Cornwall Design Guide | PART THREE

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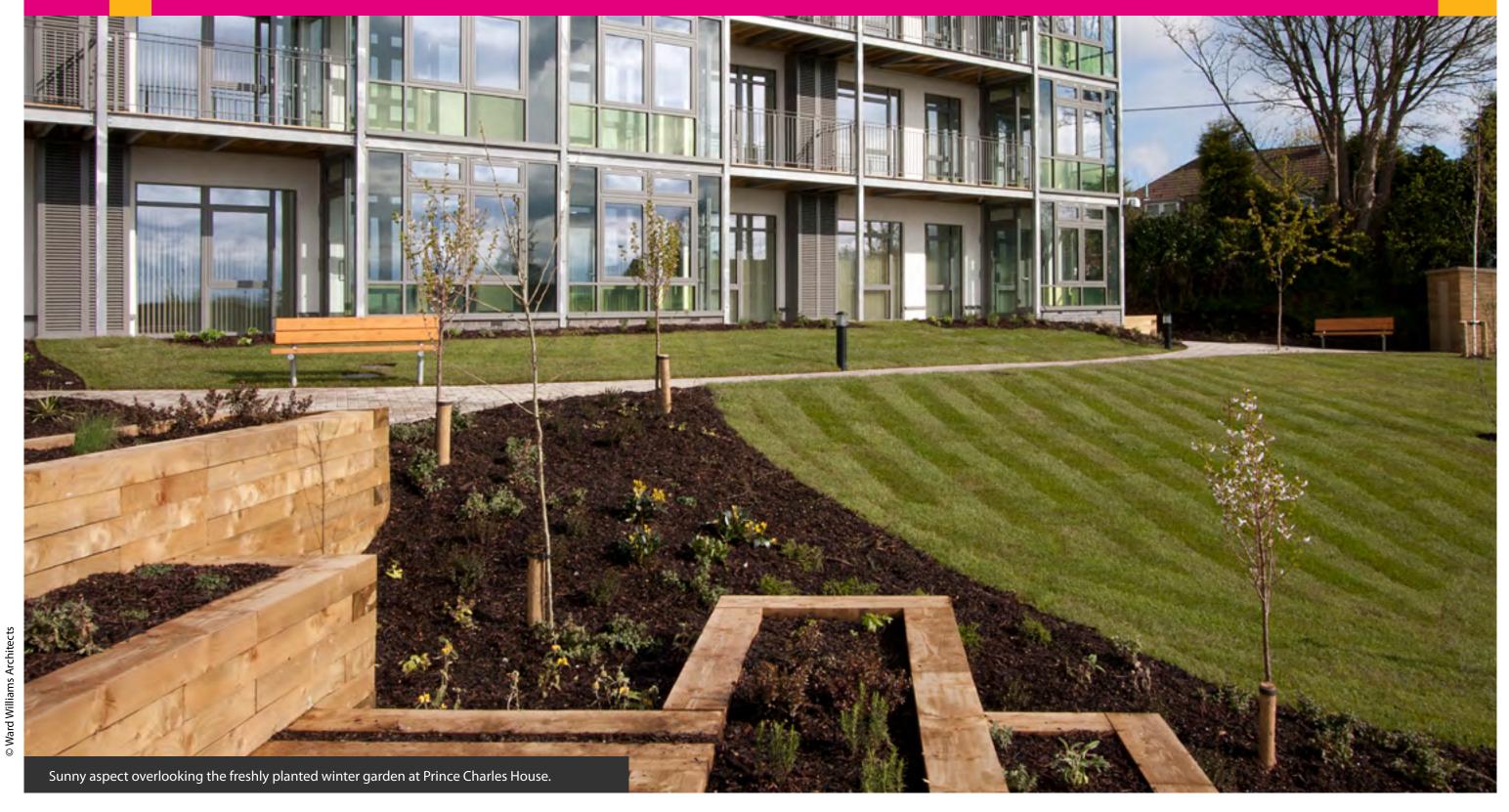
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Section Creating sustainable neighbourhoods

The Government, Cornwall Council and local partners like Cornwall Sustainable Buildings Trust have issued guidance on creating successful sustainable neighbourhoods.

Government »

Cornwall Council »

Cornwall Sustainable Buildings Trust »

- Community consultation, involvement and engagement
- 4.2 **Neighbourhoods and district centres**
- Community focal points and public realm
- Accessibility and ease of movement
- Access, equality and diversity
- **Reducing construction waste**
- **Design process for successful layouts**
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- Density appropriate to location 4.10 **>>**
- Maintain both privacy and outlook
- 4.12 **)** Health and wellbeing

4.1 Community consultation, involvement and engagement

Design proposals should be developed with active involvement and engagement with local people through consultation at the early stage of development conception. Today's emphasis is on designing by people, i.e. supporting and enabling communities to design change in their own neighbourhood.

The Local Government Association »

and Involve »

demonstrate successful collaboration using appropriate approaches and techniques in a planned way.



