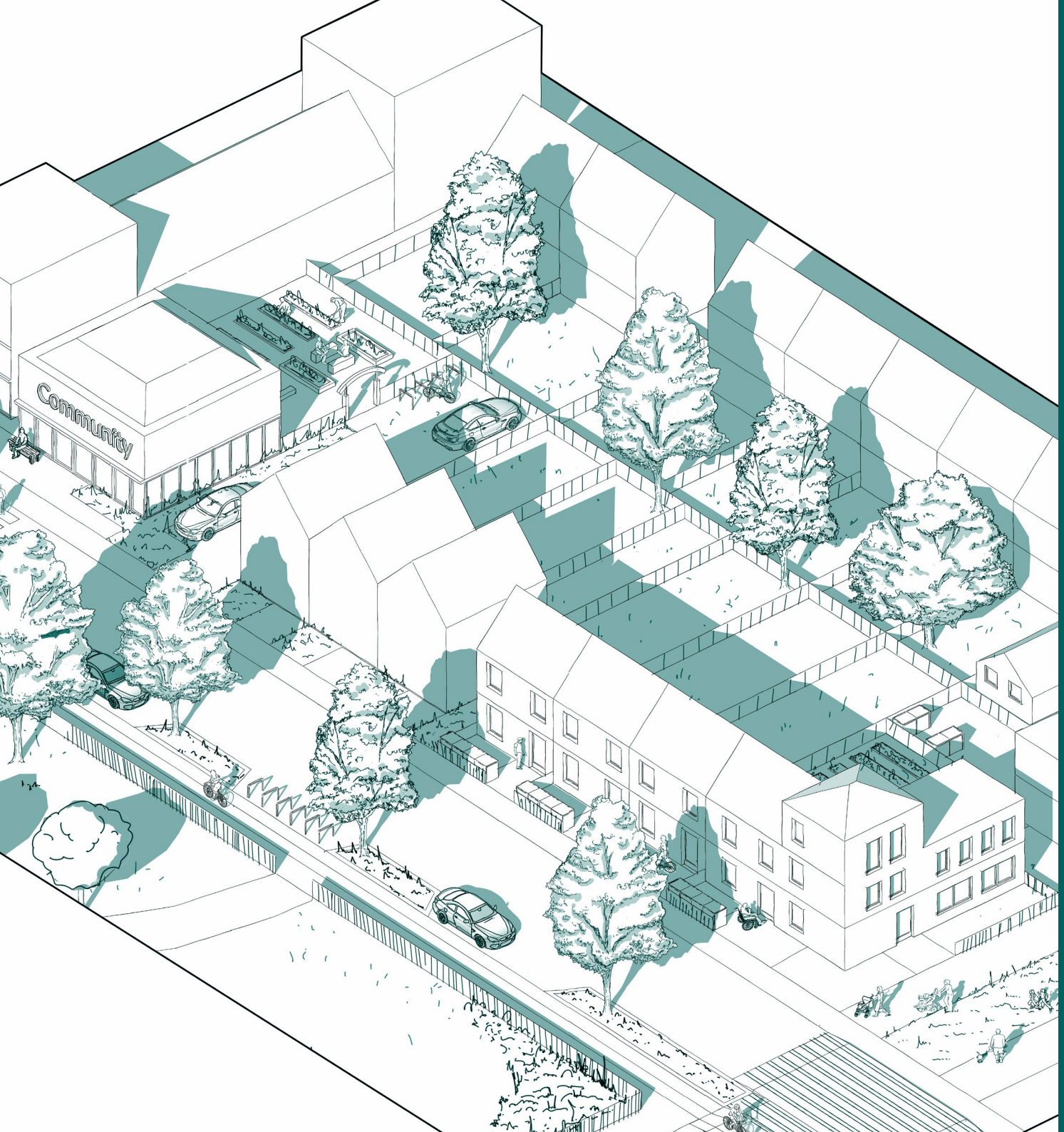

Ministry of Housing, Communities & Local Government

Draft for consultation

Design and Placemaking Planning Practice Guidance

Contents

This document/publication is also available on our website at www.gov.uk/mhclg
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January 2026

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Introduction

Introduction

1. Places affect us all – they are where we live, work and spend our leisure time. Their design influences our experience of them, as residents, visitors or passers-by. Good design and placemaking has the power to improve lives by supporting health, wellbeing, and a sense of safety, inclusion and belonging.

2. Well-designed places lift our spirits, make us feel at home, or give us a buzz of excitement and joy. Appropriate densities and layouts help people come together to learn, work, care for and support each other.

3. The principles for design quality are long standing: buildings and places should be fit for purpose, durable and bring delight. Places function well by accommodating homes, businesses and a range of other uses and activities that support everyday life. Places are complex and evolve, shaped by buildings, streets, landscape and infrastructure. Incremental changes affect their quality but well-designed places endure.

4. Design is also a process of exploring options, considering issues in the round and working collaboratively. Using design tools to test ideas and share knowledge creates a learning environment where different perspectives come together to shape better outcomes.

5. New development can strengthen existing places by improving transport, nature, facilities and community services, while supporting economic growth. Good design enables flexibility so buildings and spaces can adapt to a variety of uses. It benefits everyone and supports healthy, mixed and integrated communities.

