaces must be designed for inclusivity including textured paving blocks, level surfaces and 20mm kerbs.

Robustness and practicality

Surfaces must be robust and accessible to all.

Within adopted streets and landscapes, the handling of materials must reflect the design principles of the Code. Detail of specific materials used are to be agreed with council and highways officers to allow for future adoption. Materials selection to be adopted by the Local Highway must conform to those within the Housing Estate Road Construction Specification

Within non-highways adopted streets and park areas, surface water runoff must be minimised and all surfaces should be capable of being permeable.

Gravels can be self binding on low trafficked areas, but must be specified to maintain water permeability. Loose gravel paths must be avoided.

Asphalt with chippings

Tinted bike lanes

Tumbled concrete paving

Resin bound gravel

Conservation kerb

Self-binding gravel

Bench recessed into natural planting

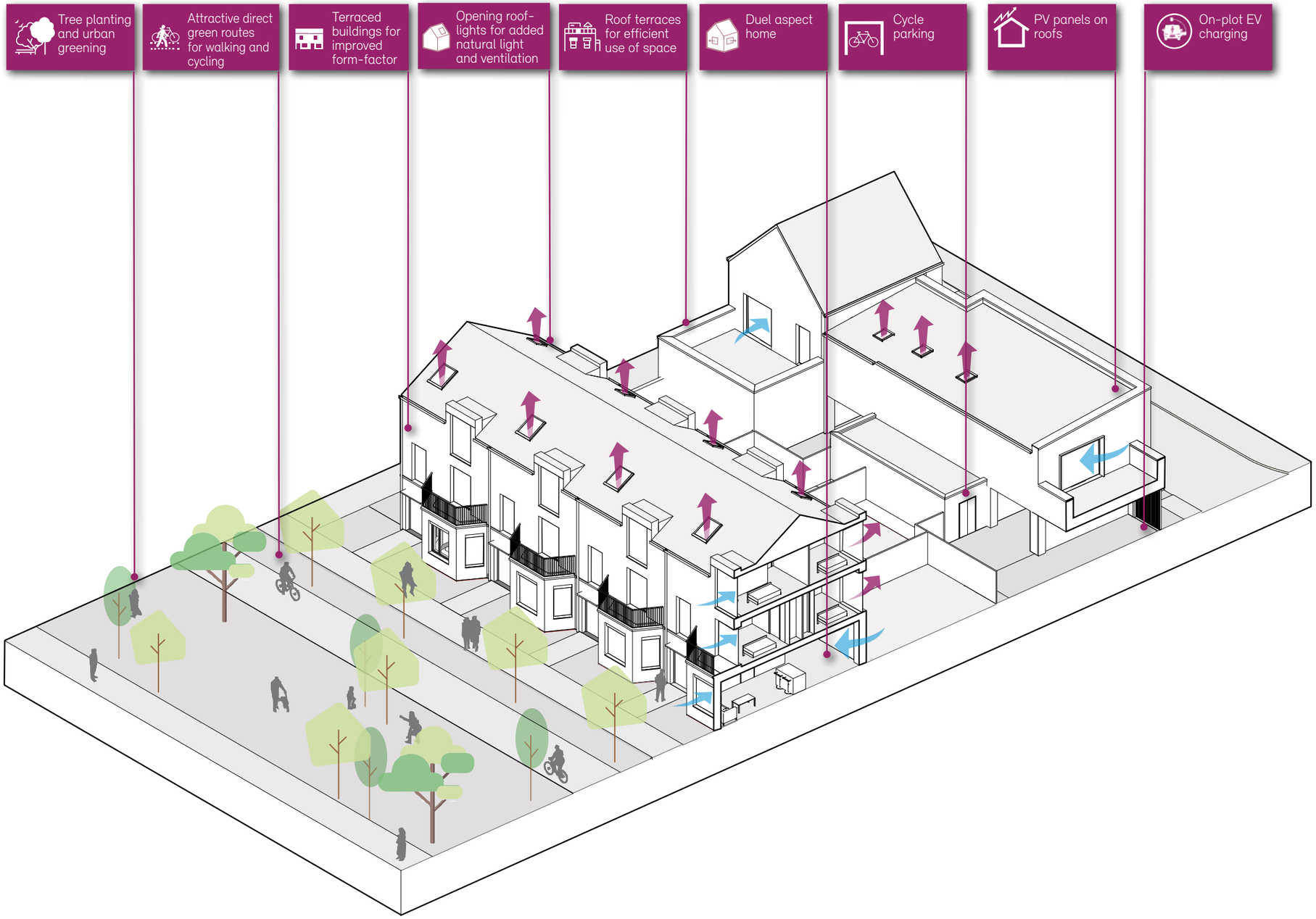
Subtle lighting in key public spaces

Subtle lighting in key public spaces

5 Resources

The development will be energy efficient, and designed to be gas free from the outset. Climate change resilience will be built-in, with buildings and green spaces that avoid overheating and conserve water and energy resources by design.

The development will focus on using passive principles, maximising benefit of green spaces and reducing running costs by encouraging sustainable lifestyles.



Naturally ventilated homes

Using the energy hierarchy

