

PUSH
Quality Places

Model Supplementary
Planning Document

Draft April 2011

Foreword

Partnership for Urban South Hampshire Quality Places Charter A Commitment from PUSH signed by all PUSH authorities:

The Partnership for Urban South Hampshire (PUSH) is a partnership of 11 local authorities in South Hampshire. The area is a focus for growth and is planned to undergo significant development and change over the next 20 years. PUSH recognises that such development will be important to the area's economy but is equally concerned to ensure that development is delivered at the highest possible quality and is designed and managed to create quality places for the well being of its existing and future residents, workers and visitors.

PUSH believes that good quality places add economic, environmental and social value to an area, which is widely recognised and supported by research. High quality places and buildings generate greater rental and capital value for local authorities and investors; such places and buildings heighten the image, attractiveness and competitiveness of a settlement helping to generate inward investment and making it a more desirable place to live, work and play.

The challenge for South Hampshire and the PUSH authorities is to ensure that the inherent principles and value of high quality places, their delivery and on-going management is recognised and supported through each authority's priorities and decision making.

PUSH believes that a quality place has a number of essential components which have been identified in fig 1 below:



Fig 1: Extract from PUSH Quality Places Charter

A Commitment from PUSH signed by all PUSH authorities:

"The PUSH authorities are committed to the creation of quality places. We recognise the different components that combine to create quality places and will ensure implementation of place making principles and the processes for their delivery. We acknowledge that we must collaborate and cooperate with the many other organisations and bodies responsible for the management and development of the public realm to achieve high quality places. We call upon those organisations and bodies to commit to delivering the place making components identified in this charter."

Delivering high quality places and buildings cannot be achieved through a statement of intent alone. PUSH recognises that it is equally important that appropriate delivery mechanisms and processes are in place. Each local authority in South Hampshire, as a signatory to the charter, is committed to delivering the following:

- Leadership and management structures to ensure that creating quality places is a high priority
- A design-led multi-disciplinary culture which plans, designs and manages new and existing places in an integrated way to achieve high quality
- Place making and quality design policies which underpin Development Plan Documents, including detailed guidance on creating high quality development where necessary
- Decision making which uses the wider value of creating quality places as a prime consideration rather than cost alone
- Opportunities to improve the quality and management of existing places
- Appropriate place awareness and design training for leaders, councillors and officers
- Community involvement in the planning, design and management of places

Contents

Introduction

This document
Design

Key Design Principles

Site Accessibility

Local facilities and public transport
Integrating with existing movement networks

Site Context

Site constraints
Positive Site Features
Character
Scale (grain and massing)
Orientation
Massing and its Impact on Neighbours
Materials
Extensions

Layout and Massing

Residential Density
Permeability, Legibility and Street
Hierarchy
Public/private distinction
Residential Privacy
Daylighting and Sunlight
Massing

External Space

Design of External Space
Management of Landscape Green
Infrastructure
Space function (The avoidance of

SLOAP)
Boundary Structures
Underground Services
Play Areas
Public Open Space
Public Art
Extensive Green Roofs
Roof terraces and Intensive Green Roofs

Residential Amenity

Private Residential Amenity
Residential Communal Garden Space
Public/private Distinction
Residential Privacy

Access, Parking and Services

Access into the site
Access around the site
Plot access
Emergency and Services Access
Highway Maintenance
Parking Mix
Cycle Parking and Storage
Refuse and recycling

Architectural detail

Proportions
Rooflines
Roof extensions to Existing Buildings
(including dormers)
Materials
Windows
Architectural features
Service details
Front, Side and Rear Extensions to
Existing Buildings

Ancillary buildings
Corner Buildings and Blank Walls
Doors and Entrances

Internal space

Lifetime Homes
Internal Living Space
Flexibility and adaptability
Natural Daylight
Passive/Natural surveillance
Noise

Policy background

Glossary

Supporting Documents and Organisations

Appendices

A: Key Design Principles Checklist
B: Quality of Routes

Introduction

This Document

This document is designed to provide guidance on the Council's expectations for the design of new development (both residential and non-residential) in the borough/city/district. It is the council's interpretation of the relevant policies in the X Council Local Plan/LDF and in Government Guidance.

It will be used as a '**material consideration**' by the Council's Development Control unit.

It should be referred to by developers even before a planning application is made i.e. at the 'pre-application' stage.

It can also be used by Members when considering the design aspects of planning applications.

The guidance is divided into design themes which contain related design issues. In each design issue section the guidance is followed by a box detailing what information is required (preferably in the Design and Access Statement) to enable a proper assessment of the proposals. A reference to the appropriate **Building for Life** assessment questions for that design issue follows this. To finish, some design issues, or two or more closely related design issues, are

distilled into 'key design principles' which appear in the coloured boxes. These key design principles are used in an assessment checklist in Appendix A.

Throughout the document, key words are highlighted and appear in the glossary near the end of the document.

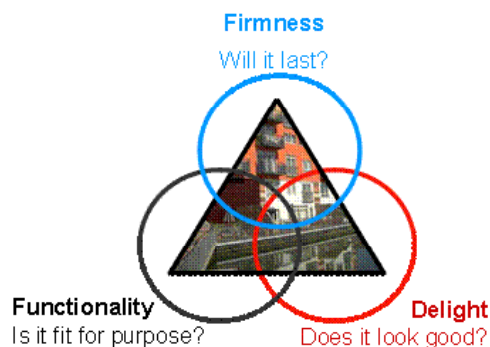
This document was produced by Eastleigh Borough Council Officers for PUSH with the assistance of colleagues in the other PUSH authorities.

This document was designed and formatted by the Solent Centre for Architecture and Design/Mark Drury (Creative Director)

All hand drawn illustrations were produced by ReFormat

Design

Good design is not simply a matter of creating attractive buildings and places. The elements of the development must also be sufficiently robust to carry out their function without deteriorating too quickly. The third critical factor is that buildings and spaces must be designed to function well for the purpose they were designed for. Successful design of new development has been shown to create a premium for property values and a significant increase in the health and wellbeing of the occupants and users of those buildings and spaces created. The design and interaction of buildings and spaces on a street scale is often termed 'urban design'.



Definition of Urban Design:

"the art of shaping the interaction between, people and places, environment and urban form, and nature and built fabric, and influencing the processes which lead to successful villages, towns and cities." (Kevin Campbell and Robert Cowan in Planning 12 February 1999)

Or, more succinctly, how buildings fit together to make quality spaces. To do this, a range of professionals and skills need to be involved, including the landscape architect, the architect, the planner, the engineer and the urban designer. All these professionals are needed to produce high quality, **sustainable developments**.

From 2009 all local authorities have been required to submit '**Building for Life**' Assessments of completed residential schemes of at least 10 dwellings. This checklist is also a useful tool for evaluating the urban design quality of a potential development.

See the Building for Life website: www.buildingforlife.org

Key Design Principles

The design guidance in this document can be distilled into the following 'key design principles' (KDP). Ideally all development should meet all of these principles. A successful response to all of them is likely to lead to a well-designed development.

Appendix A: Key Design Principles Checklist breaks down each KDP into a series of sub questions that need to be asked by the developer or the council to ascertain whether the design principles have been met or not. Each KDP is also referenced to the appropriate parts of the guidance. This checklist is designed for use as an everyday assessment tool for development schemes from the pre-application stage onwards.

1. Access to Local Facilities and Public Transport	New development should provide for safe and convenient access, particularly on foot and by cycle, to local facilities and frequent public transport.
2. Integrating with Movement Networks	New development must integrate well with cycle, pedestrian and vehicular movement networks .
3. Analysis of Context	Developers should analyse the character of the site and its context to identify positive and negative elements which will influence and inform the overall design and orientation of buildings and spaces.
4. Residential Density :	Density should be appropriate to the context and level of accessibility ; make efficient use of land and address the needs of residents
5. Legibility	Development should have its own identity and variety so that it is easy for people to find their way around.
6. External Space	The design and future management of all external space, including highways, must be an integral part of the development and should be considered at the earliest stage.
7. Boundary Structures	Boundary treatments must be appropriate to the context , well-detailed and robust.
8. Underground Services	Where possible new services should be located underground and main service corridors plotted on plans at the earliest stage to avoid design conflicts with tree planting.
9. Public Open Space	All public open space should be safe; accessible ; designed for a range of functions and users; and should balance good natural surveillance with residential amenity .
10. Public Art	Public art should contribute positively and reinforce a sense of place and identity.
11. Residential Amenity	New development should be designed to respect the residential amenity of existing and new occupiers and all dwellings should have adequate private amenity space.
12. Access within the Site	Access within the site should be overlooked, safe and convenient to use, but must not be highway dominated.
13. Parking	Surface car parking and cycle parking should be safe, convenient to use and have natural surveillance . Car parking should not visually dominate the public realm . Other vehicle parking should be safe, secure and separated from the public realm .

14. Waste, Recycling and Cycle Storage	Waste and recycling and cycle storage should be safe, accessible and convenient for the intended users and properly integrated into the built design. Cycle storage should also be secure.
15. Design of Buildings and Materials	The scale, form and design of elevations and external materials should respond positively to the defining and distinctive characteristics of the area. Where this is absent, design and materials should help create a new positive and distinctive character .
16. Continuity and Enclosure of Space	Buildings should be designed to enclose space and have active frontages onto the public realm with particular attention being paid to entrances and corners.
17 Flexible Internal Space	Buildings and spaces should be designed so they can be adapted over time to changing needs. New homes must have sufficient internal space for residents to use comfortably and to support a practical quality of home life for the intended number of residents.

Site Accessibility

Local Facilities and Public Transport

Local Facilities:

New development is better integrated when local facilities are within a safe and convenient walking distance. The development's residents, employees, customers and visitors can more easily avoid using vehicular transport to access a range of services.

Mixed use development which integrates residential with a range of **inclusive** compatible commercial and public sector uses is an inherently **sustainable** approach. Where opportunities to improve the **accessibility** of the site exist these should be taken. Similarly opportunities to co-locate services and facilities should also be taken, e.g. locating shops or a play area near a school.

Public Transport:

Providing realistic alternatives to the use of the private car requires safe and convenient access to frequent, reliable and cost effective public transport services connecting to local centres and to the larger urban areas. This usually means bus routes, but some train services can also provide this role.

Local Accessibility Contours maps provide a geographical representation of the different degrees of public transport **accessibility** throughout an area.

Zone 1 represents a service of 4 buses (or trains) an hour;
Zone 2 at least 2 per hour;
Zone 3 less than 2 per hour.

Where more up-to-date information about the frequency of bus routes or train routes to local centres is available this can be provided by developers.

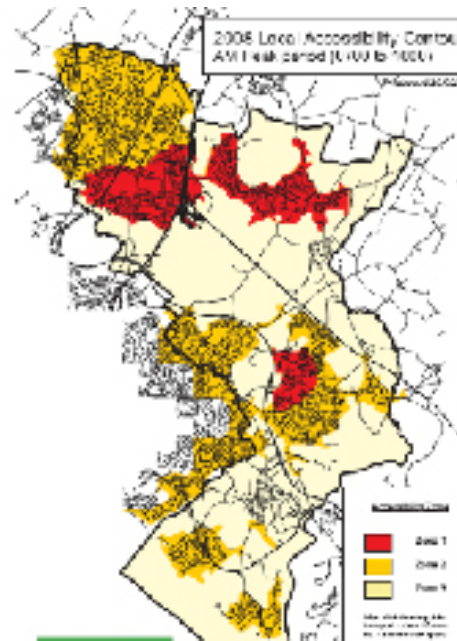


Fig 2: Eastleigh Borough Accessibility Contours (2008)

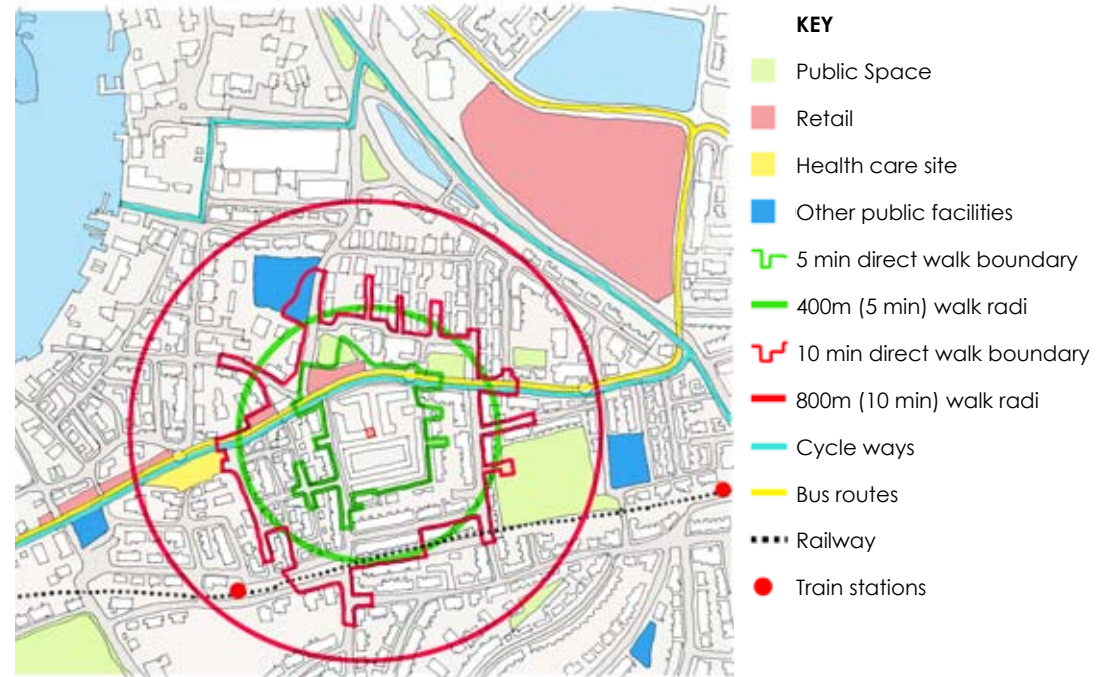


Fig 3: An **accessibility** map showing 400m and 800m 'pedsheds' and distances 'as the crow flies' from a site

Larger developments may also:
Improve public transport service through new bus routes or increased frequency;

Promote **sustainable inter-modal travel** plans by providing safe and sheltered cycle storage within or near homes or non-residential buildings and public transport links;

Promote **sustainable** travel plans including the use of **car pools**, car clubs or other proposals,

www3.hants.gov.uk/lt06-smarter-choices-strategy.pdf

Levels of Accessibility:

Facilities within 400M are ideally located.

Facilities within 800M are still only about 12 minutes walk for most people or 5 minutes by bicycle.

The measurement of route distances must reflect the reality on the ground (using streets and other adopted

surfaced pedestrian or cycle routes) taking into account any obstacles such as busy roads or large blocks.

When pedestrian or cycle routes cross a busy vehicular road or a road with a speed limit of at least 40mph the distance measured should be via the nearest safe crossing point (these are any nationally recognised pedestrian crossings e.g. pelican/ zebra crossings, footbridges or underpasses etc.).

Large new developments should provide some new facilities on site depending on the need for local provision.

The mapped contours of these realistic pedestrian distances from the site are called '**pedsheds**'.

The existence of a pedestrian route is not enough to make it a real alternative to private car travel if the quality of that route makes it unattractive to potential users. Disabled access from the site to facilities also needs to be considered.

Above all, the routes must feel safe, both in terms of personal security and protection from vehicular traffic. All new development or transport investment should strive to achieve the five 'C's':

- Connected
- Convenient
- Comfortable
- Convivial
- Conspicuous
(See Appendix B: Route Quality).

A Design & Access Statement* should:

the site on the latest version of the **Local Accessibility Contours map**; the realistic **pedshed** for 400m and 800m from the centre of the site; and show located within the **pedshed** boundaries:

the following facilities:

postal facility, food shop, bank/ cash point, primary school, medical centre, leisure centre, community centre, place of worship, public house, children's play area, public open space, café, restaurant, crèche.

and

the bus stops and train stations and specify all proposed access improvements to public transport nodes and improvements to public transport services

** or elsewhere as part of the planning application*

Key Design Principle 1: Access to Local Facilities and Public Transport:

New development should provide for safe and convenient access, particularly on foot and by cycle, to local facilities and frequent public transport.

Quality of Access:

Integrating with Movement Networks

Where possible new development should aim to complement the existing **movement networks**, should not act as an obstacle to natural **desire lines** across the site and help to provide a continuous walking and cycling environment.

- A balance must be struck between facilitating good **permeability** for legitimate users and creating opportunities for criminal behaviour. Where design solutions can be found for reducing the potential crime prevention problems of providing good connections out of the site, these should be pursued (e.g. coded entry restricted to residents/workers).
- Access across the site should be as direct as possible and should conform to the 5 'Cs' quality standards (see Appendix C).

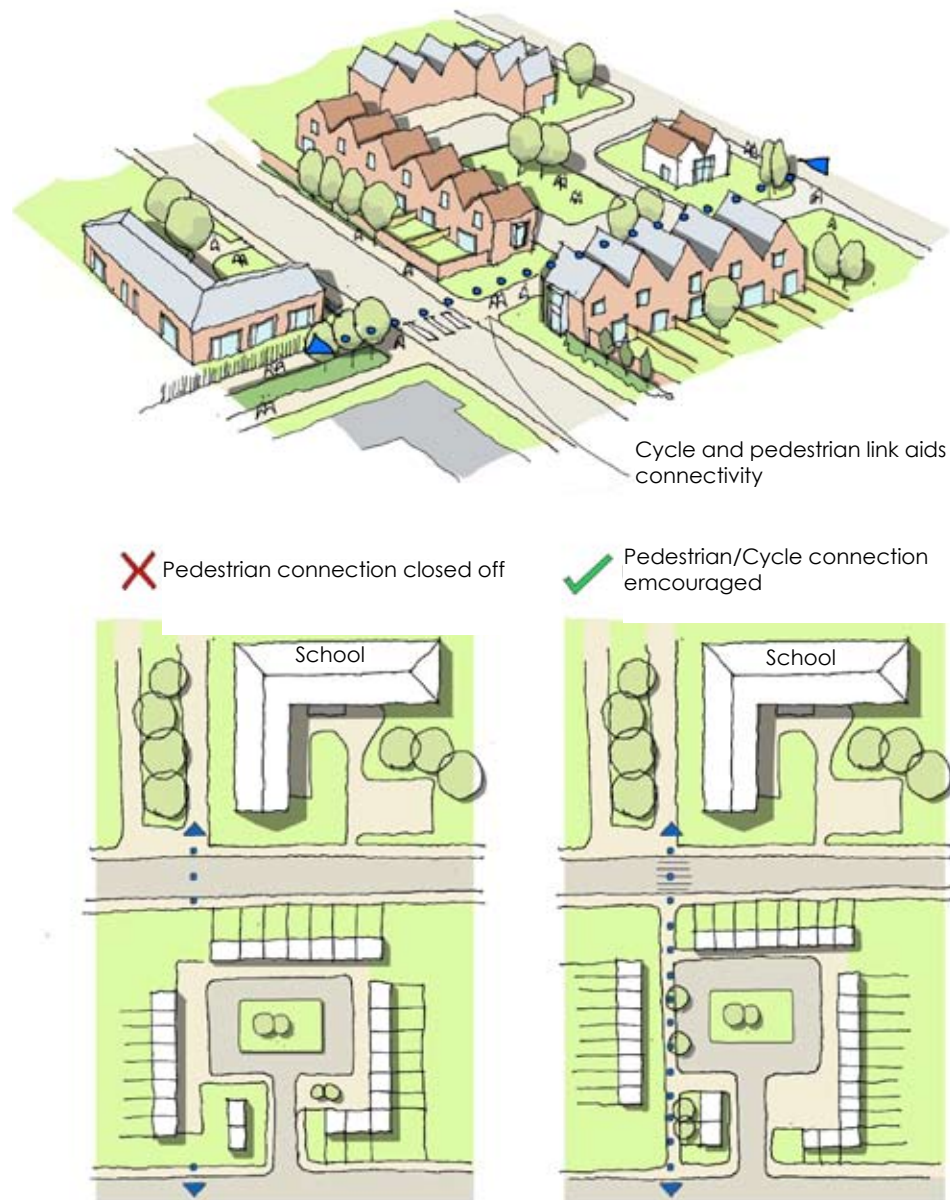


Fig 4: Alternative pedestrian and cycle accesses should be preserved or created where possible, to increase accessibility to important facilities.

A Design & Access Statement* should plot and describe:

All the existing roads, footpaths, cycle routes and bridleways that cross the site; about the site or are within 100m of the site.

All proposed changes to access across and around the development site - These changes should include the proposed removal or re-routing of routes, proposed new routes and proposed improvements to existing routes and connections to routes surrounding the site and explain why connections needed.

** or elsewhere as part of the planning application*

Key Design Principle 2 Integrating with Movement Networks:
New development must integrate well with cycle, pedestrian and vehicular **movement networks**

Site Context

Prior to work beginning on the design of a new development, a full assessment of the site should be undertaken to identify all potential **constraints** and **assets**.



Fig 5: An example of a constraints plan

Site Constraints

Site constraints can be physical, visual or social in nature. Many of the environmental constraints may need detailed survey reports, (e.g. noise, air and soil **contamination**, **biodiversity**). **Constraints** may lead to a reduction in the developable area of the site, special design solutions, specific construction techniques, or **mitigation** measures to overcome or minimise them.

Site constraints can include:

- i. **Neighbouring Development:** Typically these concern the prevention of:
 - Unacceptable impacts on privacy and amenity (of residential properties);

Overshadowing (of gardens, windows or **solar collection**);
'Overbearing' massing relationship of new building with existing.

- ii. **Topography:** May create extra privacy or overshadowing constraints
Major changes in level may make a part of a site undevelopable.
- iii. **Trees:** Existing trees will need to be protected during construction;

Trees will need to have their roots protected (which may often extend beyond the crown spread);

Trees need space in which to grow; Large trees may cast significant shade. This can make smaller private gardens or living rooms unacceptably dark which in turn will lead to significant pressure to reduce or remove the trees;

Some trees will have designated protected status because they are within a **conservation area** or when they are subject to a **tree preservation order**. The unauthorised damage of such trees may result in prosecution.

- iv. **Protected Habitats and Species:** Designated **nature conservation sites (Sites of Actual Conservation, Sites of Special Scientific Interest, Special Protection Areas, Ramsars, Sites of Interest for Nature Conservation)**;
Locally important sites (**local nature reserves**);

Species specific protection (e.g. badgers, bats, slow worms);
The unauthorised damage of such species or habitats may result in prosecution.

- v. **Continual Noise Sources:** It is the responsibility of the applicant to submit sufficient scheme design details incorporating **noise protection**

measures to enable the LPA to reach a decision on the acceptability of development in an area subject to external noise sources.

In residential schemes, applicants are advised to adopt housing layouts which have a public front facing the main noise source, allowing the buildings to reduce the impact of noise on the private rear space.

- vi. **Air Pollution** and Bad Odour Sources:

Mitigation may take the form of restricting different forms of development to certain parts of the site; preventing openable windows nearest the pollution source.

- vii. **Visual Impacts:** Large or unattractive buildings adjacent to the site;
Unightly neighbouring land use.

Mitigation may take the form of restricting different forms of development to certain parts of the site; **landscape screening**.

- viii. **High Flood Risk:** Risk from neighbouring **storm runoff**;
Groundwater flooding;
Designated EA flood risk zones 2 and 3 (See X Council Strategic Flood Risk Assessment);
Coastal storm flood risk and **coastal erosion**.

Mitigation may take the form of restricting different forms of development to certain parts of the site; certain flood adaption design measures; **storm water attenuation measures (sustainable drainage systems)**.

- ix. Land/Soil **Contamination** Risk:
To existing property;
From existing property.

Mitigation may take the form of restricting different forms of development to certain parts of the site; removing the **contaminated** material; capping the **contaminated** material.

x. **Conservation areas and Listed buildings.**

Conservation areas have a **character** and appearance which proposed development is required to maintain or enhance. It is likely the Council's Conservation Officer will need to be involved in discussions. Their input will be required for development affecting **listed** buildings or their **setting** and **listed building consent** will be required for most proposed works.

xi. Services and Utilities

These can include:
Electricity pylons
Telecoms masts
Telegraph poles and overhead telecom wires
Underground cables (electricity, telecom, cable TV)
Foul and surface water sewers

Gas and oil pipelines
Wind turbines.

Easement corridors with development restrictions may be several metres wide in some cases.

xii. **Health and Safety Executive Zones**

xiii. Archaeology
Areas and sites which are of archaeological significance have been identified by the County Council.

xiv. **Microclimate**
Dense shade
Wind exposure
Summer glare or overheating

xv. Water Courses
Springs
Culverts
Streams and rivers

A Design & Access Statement* should indicate on a plan:

All the **site constraints**.

** or elsewhere as part of the planning application*

Positive Site Features

The most successful developments utilise the positive attributes of the site in their design. This can provide greater distinctiveness, a historical connection with the area's past and an enhanced acceptance by local people. Typical **site assets** include:

- Existing buildings: These may have architectural and/or social value. A development which finds a new use and enables the refurbishment of existing attractive buildings provides the best **sustainable solution**.
 - Mature trees and hedgerows: Large trees and hedgerows provide a development with instant maturity and help to integrate new development with its immediate context. They are a positive **asset** as visual features, providers of habitat, agents of summer cooling, and act as natural cleaners of harmful **airborne particulates**.
 - Green space: Green space retained or created on site or directly adjacent should be exploited for its **visual amenity** and practical recreational value. Buildings should **front** onto it where possible, taking advantage of the views and the light it affords as well as providing **passive surveillance** over it. Larger developments
- should ensure that attractive direct routes connect the development's inhabitants to the green space.
- Attractive Views: These might be of buildings or **landscape**. New development should, where possible, make best use of these **assets** by **fronting** onto them.
 - Topography**: Changes in level often make a development more interesting and attractive. The design needs to make best use of this **asset**. This can be done by stepping buildings and structures (such as walls or railings) down rather than running parallel with the slope. An attractive rhythm can be created in the development's roof line as it adjusts to the **topography**. Where a **landmark building** is desirable it can be placed in an elevated position in relation to the surrounding buildings.
 - Facilities and services: Shops, public transport routes and other services either on site or directly adjacent, should be well-linked to the rest of the development and to the wider area.
 - Microclimate: This is often a function of **orientation** and might include both areas of cool summer shade and areas of **passive solar gain** in winter. Sun traps are also

worth exploiting when locating outdoor passive recreation (e.g. sitting) spaces.