We recommend:

- Consulting your neighbours and being aware of the situation of other residents, respecting their privacy and accommodating others where possible;
- Working with local communities to create a constructive dialogue which identifies local constraints and opportunities, for example to improve access to shared outdoor spaces, such as green spaces, or indoor spaces such as village halls;
- Leaving a legacy that allows the resident community to have some control over managing their surroundings;
- Working collaboratively with the local community, local authority and other stakeholders to ensure that your proposal promotes sustainable development; and
- Allowing the local communities to have some control over how their neighbourhood is managed.

4.2 Neighbourhoods and district centres



We recommend:

- Ensuring local development is sustainable by taking into account access to:
 - Public transport
 - Employment
 - Education
 - Health care
 - Community facilities
 - Shops and services (e.g. post office, bank, council offices)
 - Places of worship
 - Leisure and recreation and green open spaces
 - Parking
 - Public toilets
- Considering how your proposal reinforces and supports existing local facilities and services within existing neighbourhood centres;
- Providing planning contributions where required; and providing the necessary services and facilities where they are insufficient or currently not provided; and
- Ensuring facilities and services are located to be accessible by public transport, pedestrians, cycles and vehicles.



... including studios, a restaurant, childcare facilities and more.

4.3 Community focal points and public realm

How does your development provide access to existing areas such as streets and squares?

How can you access, reinforce, enhance and connect with the wider public space network?

Does your development reinforce local character and distinctiveness in layout, detail and the use of local materials?

We recommend:

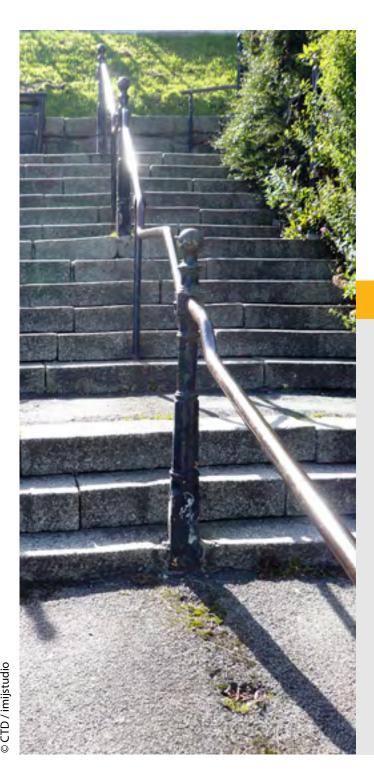
- Considering the location, use, condition and attractiveness of the existing public space network and carrying out community engagement, involvement and consultation to establish what local requirements are and use this information to inform the scheme;
- Incorporating existing areas of public spaces into design proposals;
- Ensuring public spaces are well overlooked to provide natural surveillance and provide for a safer environment.





Always try to integrate community spaces adjacent to or within new developments.

4.4 Accessibility and ease of movement



Does your development incorporate easy access to facilities and services, particularly within walking distance and provide easy access to public transport?

Have you considered how your development meets the requirements of

Manual for Streets >>

We recommend:

- Walkable neighbourhoods characterised by having a range of facilities within 5 to 10 minutes walking distance; and
- Considering appropriate levels of public transport and a design which includes:
 - Pedestrian routes and facilities
 - Public transport infrastructure
 - Cycle routes and bicycle parking
 - Traffic speeds
 - Seating to accommodate all users
 - Publicly accessible toilets
 - Accessible parking



4.5 Access, equality and diversity

Have you designed buildings to accommodate change, enabling adaptation to different uses and occupancies?

Have you considered meeting the specialist needs of people with disabilities?



ARCO2 Architecture

We recommend:

Ensuring that all buildings comply with the

Equality Act 2010 »

- Providing details, within your design and access statement, of how your proposal will meet the needs of all users and comply with the requirements of the Equality Act (DDA) audit;
- Providing information on how the proposal meets the requirements of Part M of the Building Regulations, which requires both internal and external spaces to accommodate users with disabilities;

Referring to guidance from

Cornwall Council on disabled access »

how the proposals will meet the Lifetime Homes requirements, for example level access, internal spaces that are large enough to manoeuvre a wheelchair, corridors and passageways of wheelchair width and electric sockets located at a convenient height;

- Ensuring that all new dwellings have a level or ramped approach and access to the principle floor level; and
- Designing rooms and circulation spaces to allow for changes in mobility and adaptation of the internal arrangement for installing internal lifts.

Ramp access for wheelchair users is a neccessity for all public buildings.



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4.6 Reducing construction waste

Can existing buildings be retro-fitted to add character and style to your development as well as tackling important environmental and building conservation issues?

Have you considered how recycling construction materials and waste can reduce impacts on key natural resources and emissions to air, land, water and biodiversity?