Building designs must follow the energy hierarchy. This means prioritising lowering energy demand, before looking to more technical solutions such as renewable energy generation with Photo Voltaic (PV) panels.

"Fabric First" passive principles should be used; the form of the building, its orientation, surrounding landscapes, and fabric efficiency all help contribute to reduced energy consumption. These include:

- Dual aspect homes
- Water saving fittings and appliances
- Natural light and ventilation to communal areas in flats
- Reducing hard surfaces and increasing summer shading with green spaces, water, and trees near homes
- Use simple building forms which limit thermal breaks
- Reduce embodied carbon during the manufacture, transport, and construction of building materials as well as end of life emissions
- Designing out waste of construction materials
- Consider offsite manufacture where possible.

Building typologies with an efficient form factor should be used, for example by including terraced houses and flats.

Supporting sustainable lifestyles

Supporting sustainable lifestyles
The development must support people to have healthy, active and sustainable lifestyles. This will include:

- Street networks that promote walking and cycling to schools, community facilities and shops
- Access to buses and public transport
- Site-wide car club parking and membership strategy with the provision of car club spaces and vehicles
- Charging facilities to support the use of electric vehicles
- Spaces for home working, or to work locally
- Homes that are adaptable to changing lifestyles or circumstances
- Spaces to socialise through play, exercise, gardening, food growing and resting.