6. Ultimately, good design considers people of all ages, abilities and needs, whether they live, work, learn, shop, play or are simply passing through. Its purpose is to create places that feel welcoming, work well and stand the test of time.

Purpose of Design and Placemaking Planning Practice Guidance

7. Design and Placemaking Planning Practice Guidance illustrates how well-designed places that are healthy, resilient, green, beautiful, enduring and successful can be achieved in practice. It forms a key part of the government's collection of planning practice guidance.

8. This guidance offers practical advice on creating high-quality places and buildings. Its aim is to outline and illustrate government's design priorities and it provides advice on the following in three parts:

Part 1 – Seven features of well-designed places

- Sets out seven features of well-designed places and their intended design and placemaking outcomes.
- Explains how design principles for each feature should inform the preparation of plans, design policies, guidance and proposals for new development.
- Informs planning decisions where relevant, including in the absence of local design policies, design guides or design codes, as set out in the National Planning Policy Framework.

Part 2 – Design quality in the planning process

- Explains how design quality can be integrated throughout the plan-making process.
- Provides guidance on design tools and processes within the planning system, including masterplans, local design codes and design guidance.
- Explains how design can be effectively integrated and considered in decision-making.

Part 3 – Setting effective design codes

- Explains how local design codes can set technical requirements for different design issues to support the creation of liveable places.
- Provides guidance on applying design codes appropriately across different scales and contexts.

9. MHCLG intends to publish a series of Model Design Codes. Design and Placemaking Planning Practice Guidance should be read alongside these, which will be expanded over time to create a catalogue of template design codes which local planning authorities can apply or adapt to their local context.

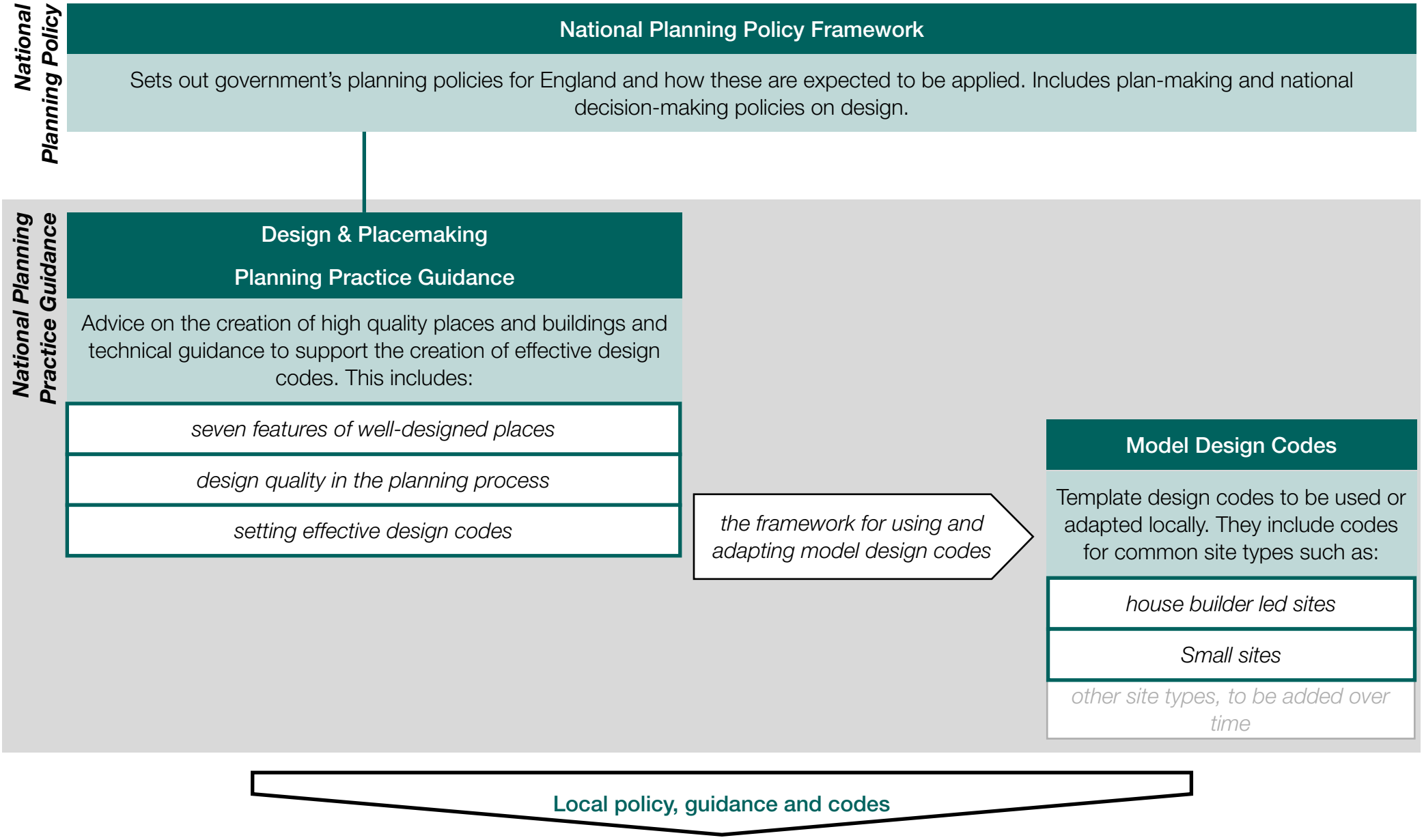


Fig 1 National policy and guidance on design

Top *- Officers Field, Weymouth*

Bottom *- Brindleyplace, Birmingham*

How to use Design and Placemaking Planning Practice Guidance

10. This guidance focuses on design quality in the planning system. It is primarily for:

- local authority planning officers, who prepare strategic or local planning policy and guidance and assess the merits of planning applications
- councillors and other decision-makers, who make planning decisions
- statutory consultees who local planning authorities are required to consult on relevant development proposals
- applicants and their design teams, who prepare applications for planning permission
- people in local communities and their representatives, including communities preparing neighbourhood plans