- Water features: Rivers, lakes, ponds and the sea are usually positive visual elements which also add water and associated wildlife sound interest, reflective qualities and often a positive psychological benefit.

Fig 6: Illustration of **site assets** exploited for a new development.

A Design & Access Statement* should indicate on a plan:

All the **site assets**.

* or elsewhere as part of the planning application



Fig.7: An example of a distinctive new building where a strong existing character absent

Character

An essential ingredient in making an attractive and successful place is the retention and enhancement or the creation of **character**. In areas where there are already well-established and recognised **settlement pattern**, styles of architecture, **scale** and **landscape**, such as typically exist in a **conservation area** or in a '**special policy area**', new development should pay special attention to them (without slavishly trying to copy existing buildings).

- More stringent restrictions on the type and nature of development occur in **Conservation Areas** and are usually set out in **Conservation Area Appraisals** prepared by the Council.

- A Council may have **Special Policy Areas** that are set out in **Character Area Appraisals** for the different areas of the borough or district.
- Some locally specific guidance such as **town or village design statements** may be available and should be used to inform design in those areas
- In other areas, such as in retail parks or residential areas where there is very little existing character, the emphasis will be on development producing new high quality and distinctive places. The overuse of standard house types will not be acceptable.

Where a distinctive style has prevailed, this may have been identified in the relevant **character area appraisal**, or a **town or village design statement** produced by the Council. New development may be encouraged to continue elements of these local styles where integration with the surrounding **built form** is deemed important.

Fig.8: Building scale, materials and roof form of this new development respects the local character

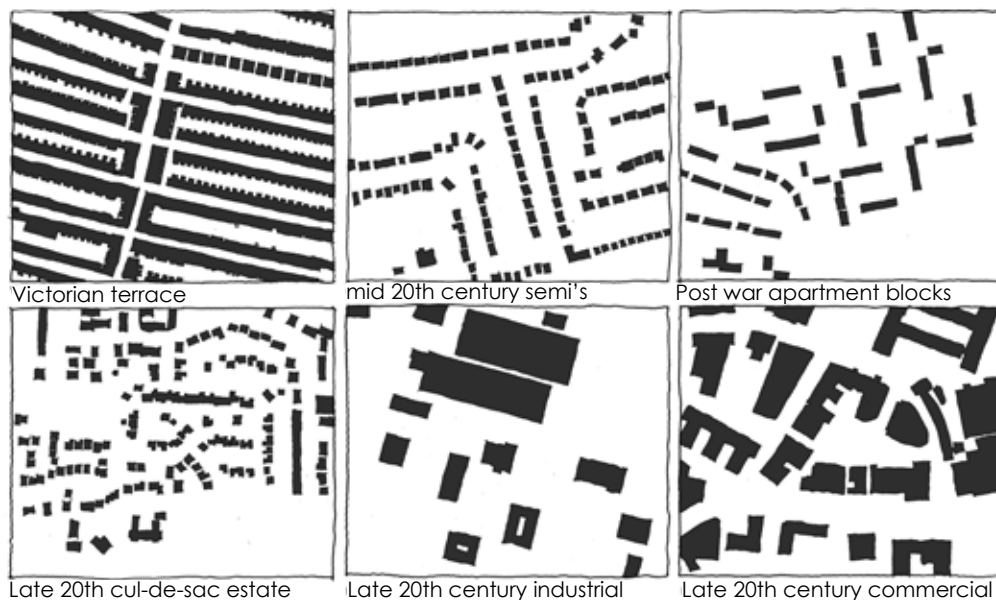
A Design & Access Statement* should:

Show an understanding of **local character** and how this is reflected in the design of new buildings (referring to the **character appraisal** if applicable) or:

Demonstrate how distinctive design will create an attractive style unique to the site.

** or elsewhere as part of the planning application*





Scale (grain and massing)

Grain:

The **grain** of an area is an expression of the pattern of development. This is best illustrated by 'figure ground' plans.

Fig.9: Figure ground plans showing different development patterns. For a new development to integrate well with its context it needs to take account of the grain that surrounds it, without necessarily trying to replicate it. It should integrate with existing movement networks and create attractive and continuous streetscapes, knitting in visually and functionally with existing development.

For a new development to integrate well with its **context** it needs to take account of the **grain** that surrounds it, without necessarily trying to replicate it. It should integrate with existing **movement networks** and create attractive and continuous **streetscapes**, knitting in visually and functionally with existing development.

Fig.10: Where the existing grain consists of an inefficient suburban series of cul-de-sacs, opportunities to improve it with new connections should be sought.

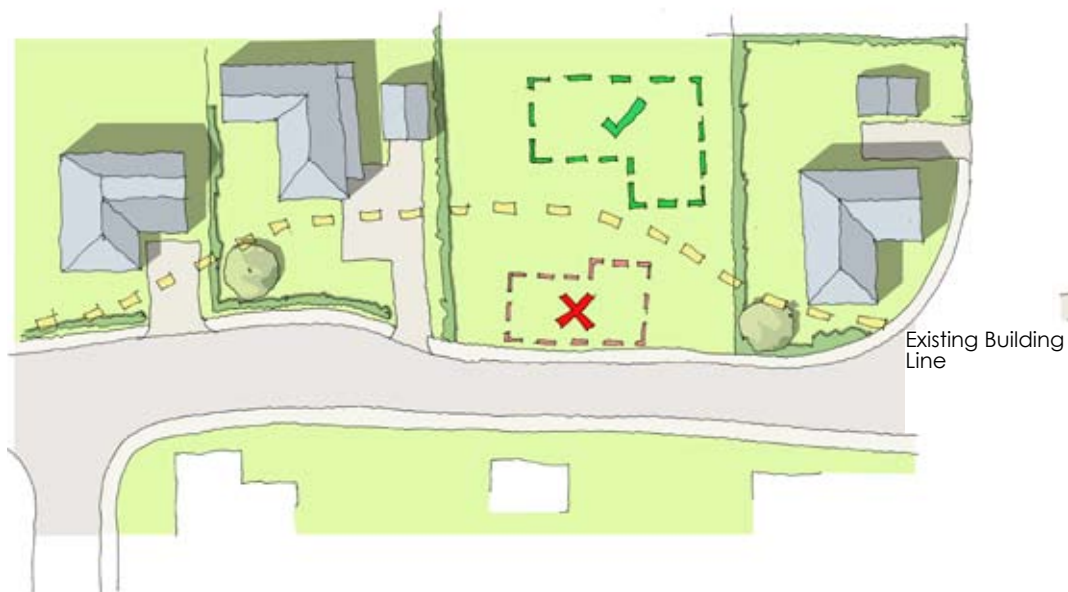
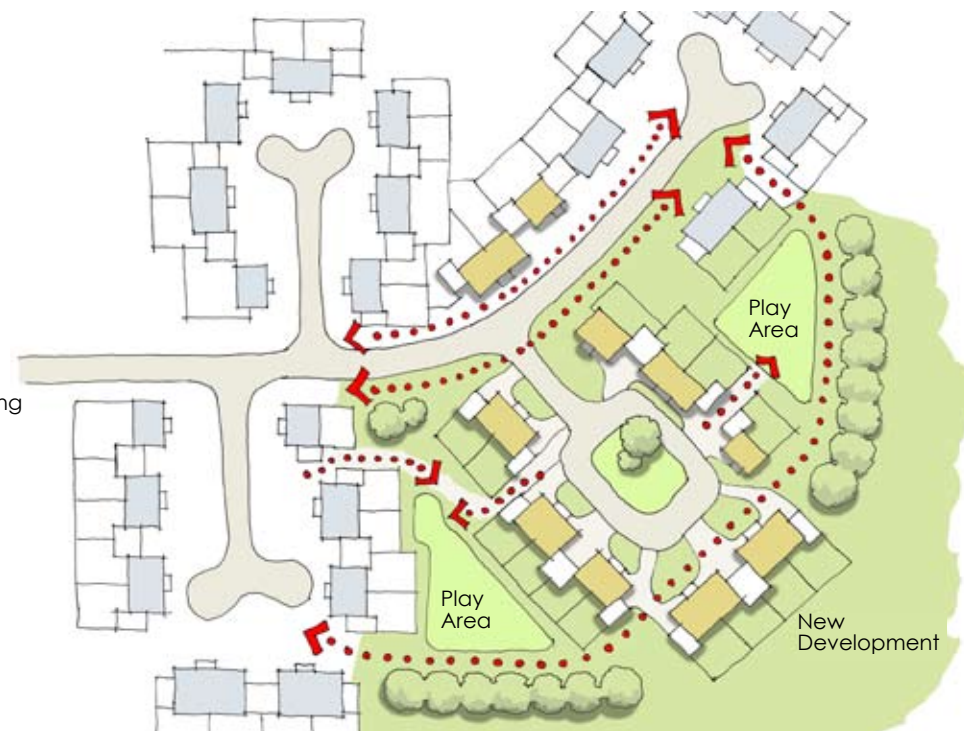


Fig.9a: Existing building lines should be the starting point for continuing the urban grain with the new development.



Massing and its impact on neighbours:

The **massing** of a building relates to its **scale**, size and height. (Ref to Planning Portal outline planning requirements for **massing**). The impact of a new building, on its neighbours will often be exacerbated by issues of overlooking and shadowing. **Orientation, topography, context** and the character of the surrounding area are all matters which must be thoroughly addressed and considered together with **scale** and **massing** to achieve a positive outcome,

The size of new buildings need to respect the **setting** in which they are built. If the area is covered by a **character area appraisal** it will detail the local **context** and include key elements such as predominant storey heights. A common criticism is that new buildings are perceived to be 'overbearing'.

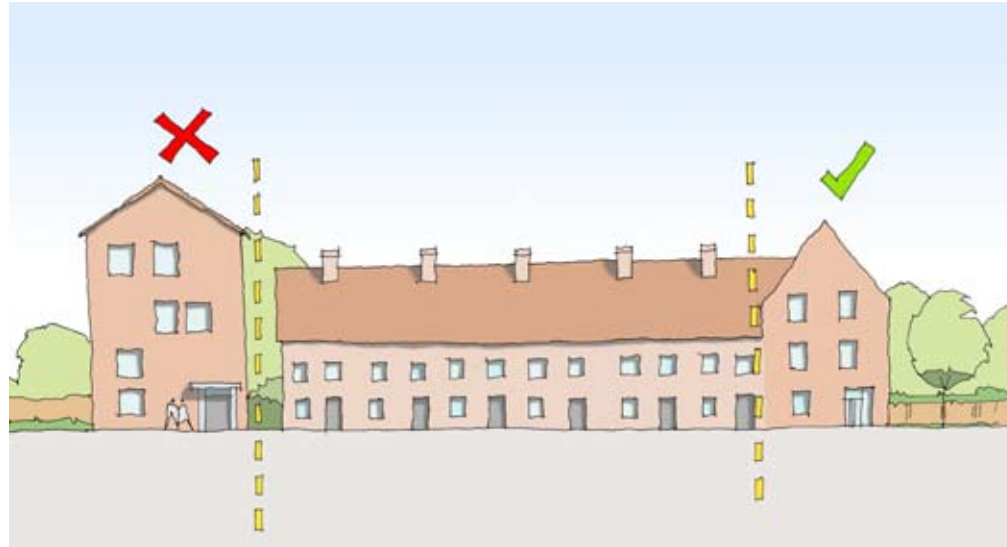


Fig.11: New development should generally not be more than 1 storey higher where it directly adjoins or is close to existing residential development.



Fig.12: Inappropriate building **mass** can render under-proportioned open space and gardens uncomfortable for users

A Design & Access Statement* should:

indicate either on a **figure ground** or a **map-based 1:2500 plan**:

- The proposed **grain** of the new development (with the site boundary shown in red);
- The existing **grain** of surrounding development.

and should indicate in plans, **elevations**, sections and in three dimensions:

- The proposed **massing** of the new development;
- The **massing** of surrounding development (buildings and mature trees);
- Existing and proposed changes in level.

* or elsewhere as part of the planning application

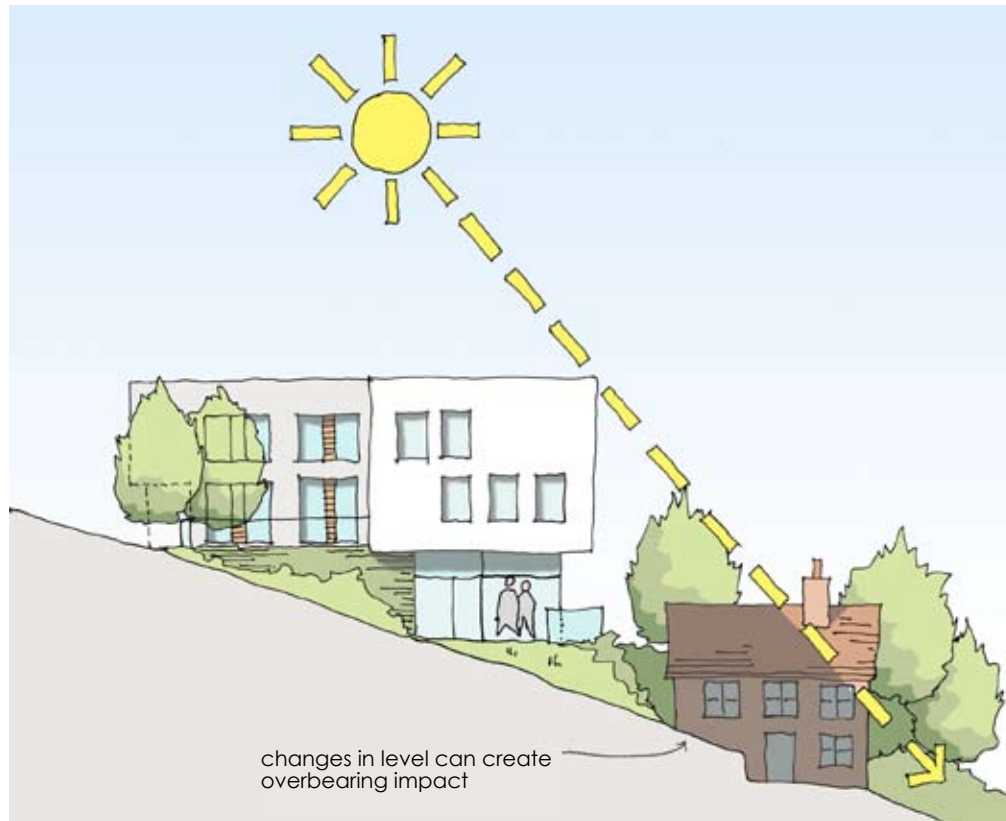


Fig.13: Significant changes in level can make massing relationships with existing development worse

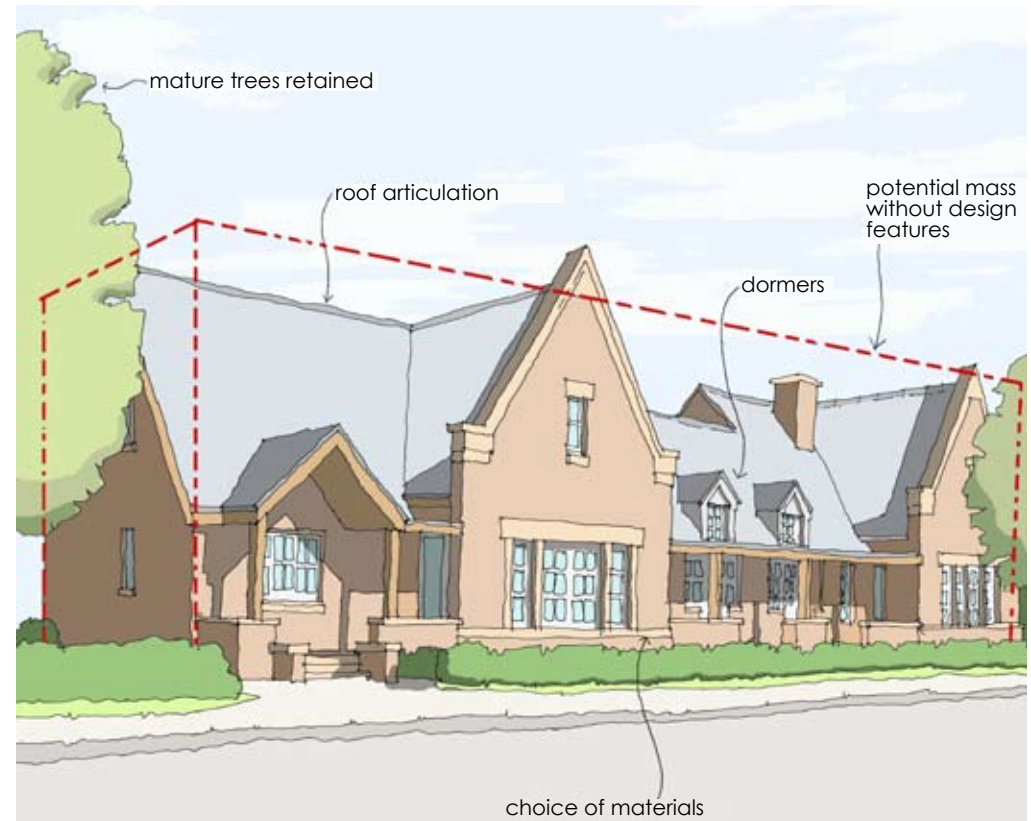


Fig.14: The perceived **mass** of a building can be reduced by a variety of design measures

Orientation

The **orientation** of buildings should be decided following the analysis of the **site assets** and **constraints**.

Passive Solar Gain:

One constant **asset** or **constraint** is the trajectory of the sun in the sky and its position relative to buildings. To make best use of free heat energy from the sun, buildings should maximise the entry of the low winter sun (**for passive solar heating**) by **orienting facades** with generous **fenestration** within 30 degrees of due south. This works best when the building has a high **thermal mass**. The **orientation** of outdoor spaces to maximise sun and shelter must also be considered.

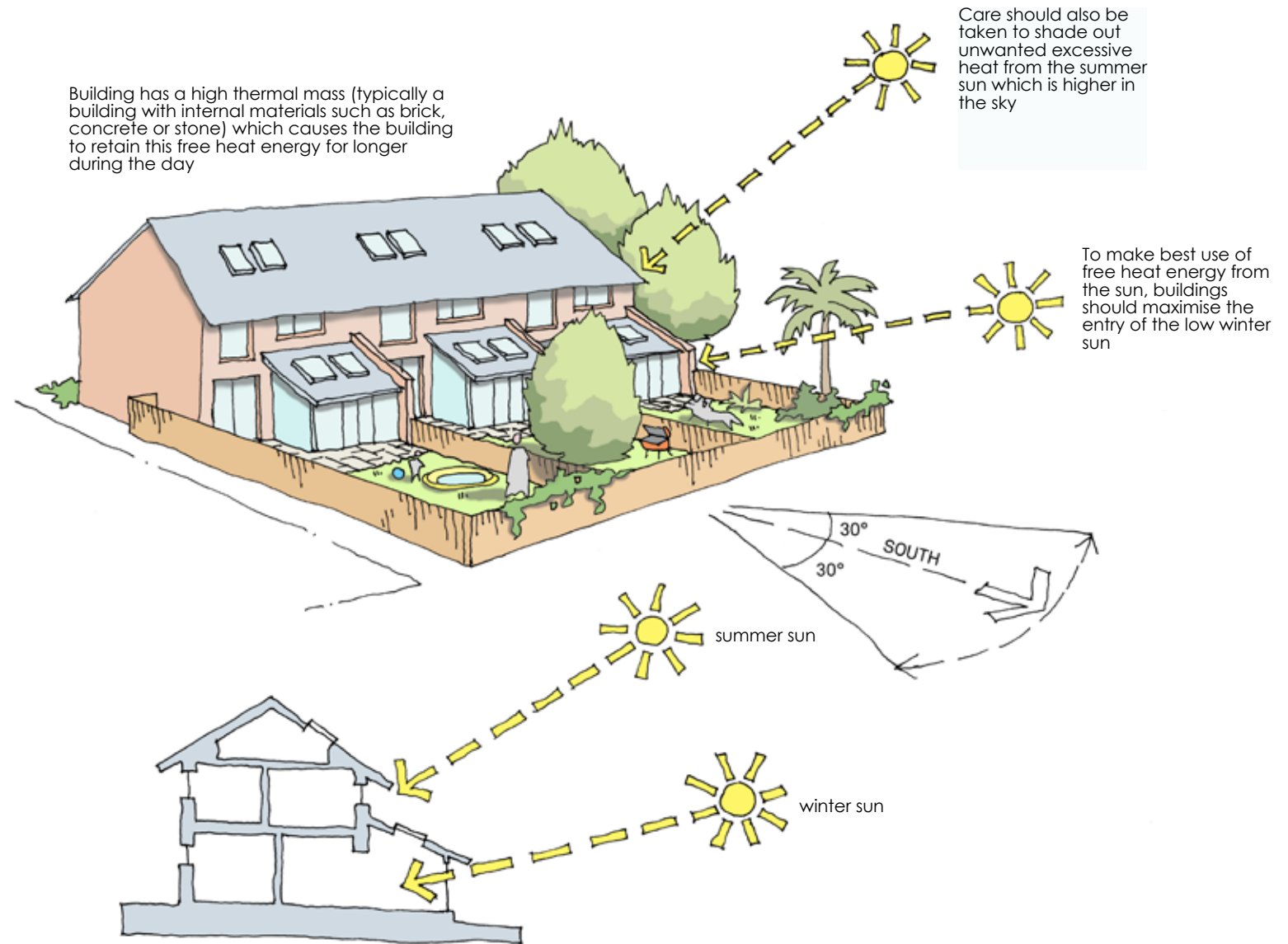
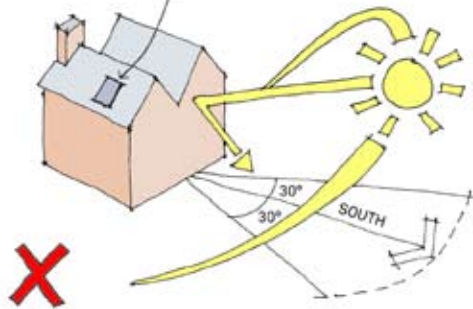


Fig.15: The perceived **mass** of a building can be reduced by a variety of design measures

Active Solar Gain:

Building **facades** and roofs will increasingly be used to collect solar energy for conversion into electricity or to heat water for the building's occupants. An aspect within 30 degrees of due south is ideal.

PV/solar water panel does not maximise movement of the sun throughout the day



PV/solar water panel facing 30 degrees of south maximise movement of the sun

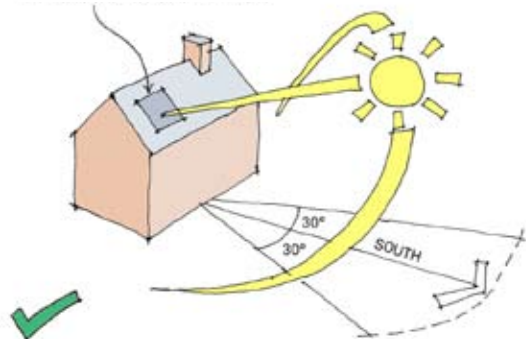
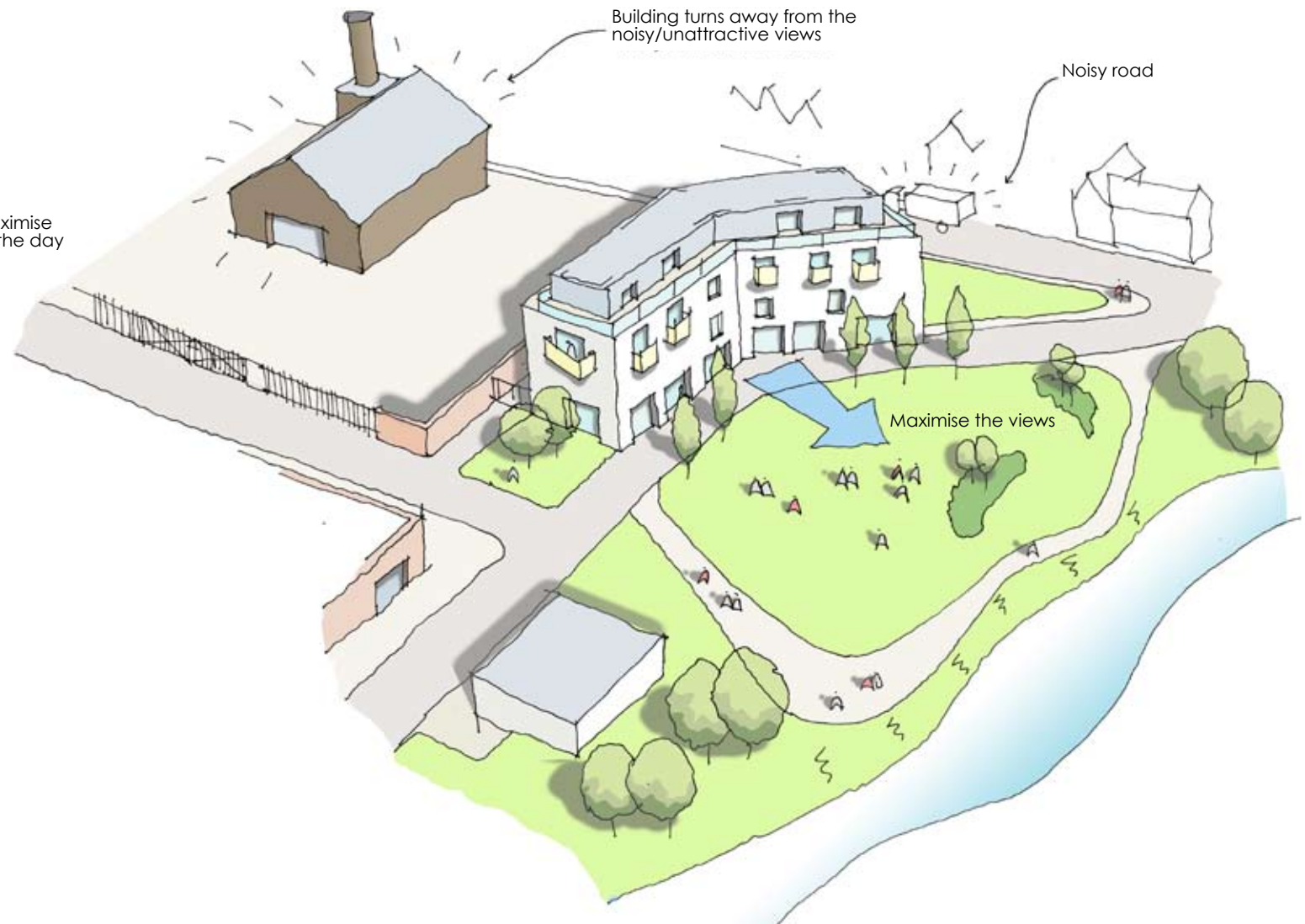


Fig.16: The potential for solar collection should influence roof orientation

**Views:**

Where development adjoins a park, lake or other attractive feature, buildings should, where possible **front**

onto it and maximise views with more floors, larger windows, bay windows, balconies and roof terraces.