Climate change resilience

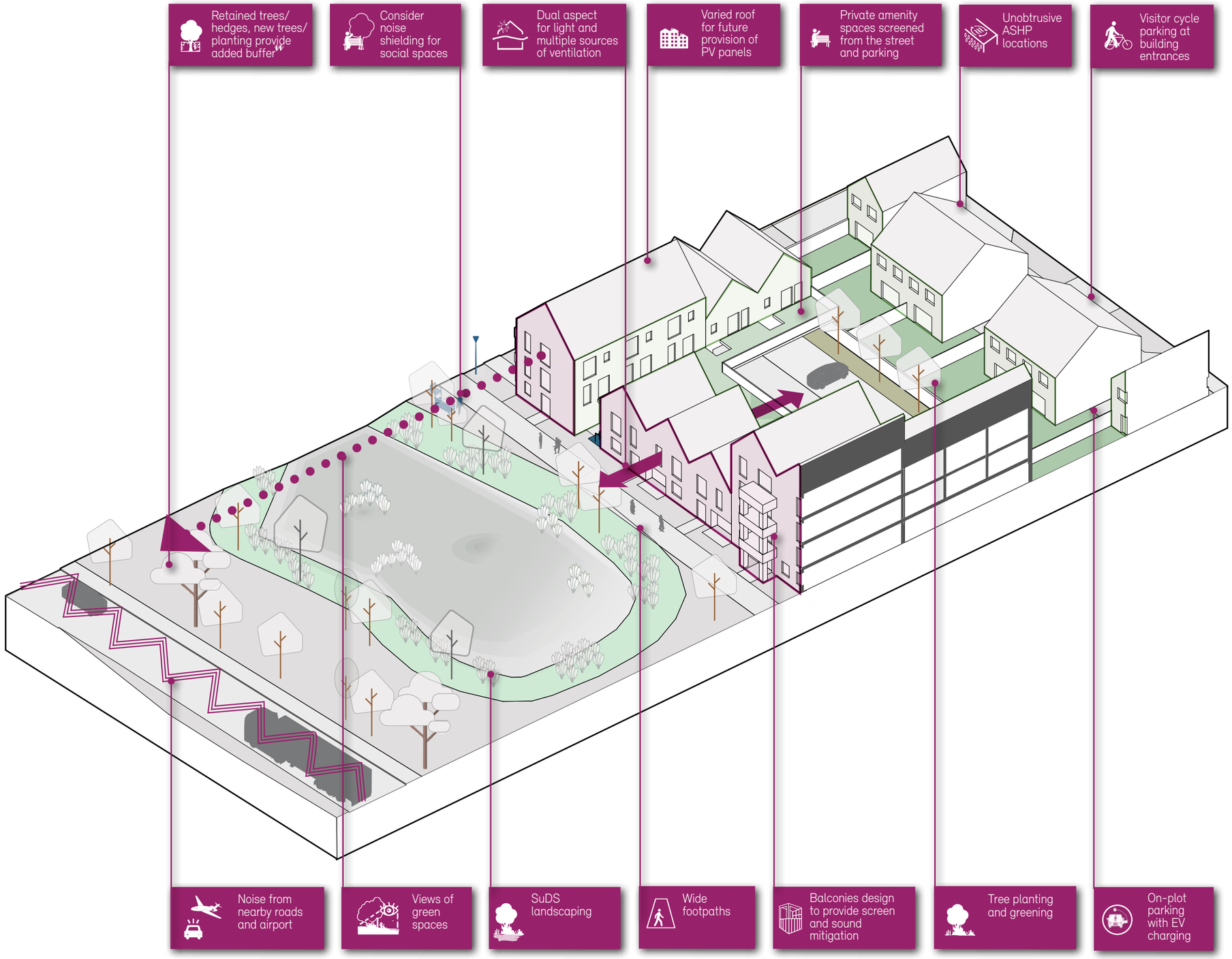
Proposals must consider climate change resilience across both buildings and landscape. This will include:

- Mitigating overheating risks for building users, prioritising passive measures e.g. dual aspects, natural ventilation strategies, and shading
- Any shading devices on proposed elevations be integrated with the window openings
- Addressing the risk of urban heat island effects and overheating in public spaces e.g. minimising hard landscaping and using cool materials, incorporating water, and including deciduous tree planting to provide shade to when it is needed
- Landscape planting selection for drought resistance Sustainable Drainage Systems (SuDS) to manage surface water, flood risk and designed to anticipate significant changes in rainfall.

Where there is a risk of airport or road noise, these should be addressed using passive design measures wherever possible. These include:

- Location of amenity spaces away from noise sources
- Integration of sound absorbent materials and surfaces
- Acoustic protection of balconies
- Where mechanical ventilation is unavoidable, any vents must be unobtrusively integrated into the elevation design.

Further guidance on integrating sustainable building design can be found within the Homes and Buildings section.



Integration of services

Storage

Utility service boxes, air source heat pumps, cables, wires, flues, satellite dishes must be kept off frontage elevations and be discretely incorporated.

Vents must be carried out to match the surrounding wall finishes and be carefully coordinated with openings.

All buildings must provide sufficient internal storage to allow for the segregation of recyclable materials and food waste. Design of waste storage must not detract from the street scene.