Relationship with national policy

11. This guidance is intended to support the applications of policies in the National Planning Policy Framework. This states that development proposals that are not well-designed should be refused. This guidance outlines and illustrates the government's priorities for well-designed places and how planning policies and decisions should support this.

Terminology

12. The language used here is as clear and straightforward as possible, avoiding jargon. When technical terms are necessary for precision, definitions are provided. Key components of technical design language and related terms within the planning process are defined in Appendix A.

Using the seven features to assess design quality

13. The seven features of well-designed places (set out in **Part 1**) are: liveability, climate, nature, movement, built form, public space and identity. In a well-designed place, the seven features come together through an integrated process, each supporting the others to create a distinct and cohesive place that is based on a sound understanding of its context. Good design considers how a development proposal can contribute to all these features, regardless of scale; from incremental changes such as reusing buildings and highway works to new buildings, infill developments, major projects and larger scale developments such as urban extensions, new neighbourhoods, new towns and settlements and large scale infrastructure.

14. Early in the design process, the relative importance of each feature may be discussed and agreed upon. The most relevant features will depend on factors such as:

- locally identified priorities and concerns
- the strategic priorities of the local authority
- the needs of specific user groups
- the scale of the proposal
- the site and its location
- the stage of the design process
- evolving needs and priorities throughout the development timeframe

Clear concept for design quality

15. Well-designed places and buildings arise from a clearly expressed design concept: a story that explains how the design has evolved and how it shapes the layout, form, appearance and details of the proposed development. This concept may draw inspiration from the site itself, its surroundings or a broader context. It may also introduce new approaches that either contrast with or complement the existing environment. This design story will address all seven features of well-designed places and is typically presented in a design and access statement submitted with a planning application.

Community participation

16. Local communities can play a vital role in creating well-designed places and buildings that encourage a strong connection between the built environment and people's quality of life. Involving diverse community members, including underrepresented groups, through approaches such as co-design, design workshops and other participatory methods, ensures new development responds to local community needs and knowledge and improves quality of life for current and future residents. Well-designed places continue to rely on community participation once development has been completed to ensure they are well-managed and maintained. Processes such as Post Occupancy Evaluation can provide an understanding of what has worked from the design process and can help raise standards of design quality for future development.

Top *- Gascoigne West Phase 2, London*

Bottom *- Poundbury, Dorchester, Dorset*

Part 1:

Seven features of well-designed places

Introducing the seven features

Introduction

17. Well-designed places are shaped by distinct features that work together to define their character. This guidance provides practical advice on how design quality can be achieved using the seven features of well-designed places, which reflect government's priorities and provide a common overarching framework.

The seven features of well-designed places set out in this chapter are:

- **Liveability** – healthy, mixed and integrated communities
- **Climate** – mitigating and adapting to change
- **Nature** – enhanced and optimised
- **Movement** – accessible and easy to move around
- **Built Form** – a compact and connected pattern of development
- **Public Space** – safe, social and inclusive
- **Identity** – attractive and distinctive

18. Each of the seven features includes design and placemaking outcomes and corresponding design principles that can inform local policies and guidance and decisions on development proposals.