Fig.17: Development should be designed to maximise positive and minimise negative views

Streets:

Buildings should **front** the street with **active rooms**, balconies and bay windows maximising liveliness and **natural surveillance**. The **orientation** of the **street pattern** will also be influenced by **pedestrian desire lines** and the need to connect the site with its immediate surroundings.

Character:

When developing within a strong **context**, such as **conservation areas**, a particular **orientation** may be required.

Ultimately the final **orientation** will be a compromise between the above considerations.

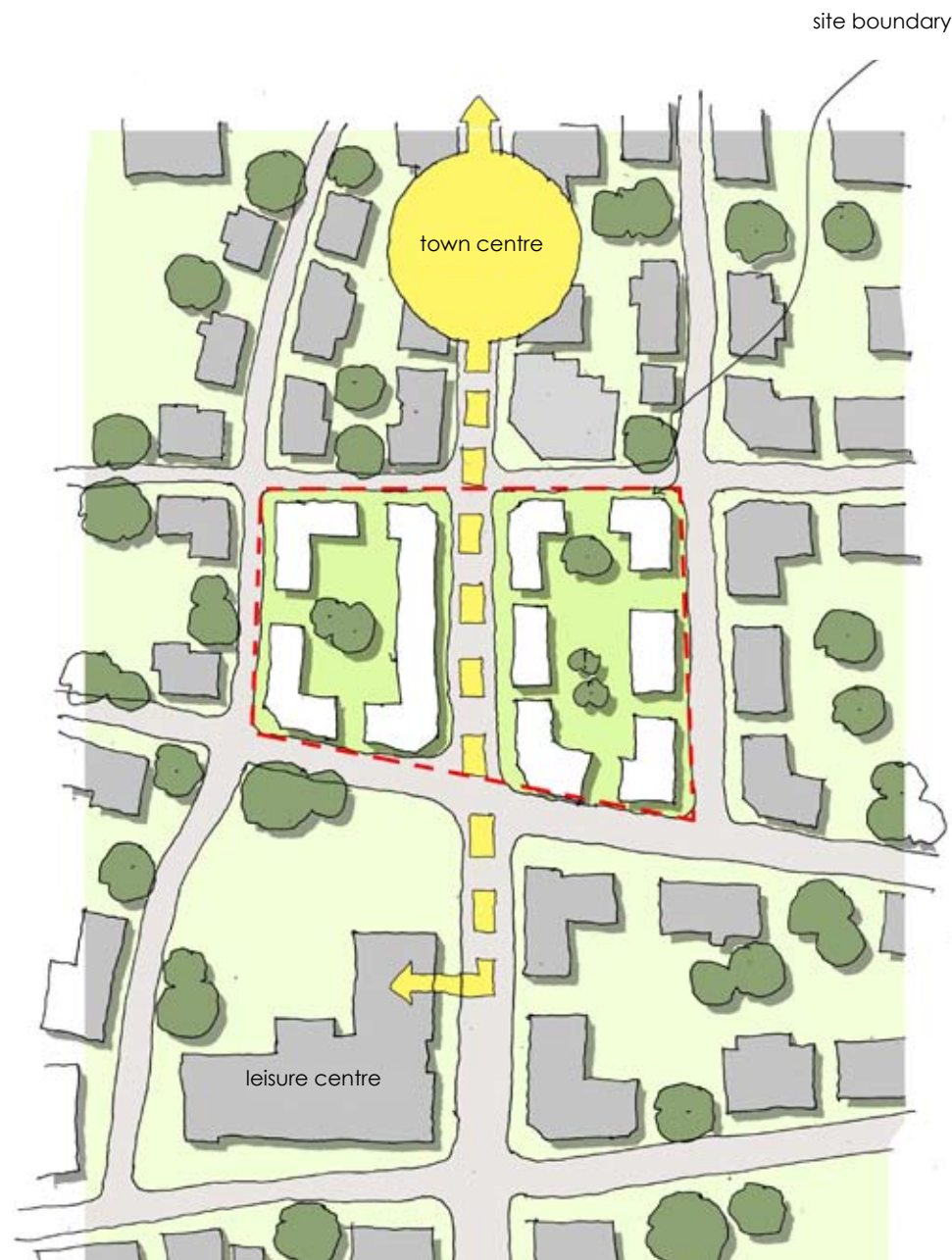


Fig.18: Development should be designed to maximise positive and minimise negative views

A Design & Access Statement* should indicate on a plan and in the text:

How **orientation** has influenced the design for **active** and **passive solar gain**, addressing streets and other public spaces, maximising views and responding to other **site assets** and **constraints**.

** or elsewhere as part of the planning application*

Key Design Principle 3 (Analysis of Context):

Developers should analyse the **character** of the site and its **context** to identify positive and negative elements which will influence and inform the overall design and **orientation** of buildings and spaces.

Layout

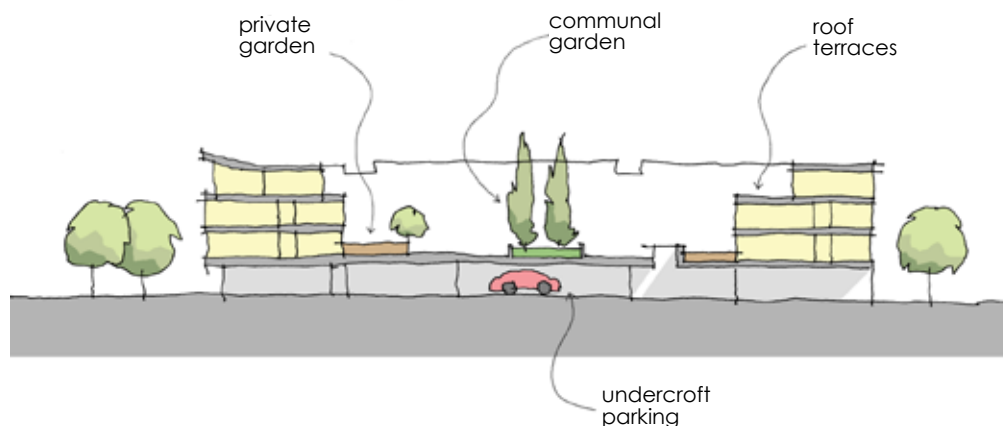
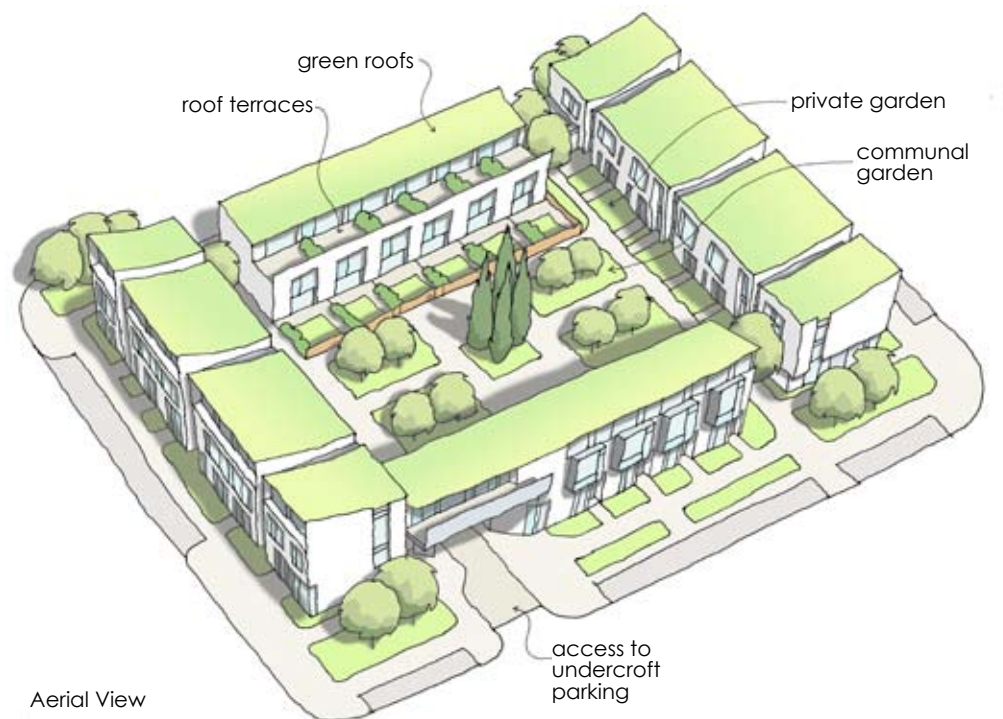
Residential Density

Density can be defined in various ways but for the purposes of this document residential density is taken to mean net density as defined by PPS3.

While development should make efficient use of land, the overriding objective should be to create an attractive development that functions well, irrespective of the numerical density. All development should take account of the existing **local character**.

Developments that propose relatively high density (over 50 dwellings per hectare (dph)) will need to demonstrate that the increased **spatial** requirements for associated car parking as well as for bin storage and cycle parking do not reduce the quantity to an unacceptable degree and degrade the quality of the remaining ground level **landscape** and open space. In addition, **surface water runoff** from roof space and ground level hard surfacing will become more intense, often with fewer opportunities for above ground **sustainable drainage systems**.

Fig.19: High density developments may need special design measures to achieve high quality environments



Section

A Design & Access Statement* should indicate on a plan and in the text:

The proposed **net residential density** and the variation in density across the site if appropriate.

** or elsewhere as part of the planning application*

Key Design Principle 4 (Residential Density):

Density should be appropriate to the **context** and level of **accessibility**; make efficient use of land and address the needs of residents

The need for car parking in all residential development to avoid dominating the external spaces is part of the assessment of BfL Qs 11 and 12. Whether buildings are **fit for purpose** is examined in BfL Q17 and internal space arrangements in Q18.

Permeability, Legibility and Street Hierarchy

Permeability:

Permeability describes how well connected a site is. New development needs to allow for good connections both within the site and with the surrounding area. This needs to be balanced with the need for security and crime prevention.

Vehicular **permeability** is important to prevent cul-de-sacs which are inherently inefficient, causing longer driving distances and the need for wasteful turning areas for cars and service vehicles. It should allow for fairly direct routes to avoid unnecessarily tortuous journeys.

Pedestrian and cycle **permeability** is even more important and routes may need to be more direct than the vehicular routes. Where possible, people should be given the opportunity to use direct and attractive routes on foot or by bicycle as an alternative to using the car for journeys below 2 km.

Permeability must take account of the need for quality routes and **natural surveillance** (see Appendix C).

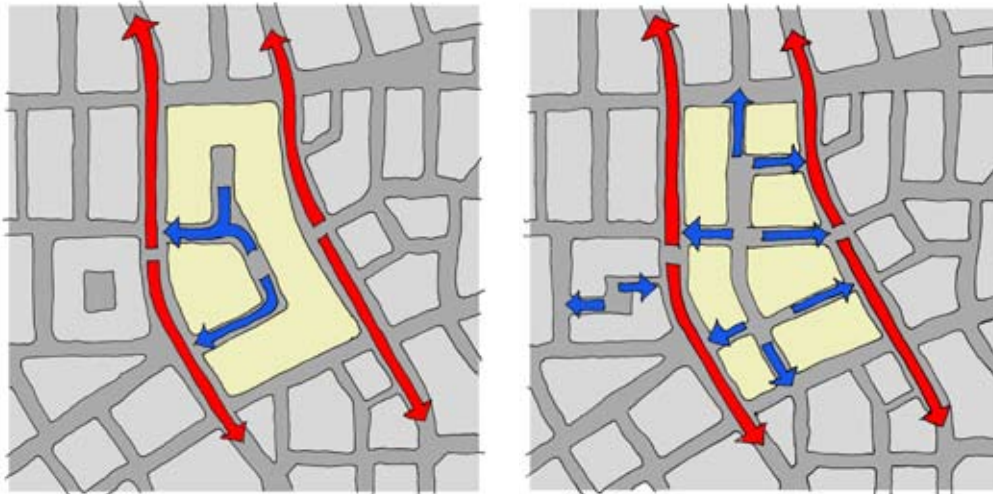


Fig.20: Poorly connected (a) and well connected (b) new street layouts

A Design & Access Statement* should indicate on a plan:

An analysis of how routes for vehicles, cycles and pedestrians will work through the site and as part of the wider **connection network** around the site and how priority for pedestrians and cycles has been designed

** or elsewhere as part of the planning application*

Legibility:

Legibility describes the ease with which visitors can orientate themselves and find their way around an area.

Fig.21: The elements of a legible development showing a route hierarchy



Legibility is promoted by:

- A clear hierarchy of routes;
- A strong and logical building layout (such as the **perimeter block**) and **massing**;
- The appropriate and consistent choice of materials for buildings and for designing the streets or routes;
- The use of views and focused **vistas** of local landmarks (buildings and landscape features) in and around the site.
- Only as a last resort should signage be employed to help provide directions to specific destinations.

Route Hierarchy:

In order to create a legible development, it is necessary to make it clear what routes are major ones and which are more secondary down to the most informal pedestrian routes. This needs to be clear from the dimensions of the street and the corresponding **scale** of buildings (and trees) which front it.

Primary Routes:

On the largest of sites, (over 500 dwellings), some form of 'main street' may typically form the spine of the development. This would not be designed as a low speed environment but should still accord with The Manual for Streets principles, www.communities.gov.uk/publications/planningandbuilding/manual-forstreets

Secondary Routes:

Many residential streets would fall into this category. They should all be designed to 'Manual for Streets' principles

Minor Routes:

The lowest in the hierarchy of streets, which serve only a very small number of vehicle movements typically.

Wholly pedestrian or cycle routes should distinguish themselves from vehicular routes by their reduced width (maximum 3m for a shared pedestrian/cycle route) and contrasting surface materials.

Smaller developments are likely to have streets that do not offer the opportunity to create a suitable hierarchy. These developments should provide the most appropriate level of routing at the highest possible standard.

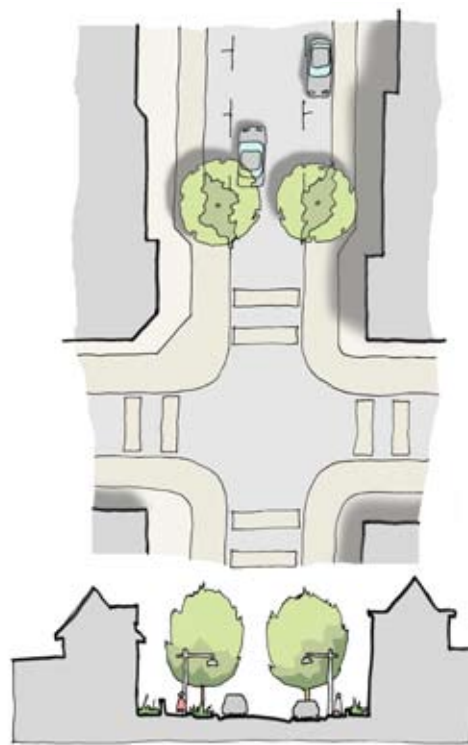


Fig.22: Primary Routes: wider streets, taller buildings, space for larger street trees, landmark buildings, segregated cycle routes and footways, vehicular flow important

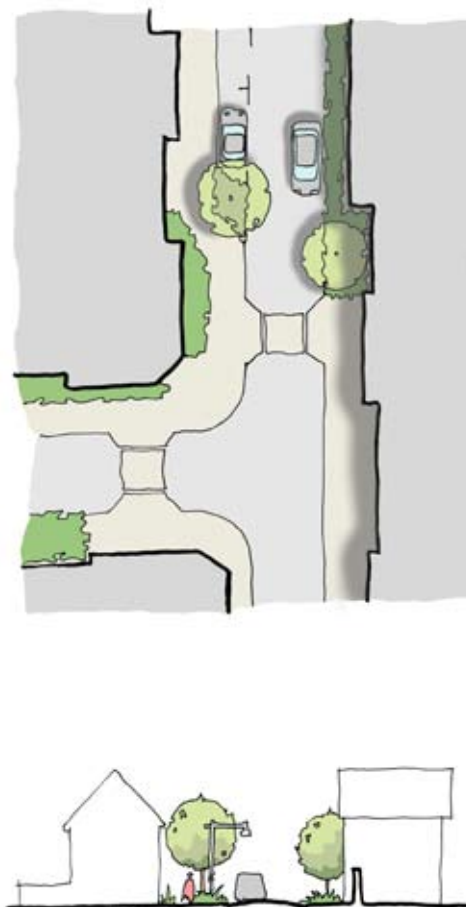


Fig.23: Secondary Routes: modest street widths, smaller buildings, mostly smaller street trees and designed space for larger street trees, local landmark buildings, cycle routes and footways may not be segregated, on street car parking

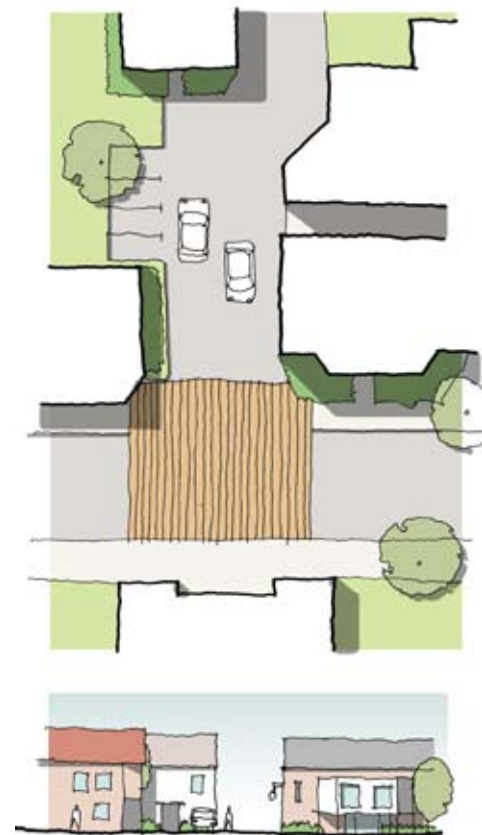


Fig.24: Minor Routes: street widths can be narrow, low rise buildings, niche opportunities for street trees non-tarmac shared surfaces appropriate, low speed environment and car parking, on homezone principles appropriate

Perimeter blocks:

The most successful layout for promoting good **permeability** and **legibility** is the **perimeter block**.



Fig.25: A typical suburban **perimeter block** layout (a) and a generic mixed used urban **perimeter block** layout (b)

Residential **perimeter blocks** make a clear distinction between private gardens behind the buildings (promoting good security) with public streets in front. The strong **building lines** provide good **passive surveillance** and activity on the street side.

Other examples of **perimeter blocks** are concentric blocks such as in Poundbury, Dorchester. In more rural locations an irregular block layout may provide a more appropriate 'organic' character.

A Design & Access Statement* should indicate on a plan or in 3 dimensions and in the text:

An analysis of how routes for vehicles, cycles and pedestrians will work through the site and as part of the wider **connection network** around the site and how priority for pedestrians and cycles has been designed;

An analysis of what new or existing landmarks, views and **vistas** should be incorporated into the development and other measures will be employed to promote **legibility** around the site;

The hierarchy of routes throughout larger developments

** or elsewhere as part of the planning application*

Key Design Principle 5 (Legibility):

Development should have its own identity and variety so that it is easy for people to find their way around.

External Space

Design of External Space

The design of the external space (predominantly landscape, public spaces and streetscape in the public realm, but also private and semi-private garden space) involving trees and other vegetation, sustainable drainage systems and hard materials, is an essential component of achieving a successful development.

Considering the treatment of the external space at a very late stage of the development's design must be avoided. At the concept stage the principles or **landscape** strategy should be integral to the design of the whole development. The Hampshire **Landscape Checklist** provides guidance as to the necessary information that should be provided to the LPA when considering a planning application (www.hiow.gov.uk/offnet/hlg/47340%20Oce%20Checklist.pdf). This information should be used to develop a good quality **landscape** design.

Opportunities to integrate **sustainable drainage systems** within the **landscape** design of the development should be taken and need to be identified at the concept stage. Adaptation to predicted climate

change should also influence the detailed design of the **landscape**.



Fig.26: A **landscape** strategy plan for a large new development (Fabrik Landscapes)

A Design & Access Statement* should indicate using text, plans and sections:

The **landscape** strategy for the design of external space in the development.

* or elsewhere as part of the planning application

Management of Landscape

The **landscape** scheme will need to include information on the maintenance of planting during the rest of the site construction if a larger development. This must be carried out in order for trees and plants to become established. Where plants die, re-planting will be required. The establishment period has the most intensive care requirement, with the need for watering and weeding. Once the **landscape** is established, general management will be needed. A management agreement must reflect these separate requirements.

There are different options for maintenance. It may be desirable to use a private management company or land and the maintenance of planting, (in the context of residential development) may be handed over to the local council. Alternatively, the development may be designed so that the majority of landscape is within private ownership.

Sustainable Drainage Systems (SuDs) that manage runoff from hard surfaces and collect, clean, store and release water slowly to the environment in as natural a way as possible should be treated as part of the **landscape**. For larger sites therefore, details of **SuDS** maintenance should be included in the management plan, specification and schedule of works which is produced as part

of the **landscape** maintenance strategy. This includes the long-term management, particularly for private housing developments.

The Council will expect **landscape** proposals to be signed off before the maintenance of landscaping is handed over. It may be necessary for a survey to be done before handover, with all **landscape** being brought up to standard and maintained at that standard for a period of time before handover.

Proper provision for access for maintenance of **landscape** areas must be designed in.

A Design and Access statement will need to:

demonstrate that the future management of the scheme during and post construction has been adequately addressed.

* or elsewhere as part of the planning application

Key Design Principle 6 (External Space):

The design and future management of all external space must be an integral part of the development and should be considered at the earliest stage.

Green Infrastructure

Green Infrastructure (GI) is a strategically planned and delivered network of high quality green spaces and other environmental features. It should be designed and managed as a multifunctional resource capable of delivering a wide range of environmental and quality of life benefits for local communities. **Green Infrastructure** includes parks, open spaces, playing fields, woodlands, allotments and can include private gardens.

The PUSH GI Strategy (www.push.gov.uk/push_gi_strategy_adopted_june_10-2.pdf), and any local GI Strategies, should be referred to when planning for future development, to ensure that existing and new green space is contributing to the multiple objectives of the Strategies.

Space Function (The avoidance of SLOAP)

'Space left over after planning' (SLOAP) are areas of land that do not have a clear function. They tend to be awkward shapes which may be on the periphery of the site. They are often **'landscaped'** with turf or shrub planting. They no clear sense of ownership and so they may become quickly neglected, are often poorly maintained and can be used for fly tipping. The result is not only an unsustainable waste of land but often

an eyesore. These areas may be on residential or non residential sites.

The flat dweller suffers from a potential invasion of privacy but does not have sufficient sense of ownership (nor the legal right to maintain it) to be able to use the area comfortably. Private **amenity space** should not be located in the **public realm**.

Every square metre of a site should have at least one clear function (for which it is fit for) and the owner responsible for its maintenance should be identified.

Fig.28: A plan showing the proposed functions and ownership of all land in a development

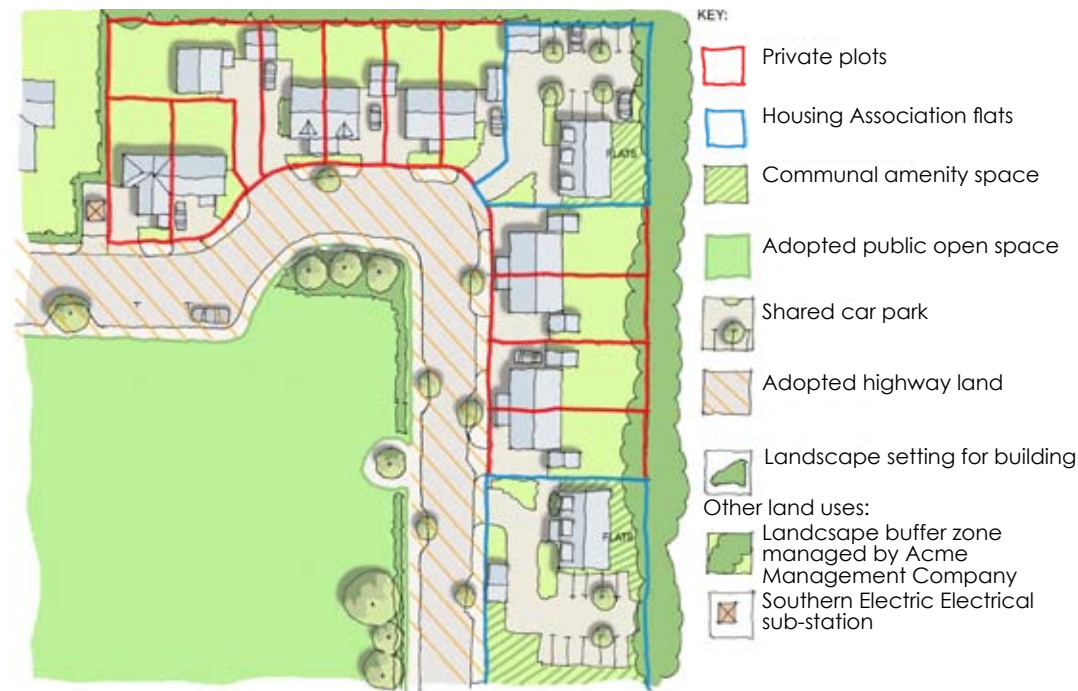


Fig.27: Two examples of **SLOAP** in residential development

A Design & Access Statement* should show on a layout plan:

How all land within a site is to be allocated clearly demarcated into areas of private, communal (management company or housing association), public highway and other public ownership.