Bin storage for waste must be screened from the public realm, and to help with this the stores should be located behind the building line.

Energy generation

Where air source heat pumps or similar are used, these should be located in rear gardens, or screened from the street frontage.

Any potential noise from pumps or similar plant / equipment must / will need to be assessed during the design stage and mitigated if required.

Where possible, roofs should be designed to optimise solar orientation to allow for future PV generation. Where PV panels are placed on sloping roofs these must be carefully coordinated with the building design and mounted in line with the roof finish.

Enclosure and location of service buildings such as substations must follow the Design Code.

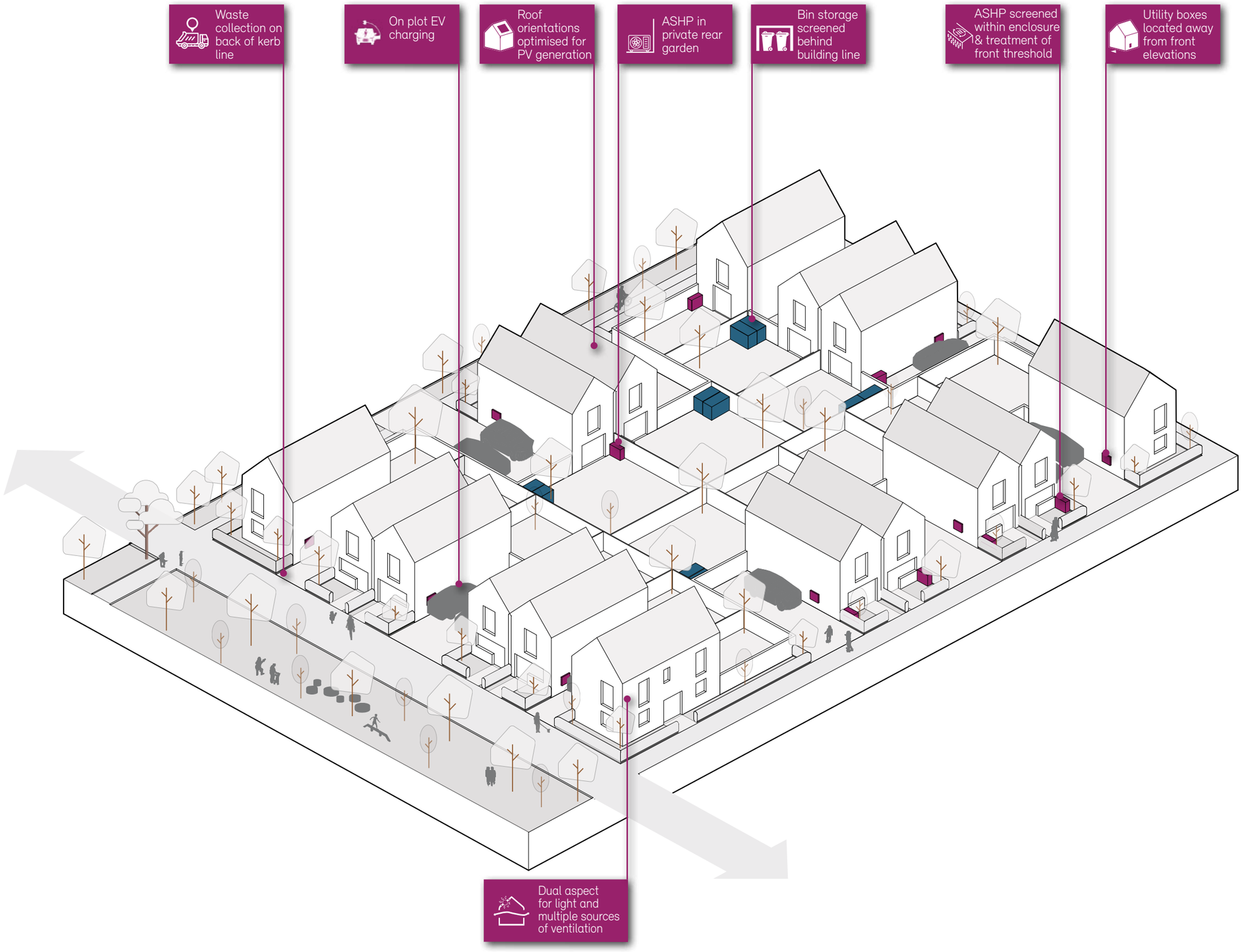
Noise

Where there is a risk of airport or road noise, these should be addressed using passive design measures wherever possible.