We recommend:

 Researching available methods and materials and prioritising cost effective measures to deliver an easier build and a more sustainable and durable building, refer to the:

Cornwall Sustainable Building Guide »

which has been developed in partnership with Cornwall Council and Cornwall Sustainable Building Trust (CSBT);

- Helping to change energy use habits and reducing CO₂ emissions by designing efficient buildings and using renewable energy. Save energy, reduce CO₂ emissions, save money;
- Reducing waste and associated costs by designing, specifying and building in ways that make the best use of materials, and allow maximum recyclability at the end of the building's life;
- Minimising the impact of waste by choosing materials that are natural and recyclable, and separating recyclable and re-usable waste on site to prevent it going to landfill; and
- When demolishing, re-use material on site where possible. Any material which cannot be re-used should be recycled or re-used elsewhere.



Beware cement is a high embodied energy material!

4.7 Design process for successful layouts

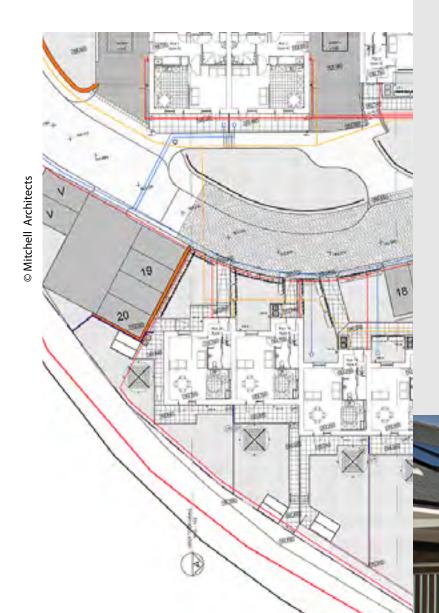
4.8 Pattern of settlement



Designing in context for successful layouts

4.10 Density appropriate to location

Have you considered the existing pattern of settlement and context of the development?



We recommend:

- Respecting the characteristics of the surrounding area, in terms of scale, urban grain, street patterns and widths, massing of buildings, landscape, materials, colours, styles and detailing;
- Managing the height differences between existing and proposed developments, by relating new development heights to those of the immediate context and surrounding area;
- Relating density and massing to the site context and local characteristics;
- Creating public open space that helps to integrate the built form into the existing public spaces and meets the requirements of users: and
- Enhancing the locally distinctive features of the area by avoiding an excessive variety of building styles, materials and colours.

Will your development reinforce the pattern of density found in the area?

Is higher density development well designed giving attention to privacy, good internal space standards, providing private or common open spaces and giving adequate consideration for travel arrangements and emergency access?

We recommend:

- Increasing densities around key movement intersections, along strategic infrastructure routes and within neighbourhood, local and village centres;
- Integrating new development by using a similar grain and density to that found in the immediate adjacent areas. Consider scale, height, volume, site coverage and distance from and effect upon, adjacent buildings; and
- Ensuring that high density development does not lead to the loss of environmental quality, significant existing landscape features and internal and external space standards.

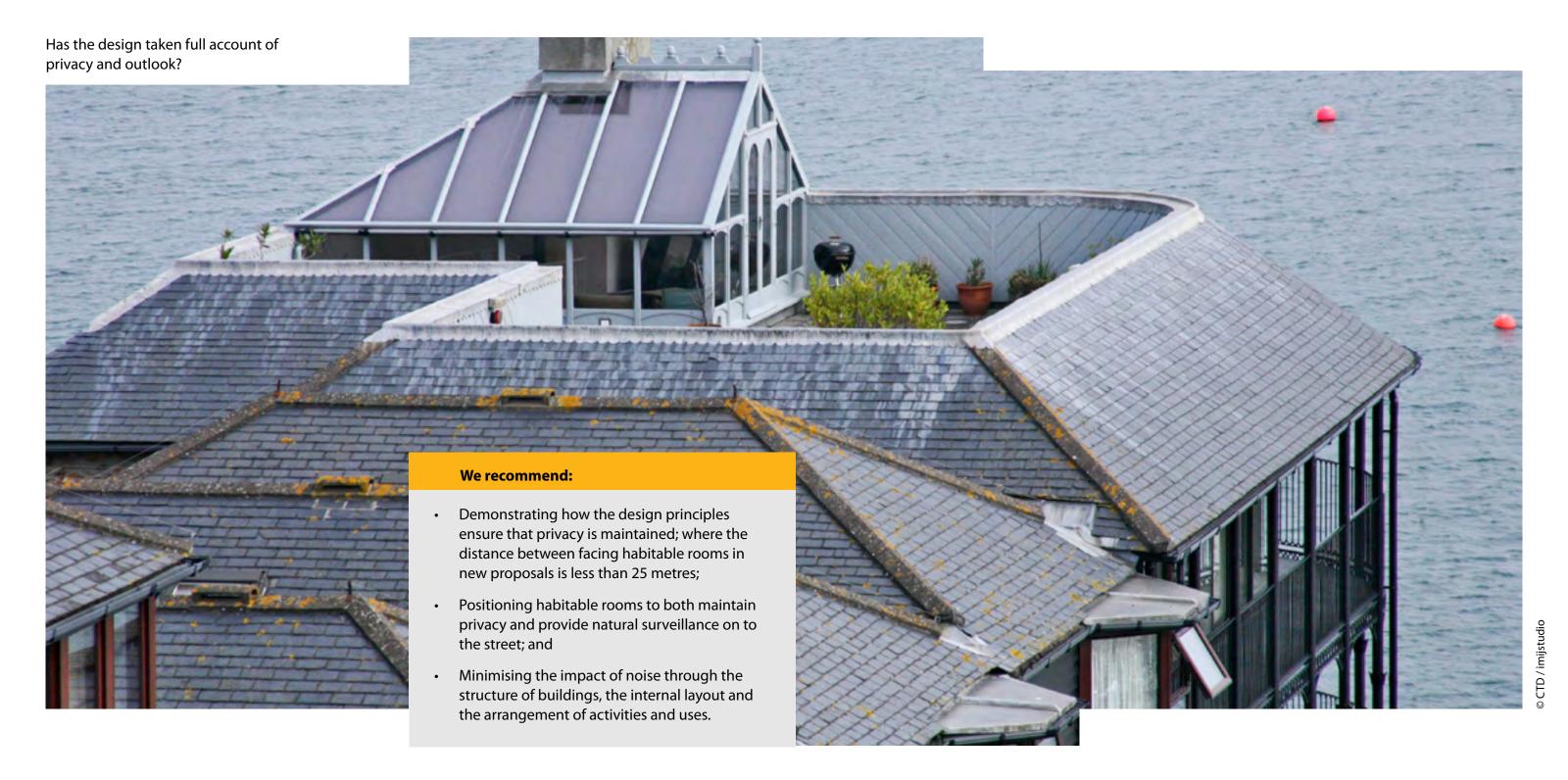
Reports on Residential Densities have been published by:

The Town and Country Planning Association » and Building for Life/CABE »

A considered density of buildings appropriate to the site.



4.11 Maintain both privacy and outlook



4.12 Health and well-being

Have you considered how the environment that has been created affects both the physical and mental health of individuals and communities?

We recommend:

 Considering how the design and maintenance impacts on both individuals and communities.

Cornwall Council » and

Cornwall Sustainable Building Trust »

have produced detailed guidance and case studies.

- Providing some private, or partially private, outdoor space where possible;
- Following

Secure by Design »

principles to create a safe and secure environment for occupants;

 Ensuring there is natural daylight in kitchens, living rooms, dining rooms and studies

BRE natural daylight standards »

- Ensuring appropriate sound insulation to reduce noise pollution and increase privacy for occupants;
- Ensuring flexible and adaptable design,

Lifetime Homes »

to allow for structural extension, flexible internal spaces, flexible building services, and flexibility to integrate new technologies;

- Designing buildings which adapt to climate change;
- Avoiding sick building syndrome by providing appropriate heating, ventilation, lighting and air conditioning systems and choosing non-polluting building materials;
- Designing buildings to prevent radon gas entry
- Providing access to existing health facilities and services;
- Creating a safe and pleasant public space that can have a social function as well as accommodating movement and transportation;
- Promoting inclusive, safe communities and encouraging healthier lifestyles by providing opportunities for community and voluntary activities. This should be for minority as well as majority interests



- and help stimulate life long learning and contribute to regeneration and economic prosperity;
- Promoting sustainable participation in sport recreation and cultural activities;
- Contributing to an area's community health and wellbeing via planning obligations.
- Ensuring large developments leave a legacy that allows the resident community to have some control over managing their surroundings;
- Growing fruit and vegetables allowing occupants to be more self-sufficient and create extra habitat for wildlife;
- Engaging with local landowners and formally designing new development proposals which make land available for community allotments and orchards close to residential areas;
- Considering a living neighbourhoods approach to new developments, by designing for personal and communal food production; and
- Using edible fruit species of trees and shrubs in the planting and soft landscaping of large developments, to reinforce and enhance local planting.

« section contents

Green infrastructure



section contents >>>

Section Green infrastructure

Does your development take into consideration Cornwall Council's green infrastructure strategy?

Green Infrastructure Strategy »

Cornwall Council's guidance on trees, plants & landscapes »

- 5.1 **»** Protecting existing features
- 5.2 » Planting and soft landscape
- 5.3 **Wildlife** provision
- 5.4 » Parks, sports and recreation areas
- 5.5 **)** Gardens and outdoor private space

(main contents)

5.1 Protecting existing features

Green Infrastructure includes:

- Green Places parks, woodlands, informal open spaces, allotments, street trees, multi use trails etc;
- Blue places rivers waterways, lakes and canals;
- Yellow places our beaches;
- And post industrial mining areas;

Designing for green infrastructure is increasingly being seen as a smarter alternative to retrofitting and upgrading grey infrastructure (roads, sewerage, energy etc), it will require deliberate actions and approaches to the reshaping of our existing built environment.