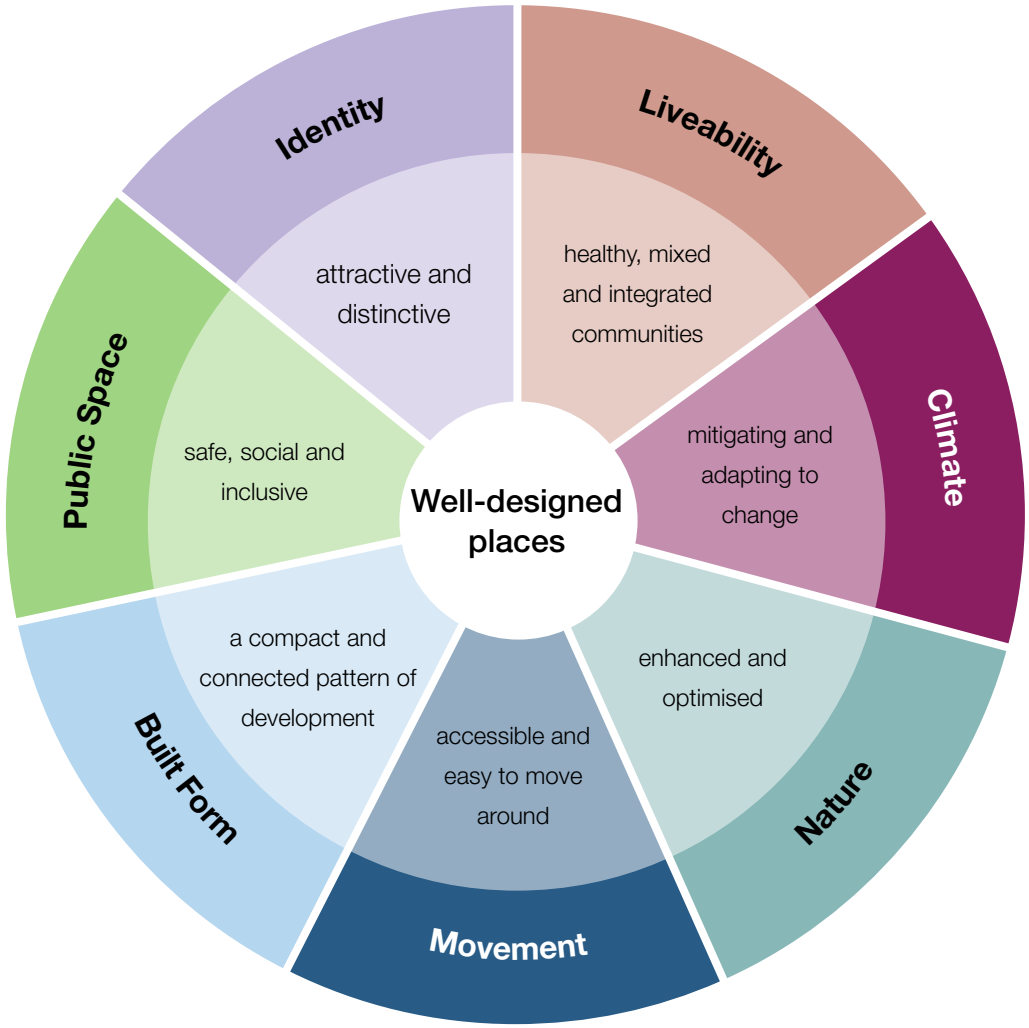


Fig 2 Seven features of well-designed places

Context

19. Well-designed places are based on a sound understanding of context, which is the location of the development and the attributes of its immediate, local and regional surroundings. However, well-designed places do not need to copy their surroundings in every way. New development can introduce elements that reflect how we live today, to include innovation or change such as increased densities and incorporate new sustainable features or systems.

20. Alongside consideration of the seven features of well-designed places, all local design policies and design tools should establish an appropriate baseline understanding of the local context and an analysis of local character and identity. This may include (but not be limited to) a consideration of:

- the relationship between the natural environment and built development
- typical patterns of built form that contribute positively to local character
- the street pattern, street proportions and landscape features
- the proportions of buildings framing spaces and streets
- local vernacular architecture and other architectural features that contribute to local character

21. Planning applications should demonstrate an understanding of the local context through written material, drawings and, where relevant, a design and access statement. Further guidance on context is included in each of the seven features of well-designed places.

Top *- Wapping Wharf, Bristol*

Bottom *- Marmalade Lane, Cambridge*

Liveability

Introduction

22. Liveability is the extent to which a place is suitable for living in and can play a key role in determining people's quality of life. Liveable places are enjoyable to spend time in and encourage healthy, mixed, vibrant and integrated communities. They optimise people's proximity to each other, reducing isolation and creating the conditions for people to live equitable and safe lives. Liveable places provide access to jobs, local services and facilities and enable physical activity for all.

Creating liveable places by design

23. Local design policies, guidance and proposals for new development can put people first by prioritising design to maximise public benefit: creating places that function well, prioritise proximity to public transport and community infrastructure and encourage a sense of belonging. The liveability of an area is enhanced when places include an appropriate mix of uses that support everyday activities and promote healthy behaviours. Compact, mixed-use development creates lively, active places that feel like centres or destinations. Neighbourhoods should offer a mix of house types and tenures to meet local needs and market demand, ensuring inclusivity for all stages of life.

24. Liveable places have:

- an appropriate mix of uses including local services, commercial uses and facilities to support daily life
- a mix of house types and tenures to suit people at all stages of life according to their different needs and support people's health and wellbeing
- homes that are integrated with other facilities and designed to be tenure neutral and socially inclusive
- a good relationship between private, shared and public spaces, contributing to social interaction, inclusion and play
- well-designed homes and buildings that are functional, accessible and environmentally sustainable
- good management and maintenance regimes that are formed during the early stages of the design process

Design principles contributing to liveability

25. Liveability and context:
Development proposals that deliver liveable places are based on an understanding of their local and wider context. New development should be integrated into its wider surroundings, physically, socially and visually. It should be carefully sited and demonstrably based on an understanding of the existing situation including how people use the space. This includes well-located new facilities, which address local needs and demands of the community.

26. Local design policies and guidance for development proposals should address the following design principles:

L1 Effective use of land

27. Using land effectively is a key component of achieving sustainable development, recognising that land is a finite resource. This means getting the maximum possible benefit for people from a site or area, taking into account relevant constraints.

Top - *Steepleton, Gloucestershire*

Bottom left - *Abode at Great Kneighton, Cambridge*

Bottom right - *The Triangle, Swindon*

28. This can achieve better economic, social and environmental outcomes, facilitate efficient use of resources and infrastructure and reduce pressure on greenfield sites.