* or elsewhere as part of the planning application



Boundary Structures

Rear garden **boundary** structures abutting onto public or semi-public spaces should consist of well detailed brick walls (unless they need to accommodate existing mature trees).

Front garden **boundaries** for larger developments should consist of robust railings or brick walls and

gates. For infill development, cues should be taken from local circumstances. In rural locations, timber picket fences and/or hedges may be suitable. Hedge plants without railings or any other inappropriate material are liable to suffer easy damage or decay. **Boundary** structures on a gradient should always step down to accommodate the slope rather than run parallel to it.

Fig.29: Appropriate **boundary** structures for rear private gardens



Fig.30: Appropriate **boundary** structures for front private gardens



Fig.31: Non-residential secure **boundaries** should enhance the public realm



For existing properties, the **boundary** treatment should be reflective of the general **character** of an area. Should the **boundary** treatments of the majority of properties in an area consist of low fencing or walling and dense planting, a 1.8m high brick wall will not be acceptable.

However, in general terms, it is advisable for **boundaries** that abut a public footway to be as robust as possible. Should planting be the preferred option, then prickly hedge species may offer a good choice for crime prevention reasons. This planting should be reinforced with temporary fencing (eg. wooden or post and wire) to support it until established.

A Design & Access Statement* should show on a layout plan and with elevations and sections:

*Where all the proposed different **boundary** structures will be located around the development and the design of each type.*

** or elsewhere as part of the planning application*

Key Design Principle 7 (Boundary Structures):
Boundary treatments must be appropriate to the **context**, well-detailed and robust.



Fig.32: Service margins and trees designed together in a new street (Architecture plb)

Underground Services

Manual for Streets (section 11.5) provides guidance for locating underground services in streets, www.dft.gov.uk/pgr/sustainable/manforstreets.

Detailed design advice can be found in NJUG Guidance www.njug.org.uk.

The main principle is that wherever possible, underground services should

be restricted to specific margins, often under the foot way, or in shared surfaces in a defined linear strip. This frees up more of the street for potential street tree planting elsewhere.

Key Design Principle 8 (Underground Services):

Where possible new services should be located underground and main **service corridors** plotted on plans at the earliest stage to avoid design conflicts with tree planting.

A Design & Access Statement* should show on a site layout plan The location, capacity and dimensions of all waste and recycling storage

- The width and location of all service margins and any other underground service routes
- The proposed street tree planting shown on the same plan

** or elsewhere as part of the planning application*

Play Areas

If it is the intention that the Council will adopt the play area and the developer wishes to construct the

play area themselves, the location, design, specification and construction will need to be agreed with the Council. It is often a Council's preference, however, to accept the

required contribution to the play area and make arrangements for the appropriate equipment following the occupation of the development and consultation with residents.

A Design & Access Statement* should shown a plan and in the text:

the location of all proposed play areas, their distance from the nearest residential buildings and their future management arrangements.

** or elsewhere as part of the planning application*



Fig.33: The main elements of a well-located play area

Public Open Space

Public open space provides a wide range of recreational and social functions as well as giving urban dwellers their nearest opportunity for interacting with the natural environment beyond their own gardens.

- The best new **public open spaces** will be designed by a **landscape** architect following the advice set out in the Hampshire **Landscape Checklist** (www.hiow.gov.uk/offnet/hlg/47340%20Oce%20Checklist.pdf)
- The design should reflect identified user groups based on local

requirements;

- The **public open space** should be in an easily **accessible** location with high quality priority links for pedestrians and cyclists.
- If it is proposed that the space is to be adopted by the Council, it will need to consist of a contiguous area of at least 0.2ha in a usable shape (i.e. not too narrow).
- The Council would encourage developers to provide **public open space** of a standard eligible for green flag awards.

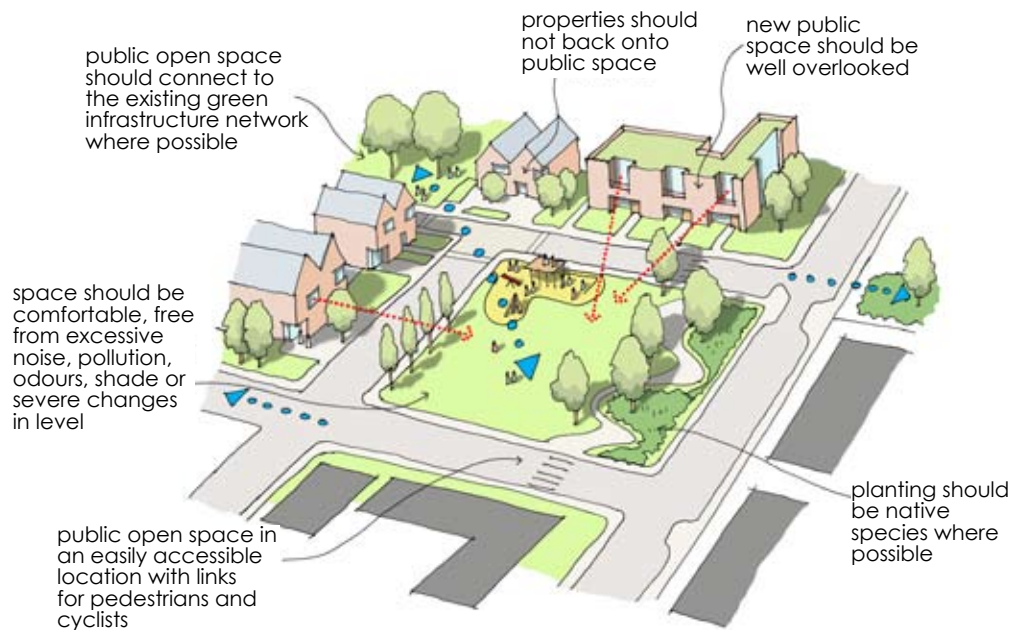


Fig 4: AlternaFig.34: Some important design requirements for good public open space

A Design & Access Statement* should show on a layout plan and with elevations and sections:

- The location and size in hectares of all proposed new areas of open space;
- The proposed users of each area of open space;
- The broad **landscape** design approach;
- How they connect with the pedestrian and **green infrastructure** networks;
- The extent of overlooking by active residential or non-residential rooms and balconies.
- Where and how it promotes biodiversity
- How and by whom the space will be managed

** or elsewhere as part of the planning application*

Key Design Principle 9 (Public Open Space):
All **public open space** should be safe; **accessible**; designed for a range of functions and users; and should balance good **natural surveillance** with residential **amenity**.

Public Art

Public art has the potential to enhance an area and community on both a physical and social level. The best public art is produced through a thorough assessment of the site **context** and comprehensive engagement of the community.

Public art must be constructed with robust materials which should anticipate some attempted vandalism in the most public locations and should design-out potential safety concerns for passers-by. The ease of maintenance should also be a design consideration. The illumination of public art should be considered to extend and transform its experience into the night. Developers are encouraged to contact the Council's public art officer at the earliest possible stage.

A Design & Access Statement* should:
provide a public art statement detailing the approach proposed to provide appropriate art in the public realm.

** or elsewhere as part of the planning application*

Key Development Principle 10 (Public Art):
Public art should contribute positively and reinforce a **sense of place** and identity.

The extent of good overlooking of public spaces is assessed (among other things) in BfL Q15. How well public space is designed and managed is assessed in BfL Q16.

Good public art will contribute to a site's distinctiveness and help with legibility. These issues are assessed in BfL Qs 8 and 9 respectively.

Extensive Green Roofs

- In contrast to **intensive green roofs**, **extensive green roofs** are not designed for general access but they are to be encouraged in most circumstances for the range of environmental benefits they can provide. These benefits will vary according to the detail of their design.

Extensive green roofs are normally lighter and therefore require less support in the roof below than intensive roofs. Extensive roof vegetation, such as wildflower meadow

grassland or sedum, require minimal maintenance (typically one meadow cut per year) and may not even need irrigation. For all these reasons, **extensive green roofs** are considerably cheaper to install and maintain than **intensive green roofs**.

A Design & Access Statement* should show on the layout plan and in the text:

The location of all proposed **extensive green roofs** and their future management arrangements.

** or elsewhere as part of the planning application*

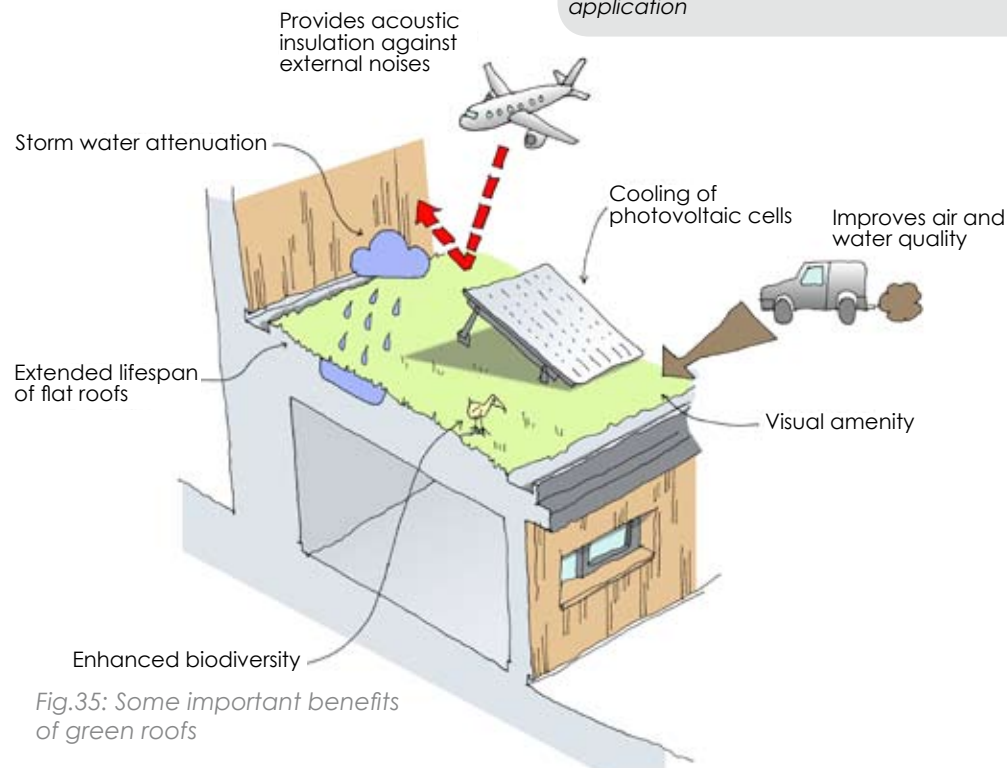


Fig.35: Some important benefits of green roofs

The provision of green roofs will contribute to the assessment of whether the development has features that reduce its environmental impact in BfL Q5.

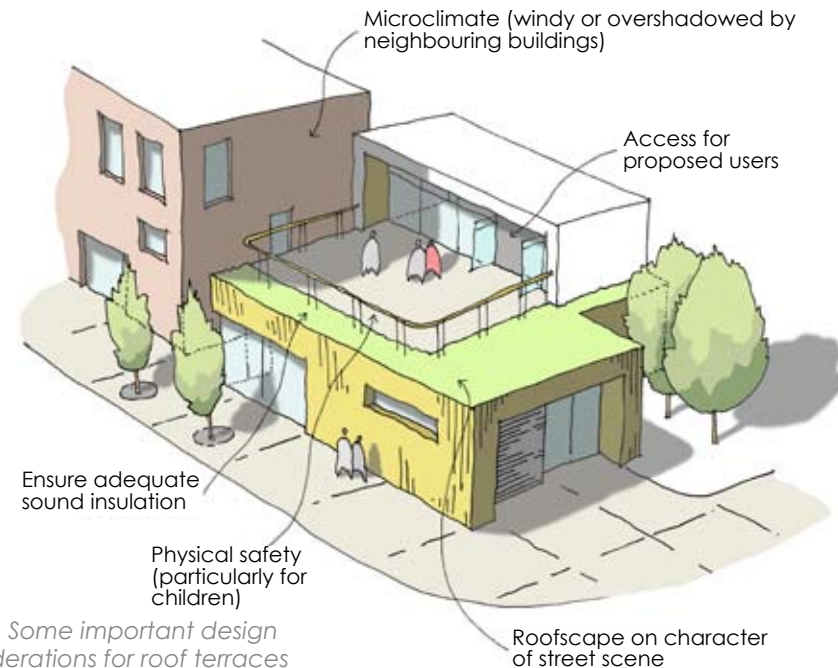


Fig.35: Some important design considerations for roof terraces

Roof Terraces and Intensive Green Roofs:

In the interests of making best use of urban land, maximising opportunities for private residential, non-residential and communal open space, roof terraces will be encouraged if there are no overriding design or privacy concerns. **Intensive green roofs** can serve a similar function to roof terraces.

The intensive green roof/terrace design must also properly consider the function of the roof terrace and provision for facilities such as electricity and water.

A Design & Access Statement* should * show on a layout plan, street scene elevations, in 3 dimensions and in building floor plans:

- the location of all proposed roof terraces;
- the general design approach;
- access arrangements.

** or elsewhere as part of the planning application*

Roof terraces will be assessed as part of BfL Qs 10 & 15 (providing good passive surveillance of routes and public spaces) and in BfL Q17 (architectural quality).

Residential Amenity

Private Residential Amenity

Minimum provision:

- An important component of good quality residential design is the provision of useable outside private space where residents can take advantage of fresh air and direct access to the natural environment. This is different from semi-private communal space (which is shared by residents).
- External private space can be provided by back or side gardens, roof terraces, or balconies. In the case of ground floor rented flats this can consist of a portion of the communal space screened off by suitable hedge planting (see communal gardens sub section below).
- The private outdoor space must be easily and directly physically accessible for all physical abilities but accessible to only those residents for which it is designed to be used.
- To qualify as usable private space it will need to allow for
 - at least 2 people to sit out in comfort
 - a certain measure of privacy (e.g. not directly overlooked by neighbouring outdoor sitting areas or living rooms).

- The size will need to increase where:
 - the local **context** requires it (i.e. in more suburban, 'leafy' areas)
 - excessive shading renders significant areas of the garden unusable due to neighbouring buildings or other structures, trees and **orientation**
 - mature trees are to be retained within the garden space.

Private residential **amenity space** may sometimes not be appropriate where **constraints** exist which, even when **mitigated** would result in unsafe or uncomfortable environments.

For other design reasons (e.g. privacy requirements or the need to take account of the local **context**) minimum back garden sizes may need to be significantly larger

Residential Front Gardens:

Front gardens are an important contributor to the **landscape** design of the street as well as providing opportunities for social interaction.

In some situations front gardens are not provided (where there is a local tradition of houses fronting directly onto the pavement or in a 'homezone' or mews street) and 'defensible space' must be provided through other means...

Fig.36: The benefits of front gardens

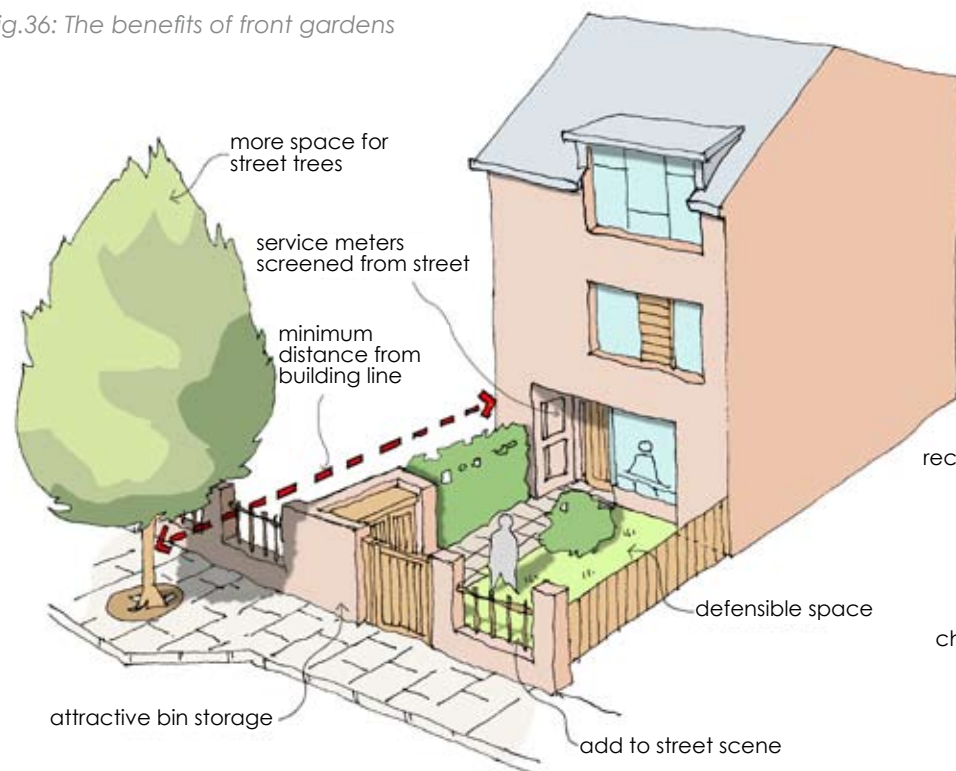
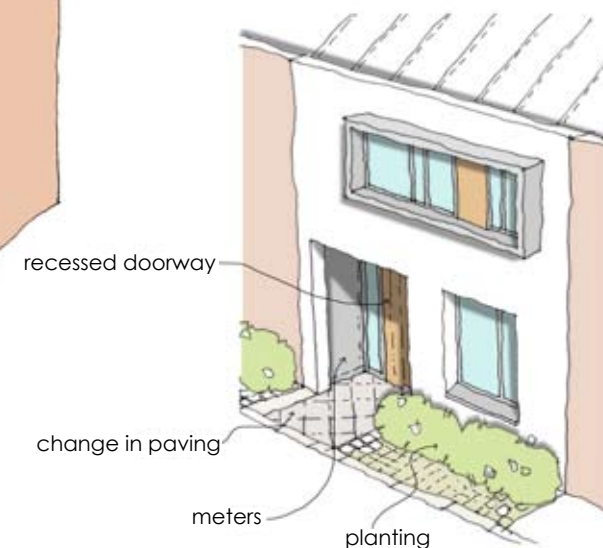


Fig.37: Defensible space where front garden not provided.



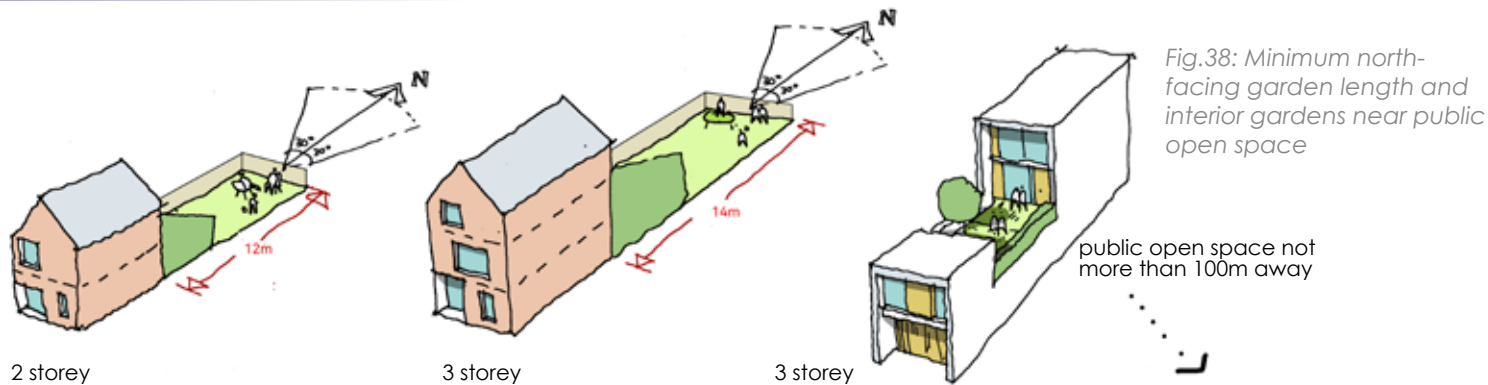


Fig.38: Minimum north-facing garden length and interior gardens near public open space

Residential Rear (or Side) Gardens:

- Back gardens facing within 30 degrees of north should be a minimum length when measured from the house of 12m for 2 storey house and 14m for 3 storey houses to compensate for excessive shade from the house.
- Where there is easy access to local public recreation space (within 100 m), useable gardens integrated within the fabric of individual houses may be an acceptable alternative to the provision of conventional private rear gardens.

Balconies:

The provision of balconies on new buildings can make a positive contribution, in providing outdoor sitting space, where views out will not adversely impact on the privacy of existing buildings and private space.

- New balconies would be inappropriate for most existing dwellings in the borough due to an unacceptable loss of privacy to adjoining properties.
- Where flats front onto open space, balconies will be encouraged.

Balconies should be integrated within the design of the building and therefore be considered early in the design process.

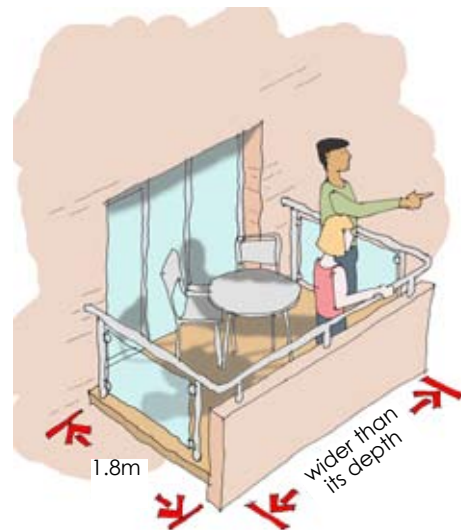


Fig.39: Appropriate balcony dimensions

A Design & Access Statement* should show on a layout plan, street scene elevations, or in 3 dimensional street scenes and in building floor plans:

- the area of private **amenity space** for each residential unit ensuring that at least minimum standards are met
- Where the proposed front gardens or other **defensible space** will be located and what the typical design approach will be for them.
- the location of all proposed roof terraces, interior patios and balconies
- the general design approach, including the provision of privacy;
- access arrangements.

* or elsewhere as part of the planning application

Residential Community Garden Space

For flats, the provision of individual private gardens may not be possible, so private communal space will be required to provide an appropriate area of semi-private space. This can also provide an attractive **setting** for the building within the local **context**.

- The amount of communal space provided with flats should be determined by the local **context**.

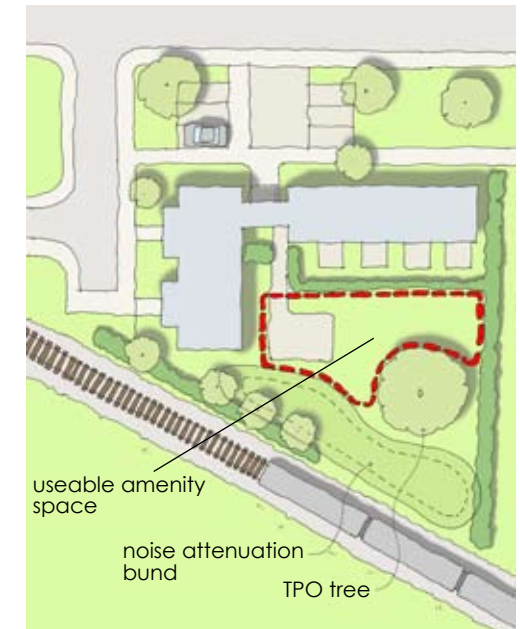


Fig.40: Useable **amenity space** excludes narrow strips of land, areas subject to excessive shade and **noise attenuation bunds**

- Communal open space should be allocated in proportion to the building, to make this space comfortable and not over-dominated by the **mass** of the building (see fig. 12)
- Communal space for flats should be provided with **enclosure** and some privacy, while including some overlooking by residents, and should have robust boundary design.
- The **amenity space** provided should be suitable for normal domestic activities, including sitting out and drying clothes and not merely act as a grassed **setting** for the building.

Public/Private Distinction

Private space for houses should be located at the rear, where possible, and ideally backing on to similar private garden space with no public access. This arrangement is best for property security and allows for relatively tranquil and sheltered spaces.

A Design & Access Statement* should show on a layout plan and in the text:

- The location of all proposed new areas of communal garden space;
- The means of access to this space for the intended users;
- The broad **landscape** design approach including any privacy protection for ground floor residents;
- future management arrangements.