Design should increasingly move from grey solutions to green solutions to deal with environmental problems such as surface water run off and overheating including the establishment of tree cover, increasing the permeability of surfaces, reinstating floodplain and reconnecting fragmented habitats.

There is already a compelling argument of the need to invest and realise the benefits of the greater scope this brings in terms of developing local renewable energy systems, community food growing and alternatives to road transport.

We recommend:

- Using plants around developments to create a softer edge and provide screening;
- Using plants to define spaces, enhance the streetscape and road corridors and generally to provide an attractive environment;
- Providing green corridors and habitat links to encourage biodiversity within the site and surrounding it;
- Using plants to provide windbreaks, to reduce heat loss and provide shade in summer and reduce effects of air pollution and noise;
- Planting single trees to provide a focal point and planting trees along streets to reflect the green lanes surrounding the village;
- Using signature plants (including evergreen varieties) in gardens to reflect the local character and to attract wildlife;
- Creating new hedges which reflect local character and dimensions. Landscaping schemes should use smaller plants and trees should have adequate rooting space;
- Checking trees are suitable for the area and will not cause problems with underground pipes or cables, or damage hard surfaces in the long term for example by using establishment aids, root barriers and planting cells;
- Considering the long term management of plants and trees and their compatibility with other species; and

or Using trees and shrubs native to Cornwall and appropriate to the local area and character, for tree and woodland planting schemes use mainly sessile oak with hazel with lesser proportions of holly, grey willow, mountain ash, ash, or beech on dry ground, and common alder in damp and wet areas. Tree diseases and plant health issues may affect tree planting schemes and can be subject to changes as new threats emerge. For more information on these threats visit

The Forestry Commission: Pests and Diseases »

Does your development take into account:

- BS5837 Guide for Trees in Relation to Construction, clearly showing protection of trees on a construction site;
- Adequate protection of existing plants by erecting temporary fencing before starting work on site.
 Maintain this for the duration;
- Making good use of soil and avoiding importing or exporting topsoil; and
- Retaining water features, natural springs, ponds and boggy areas created by local topography.
 Are these incorporated into the designs of external areas and safeguarded from contamination.



Good delineation of boundary using natural stone and planting scheme.

5. Green infrastructure

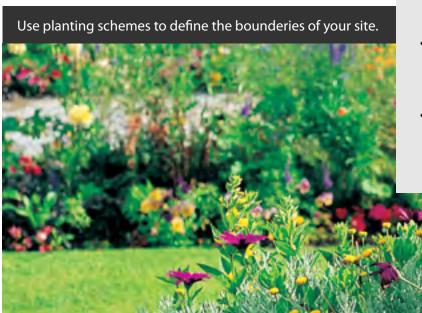
5.2 Planting and soft landscape

5.3 Wildlife provision

Planting schemes perform a number of valuable functions and will be critical to the character of the development and its successful integration within the surrounding area.

Street trees

Have you incorporated trees in street areas, such as community focal points, public open spaces, and on-street parking areas?



We recommend:

- Involving the design team, arboriculture consultant or a Cornwall Council tree officer at the outset of the scheme to ensure that suitable trees are used and their needs in terms of growth, protection and maintenance are appropriately catered for;
- Considering trees as part of the existing and proposed 'green infrastructure' to maximise their contribution;
- Ensuring that when planting new trees, you are aware of any potential archaeological disturbance;
- Considering the type of tree and location to prevent conditions where trees could: obstruct pedestrians; and
- Ensuring tree pit design is appropriate in terms of the nature and conditions of the particular location.



Use plants that provide food for butterflies & other insects.



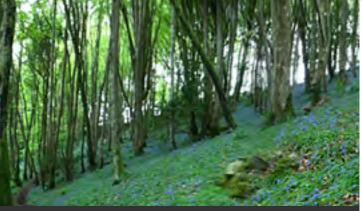
Find out more about habitat provisions for:

Bats »

Birds »

Swifts >>

We recommend:



Use appropriate trees that support biodiversity.

- Using plants which are likely to be of value to local wildlife
- Including native species and natural plant associations, plants which create good cover and nesting habitat;
- Locally sourcing trees which can provide safe roosts and nest sites;
- Using plants with berries/fruit;
- Consulting with local wildlife groups for further advice on plant selection and planting procedures to encourage wildlife;
- Using garden ponds and grassed areas;
- Aiming for no net loss of biodiversity following development of the site; and
- Providing spaces in buildings for roosting bats and nesting swallows, swifts, house martins and house sparrows, through careful building design or by erecting boxes.