29. Design considerations for effective land use could involve:

- integration and co-location of housing with shops and services in mixed use buildings close to public transport nodes
- providing substantial, accessible, ecological coherent useable green spaces rather than small strips and verges
- identifying land that is under-utilised, such as excessive areas of paving in public spaces, to re-purpose for nature, play or services to support new development
- consolidating surface car parking infrastructure into multi-storey car parks or car barns, or building over surface car parks

30. Designing for liveability means equitable access to a variety of services and cultural facilities, particularly in towns and city centres. New development can boost vitality and support sustainable economic growth by integrating commercial development, including buildings and spaces accommodating uses for a temporary period.

L2 A mix of uses

31. Co-locating different types of development within a single walkable area and ensuring the correct balance of uses will increase local activity throughout the day, reduce the need to travel, encourage sustainable modes of transport and support shops and services with a critical mass of people.

32. Successful communities require a range and variety of local services and community facilities including schools, nurseries, workplaces, healthcare, places of worship, recreational, civic and commercial uses. These should be designed so they:

- represent the varied needs and aspirations of the existing and future local community, including all ages and abilities
- support everyday life and encourage healthy, active and sustainable lifestyles
- are convenient and within walking, wheeling or cycling distance on accessible routes to local homes and other facilities
- are located to complement rather than conflict with neighbouring uses in terms of noise, servicing and ventilation
- are accessible for everyone including people with physical disabilities, people who are neurodivergent and people with a mental health condition

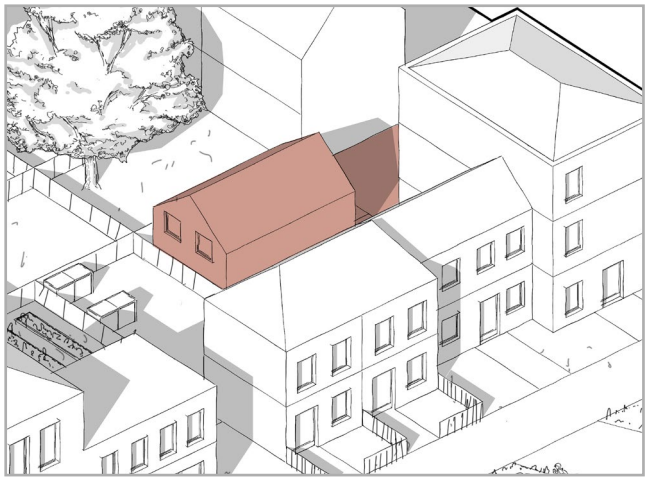


Fig 3 L1 Effective use of land: Identifying and repurposing land that is under-utilised

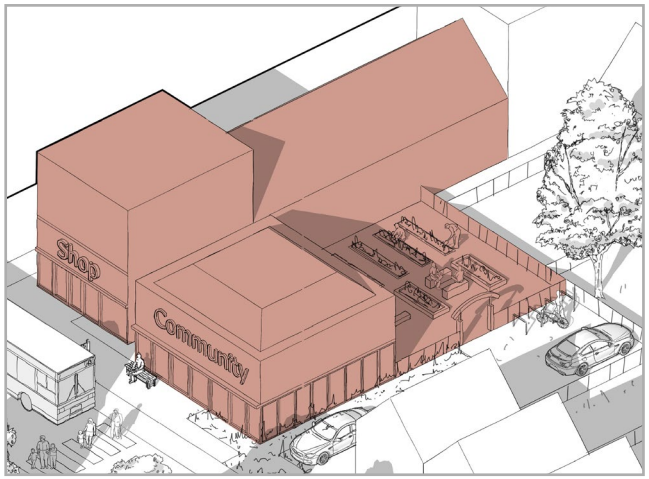


Fig 4 L2 A mix of uses: Community spaces can create activity that supports local shops

- are safe and include proportionate security measures depending on the mix of uses

33. Large scale mixed-use development needs to be designed to generate activity and intensity so the place feels like a vibrant centre or destination (see Built Form). This ensures the interrelationship between different uses is designed to cater for all users, paying particular attention to:

- the arrangement of ground floor uses, to ensure they are occupied successfully and appropriately
- the access arrangements to upper floors, especially to homes

34. Community spaces can create activity that supports local shops and other services enhancing the liveability of an area. Their design should ensure they can be used by the wider public or specific resident groups for many different activities, as these spaces can act as a self-organising public service and support community cohesion.

35. Schools and nurseries can provide a focus for community life and include important facilities beyond educational uses. Guidance on the provision, land requirements and design of schools is provided by the Department for Education (see School and Further Education College Design and Construction).

Top *- Derwenthorpe, York*

Bottom left *- Buccleuch House, London*

Bottom right *- Bourne Estate, Holborn, London*

36. When designing community spaces, schools, nurseries or medical facilities, development proposals should:

- be as accessible as possible to the communities they serve, including by sustainable modes of transport
- ensure sufficient provision to meet local needs where appropriate

L3 A mix of home tenures, types and sizes

37. A considerable amount of time is spent daily in the home environment. Internal home quality and its immediate surroundings are key determinants of the health status of the general population, particularly those who have diverse needs or specific needs related to protected characteristics.