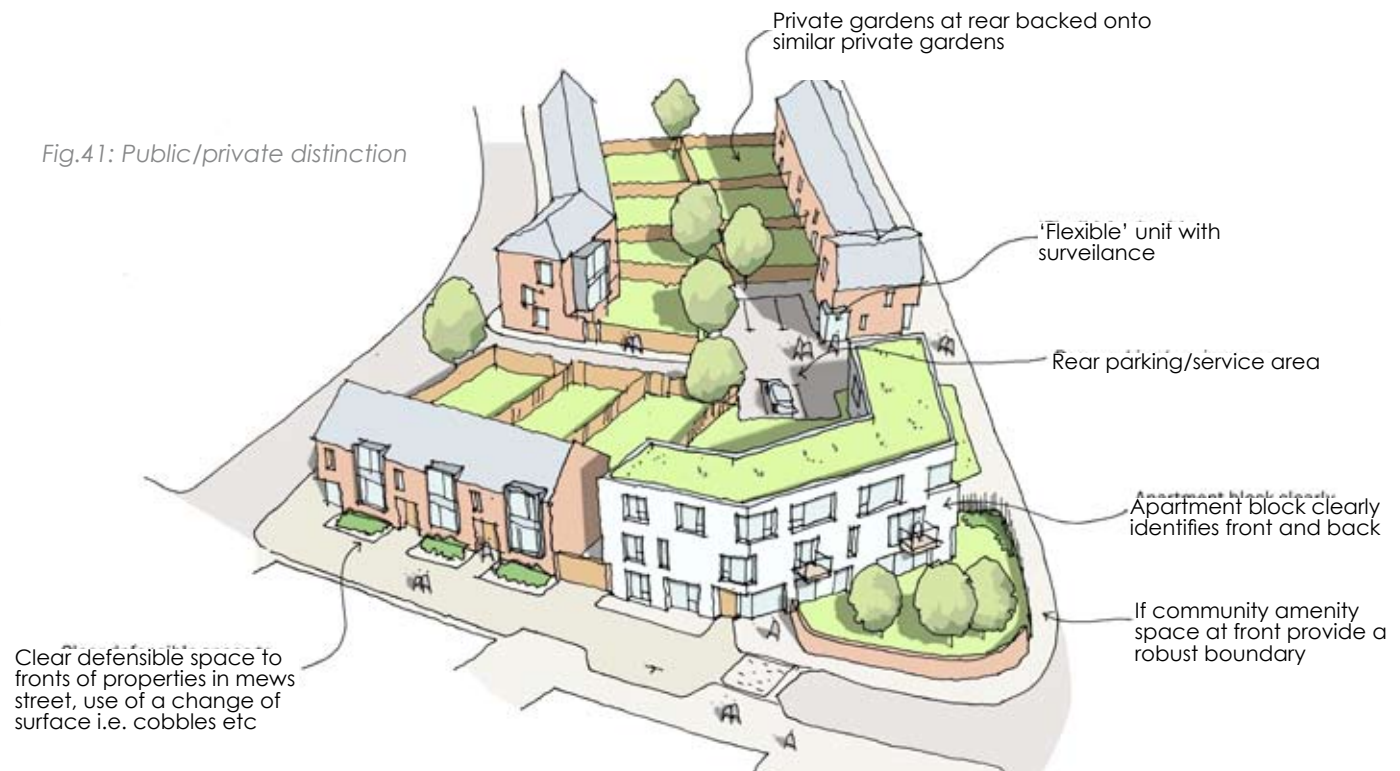
** or elsewhere as part of the planning application*

A Design & Access Statement* should indicate on a plan:

A **development concept** showing in broad terms where the private areas and public areas of the development will be located through the site in the **context** of surrounding existing development.

** or elsewhere as part of the planning application*

Fig.41: Public/private distinction



Residential Privacy

Front Privacy:

The 'public' front of residential properties should achieve a balance between **natural surveillance** of the street from inside the property and reasonable privacy from passers by.

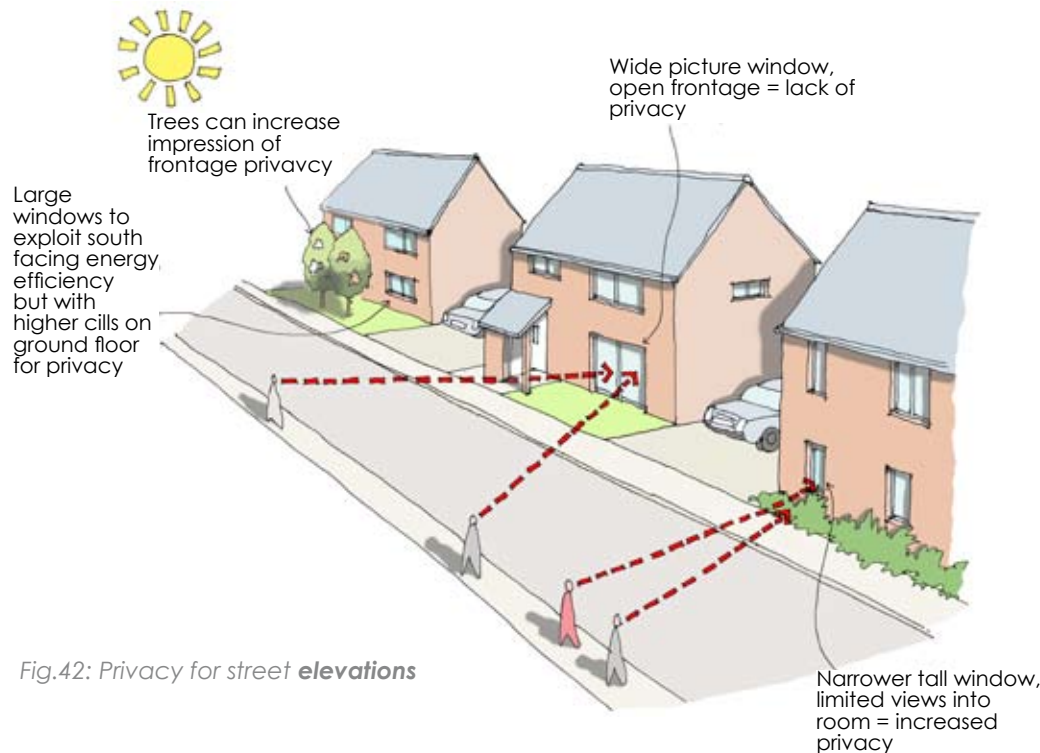


Fig.42: Privacy for street **elevations**

- Developers of ground floor flats are encouraged to provide private outdoor sitting space wherever possible. Where direct access to communal space is provided from ground floor flats, some **defensible space** should

be provided which may include planting, to safeguard the privacy of residents from other users of the communal space.

Rear Privacy:

On the non-public side, (normally the rear of the building), a high standard

of privacy is required for the windows of living rooms and outdoor private garden space (particularly near the house). Some overlooking of gardens from the upper storeys of adjoining dwellings will be unavoidable in most urban and suburban housing layouts

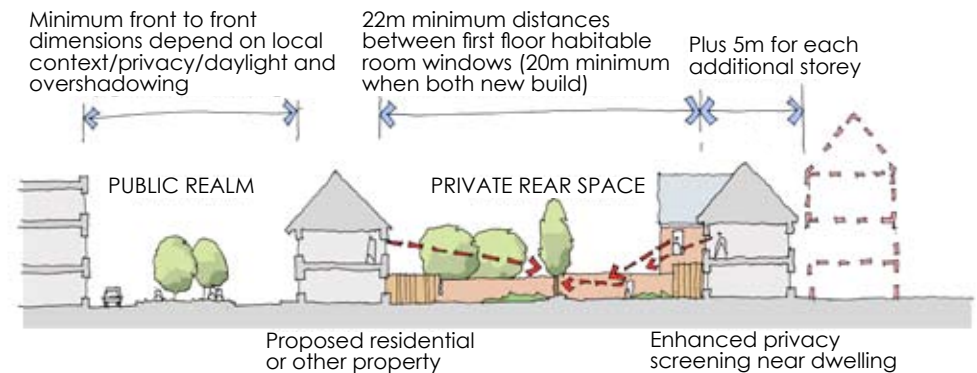


Fig.43: *Rear residential privacy*

Rear privacy can best be assured by arranging garden boundaries back to back, and not adjoining a public space.

Where private gardens must adjoin a public space they should be enclosed with brick walls of an appropriate height (rather than timber fences).

- Proposals for housing significantly higher than existing dwellings are unlikely to be approved where **habitable rooms** directly overlook the back of existing properties.
- Apartments looking onto other apartments, separated exclusively by public or communal space, should be a minimum distance apart between windows of habitable rooms to ensure satisfactory standards of privacy and day light considerations and to prevent unacceptable levels of overshadowing.
- Beyond a distance of about 35m,

reasonable privacy is achieved by remoteness.

- For conventional houses with private rear gardens, the front of one house should not face the rear windows of another, for reasons of privacy and informal surveillance. Exceptions to this rule will require a combination of increased separation distance (above the accepted back to back minimum) and privacy screening.
- These principles should also be applied to rear extensions, where consideration should be given to the potential impact of side windows above ground floor level on adjoining properties.
- Overlooking can also be a particular problem on sloping sites. Changes in **orientation**, the arrangement of rooms and the presence of established vegetation may be used to help mitigate rear overlooking problems.

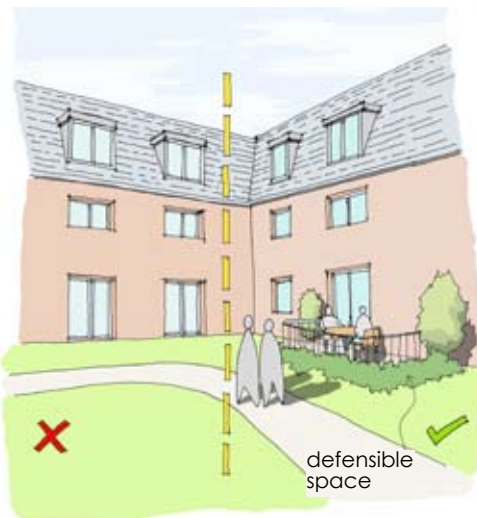


Fig.44: **Defensible space** is required for ground floor flats adjacent to communal areas

A Design & Access Statement* should demonstrate on a layout plan or in 3D:

That the design of the development has considered and protected the residential privacy of new and existing properties

* or elsewhere as part of the planning application

Daylight and Sunlight

Daylighting:

- The relative heights and separation of buildings should be adjusted to ensure that the windows of neighbouring properties enjoy reasonable day lighting.
- Where this is likely to be an issue, the applicant should provide drawings to demonstrate that anticipated problems can be overcome.
- It is recommended that new dwellings should meet the daylighting standards set out in BS8206 part II (which also accords with the Code for Sustainable Homes Standard).
- For houses and flats, the impact of adjoining structures on the level of daylight available is particularly important in living rooms, dining rooms and kitchens
- Daylighting in bedrooms may also be considered, but is generally considered less important except where this is the main private accommodation such as in residential homes.
- Detailed proposals should also take account of local circumstances like level difference between properties and orientation.

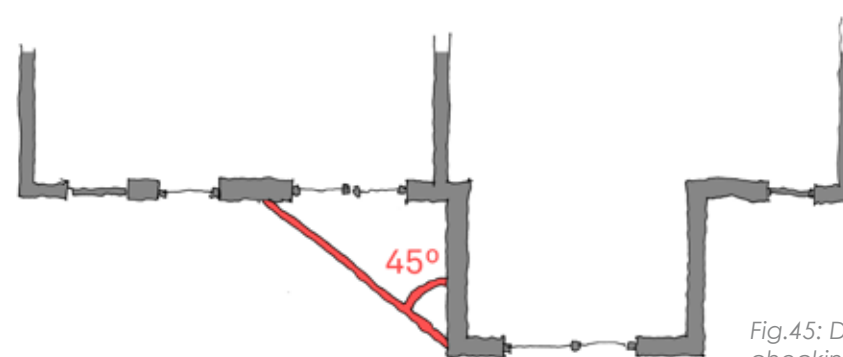
Guidance and tables are provided in the BRE report *Site Layout Planning for Daylight and Sunlight – a Guide to Good Practice* published in 2002. This guidance should be used if there is doubt about the acceptability of proposals with regard to daylighting and sunlight after the tests described have been carried out.

Day light checking for extensions:

- On the window wall elevation an angle is drawn diagonally down at 45 degrees from the near top corner of the proposed extension.
- An angle of 45 degrees is then drawn back from the end of the extension toward the window wall.
- If the centre of the main window



Elevation



Plan

Fig.45: Daylight checking for rear extensions

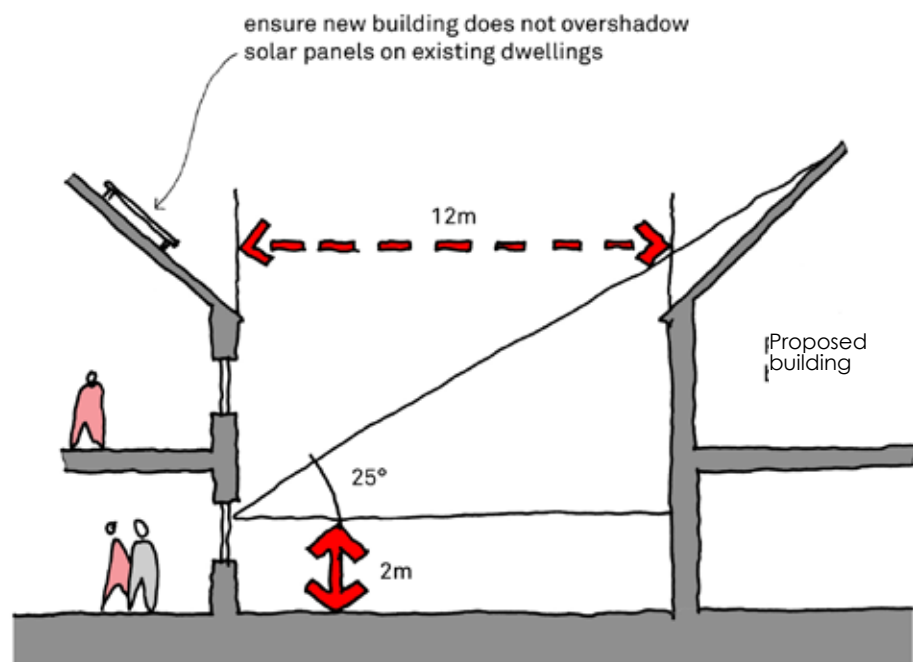
of the adjoining property lies on the extension of both these lines, then the extension will probably cause a noticeable reduction in skylight received by the window.

Daylight checking on a proposed or existing building:

- Reference points are drawn 2m above ground level (taking into account any slope corresponding

to the top part of ground floor windows);

- A **section** in a plane is drawn perpendicular to the face of the building;
- If none of the obstructing building subtends an angle to the horizontal > 25 degrees, then there will be potential for good daylighting in the building.



DAYLIGHTING REFERENCE TO LINE DRAWN PERPENDICULAR TO BUILDING FACE 2M ABOVE GROUND LEVEL

Fig.46: Daylight checking for new buildings adjacent to existing homes

- If an obstructing building exceeds this relative height, then further analysis can be carried out to quantify the amount of skylight falling on a vertical window known as the 'vertical sky component'. This is described in detail in the BRE report referred to above.

Sunlighting:

The extensive obstruction of sunlight to an existing property or its garden by the construction of a new building or extension is likely to be resented by existing occupiers, and could become an issue in the case of an existing window wall where:

- Designs for new buildings or extensions must take account of the effect of shading on existing solar panels.
- Further information and tables for calculating sunlight availability at different times of the year are available in the BRE guide.

Key Design Principle 11 (Residential Amenity):

New development should be designed to respect the residential **amenity** of existing and new occupiers and all dwellings should have adequate private **amenity** space.

Access, Parking and Services

Principles of access, parking and the arrangement of services in the street are addressed in detail in the Department of Transport 'Manual for Streets' (2007) www.dft.gov.uk/pgr/sustainable/manforstreets/ and Hampshire County Councils Companion Document to Manual for Streets www3.hants.gov.uk/manual_for_streets_companion_document-2.pdf

Access into the Site

(see also 'integrating with existing movement networks' in Site Accessibility)

- In residential developments, where possible, vehicular, pedestrian and cycle access into the site should not be from a single point, but should allow the possibility of entering and exiting the site from several different locations. This is to prevent the inefficiencies experienced with typical cul-de-sac developments and excessive vehicle movements experienced by residents living on a single route in and out.
- The design of the access will depend very much on the nature and size of the development and the size and traffic speed of the

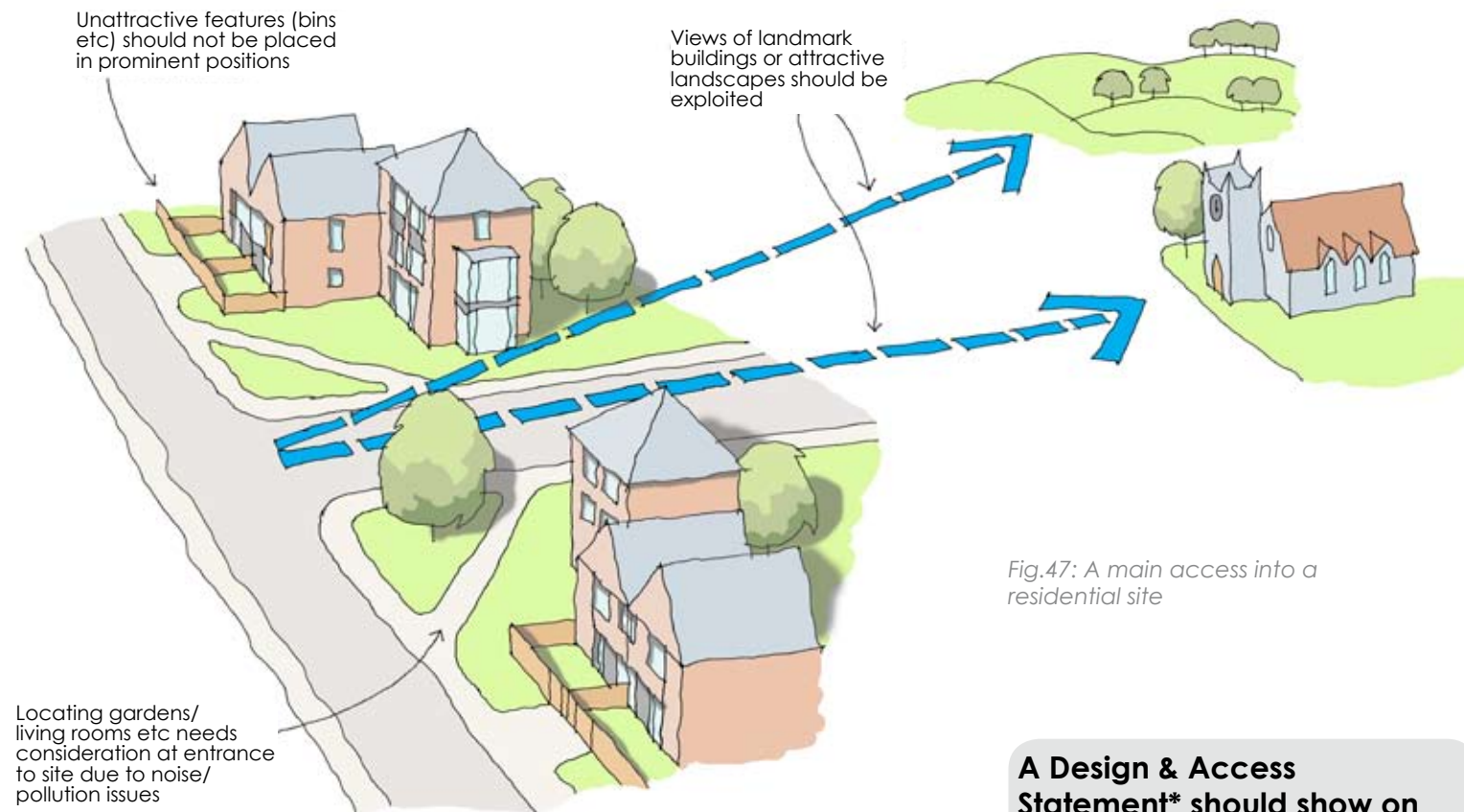


Fig.47: A main access into a residential site

road or route that it links into.

With a main access to the site:

- There is the opportunity for an architectural statement/**landmark**/public art installation depending on **context**.
- Attractive views should be maximised and unattractive elements minimised.

- Care should be taken to minimise vehicular noise/disruption to bedrooms/living rooms of adjacent properties.
- The layout must allow for safe and appropriate construction vehicle access during the construction period minimising the impact on neighbouring properties and the general public.

A Design & Access Statement* should show on a site context plan and site layout plan:

The location of all vehicular, pedestrian and cycle accesses into the site (with one way restrictions if applicable);

The design strategy for access into the site.

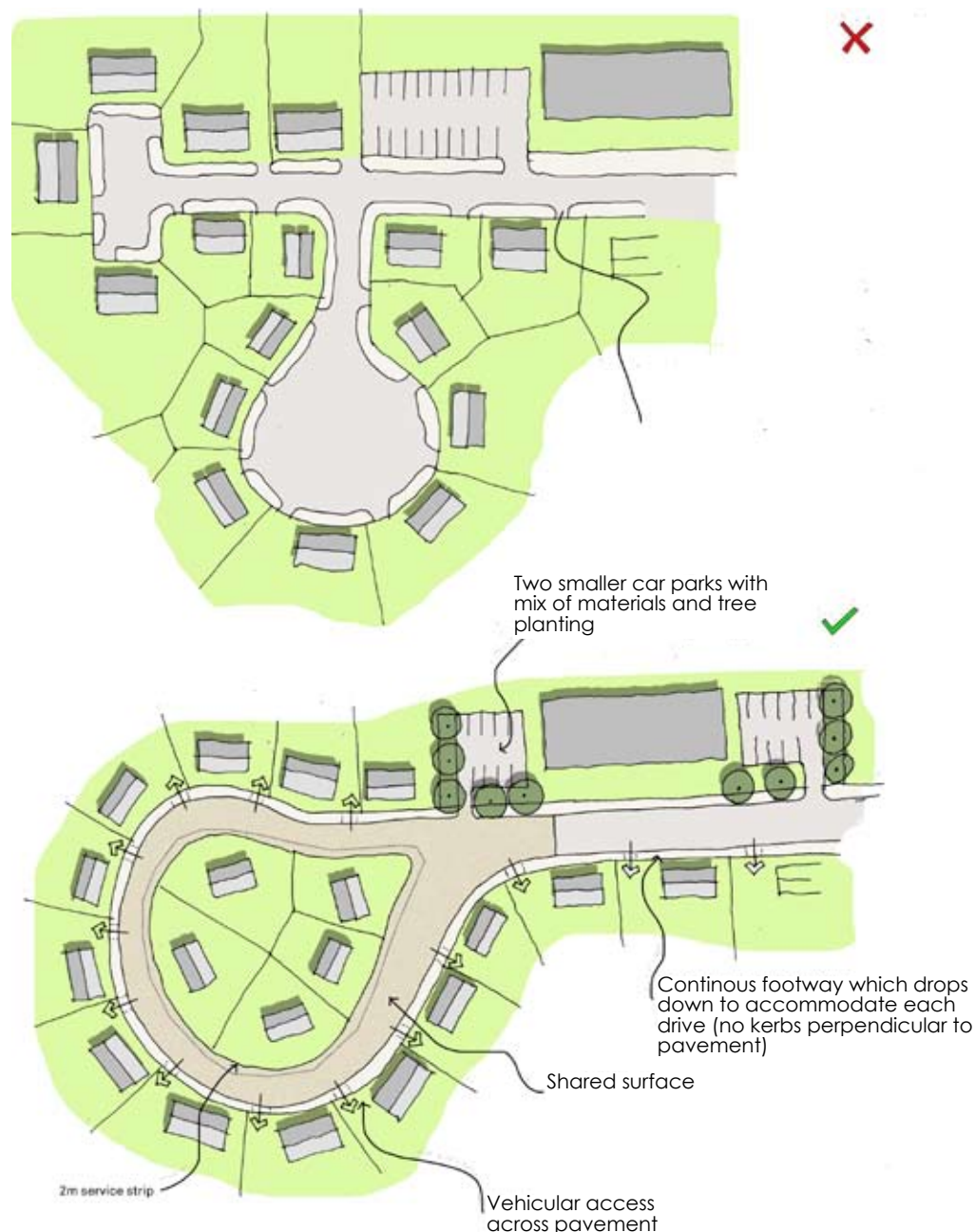
* or elsewhere as part of the planning application

Access around the Site

Access around the site should follow a logical **hierarchy of routes** (see hierarchy of routes on p.x). It should be easy to find your way around the site (see **legibility** on p.x) and should be attractive (see Appendix B: Quality of Routes).

- The development design should ensure that the access routes around the site are well overlooked are well lit at night and are attractive
- The ease of access for people with pushchairs, wheelchairs and disabilities should also be considered.
- The layout must allow for safe and appropriate construction vehicle access during the construction period minimising the impact on early occupants of the site, particularly in residential developments.

Fig.48: Cul-de-sacs, hammerheads and excessive areas of tarmac, turning circles and excessive **sight lines**, and kerbs perpendicular to pavement direction should all be minimised.



A Design & Access Statement* should show on a site layout plan:

The location of all vehicular, pedestrian and cycle routes around the site (with one way restrictions if applicable);

The design strategy and route hierarchy for access routes;

The location of important views, **vistas** and **landmarks** associated with access routes.

** or elsewhere as part of the planning application*

Plot Access

Care should be taken to ensure that access to individual plots and buildings can be used by all residents, employees and visitors. Both primary and secondary means of access should be able to be used by people of all physical abilities.

Inclusive access to a plot needs to reflect:

- The location of the building on the plot,
- The **gradient** of the plot;
- The relationship of adjoining buildings.
- Car parking within 20m of the plot without significant steps in level or severe gradients

Public buildings will all have to meet

the statutory requirements for plot access set out in the Disability Discrimination Act 1995 (as amended 2005)

Many of the issues relating to **inclusive** access to buildings and associated car parking are covered in Lifetime Homes (see Internal Spaces section).

Emergency and Services Access

- Current building regulations for emergency access will need to be met.
- The design principles in the 'Manual for Streets' should also be followed (sections 6.7 and 6.8 and para 7.2.6).