5. Green infrastructure

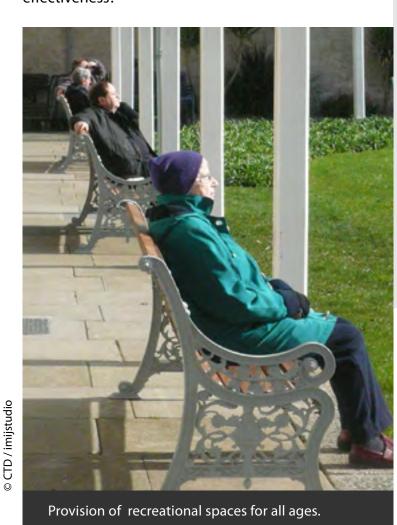
5.4 Parks, sports and recreation area

Have you provided space for community or individual use that also acts as part of the wider

Are open spaces designed to be well located, accessible, actively used and safe?

green infrastructure of the area?

Have you provided a scheme for the maintenance and management of open space within development to ensure their long-term success and effectiveness?



We recommend:

- Incorporating existing public open space and significant landscape features into new developments. Where this is not possible, provide new areas of public open space using landscaping that reflects the characteristics of the area;
- Ensuring larger open space areas rather than small pockets of land dispersed through a development site;
- Providing communal areas with a variety of facilities for occupants, balancing the needs of different age groups;
- Not using imported soil conditioners, peatbased composts, pesticides, herbicides or inorganic fertilisers; and
- Minimising the need for artificial irrigation and mains watering of plants. Use rain/ grey water to irrigate plants when this is necessary.

Have you provided convenient access to outdoor amenity space?

5.5 Gardens and outdoor private space



We recommend:

- Ensuring domestic gardens are large enough to be usable by residents.
 Typically this should be as rear and main garden; and
- Gardens should be capable of incorporating both functional uses and recreational uses.