38. Liveable neighbourhoods provide a variety of homes to suit all needs and ages, including:

- families who need affordable housing and rental homes
- older people
- students
- people with physical disabilities
- people who are neurodivergent or have a mental health condition

39. The correct mix of tenures and house types will depend on the socio-economic context of the local and wider area. New development should ensure different tenures integrate well and are designed to the same standards to create tenure neutral homes and spaces, where no tenure is disadvantaged. Larger scale development includes a range of tenures.

40. In an ageing population, designing liveable places that prioritise health and the needs of older people means integrating new settlements with good access to public transport and local facilities and promoting a variety of development models, such as community-led development, self – and custom-build and build to rent.

41. The majority of older people live in mainstream housing, which should be accessible and adaptable to meet their needs, enabling safe and independent living. Liveable places include a variety of specialist housing, including to meet the needs of older people (see planning practice guidance on Housing for Older and Disabled People).

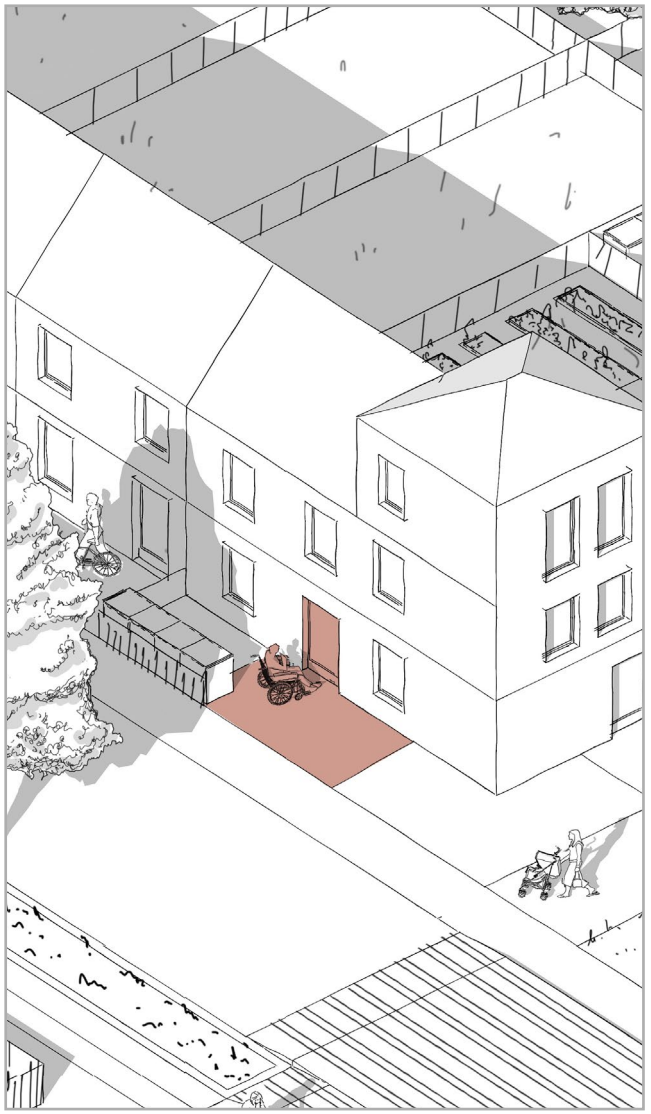


Fig 5 L3 A mix of home tenures, types and sizes: Neighbourhoods providing homes to suit all needs and ages

L4 Socially inclusive

42. Good design promotes social inclusion and contributes to creating balanced and mixed neighbourhoods that are suitable, healthy and accessible for all. Liveable places provide inclusive spaces for everyone to enjoy them including people with physical disabilities, people who are neurodivergent and people with a mental health condition. They promote social interaction and integration and help reduce loneliness (see **Public Space**).

43. Development proposals should:

- maximise the potential for social integration and play in the layout, form and appearance of types of development
- provide a consistent level of design quality across tenures, to support social integration
- avoid features that could create actual or perceived barriers, or contribute to segregation, within the development, on its edges and with its surroundings
- use local facilities such as schools, nurseries, community facilities, parks, other open spaces, health and religious or cultural facilities as destinations in layouts
- minimise people's exposure to air pollution (see **Movement**)

L5 Buildings relate well to surrounding spaces

44. New development should integrate buildings with their surroundings including external amenity and public spaces that are well-designed and functional and consider transport needs (see **Movement**). External amenity spaces should have a reasonable degree of privacy. Their design responds to local character and context and settlement type including in rural areas. They should be fit for purpose and include planting. Development proposals should consider:

- context: how buildings are sited in the wider area, including access to public and open spaces
- use: how and by whom the amenity space will be used.
- environmental factors: sunlight, shade, noise, odour, pollution.
- nature: green corridors and drainage.

45. Shared amenity spaces should feel safe and secure for residents, particularly children, offering comfort, relaxation, safety, social interaction and play and be overlooked and directly accessible.

Fig 6 L4 Socially inclusive: Consistent design quality across tenures, to support social integration

Fig 7 L5 Buildings relate well to surrounding spaces: Shared play space overlooked and easily accessible

46. Private amenity spaces, including balconies, enhance visual and outdoor amenity providing a degree of privacy and separation from adjoining public space. Front gardens should include planting to enhance public space but are not a substitute for it.