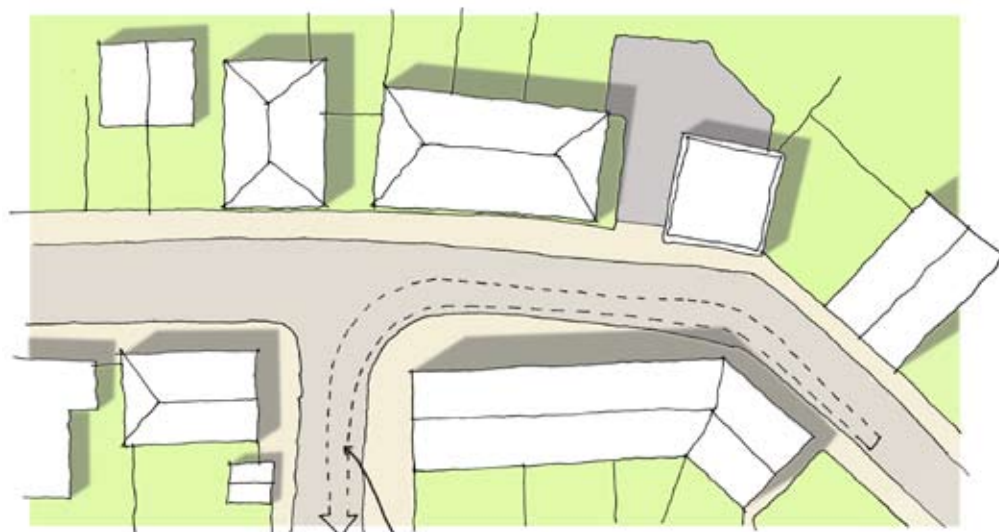


Fig.49: Tracking for large vehicles

Sufficient carriageway width and turning radii for refuse vehicles etc demonstrated through a tracking exercise

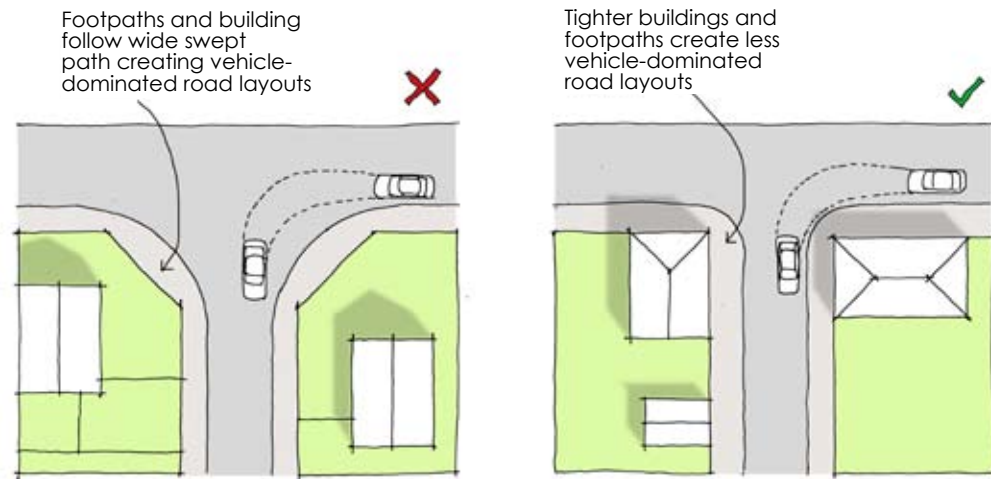


Fig.50: Vehicle-dominated junction layouts should be avoided

- While refuse lorries and fire engines will require a minimum turning radius of 10 m, footways and buildings at such junctions do not need to follow the same wide

swept path, maximising sight lines, as this will create a vehicle-oriented layout.

A Design & Access

Statement* should show on a site layout plan:

The location of waste and recycling collection points and if possible, the **tracking** for waste and recycling vehicles in accordance with Manual for Streets

* or elsewhere as part of the planning application

Key Design Principle 12 (Access around the Site):

Access within the site should be overlooked, safe and convenient to use, but must not be highway dominated

Highway Maintenance

Highways, that is, roads and foot and cycle ways, should reach **adoptable standards** and are normally adopted by the highways authority for the area. In the case of Eastleigh Borough, this is Hampshire Highways.

The design of these highways will need to reach a certain standard and a section 38 agreement signed. Following a period of maintenance, the management of the highways will then be taken over by Hampshire Highways.

Roads and foot/cycle ways that do

not reach the necessary standards, for whatever reason, can be designed to be unadopted. Under these circumstances, management and maintenance usually falls to the owners of properties along the highway.

Parking Mix

There are several different methods of accommodating cars within a new development, all of which have positive and negative aspects.

- How cars are parked in the context of development has a

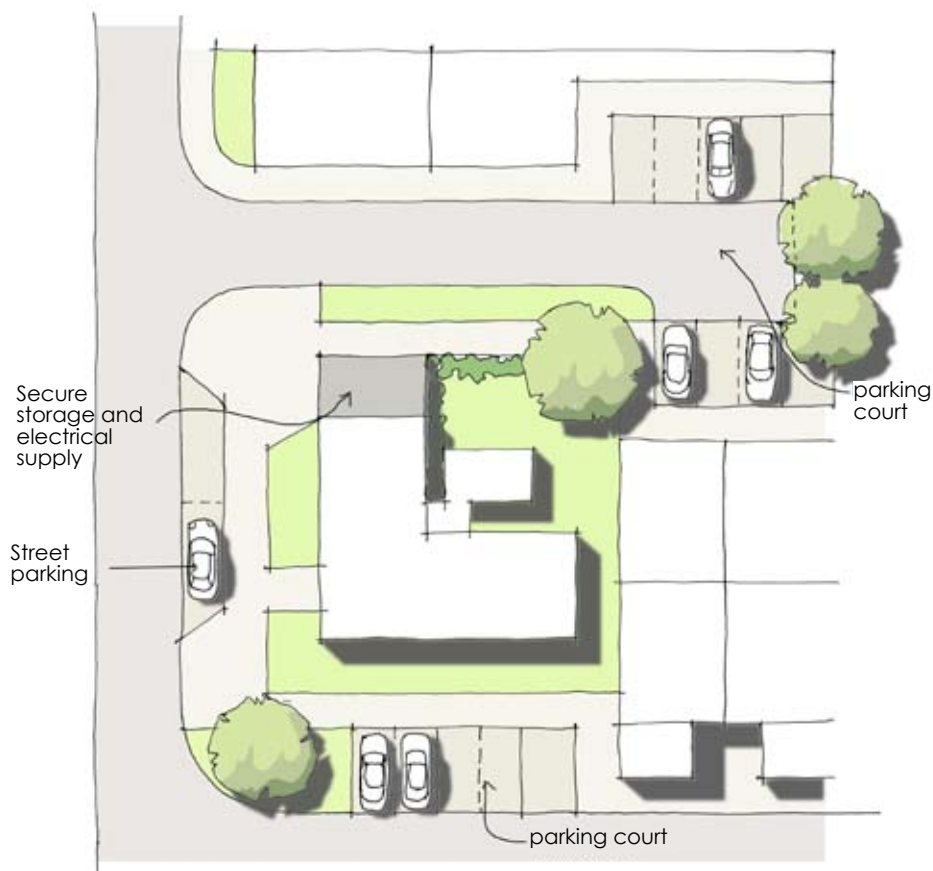


Fig.51: On larger schemes a mix of car parking methods is usually considered the best approach.

direct bearing on the **amenity**, appearance and size of the space between buildings.

- For specialist accommodation for older people and for people with disabilities, secure storage space is required under cover, with an electricity supply for powered wheelchairs or mobility scooters.
- All car parking should be within 20m of the plot it serves without significant steps in level or severe gradients.
- All unallocated car parking spaces should be suitable for adoption and cannot be subsequently allocated or conveyed to individual properties.

On Street Parking:

The most traditional car parking method is to provide unallocated spaces on the street. This enables every space to be used by anyone and to its greatest efficiency. It often allows residents to see their car from the front of their house and contributes to an **active street** and **traffic calming**, while keeping most vehicular activity on the public side of buildings.

- Angled parking bays are more efficient, but increase the width of the road; are potentially more dangerous, and can have a negative impact on the ground

floor windows of **habitable rooms**, with lights shining in at night.

- Continuous areas of communal street parking are also visually intrusive and need to be broken up or their quantity in one place restricted.
- The proportion of on-street parking appropriate for a particular scheme will be considered on its own merits, within the local **context** with regard to the parking standards set and the environmental impact of the proposals.
- Street layouts should be designed to discourage on-pavement parking near the fronts of houses or elsewhere.

Parking Squares :

Parking Squares can provide more car spaces in a wide street than parallel kerbside parking.

- They need to be designed with robust materials and as attractive public spaces which also accommodate parked cars. This can be achieved with generous and appropriate street trees, surfaces other than tarmac and appropriate street furniture.
- Small squares can add interest and provide parking in a **traffic calmed** environment.

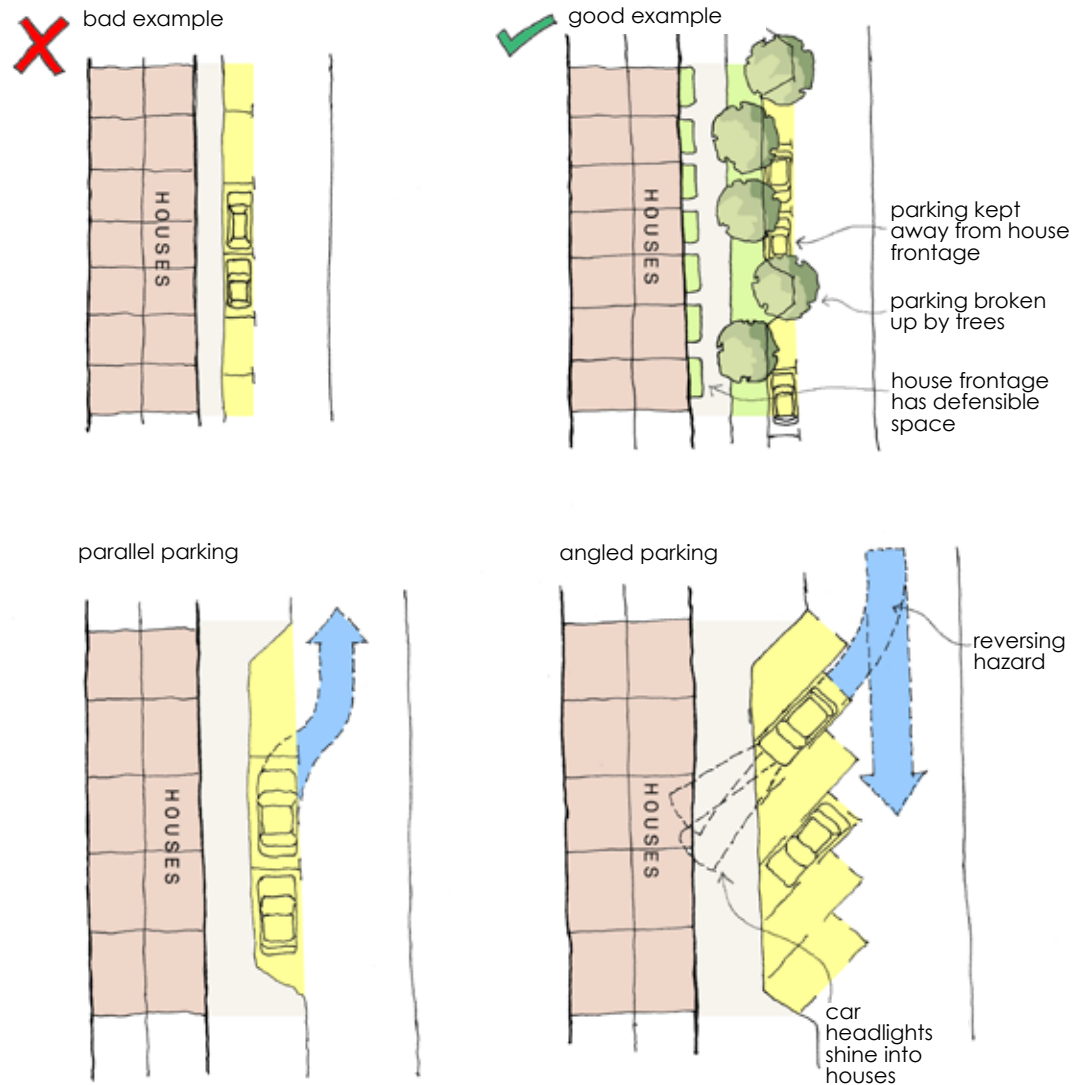


Fig.52: On street car parking



Fig.53: Parking squares

Homezones and shared space:

Homezones and shared space can provide a pedestrian and vehicle environment with built-in **traffic calming** and parking. Environmental enhancements, space defined by built **frontages** and the use of high quality surface materials are requirements of a successful scheme.

In curtilage parking:

Many modern residential developments provide in **curtilage** parking spaces, usually in front of the house.

This may provide the car-owner with greater security and ease of access but it is a less efficient use of space than unallocated parking and prevents parking in the street across the access to the property.

- Particularly when plot widths are narrow (below 5.5m) the parked car will usually visually dominate the front of the house. This effect will be magnified if this method is repeated at regular intervals in a street.

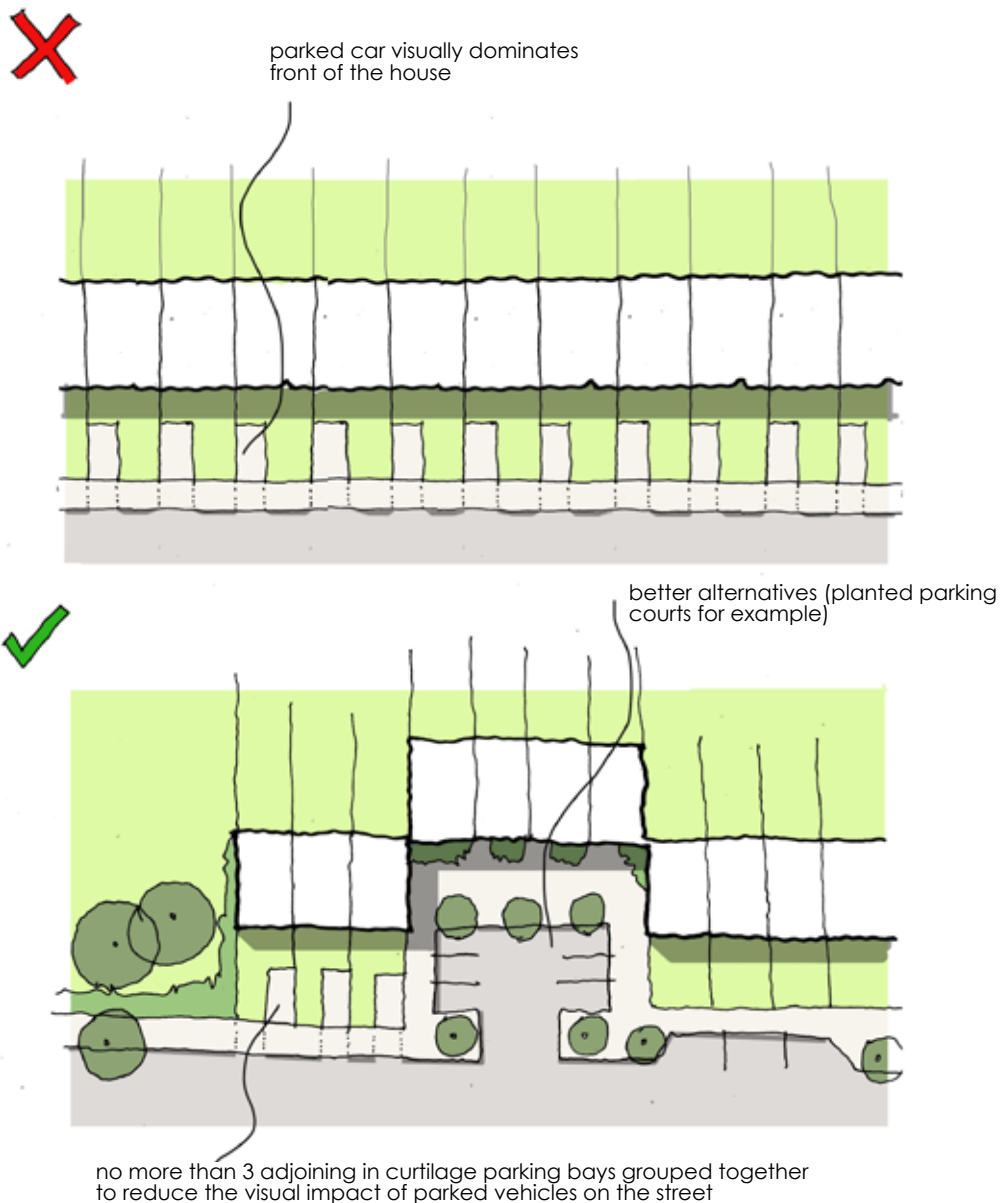


Fig.54: In-curtilage car parking

- As a rule, in-**curtilage** parking in front of the property should be avoided if better alternatives are available and in any event no more than 3 adjoining narrow-fronted properties utilizing this approach should be grouped together to reduce the visual impact of parked vehicles on the street.
- Private car spaces and drives visible from the street should be surfaced in small unit permeable pavers, or other materials which will allow sustainable drainage

and contrast with standard tarmac, raising the environmental quality of the area.

- Where in-**curtilage** parking for individual houses is appropriate, designers will be encouraged to provide parking or garaging to the side of the house behind the **building line**.

In curtilage garages:

The provision of in-curtilage parking in garages provides the most secure form of private car accommodation.

Fig.55: In-curtilage garage



There are several design considerations:

- Integral garages are best accommodated in wide fronted buildings (incorporating ground floor front windows) at least 6m width and at least 2 storeys in height to limit car dominance and encourage **informal surveillance** of the street.
- The position of external garages should take account of local **context**. Garages built in the front of sites will only be permitted in exceptional circumstances

Rear garage courts:

Rear garage courts on a modest scale (no more than 6) are acceptable as long as they are safe (well overlooked), convenient and accessible.

Communal courtyard parking:

Communal courtyard parking can offer an alternative to in-**curtilage** or **frontage** arrangements and help prevent the street from being dominated by car parking. Courtyards may also be needed as a supplement to other forms of parking when adequate parking provision cannot be made by other means alone.

- Apartments will often need to accommodate some parking in private courts, depending on the building **orientation** and the location of **amenity space**.



- There must be clear responsibility for the regular maintenance and care of the space.
- Courtyards can be arranged with through routes only if buildings have been placed to overlook and **front** onto part of the space.
- Entrances to private rear court car parks need to be designed to provide a private feel with the use of close buildings or archways. Coach house units should be used only very sparingly due to their poor **amenity** provision.

Fig.56: Good and bad ways to provide in-curtilage garages

Underground and undercroft parking:

The design of **undercroft car parking** and the access to underground car parking must strive to reduce the potential negative effects on street level elevations.

Reducing the impact of parking:

- Parking should not cause adverse impact to windows at ground floor level, particularly at night.
- Any block of more than 10 parking spaces should be broken up

and sub-divided with appropriate paving and tree planting to reduce the visual impact. Appropriate trees should be planted at an average of at least 1 tree per 6 car spaces, breaking up rows of cars.

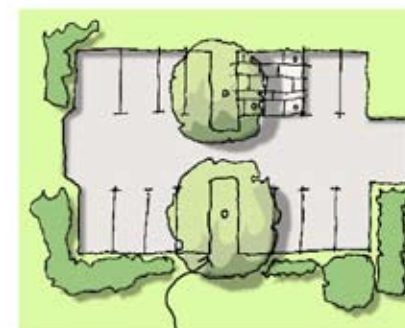
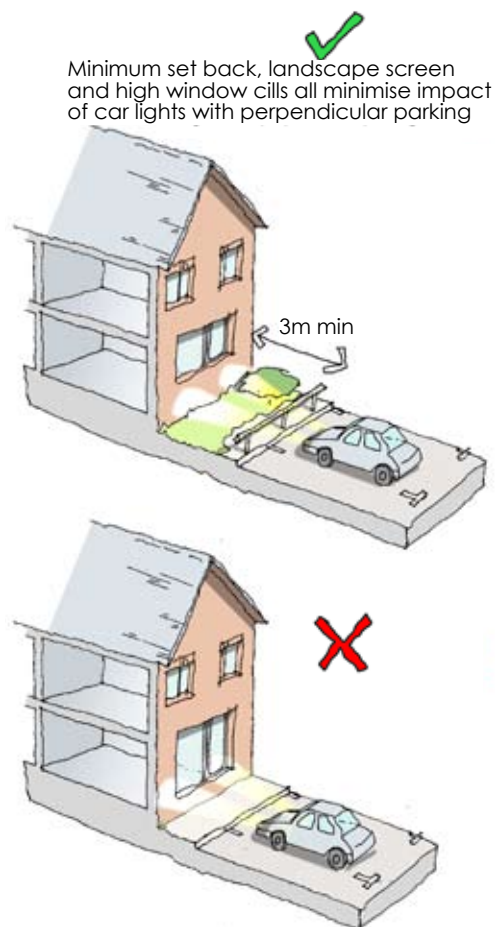
Parking for Existing Development:

Ideally, small-scale new development should not result in additional on-street parking, therefore in-**curtilage** parking will normally be required. There should be room to park a vehicle in front of a garage without overhanging the pavement. A distance of 6m between garage doors from the back edge of the footway is required. If this is not possible, the distance can be reduced to a minimum of 5.25m, provided doors are used which open within the confines of the garage (e.g. folding shutter doors or flush opening doors).

Any extension should allow a driver emerging from a garage to be able to see onto the street without causing an obstruction or risk to other road users, including pedestrians.



Fig.57: Rear court car parking



Car parks should be broken up with strategic tree planting

Fig.58: Reducing the impact of car parks

Pavements:

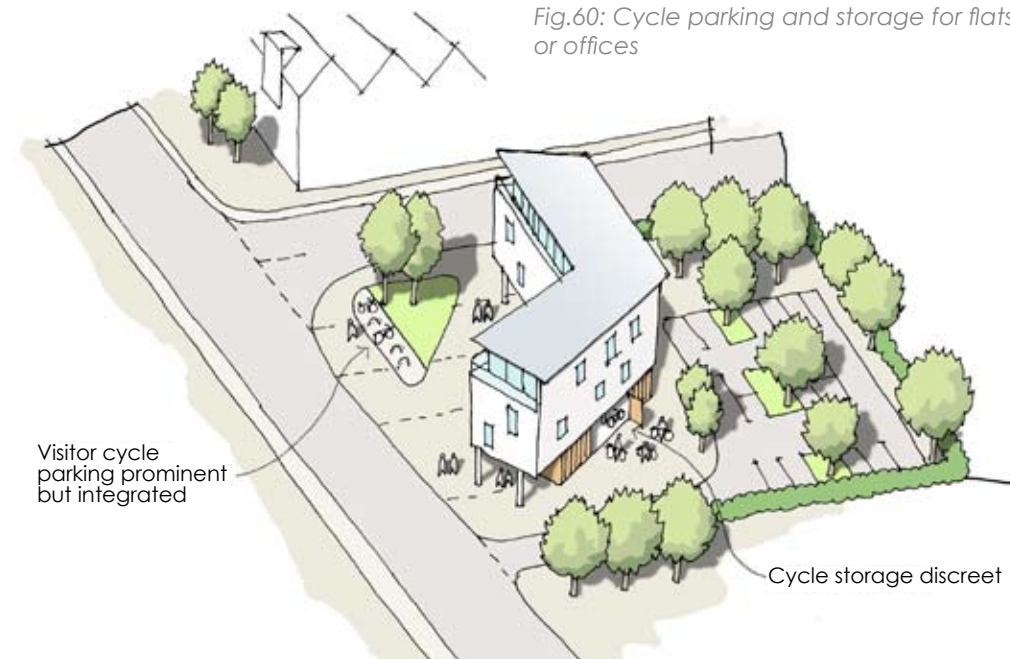
If separate pavements with full height kerbs are provided as part of a residential development they should ideally be 1.8m but must of a useable minimum width of not less than 1.5m. Where space is limited, carefully designed shared space provides

A Design & Access Statement* should show on a site layout plan and in sections/elevations and text:

- A statement of car parking allocation for each plot.
- All unallocated and allocated car parking distinguished.
- The location, surface materials and dimensions of all parking spaces
- The location of all visitor car spaces
- The location of all associated street trees and shrub planting
- The location and dimensions of all garages
- How car parking spaces are overlooked by existing or proposed windows from **habitable rooms**

** or elsewhere as part of the planning application*

a better solution. Substandard pavement widths will not be acceptable.



A Design & Access Statement* should show on a site layout plan and in sections/elevations:

The location, capacity and dimensions of all cycle storage

The design, and construction materials of stand alone cycle storage.

** or elsewhere as part of the planning application*

Cycle Parking and Storage

Secure and convenient cycle storage should be available for all residents.

Fig.60: Cycle parking and storage for flats or offices

Refuse and Recycling

The Council has a strong policy on recycling and would encourage developers to ensure adequate facilities are provided to enable residents to increase their recycling rate.

The Code for Sustainable Homes Technical Guide provides guidance (under issue Was 1) on non-recyclable and recyclable storage facilities which the Council will expect compliance with.

www.communities.gov.uk/planning-andbuilding/buildingregulations/legislation/codesustainable/

During construction of a larger development site, it is often necessary for refuse collection operatives to service new dwellings whilst the road surface is still unmade. This often presents problems for the movement of waste bins due to the increased distance from the made-surface of the path and the unmade road. Provision should be made to allow easy access during this period (possibly through the addition of temporary ramps from footpaths in appropriate locations). Additionally, the issue of collection vehicles meeting construction vehicles onsite should be avoided through the provision of a site traffic management plan that is adhered to. This information will be provided to the Council's Direct Services Unit to assist them in their task.

Key Design Principle 13 (Parking):

Surface car parking and cycle parking should be safe, convenient to use and have **natural surveillance**. Car parking should not visually dominate the **public realm**. Other vehicle parking should be safe, secure and separated from the **public realm**.

The provision of composting bins for residential properties will be encouraged and will earn a credit under the Code for Sustainable Homes.

Commercial sites should ensure that there is enough storage space to accommodate the waste anticipated by their business in an accessible yet discreet location.

A Design & Access Statement* should show on a site layout plan and in sections/elevations:

The location, capacity and dimensions of all waste and recycling storage;

The design, and construction materials of stand-alone waste and recycling storage, including the gradient of the surrounding ground and any ramps;

The wording and location of appropriate signage for communal bin stores in accordance with the Council template.

A **construction management plan** including details of temporary road measures to allow safe collection of refuse and movement of site traffic.

Management and maintenance arrangements for communal bin stores should be described.

** or elsewhere as part of the planning application*

Key Design Principle 14 (Waste, Recycling and Cycle Storage): Waste and recycling and cycle storage should be safe, **accessible** and convenient for the intended users and properly integrated into the built design. Cycle storage should also be secure.

Architectural Detail

Architectural detailing can make the difference between a scheme being good or excellent. The attention to detail and the quality of workmanship and finish affects the perception people have of a place, and the durability of a building. The Council encourages developers to pay close attention to these issues and strive for the highest possible quality.

Proportions

The proportions of a building consist of the position and relative size of the different elements of the building when viewed from outside. When proportions are right, none of the elements appear out of synch with the others. This may involve the creation of symmetry.

However, a building does not exist in isolation and so the proportions of the structure should also consider those of site and **setting (site context)**. This may be the natural **setting**, eg. **topography**, mature trees, etc. It may also be the surrounding built environment, and the relationship to buildings on and off site.

This subject is complex and one that architects are trained to deal with. It is one of many considerations that are best dealt with in the hands of a professional.

A Design & Access Statement* should demonstrate in plans, elevations or in three dimensions and in text that:

Development has taken account of the **setting**;

The proportions of the buildings are balanced.