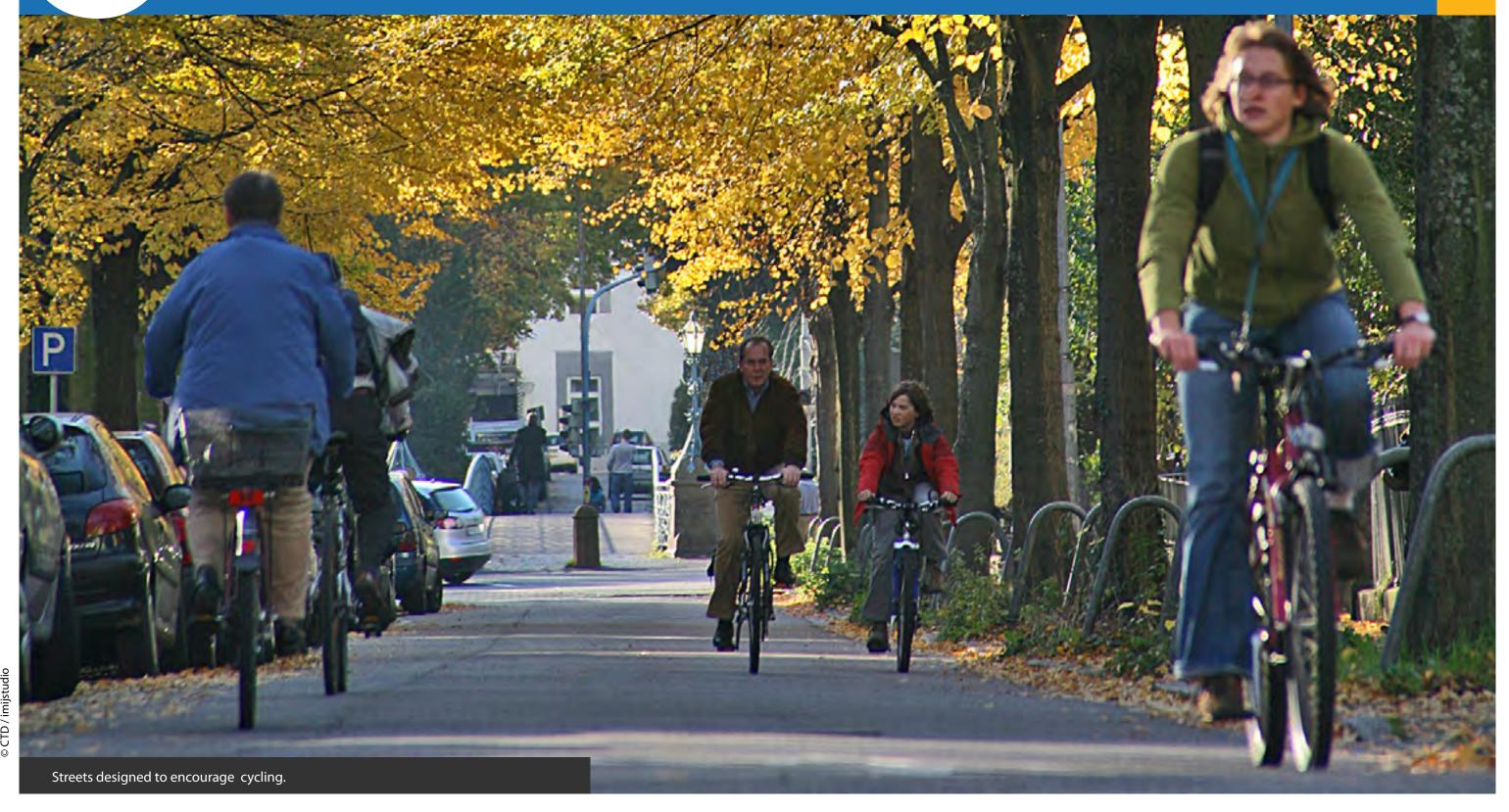
Functional uses

- Rotary clothes drying;
- Refuse bins, recycling, composting;
- Storage for bicycles, pushchairs, wheel chairs, surf boards and the like and/ or pet housing.

Recreation uses

- Children's play and or patio seating/ dining;
- Ornamental or productive (fruit and vegetable) gardening.

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Section

Designing for movement & connections

- 6.1 » Planning for movement and connections
- 6.2 >> Promote and encourage sustainable and active travel
- 6.3 » Streets as places
- 6.4 » Providing a mix of uses
- 6.5 » Cars and cycle parking
- 6.6 » Off-street parking
- 6.7 » On-street and communal parking
- 6.8 » Electric charging points
- 6.9 » Cycle parking
- 6.10 >> Highway drainage systems
- 6.11 » Designing out crime to create a safe environment

6.1 Planning for movement and connections

Have you established at the early stages of your project how people, bicycles and vehicles will move around your proposed site?

Documents relating to this are:

Cornwall's Local Transport Plan – Connecting Cornwall: 2030 »

Connecting Cornwall Strategy »

Manual for Streets »

Streets for All – South West, by English Heritage »

Have you created a travel plan that demonstrates how your development will support and encourage sustainable travel, such as walking, cycling and the use of public transport?

Travel Plans for new Developments »

We recommend:

Giving consideration to all forms of movement around and through your development at the earliest stage, including:

- Historic road and street patterns and traditional axis of movement;
- Roads and service routes, including an indication of their hierarchy;
- Traffic generation, current levels and with future proposals and projects;
- Traffic management;
- Overall car parking provision, design and parking strategy;
- Public transport routes, including stops and stations;
- Pedestrian movement, along formal routes and desire lines:
- Footpaths, public rights of way;
- Cycle paths, which may include the national cycle network in some parts of Cornwall;
- Bridleways and routes for other alternative forms of transport;
- Plans and proposals included in the

Local Transport Plan and Connecting Cornwall: 2030 >>

 Maximising access on foot, cycle and to public transport facilities;

- Providing facilities close to where people live;
- Making sure there are bus stops less than 400 metres and ideally within 200 metres of homes;
- Delivering public transport at an early stage of development;
- Providing enough secure storage for cycles at dwellings and at workplaces, shops, community facilities and transport interchanges;
- Ensuring jobs, education, healthcare and services can be accessed locally or by sustainable transport;

Encouraging neighbourhoods to adopt travel plans which:

- Support a long term change in travel behaviour through education and awareness raising;
- Maximise travel choice for all users;
- Ensure that new developments are linked to existing sustainable transport networks.



Cornwall Council

6.2 Promote and encourage sustainable and active travel

Your development should build on and reinforce existing movement networks through

active travel »

Is the development easy to get to and move through by foot and bicycle?

Are children's needs taken into account in planning movement routes, including how traffic speeds, volumes and the potential for independent walking and cycling can be addressed and encouraged?





- Keeping and improving existing routes and access points;
- Designing areas around walking routes that are direct, convenient and follow natural lines;
- Creating direct and attractive connections between public transport, footpaths, cycle routes, local facilities and surrounding areas;
- Linking new pedestrian and cycle routes with strategic networks such as safe routes to school and the national cycle network;
- Planning for informal play opportunities en-route;
- Avoiding cul-de-sac or routes that do not make direct links and good connections;
- Ensuring that residential streets are designed

- to a speed appropriate to their use; and
- Ensuring peripheral 'bypass' roads are avoided, as new routes should try to integrate with the existing movement network;
- Providing facilities close to where people live.

6.3 Streets as places

Does your design consider the appearance, layout, connections, and function of streets as places for people and transportation?

Does your scheme create streets and public spaces that encourage people to meet and relax rather than provide simply avenues for vehicles to travel?

Are streets within the proposed development simple, attractive, flexible, and adaptable to meet the requirements of all users?

We recommend:

Considering the impact upon the existing area - developments should either form part of an existing street or create new streets;

Considering the use of a street foremost by pedestrians, where people can access local facilities and services and meet one another, people watch and rest etc; as well as the accommodation of different modes of transport;

Considering catering for a range of different modes of movement and reinforce community functions by providing attractive places where interaction between people is encouraged;



Attractive surrounding pathways which invite to visitors to walk, relax and relate.