47. Buildings and public spaces should address relevant security risks and promote safety and security by embedding proportionate security measures into their design. The interface between building and public space is designed to be positive and appropriate to the context (see Identity and Public Space) and to occupants and passers-by.

L6 Well-managed and maintained

48. Liveable places encourage a sense of ownership and belonging among users, while welcoming visitors. Community participation in the design process helps establish a sense of ownership.

49. Effective management and maintenance preserves places' qualities or conditions and contributes to their resilience and attractiveness, improving liveability. Development proposals should ensure places are designed to be robust, durable and easy to look after with clearly defined ongoing responsibilities for all parts of a development.

50. Management and maintenance plans need to be considered early in the design process and should take account of service charges and future community control. For completed development, the following should be managed from the outset:

- local waste
- cleaning
- car parking
- internal common spaces
- shared spaces and public spaces (including play areas, open spaces, streets, green infrastructure, trees, sustainable drainage systems, and other public spaces)

51. It is essential that high density urban developments, including tall buildings, consider long-term management requirements such as renewal of cladding systems.

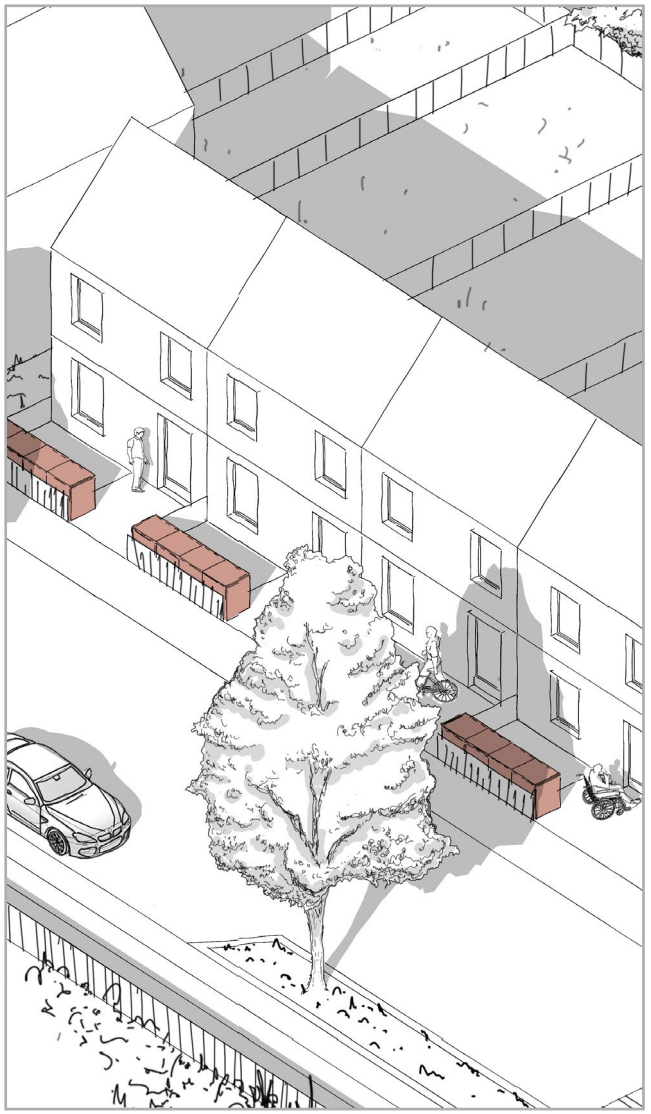
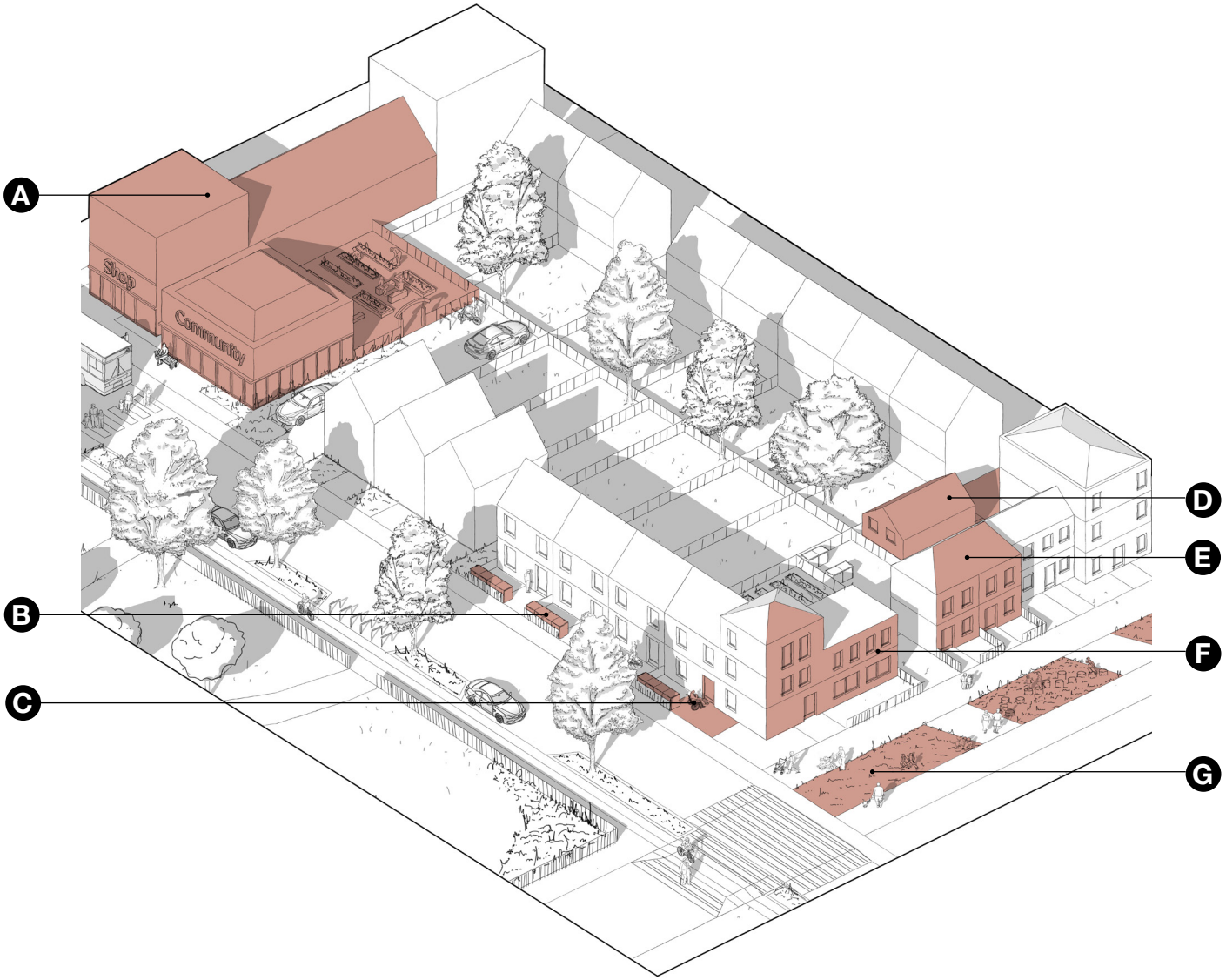