** or elsewhere as part of the planning application*

Rooflines

Although rooflines are not always visible as a whole, they form an important element of the street and can have a considerable harmful effect if not carefully designed and constructed. Where there are level changes in and around site, the way in which roofs are seen can change. The way in which roofs will be viewed should form part of the design consid-

erations. Roof design and detailing is particularly relevant for prominent buildings, such as corner buildings, **listed buildings** and structures within a **conservation area**.

- Rooflines should complement surrounding development.
- Symmetry should be achieved for semi-detached pairs and each end of a terrace.
- Tiles should be of a material, style, proportion and size suitable for the building.
- The detailing on roofs is important for longevity and maintenance – valley gutters, eaves, fascia, weatherboarding – all should be of a high standard and properly finished.
- It should be possible for a chimney to be used, and not simply be a design feature.
- Where an area of flat roof is required to lower the height of a pitched roof, a ridge tile or similar should be used along the joint of the flat roof with the slope to give the impression of a ridge line.
- If flat roof dormer windows are included in the design, they should complement the building in terms of proportion, size, position and detailing. They should be kept well away from the ridge and edges of the roof in order to provide a visual frame.
- The proliferation of aerials and satellite dishes can make roofs look cluttered. In flattened developments it may be possible for shared satellite dishes to be erected to reduce to need for additional dishes.
- The use of green roofs or roof terraces can have numerous benefits (see roof terraces and **intensive green roofs** and

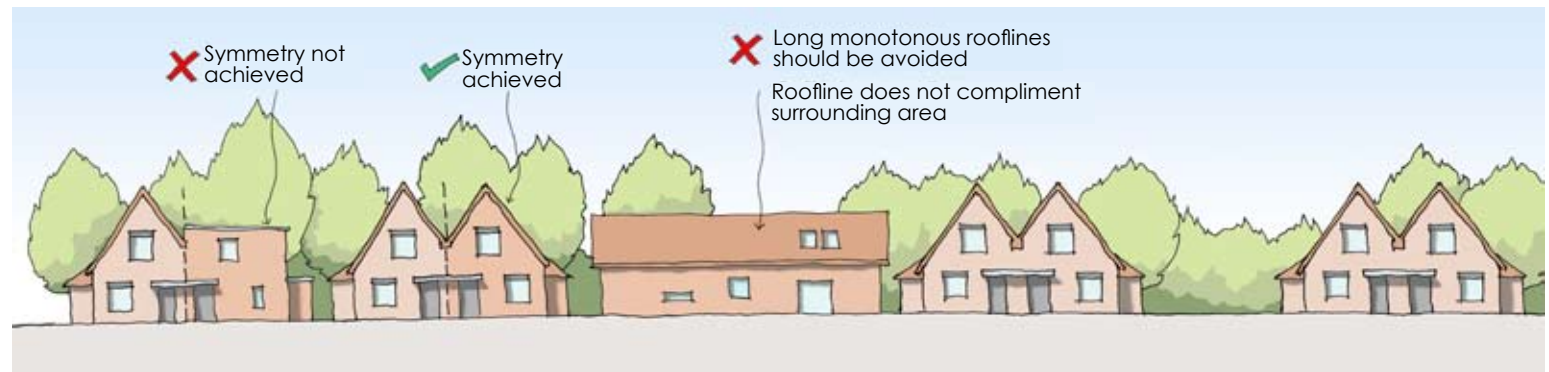


Fig.61: Rooflines in a street

extensive green roofs in external spaces chapter). These will require specific design and construction techniques.

The roofs of low structures such as sheds, garages, and bin and bicycle stores can have a more immediate impact at street level. The same principles apply to these structures as to the primary roofs.

A Design & Access Statement* should accurately show on elevation drawings and sections (or in three dimensions):

The shape, height, and slope of the roof.

** or elsewhere as part of the planning application*

Roof Extensions to Existing Buildings, (Including Dormers)

Changes to the shape of a roof need to be carefully considered. In the case of semi-detached properties or streets with very uniform roof design, significant alterations to the roof are generally unacceptable. Dormer windows can be difficult to incorporate into a roof without adversely affecting the appearance of the dwelling and the street, and might not always be appropriate.

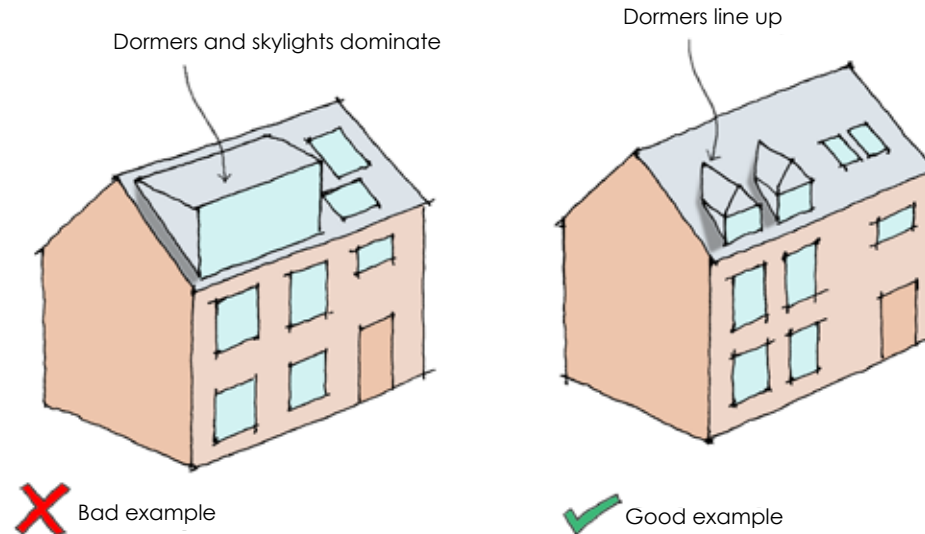


Fig.62: Appropriate **scale** of dormers and skylights

A dormer should not dominate the roof, but should complement the existing features of the house in terms of proportion, size, position and detailing. They should line up with the existing windows, and be kept well away from the ridge and edges of the roof in order to provide a visual frame. A number of small dormers may be preferable to a single larger one.

Where extra headroom is not required, roof lights offer a simple, economic method of lighting the roof space. They should not protrude significantly from the roof profile and should be evenly spaced. They are best kept as small as possible so as not to dominate the roof.

Materials

The materials chosen for a scheme should take account of the context of the site. They should respect and complement the character, scale, texture and colour of existing materials used in the local area, if they are recognised as worth respecting.

- If a range of materials are to be used they should complement each other.
- Hard **landscape** materials should complement building materials.
- In large developments, different materials can be used to create

distinctive street identities that aid **legibility**.

- Materials should be robust, **sustainable**, and easy to maintain. (for guidance on the relative **sustainability** of building materials refer to the BRE Green Building Guide [INSERT WEB LINK](#))
- The Council supports the principle of the re-use and recycling of construction materials and the use of locally-sourced materials for reasons of good **sustainability**. The use of FSC or similarly certified **sustainably** sourced timber is also encouraged.
- Prefabricated elements which lead to substantial waste savings, quicker construction and better building performance, (**Modern Methods of Construction** (MMC)), will be supported as long as they are robust and the visual quality is not compromised, particularly where buildings address the street.
- In **conservation areas** and for prominent or **listed buildings**, the type and colour of mortar can have a significant impact on the perception of development and should be considered when choosing materials.

Existing buildings:

When considering extensions to existing buildings, the materials used in an extension should match or complement the existing dwelling in terms of type, colour and texture. Changes in appearance as a result of weathering should be taken into account when selecting bricks and tiles. It may be worth considering re-using tiles from the rear of the property for the front of extensions.

A Design & Access Statement* should indicate on both plans and elevations (or annotated elevation where necessary):

The schedule and palette of materials used for each building and for each street with an explanation for these choices with particular reference to the local **context**.

** or elsewhere as part of the planning application*

Windows

Not only do windows allow natural light to enter a building, provide ventilation, and offer opportunities for **natural surveillance**, windows often form the most prominent elements in the **elevations** of the building.

If a property has been designed to take account of the surrounding buildings, the windows should also reflect this, in form and material. Wholesale application of plastic windows in a **conservation area** should be avoided, particularly on the public **elevations**. Plastic windows will not be accepted for **listed buildings**. Windows should be able to be opened, where appropriate as noise and air quality issues may need to be addressed.

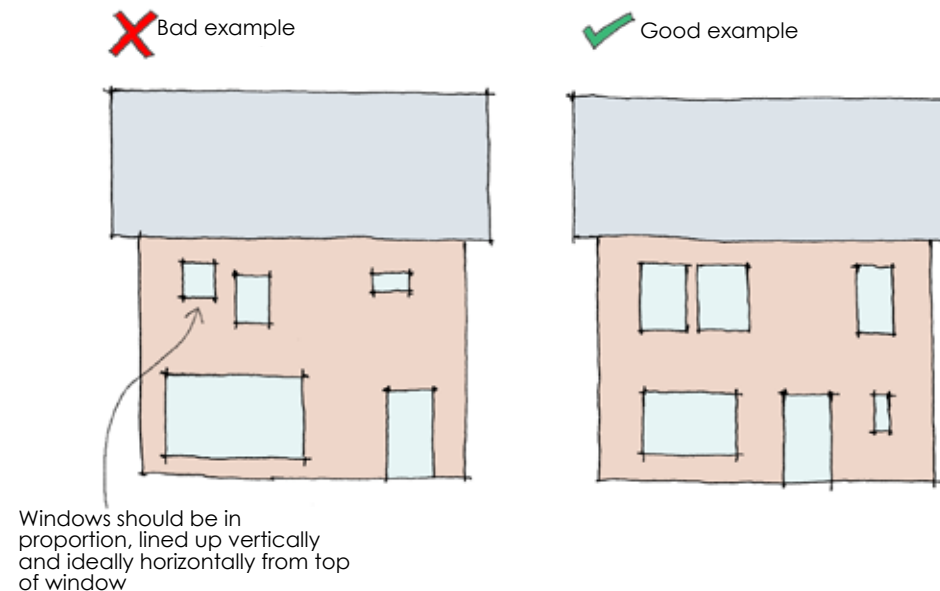


Fig.63: Appropriate window layout and proportion

A Design & Access Statement* should accurately show on elevation drawings and sections:

Location, size and detailing of windows and surroundings.

** or elsewhere as part of the planning application*

Architectural Features

Existing buildings or local areas may have distinctive architectural features which contribute to their special character. These should be used where existing buildings are to be retained or the design of new buildings is to complement existing development. Where possible, existing external decorative features such as door architraves, decorative lintels, sill and eaves details, should be incorporated into the new design.

Service Details

The siting of equipment for services (such as utility meter boxes and rainwater details) are necessary but when done badly can let a high quality scheme down. If they can't be hidden, or are to serve as a design feature, they must be of a high quality material and finish.

Front, Side and Rear Extensions to Existing Buildings

The design and appearance of the fronts of houses, and the distance between the buildings and the street are important aspects in defining the **character** of residential areas. Generally, only modest front extensions, which are in keeping with the **character** of the existing house, will be allowed, e.g. garage and porch extensions.



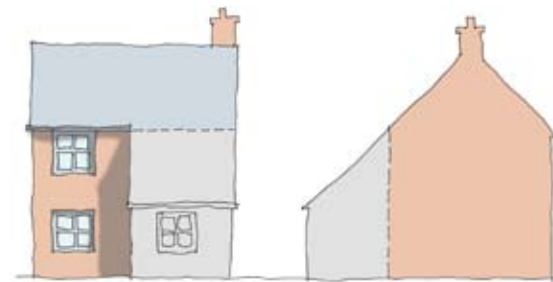
Fig.64: Residential services

- Single or two storey side or rear extensions should be in **scale** and balance with the whole of the house.
- All extensions must comply with the 25 and 45 degree code guidelines to avoid harming a neighbour's outlook or daylighting (see page XX).
- Setting the extension back from the front wall of the house will often help the original building to maintain its dominance, and avoid a mismatch of materials.

Extensions up to the side boundary line could restrict access into the rear garden which may be inconvenient and impractical and may cause maintenance issues. In addition, foundations and roofs might encroach into the adjoining property.

Semi-detached houses are normally designed as a matching pair. To preserve the balance of the buildings, any side extension should be set back from the front of the building. The depth of any set back and width of the extension will vary according to the design of the house

Extensions to the rear of a property are the least likely to have a major impact on the house, the neighbours and the surroundings. When extending a semi-detached or terraced property it is important to follow any established pattern of extension. For example, in terraced houses the rear outshot is a very traditional form which, when paired with a similar extension on a neighbouring house can appear to be part of the original design. This type of extension can also increase the privacy to rear gardens.



Sympathetic rear elevation

Fig.65: A sympathetic rear extension



Traditional paired outshot extension to rear of terraced house

Fig.65: A sympathetic rear extension

and merits of each proposal. Side extensions should take account of the spaces between houses and whether this is an important feature through the street.

Two storey extensions to corner properties will need to take into account the visual impact upon all related roads and the relationship with other buildings.

Fig.66: Porches and canopies should reflect the **character** of the original house.

Fig.67: Keeping the ridge and eaves of an extension lower than the main building and maintaining the same roof pitch will help the original house maintain its dominance.

Ancillary buildings

Ancillary buildings may include bin and bike stores, general storage and garages. For new development, these have been covered elsewhere. For existing properties, as with any other extension, garages should be sympathetically related to the main dwelling, whether they are adjoined or free-standing. Pitched or lean-to roofs are normally preferable to flat roofs as they are more likely to complement the existing house and locality. In normal circumstances, garages should be in line with or behind the front of the house.

Key Design Principle 15: (Design of Buildings and Materials)

The **scale, form** and design of **elevations** and external materials should respond positively to the defining and distinctive characteristics of the area. Where this is absent, design and materials should help create a new positive and distinctive **character**.

Corner Buildings and Blank Walls

Corner buildings, because of their location, need to be designed to address all aspects facing the street.

- All street **elevations** should be attractive and contain windows

from **habitable rooms** for **passive surveillance**.

- The use of a standard house type is very unlikely to be appropriate in corner locations.
- Plot layout should also consider the relationship between all streets in terms of the siting of the building, entrances and exits to the site, location of bin/cycle stores, **landscaping**, etc.

Blank walls in the **public realm** should be avoided as they are visually unappealing, with their large, bland **elevations**. They can cause problems

with the lack of **passive surveillance**, and can become the focus of anti-social behaviour. All walls facing onto a public or semi public area (such as a car parking area) should have windows from **active rooms** (not bathrooms, halls, stairwells or store-rooms)

In exceptional circumstances where blank walls cannot be avoided in the **public realm**, their impact must be **mitigated**. This could be through the use of planting, eg. non-destructive climbers or green walls, or through detailing such as weatherboarding, tile hanging, brick detailing or through public art.

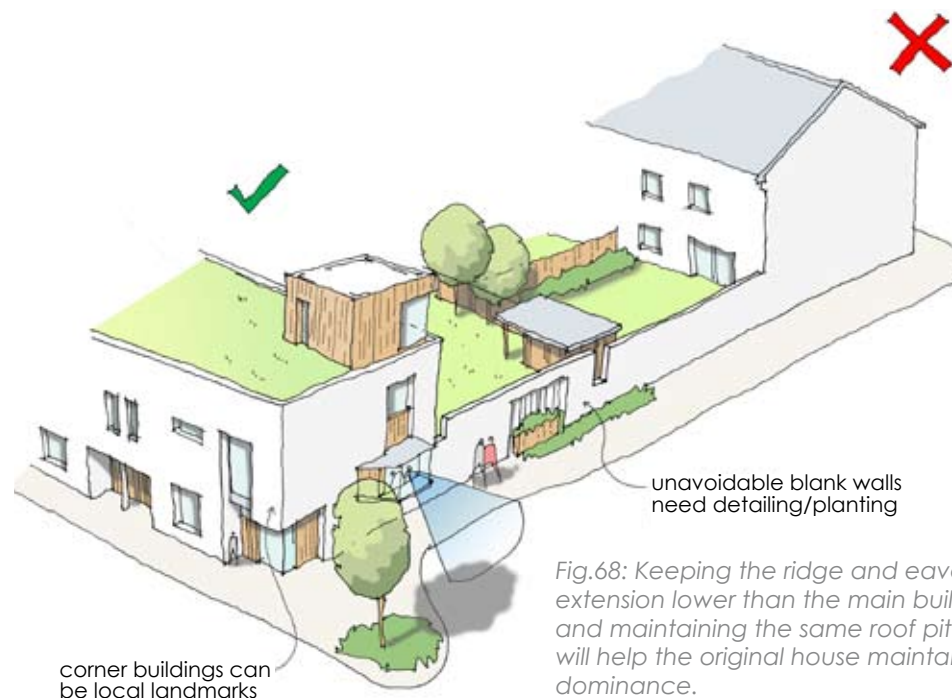


Fig.68: Keeping the ridge and eaves of an extension lower than the main building and maintaining the same roof pitch will help the original house maintain its dominance.

A Design & Access Statement* should show in elevation drawings and plans (or in 3 dimensions) and in text that:

Corner buildings and plot layout have been designed to address both street aspects; identify and justify any proposed blank walls visible from the **public realm** and demonstrate how their impact will be mitigated.

** or elsewhere as part of the planning application*

Doors and Entrances

The entrance to a building, together with the boundary to the plot, is a transition zone from public to private space. It is therefore important that this be well designed as it affects people's sense of security and ownership as well as being the visual focus for the building.

- Front doors should be easy to find and be visible from the **public realm**. The design of non-residential entrances need to signify to visitors that this is the main access to the building.
- They should be designed with level thresholds to assist **accessibility**.

- Doors should be robust, good quality and properly fitted and finished.
- A slight recess for garage doors is advisable.
- Doors and access gates should preferably be solid hardwood (from sustainable sources) as this is more durable and lower maintenance than softwood.
- Rear gates that can be seen through are likely to be modified by residents to gain more privacy to gardens.

Fig.69: Doors and entrances.



A Design & Access Statement* should accurately show on elevation drawings and sections and text (and for non-residential buildings in 3 dimensions):

Location, size, materials and detailing of front doors, garage doors and access gates;

The relationship between doors, depth of the reveal and site levels.

The design treatment of main entrances for non-residential buildings

** or elsewhere as part of the planning application*

Key Design Principle 16: (Continuity and Enclosure of Space)

Buildings should be designed to enclose space and have **active frontages** onto the **public realm** with particular attention being paid to entrances and corners.

Internal Spaces

Lifetime Homes

As people's circumstances change their needs and abilities in a home can change too. Often people feel they must move house when their current home cannot be adapted to their changing needs (e.g. disability, sickness, old age).

Lifetime Homes comprises sixteen criteria that are aimed at providing housing that can respond to the needs of its residents throughout their lifetime, and in particular for modifications that may be required for individuals with mobility difficulties. These are set out in detail on the Lifetime Homes website, <http://www.lifetime-homes.org.uk>, or in the current issue of the Code for Sustainable Homes Technical Guide.

In its Disability Equality Strategy the Housing Corporation indicated that all housing funded by them from 2011 onwards would need to be Lifetime Homes compliant. It is also a requirement of the Code for Sustainable Homes at level 6.

Lifetime Home designs should be considered at the earliest stages of the design process. Layout plans may be required to show the position of furniture and turning circles to demonstrate that the room is of an adequate size.

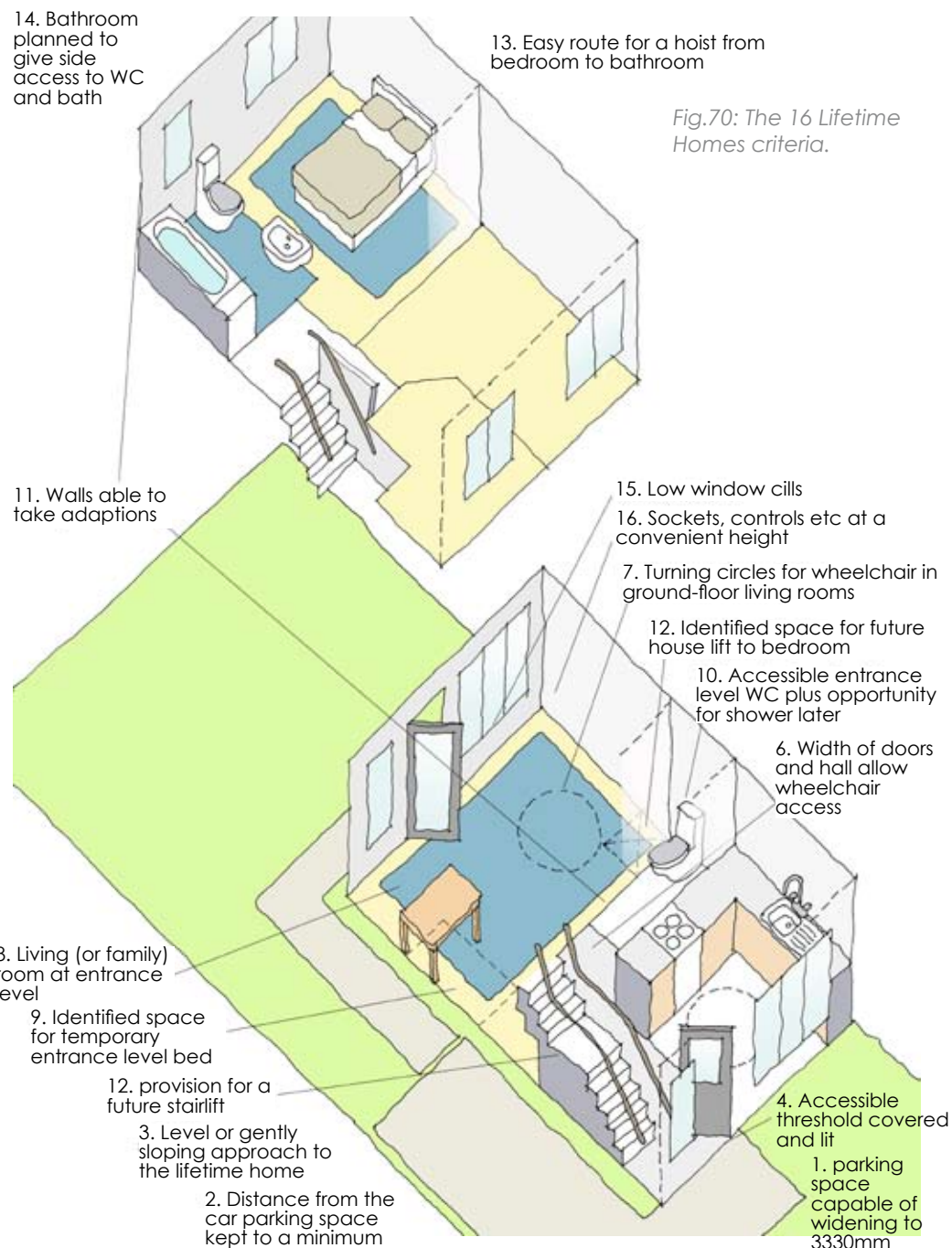


Fig.70: The 16 Lifetime Homes criteria.

A Design & Access Statement* should show in plan form or text:

Full application - The location and number of all proposed Lifetime Homes compliant houses or flats;

Outline application - the numbers of lifetime homes to be provided.

** or elsewhere as part of the planning application*

Internal Living Space

CABE's research 'What Home Buyers Want' (2005) reports that people would prefer more living space with fewer, but larger bedrooms; kitchens that are large enough for a table for meals as a family; and multi-functional rooms. At present, it would appear new dwellings are not addressing the needs of residents now, or in the future.

Ideally, homes should provide:

- Space for appropriate furniture and equipment;
- Space to access/use furniture/equipment/doors/windows;
- **Circulation space;**
- Space to undertake normal living

activities that do not just use furniture, eg. washing, dressing, cooking, eating, playing;

- Space for clean storage, eg. linens, vacuum cleaner, etc;
- Sufficient separation of rooms to allow required level of privacy, (this need can change over time, however designs that succeed when the rooms are separate, will succeed if the dwelling is converted to open plan. The converse will not necessarily be true).
- **Circulation space** should allow for space near to the accesses to keep outdoor items such as coats, boots, prams, etc, preferably without having to pass through **habitable rooms**.
- Shared **circulation space** for flats should be designed for minimum maintenance and provide easy access to flats and associated facilities such as **amenity space** and bin stores and bicycle parking.

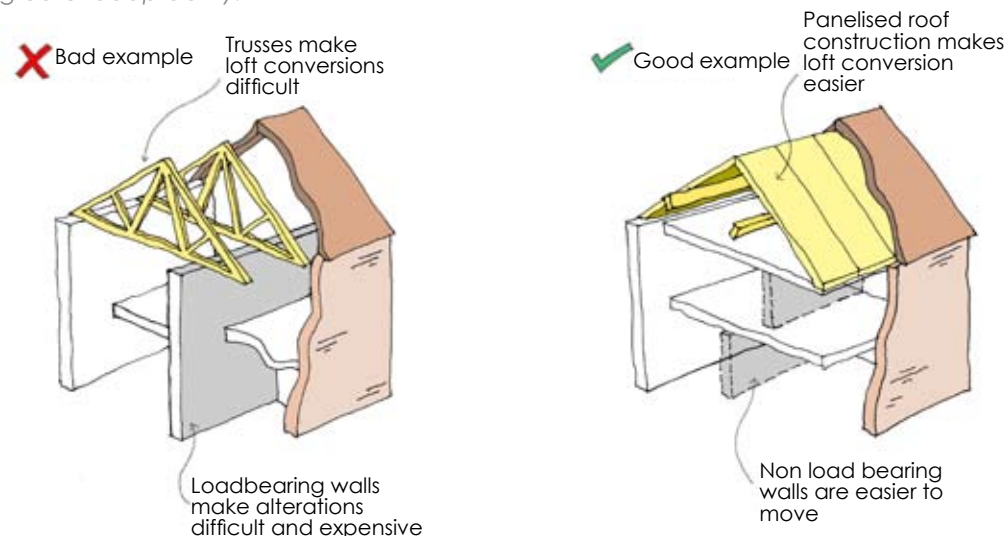
Flexibility and Adaptability

Flexibility is the potential to use rooms in a house for different purposes, eg. use of a bedroom for a study as well as guest room. This depends on the space within a dwelling, the room layout and the number of rooms.