Using buildings that work with the street as a whole, with fronts of buildings creating street frontage, facing onto key public areas and open spaces. Avoid having blank sides or the back of buildings facing public highways, – use openings, windows and doorways, to actively engage with the street;

- Utilising building orientation and internal layout to achieve an effective balance between solar gain, wind orientation and steep slopes;
- Providing opportunities for informal interaction at community focal points; and
- Having a clear identity, informed by local character and context, uncluttered and uncomplicated.

6.4 Providing a mix of uses

Successful communities need a range of conveniently located services that support their needs within easy walking distance. Mixing uses can reduce the need to travel and can bring life to residential areas during the daytime.



We recommend:

- Ensuring the design takes into account noise, odour, lighting and air quality issues (in mixed use developments);
- Considering using ground floors to accommodate shops and local facilities with residential use above;
- Locating convenience shops and services along principal routes or the junctions of major routes that are a short walk from residential areas;
- Increasing ceiling heights on ground floors of buildings at prominent locations to accommodate a potential change of use from residential to business;
- Creating shopping streets, not shopping centres, and business quarters, not business parks to encourage mixed use rather than single use development;
- Avoiding unattractive and inactive frontages by wrapping supermarkets, industrial and commercial buildings, for example, with smaller units that front the street; and
- Concealing unsightly service yards and storage areas with other forms of development and appropriate landscaping.



6.5 Cars and cycle parking

6.6 Off-street parking

6.7 On-street and communal parking

Integrate car parking into the design of the

street. Parking spaces can be provided within

the highway domain on streets and in parking

Does your proposal achieve a balance between providing safe and convenient parking, close to each individual property and reducing the dominance of the car?

We recommend:

- Parking within the dwelling boundary;
- Locating garages close to the property they serve and avoiding large areas of garage blocks;
- Communal off-street parking for residential areas should be kept small to reduce the impact of cars on the quality of the development or local area;
- Surrounding dwellings should either be built around parking areas to form mews or should overlook garages and parking areas in order to reduce crime; and
- Access to garages and parking areas should be provided from the rear of the plot or to the side of buildings from driveways or, exceptionally, from the front through carriage arches.
- Continuous rows of parked cars should be broken up by careful landscape and design, allowing enough space for pedestrian movement and landscape planting to develop

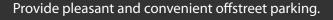
squares or other large spaces;

alongside the development;

- Parking arrangements should be appropriate to the speed and volume of traffic using the road on which the parking is situated;
- Large, single-use car parks should be avoided in preference to parking areas designed as attractive communal areas; and
- Communal parking areas should be provided in courtyards to the rear of dwellings, with a single entrance point, overlooked by adjacent dwellings and should be convenient to the properties they are intended to serve.



- Taking account of the position of garages and car ports relative to the highway – they should be set back from the street frontage; and
- Ensuring, where appropriate, garages and other buildings are related to position, layout, orientation of existing outbuildings when relating to existing streets.





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6.8 Electric car charging points

6.9 Cycle parking

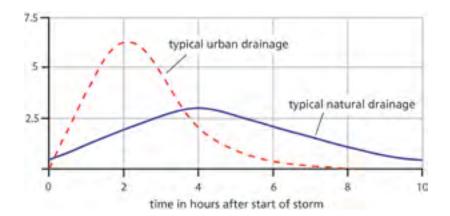
6.10 Highway drainage systems

Charging points for electric vehicles should be considered early in the design process. Guidance on implementing adequate provision can be found at:

Guidance for implementation of electric vehicle charging infrastructure »

April 2010, Transport for London.

- Space, under cover where possible, should be made available within the development for cycle parking.
- Ideally cycle parking should be accommodated within individual garages or plots.
- Large communal bicycle stores, poorly sited with little natural surveillance should be avoided.
- Appropriate provision of parking for disabled users.



Does your development incorporate:

sustainable urban drainage systems »

where it can be demonstrated that they will be acceptable and adoptable?



We recommend:

- Development proposals should provide details on the following as part of the Sustainable Urban Drainage scheme (SUDs) design:
- Providing detailed information on the general drainage and impact of flooding on both existing and proposed development;
- Providing detailed information on the existing and proposed ground and ground water conditions;
- Providing information on rights of discharge;

- Incorporating access for long-term maintenance and inspection requirements;
- Involving the adopting authorities, in terms of highway, land drainage, highway structures and sewage, water company, as early as possible to discuss the acceptability of any proposals; and
- Providing details of the agreement for proposals, which are acceptable for adoption, who will adopt them, the maintenance and management plan, and level of commuted sum required.

6.11 Designing out crime to create a safe environment

Creating places that both feel safe and are safe is crucial to the success of all development.

Does your scheme create places that achieve both?

Feel safe & are safe »



We recommend:

Approaching the design of developments with:

Designing Out Crime »

at the heart of the process can help to achieve safe places.

For additional information also

look here »

 Designing in opportunities for natural surveillance, by the provision of well-lit and well-maintained paths, streets and squares that are overlooked without compromising privacy.