These should include:

- Location of amenity spaces away from noise sources
- Integration of sound absorbent materials and surfaces
- Acoustic protection of balconies
- Where mechanical ventilation is unavoidable, any vents must be unobtrusively integrated into the elevation design.

Further guidance on integrating Homes and Buildings design can be found within the Homes and Buildings section of the Code.



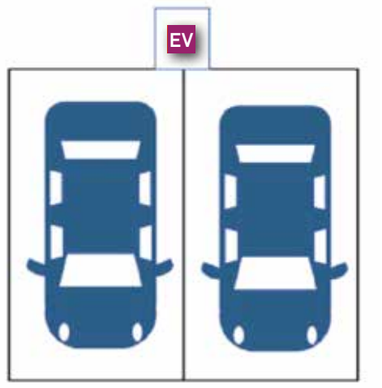
Electric Vehicle (EV) strategy

Every home must include provision for charging of Electric Vehicles.

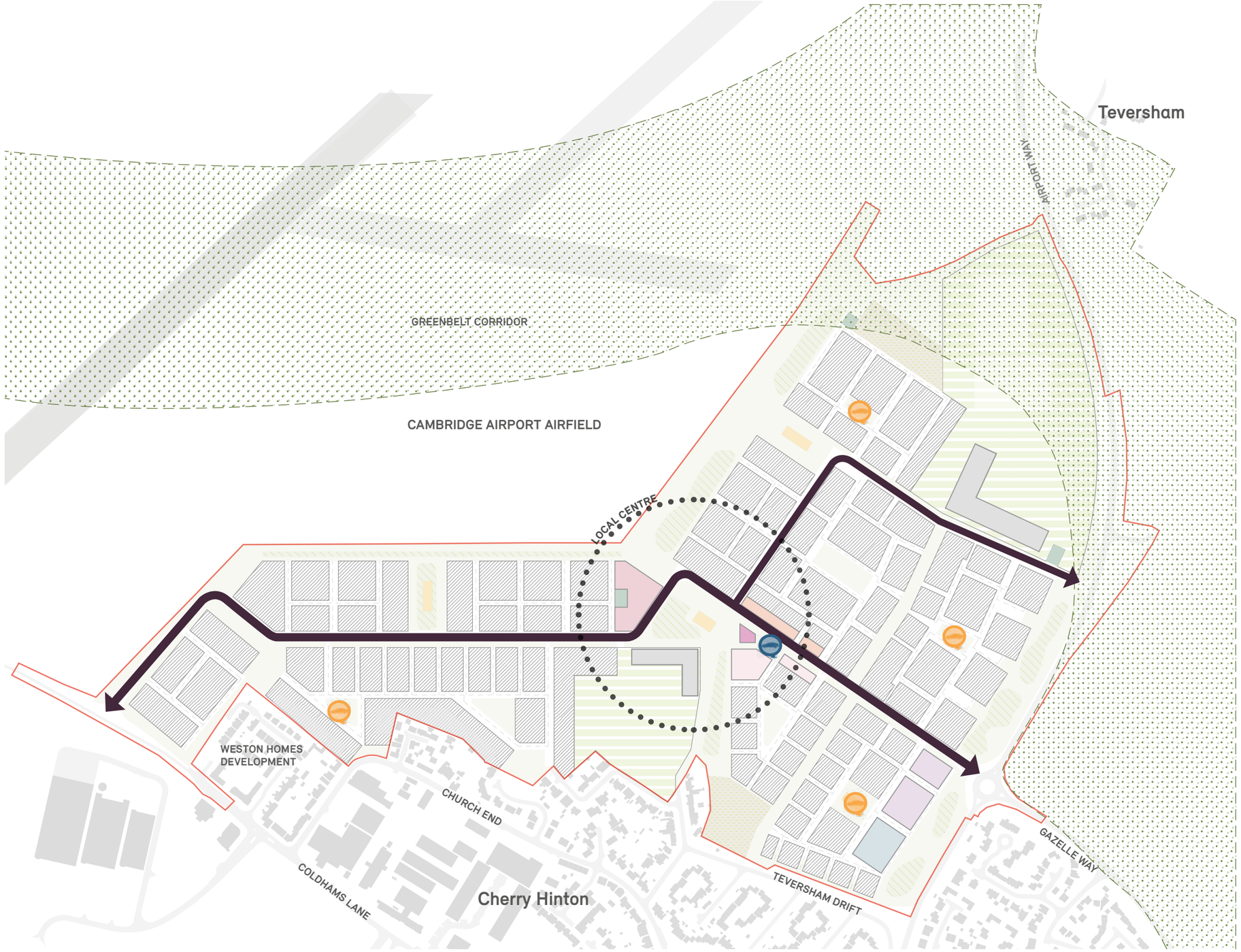
All dwellings with a dedicated on plot parking space must have active EV charging facilities.