Home working, in particular, is likely to become more prevalent, and will require space for a desk and internet access. **Open plan** designs for living and **circulation space** do not allow much **flexibility** when the home is in use. Again, compliance with minimum space standards and Lifetime Homes will benefit **flexibility**.

Adaptability is the potential to modify the spaces of a home by altering the fabric of the building. Where possible, dwellings should be designed to allow further development such as extensions and conversions, to allow the home to grow and change with the residents.

Fig.71: Two building elements which allow greater adaptability.



A Design & Access Statement* should demonstrate that:

The building has been designed to be **flexible** and allow ease of future modifications.

** or elsewhere as part of the planning application*

Key Design Principle 17 (Flexible Internal Space):

Buildings and spaces should be designed so they can be adapted over time to changing needs. New homes must have enough internal space for residents to use comfortably

Natural Daylight

Good quality natural light helps to make the interior of a dwelling or a work place a more pleasant and enjoyable place to spend time. It also reduces the need to use electric lighting.

The amount and quality of natural light depends on the

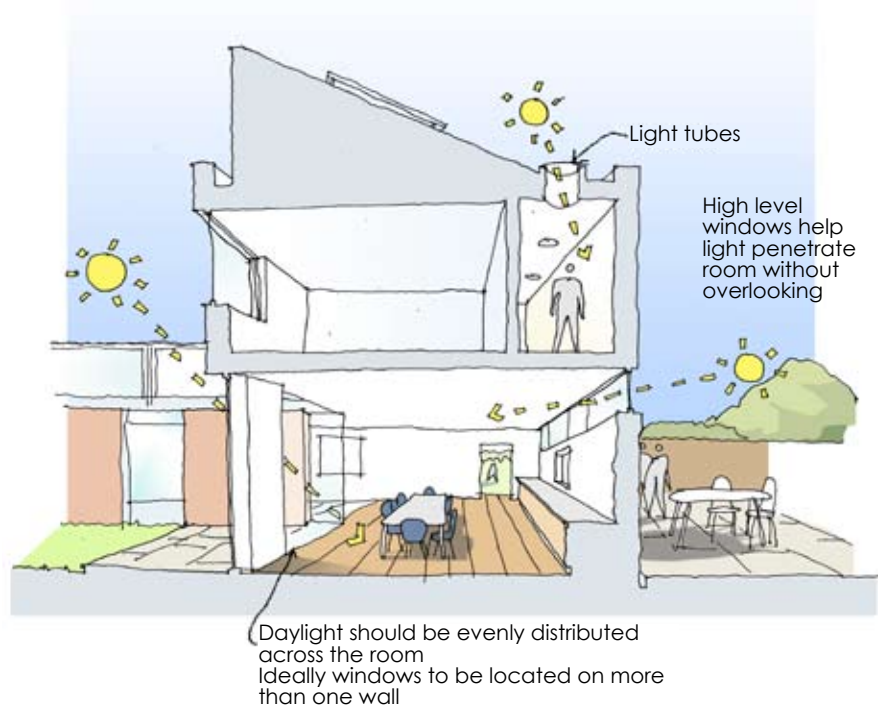
- size and position of windows,
- the shape of rooms,
- the colour of internal surfaces
- and the structures that surround the building.

Roof mounted '**light tubes**' can bring natural light into corridors, landings and other rooms

The size of windows to provide good day lighting must be balanced with privacy requirements within the home. It is important that the **orientation**, location and use of the room are all taken into account when considering the size and location of windows.

The Code for Sustainable Homes and BREEAM assessments include credits for minimum standards for natural daylight levels for homes and non-residential buildings respectively.

Fig.72: Natural daylight in a home.



A Design & Access Statement* should show in floor plans and in text that:

Windows have been provided for all **habitable rooms**, including kitchens;

The **orientation** of buildings and the location of windows have considered the site **context**.

* or elsewhere as part of the planning application

Passive/Natural Surveillance

Passive or **natural surveillance** is the informal, close observation of people in public areas (such as the street or open space) or semi public space (such as a shared car park). It is achieved when there is a good level of overlooking by neighbours of that space. It acts as a deterrent to people wishing to commit anti-social behaviour which reduces both fear of crime and the level of crime itself.

In order for **passive surveillance** to function effectively, it is important

that the size, shape and position of the windows of **habitable rooms** allow an unobstructed view of the space.

Flats and non-residential buildings with well-proportioned-balconies and roof terraces looking onto public space can provide better levels of **passive surveillance**.

Balanced with the need for surveillance, is the desire of residents for privacy in their own homes. Where

this issue is not adequately addressed at ground level, blinds and curtains tend to be closed throughout the day and night, negating any passive surveillance benefit. Footways at a slightly lower level than windows, or setting the property back from the edge of the footway with carefully chosen planting that doesn't obscure views are two options that could be used.

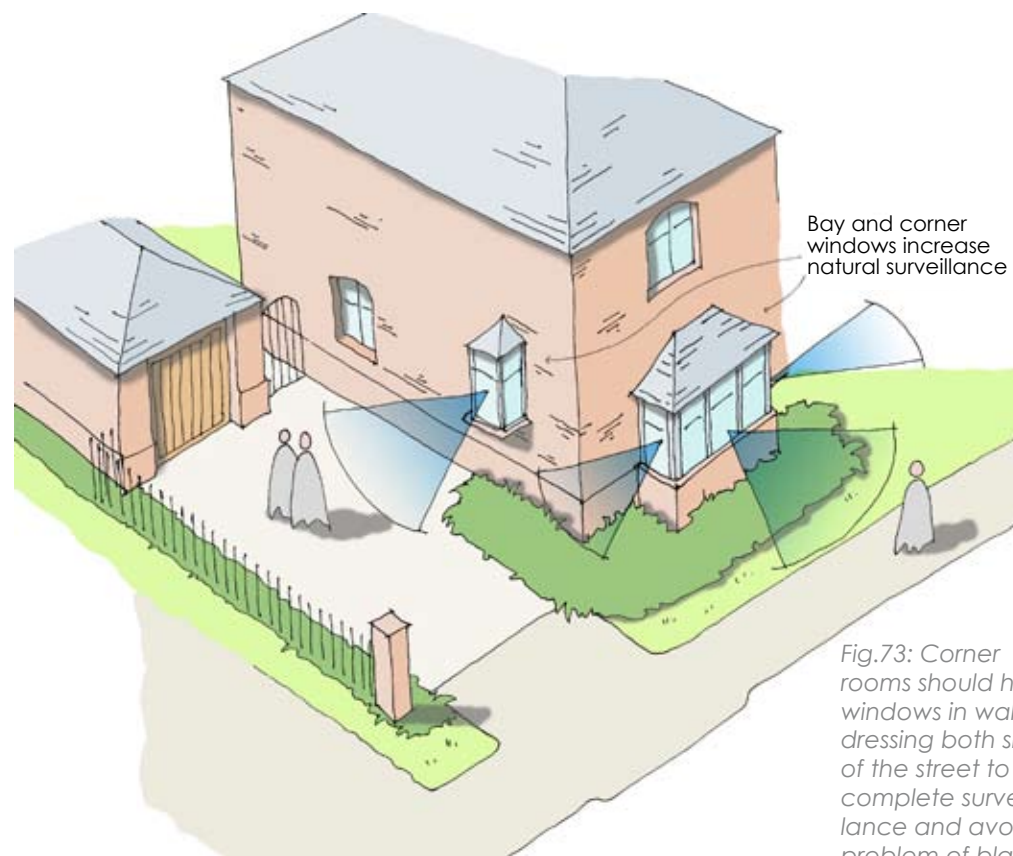


Fig.73: Corner rooms should have windows in walls addressing both sides of the street to allow complete surveillance and avoid the problem of blank flank walls.

Fig.74: Properties with integral garages require windows to **habitable rooms** at ground level to maximise the opportunities for surveillance.



Fig.75: Routes and public spaces that are primarily used during the day benefit from **passive surveillance** from non-residential buildings such as offices.

Ground floor habitable rooms increase natural surveillance



A Design & Access Statement* should demonstrate in text, layout and floor plans (and in 3 dimensions) that:

Opportunities for good **passive surveillance** have been achieved.

** or elsewhere as part of the planning application*

positioned close to bedrooms where peace and quiet are needed for study and sleeping.

A Design and Access statement will need to demonstrate that:

Noise from external sources has been **mitigated** against.

Noise

Noise disturbance, both from inside and outside the home, is a particular issue for residents, causing stress, affecting sleep and causing problems between neighbours. Potential noise sources will need to be identified as part of the **site constraints**.

Thought should be given to the location of parking, roads and footways, public open spaces and play areas, in relation to dwellings and in particular bedrooms. The relationship with neighbouring properties should also be carefully considered, as noise such as music or conversation from the adjacent house can be particularly disturbing for residents.

The internal layout of a home should consider the relationship between different rooms and their uses. Ideally, noisy rooms such as kitchen, dining and living rooms should not be

The overlooking of public open space and pedestrian routes is considered in BfL Q15.

Architectural quality is assessed in BfL Q17. Improvements in noise insulation and construction methods to reduce noise transmission may be reflected in BfL Q19 and Q20.

Policy Background

Planning and Compulsory Purchase Act 2004 (The Act):

- Statutory requirement for local authorities to undertake their function with a view to contributing to the achievement of sustainable development:

'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'.

- Therefore need to consider long term social, environmental, economic and resource impacts of development.
- Requirement that all relevant applications be accompanied by a statement about the design and access principles that have informed the development.

National:

PPS1: Delivering Sustainable Development

- Identifies four aims of sustainable development:
 - Social progress which recognises the needs of everyone;

- Effective protection of the environment,
- The prudent use of natural resources,
- The maintenance of high and stable levels of economic growth and employment.

- Paragraph 4 states *'these aims should be pursued in an integrated way through a sustainable, innovative and productive economy that delivers high levels of employment, and a just society that promotes social inclusion, sustainable communities and personal well being, in ways that protect and enhance the physical environment and optimise resource and energy use.'*

- Paragraph 13 requires planning policies to *'promote high-quality inclusive design in the layout of new developments and individual buildings in terms of function and impact, not just for the short term but over the lifetime of the development. Design which fails to take the opportunities available for improving the character and quality of an area should not be accepted.'*

- Paragraph 26 further encourages planning authorities to take account of longer term impacts and the needs of communities in

the future.

- Paragraph 33 recognises that *'good design ensures attractive, usable, durable and adaptable places and is a key element in achieving sustainable development. Good design is indivisible from good planning.'*

PPS3: Housing

- Goal to ensure everyone has the opportunity of living in a decent home, which they can afford, in a community where they want to live.
- Paragraph 10 requires the planning system to deliver *'High quality housing that is well-designed and built to a high standard'*.
- Paragraph 13 states that *'good design should contribute positively to making places better for people. Design which is inappropriate in its context, or which fails to take the opportunities available for improving the character and quality of an area and the way it functions, should not be accepted.'*
- Paragraph 14 states that planning authorities should develop design policies aimed at *'creating places, streets and spaces which meet the needs of people, are visually*

attractive, safe, accessible, functional, inclusive, have their own distinctive identity and main and improve local character.'

- Paragraph 69 states that *'in deciding planning applications, Local Planning Authorities should have regard to: achieving high quality housing; ensuring developments achieve a good mix of housing reflecting the accommodation requirements of specific groups, in particular, families and older people; the suitability of a site for housing, including its environmental sustainability; using land effectively and efficiently.'*

PPS 5: Planning and the Historic Environment:

- Paragraph 7.5 states that *'Local planning authorities should take into account the desirability of new development making a positive contribution to the character and local distinctiveness of the historic environment. The consideration of design should include scale, height, massing, alignment, materials and use'*.
- PPS6: Planning for Town Centres:
- Paragraph 2.19 states *'It is essential that town centres provide a high-quality and safe environment if they are to remain attractive and competitive. Well-designed public spaces and buildings, which are fit*

for purpose, comfortable, safe, attractive, accessible and durable, are key elements which can improve the health, vitality and economic potential of a town centre. Policies for the design of development for main town centre uses, regardless of location, and for development in town centres, should promote high quality and inclusive design, in order to improve the character and quality of the area in which such development is located and the way it functions.'

PPS13: Transport:

- Paragraph 6 states that 'LPAs should...consider how best to reduce crime and the fear of crime, and seek by the design and layout of developments and areas, to secure community safety and road safety.'

Local:**Supporting Documents and Organisations****Relevant Council Documents:**

Statement of Community Involvement Adopted July 2006

Eastleigh Borough Local Development Framework - Local Development Scheme - Adopted June 2007

Building for Life: www.buildingforlife.org

CABE (the Commission of Architecture and the Built Environment) - www.cabe.org.uk

Green Flag Awards – www.greenflagawards.org.uk

RIBA (Royal Institute of British Architects) - www.architecture.com

Lifetime Homes - www.lifetimehomes.org.uk

Code for Sustainable Homes - www.breeam.org/page.jsp?id=86

Planning Portal - www.planningportal.gov.uk

Glossary

A

Accessibility – the ease that people of all abilities are able to get to destinations and into buildings and spaces.

Active frontage – the front of a property that allows people inside and outside of that property to interact, eg. floor to ceiling windows at street level; pavement dining for a restaurant.

Active room – also known as habitable room, this room is used for day functions such as cooking, eating, playing.

Active solar gain – involves the use of solar collectors and other renewable energy systems like biomass to support the solar passive features.

Active street – a street that encourages pedestrian traffic by providing access to useful facilities or acting as a direct route to other facilities, and creating a pleasant pedestrian environment.

Adaptability – the ability of a structure to be altered, often structurally, to fit changed circumstances.

Adoptable standards – the level of quality required for the care and maintenance of certain works to be

taken on by a local authority or government organisation.

Air pollution – The introduction of chemicals, particulates, or biological materials that cause harm or discomfort to humans or other living organisms, or that damages the natural environment, into the atmosphere

Airborne particulates – tiny pieces of solid or liquid material such as dust, smoke, fumes, found in air or emissions.

Amenity – something that adds to a person's comfort or convenience; eg. privacy; lack of noise; attractive views.

Amenity space – an area of land, generally green space and planting, which softens the urban environment, allows for informal leisure and provides a setting for buildings.

Architectural detailing – the designed detail on a building or structure, eg. decorative lintels, sill and eaves details.

B

Biodiversity – the variation of lifeforms, plant and animal, in a given area or ecosystem.

Boundary – the border or limit of a property or space. This may be

indicated visually, through the use of a fence or wall; may be identified on a land ownership plan or similar; or may be historic and undefined.

Building for Life (BfL) – the national standard for well-designed homes and neighbourhoods, incorporating many of the principles of good urban design created by CABE, (Commission for Architecture and the Built Environment) and the HBF, (Home Builders Federation). Its criteria consist of a series of twenty questions which are used to evaluate the quality of new housing developments.

Building line – a designated line beyond which buildings are not erected.

Built form – how a building looks, eg. size, shape, height, location in plot, etc.

C

Car pool – a car hire service generally charged at an hourly rate.

Character – the combination of features and structures that distinguish one place/structure from another.

Character area appraisal – an assessment which identifies the defining features of an area, usually prepared by or on behalf of a local authority.

Circulation space – free space that allows movement from one area to another.

Connection network – the streets/paths/spaces that are interlinked, allowing people to move between them.

Conservation area – an area of land designated by a local authority under the Town and Country Planning (Listed Buildings and Conservation Areas) Act 1990 as possessing special architectural or historic interest. The Council will seek to protect or enhance the character and appearance of this area.

Conservation area appraisal – a published assessment identifying the architectural features or historic interest that warranted the areas conservation area designation.

Construction management plan – a written document that covers all aspects of the construction process, from site clearance, deliveries, construction traffic routing, through to completion of the development and moving off-site. May be required by a local authority to ensure the amenity of nearby residents to protected as much as possible and disruption to an area is minimised.

Contamination – the presence of particles, chemicals or other undesirable elements in a particular environ-

ment.

Context – the setting of a site or area. A context (or site or area) appraisal is a detailed analysis of the features of a site or area, including land uses, built and natural environment, and social and physical characteristics, which serves as a basis for the design of development in that site or area.

Culvert – a covered channel, pipe or drain that is below ground level or that carries a watercourse below structures/land.

Curtilage – the site area; the area of land immediately surrounding a house or other building; the area of land that is reasonably associated with the enjoyment of the house. This is usually the garden area.

D

Defensible space - an area of land with physical characteristics that allows residents to take responsibility for their own security.

Density – the mass or floorspace of a building or buildings in relation to an area of land; see 'net residential density'.

Desire lines – a route that people or animals instinctively wish to travel, often the shortest or straightest line between two points.

Development concept – the original thought-process and idea behind the design of a new development.

E

Easement corridor – the area of land to which legal permission is granted to allow someone or something to move across land not in their ownership, eg. sewer easement.

Elevation – a side-view drawing of the outside of a building.

Enclosure – the creation of a sense of defined space by means of surrounding buildings/structures/planting.

Encroachment – development on land that was formerly part of a street/public land/land in someone else's ownership.

Extensive green roof - a low-maintenance type of living roof cover, (which comprises of plants and soil or a growth medium), which is usually only accessed for maintenance purposes.

F

Façade – the main face of a building.

Fenestration – the design and placement of windows in a building.

Figure ground – the use of differentiation (usually black and white) to

clearly show the position of buildings in relation to space on a plan.

Fit for purpose – development that meets the needs and requirements of the occupier.

Flexibility - the ability of spaces within a building to be easily changed in response to changing needs of the residents; usually non-structural, eg. the ability to use a bedroom as a study.

Floor plan – a line drawing showing the layout of rooms as if seen from above, normally to scale.

Form – the layout, density, scale, appearance and landscape of a development.

Fronts – a structure that 'looks out' onto something; the main elevation of a building is located to look out over something that provides good amenity value, eg. a park or lake, or something that benefits from active surveillance, eg. a street or footpath. **Frontage** - the area of land in front of a building up to the street or water; the front or face of a building.

G

Gradient – the slope along a road or area of land.

Grain – the general arrangement or pattern of development of an area.

Green Infrastructure – connected and substantial networks of multi-functional green space.

Groundwater – water beneath the ground.

H

Habitable rooms – a room for living purposes, excluding bathroom, toilets, corridors, and halls. Depending on the local authority, kitchens may also be excluded.

Homezone – a road in residential area that has been designed to allow it to be used for a range of activities and to encourage very slow vehicle speeds

Health and safety executive zone – a safety zone legally imposed by the Health and Safety Executive to protect people working/living near to major hazard sites or pipelines or protect the hazard itself.

I

Inclusive – a structure/place that does not exclude anyone; allows access to people of all abilities. **Informal surveillance** – see passive/natural surveillance.

Intensive green roof - labour-intensive planted roof, requiring irrigation, feeding and additional maintenance. Usually designed to provide

easy access and to be used like a garden or recreational space. Inter-modal travel – the use of different types of transportation to get from one place to another.

L

Landmark building – a prominent identifying structure in a landscape.

Landscape – the visible features of an area of land (including physical elements such as landform, living elements such as plants and animals, elements such as lighting and weather, and human elements such as buildings and human activity). Soft landscape features include planting; hard landscape features include walls, patios, walkways, made up of hard materials.

Legibility - the ease with which visitors can orientate themselves and find their way around an area.

Light tube – also known as light pipe or sun tube, used to transport or distribute natural or artificial light. Listed building – a building included on the 'statutory list of buildings of special architectural or historic interest' held by English Heritage. Listed building consent – permission from a local authority to demolish or alter a building designated as a listed building.

Local Accessibility Contours map – a

geographical representation of the different degrees of public transport accessibility throughout an area.

Local character – see character.

Local nature reserve – an area of land that is protected and managed in order to preserve a particular type of habitat, plants or animals

M

Mass/Massing – the physical volume or bulk of a structure or building.

Material consideration – a factor (such as central government policy) that must be taken into consideration when a decision is being made as part of the planning process.

Mechanical ventilation - mechanical ventilation systems circulate fresh air using ducts and fans, rather than relying on airflow through small holes or cracks in a home's walls, roof, or windows.

Microclimate – the climate of a small, specific place in a particular area, as contrasted with climate of the whole area.

Mitigation – methods to reduce, remove or compensate for adverse environmental impacts.

Mixed use development – the integration of more than one type of use

within a building or set of buildings.

Modern methods of construction

- collective term to describe a variety of building construction methods including off-site construction. Movement network – the movement of people and vehicles going to and passing through buildings, places and spaces.

N

Natural Surveillance – (also known as Passive Surveillance) – informal, close observation of people in public areas, often from nearby buildings or spaces.

Nature conservation site - an area of land that is protected and managed for its value to the environment, wildlife or plant life and natural resources.

Net residential density – “net dwelling density is calculated by including only those site areas which will be developed for housing and directly associated uses, including access roads within the site, private garden space, car parking areas, incidental open space and landscaping and children's play areas, where these are provided,” (PPS3, November 2006)

Noise attenuation bund – a large mound of earth designed to reduce noise level of a particular source.

Noise protection measures

– measures that are put in place to reduce exposure to damaging levels of noise.

O

Open plan – generic term for the design of a floor plan that creates large, open spaces and minimises the number of dividing structures such as walls or partitions.

Orientation – the adjustment or alignment of a building or structure to its surroundings or environment.

Overbearing – “a term used to describe the impact of a development or building on its surroundings, particularly a neighbouring property, in terms of its scale, massing and general dominating effect, “ (Planning Portal)

P

Passive solar design – a building designed and orientated to make the most of the sun's warmth. Passive Solar Gain - systems that absorb, store and distribute the sun's energy without relying on mechanical devices like pumps and fans, which require additional energy.

Passive solar heating – a system of features built into a building that take advantage of the sun's warmth within relying on mechanical devices.

Passive surveillance – (also known as Natural Surveillance) - informal, close observation of people in public areas, often from nearby buildings or spaces.

Pedshed – the area encompassed by the walking distance from a development, usually a five or ten-minute walk, covering the actual distance walked.

Perimeter Block - a street block each of whose frontages face a public space (usually a street).

Permeability – the extent to which the buildings, structures and highways affect the ability of people or vehicles to move in different directions.

Planning Obligations – a legal instrument through which the planning system can address and mitigate the impact of development. Planning obligations can be used to secure improvements to development proposals, or to secure contributions towards services and infrastructure needed as a result of new developments.

Protected habitats – areas of land, protected under law, that provide a certain environment required for certain species of plant or wildlife to survive and thrive.

Protected species – certain species of plant or wildlife that are protected

under law.

Public open space – space set aside for formal or informal recreational purposes with access for the general public.

Public realm – all areas to which the public has open access, eg. Streets, parks, public buildings.

R

Ramsar – an area of land protected under the Ramsar Convention. The Ramsar Convention is an internal treaty for the conservation and sustainable use of wetlands, to prevent the loss of wetlands in the future.

Roofscape – the view of roofs of a particular street/area/town/city.

S

Scale – the size of a building in relation to its surroundings; the size of parts of a building or its details, in particular relation to the size of a person. **Section** – a drawing, usually to scale, of the internal cross-section of a building or structure, to provide information about internal arrangement and construction.

Sense of place – a feeling of appreciation for the distinct character of an area.

Service corridor – an underground

pathway for pipes/drains/etc for utility services such as electrics and water to run.

Service margin – an area of land either side of a service corridor or easement that has restricted development to protect the associated services.

Setting – the context or environment in which something sits.

Settlement pattern – the distinctive way in which the roads, fields, paths and buildings are laid out in a particular place.

Shared space - an urban design concept aimed at integrating uses of a public space.

Site asset – a feature of a site that have a positive value and can be used to enhance development.

Site constraint – a feature of a site that may have a detrimental value and will need mitigation measures to be incorporated into the design.

Site line - unobstructed line of vision for, amongst others, a driver at a junction.

Sites of Actual Conservation – an area of strictly protected land designated under the European Habitats Directive because of its important contribution for the conservation of specific habitats or species.

Sites of Interest for Nature Conservation – a non-statutory designation of sites at county/boundary level. Generally assessed by a local authority or county wildlife trust and adopted in local development framework documents.

Sites of Special Scientific Interest – a statutory protected site for nature conservation in the United Kingdom, identified by English Nature.

Solar collection – the absorption of sunlight with the intent of using the energy generated.

Solar energy – energy from the sun that is used to provide thermal (heat) or electrical energy.

Storm runoff – also known as storm water runoff or surface water runoff. Water that falls during rain events that is not absorbed into the ground and passes instead into storm water drainage system.

Storm water attenuation – the control of water that falls on impermeable surfaces in order to manage the rate of discharge into the ground or waterways.

Streetscape – the visual appearance of the street as a whole, including road, verges, gardens, buildings, trees, etc.

Street scene – the roadways,

pavements, street furniture, signage and other elements that comprise the street environment.

Street pattern – the layout of streets in an area.

Space left over after planning - areas of land within a development, often small and misshaped, that have no specific purpose.

Spatial – the space in which something is situated.

Special policy areas – **an area of land** that has local protection through a specific policy in the local development framework.

Special Protection Areas – a European designation for the protection of habitats for certain species of bird.

Surface car parking – open parking areas for cars at the ground level.
Surface water runoff – the drainage of water from rain or flooding, etc that has remained on the ground.

Sustainable – the ability to maintain balance in a certain process or state in a system. The most commonly quoted definition for sustainable development is the Brundtland Commission definition of “development that meets the needs of the present without compromising the ability of future generations to meet their own

needs”

Sustainable drainage system – an environmentally-friendly way of dealing with surface water runoff to avoid problems associated with conventional drainage practice. These problems include exacerbating flooding. This approach may also be termed “SUDS” (or sustainable urban drainage systems), but applies equally to rural and urban sites.

T
Thermal mass – the capacity of a structure/material to store heat.
Topography – the surface features of a place.

Town design statement – a published document that provides information as to what development would be acceptable in a particular town.

Tracking – the monitoring of a vehicle to provide information as to the movement around roadways. This is used to design highways that can accommodate certain vehicle types.

Traffic calming - a set of measures used to slow down or reduce vehicular traffic.

Transport nodes – a stop on a transportation system.

Tree preservation order – a direction made by the local planning authority

that makes it an offense to carry out work to a tree without the local authority's permission.

U
Undercroft car parking - parking at ground floor level which occupies the footprint of the building.

V
Village design statement – a published document that provides information as to what development would be acceptable in a particular village.

Vista – a view or outlook.

Visual amenity – a pleasant or attractive element of the environment that can be seen