For dwellings with communal or courtyard parking arrangements, 50% of homes must have active EV chargers. The remainder of dwellings must be provided with adequate electrical capacity & ducting for future installation of EV chargers.

Rapid charging hubs must be provided at strategic locations for the use of both residents and non-residents. A central rapid car charging hub can be provided within the market square, while other smaller hubs can be located within surrounding neighbourhoods parks.



Typical EV charging arrangement



Recommended locations for strategic Rapid Charging Hubs

Living Communities

We have grouped the four characteristics of Identity, Built Form, Uses and Homes and Buildings under a shared heading of Living Communities.

This is to emphasise the importance to the Code of taking an integrated design approach to all aspects of building design. Buildings must be understood in the groups they form, explaining their practical and aesthetic coordination, and the streets that they create, in an integrated and coordinated way.

Materiality

Materials will help integrate the proposal into the surrounding area by complementing the existing materials, while also reducing embodied carbon.

Neighbourhood

Creating a design-led development, providing spaces to excite and spark local interactions and help build a strong community.

Building design

Buildings will contribute to both the sense of identity of the individual home, and how it belongs in the street.

Detailing

How buildings and neighborhoods are detailed, and the clarity and consistency of that detailing, is a key contributor to their character.

Sustainable homes

Taking a design led approach to delivering high quality, low/zero carbon, affordable, adaptable, family homes fit for the future.

Tenure blind

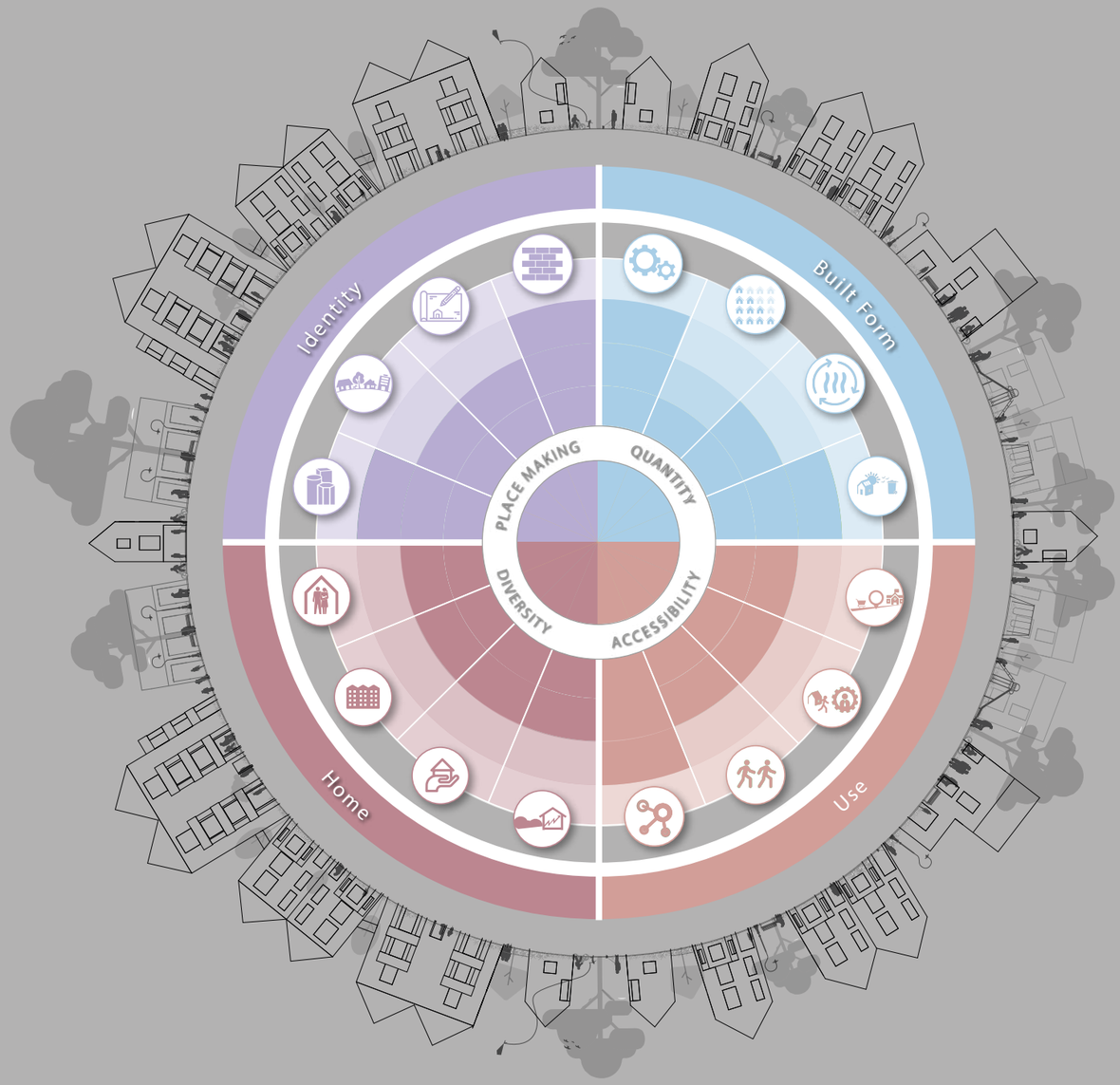
Providing a tenure-blind, sustainable and vibrant community that knits into the surrounding neighborhoods.

Choice

Providing a choice of high quality homes.

Fabric First

Fabric First design for both climate change mitigation and resilience.



Street design

Streets and spaces will be recognisable and defined at their edges by buildings and landscape to make them easy to navigate with priority given to sustainable transport modes.

Density

A variety of scales, and forms of development will be used as part of the distinctiveness between different low-rise urban, suburban, and rural inspired areas.

Resource management

Renewable/circular resource management including heat, energy and water.

Environmental sustainability

Environmental sustainability and reducing environmental impact at the heart of every design decision, including innovative technologies for energy and waste to create a sustainable community.

Social sustainability

Create an active center with shops, schools and other 'social infrastructure'.

Home working

Homes and neighborhoods designed for the post pandemic world with space and infrastructure to support home working.

Accessible

Providing high quality infrastructure to connect residents with the world beyond. Prioritising sustainable transport modes.

Amenity

Providing spaces for local interactions and help build a strong community.