Fig 8 L6 Well-managed and maintained: Local waste management plans need to be considered early

Fig 9 Liveable place providing well-designed homes and a mix of uses to support the community



A. Community spaces can create activity that supports local shops

B. Local waste management plans need to be considered early

C. Neighbourhoods providing homes to suit all needs and ages

D. Identifying and repurposing land that is under-utilised

E and F. Integrating different tenures and designing to the same standards

G. Shared play space overlooked and easily accessible

Climate

Introduction

52. As temperature trends continue to rise, and extreme weather events become more frequent and severe, well-designed places and buildings respond to the impacts of climate change by being energy efficient, minimising carbon emissions to meet net zero by 2050, and maximising adaptation and resilience to extreme weather and other climate change effects. Their design conserves and improves natural resources including land, water, energy and materials. Well-designed places and buildings identify measures to achieve:

- mitigation, primarily by reducing greenhouse gas emissions and minimising operational and embodied energy
- adaptation, by modifying and upgrading new and existing buildings and infrastructure to cope with current and anticipated climate change impacts
- resilience, by building capacity to endure, adapt and recover from extreme weather events as well as long-term climate changes

Responding to climate change with design

53. Local design policies, guidance and proposals for new development can play a vital role in addressing the challenges posed by climate change. By prioritising energy efficiency, reducing greenhouse gas emissions and promoting sustainable construction practices, new development can contribute to climate change mitigation. Green and blue infrastructure should be integrated, enhancing flood resilience and adopting passive design strategies to help create places that are resilient to expected changes and build climate resilience.

54. Liveable and resilient places:

- effectively use land to increase green infrastructure provision, CO2 absorption, sustain ecosystems and prioritise nature-based solutions
- have a layout and form that enables compact and walkable neighbourhoods to promote active travel, reduce resource requirements for land, energy, materials and water, and support health and wellbeing

- use green infrastructure and the built environment to reduce overheating and air pollution and minimise flood risk and the potential impact of flooding
- are fit for purpose, adaptable, and reduce redevelopment and waste
- are resilient to climate change impacts and extreme weather, including overheating, changing rainfall patterns, drought, and increased flood and wildfire risks
- use materials and adopt technologies to minimise their environmental impact

Design principles contributing to climate change mitigation and adaptation

55. Climate and context:
Development proposals should create sustainable, environmentally friendly places, by understanding their local and wider context. Effective development enhances the site's characteristics and broader context, addressing environmental factors like landscape, microclimate, orientation, flood risk, noise, and air and water quality. Understanding the local context offers opportunities for CO2 absorption and reducing embodied carbon by making best use of new and existing buildings.

Top *- Crusader, Manchester*

Bottom left *- The Chocolate Quarter, Keynsham*

Bottom right *- Gasholders, London*

Climate and environmental changes should always inform this understanding, ensuring sustainability and resilience.

56. Local design policies and guidance for development proposals should address the following design principles:

C1 The energy hierarchy

57. Well-designed places and buildings follow the energy hierarchy to prioritise sustainable energy sources and use:

1. Energy saving: prevent or reduce the need for energy through passive measures including form, orientation and fabric.
2. Energy efficiency: use energy efficient materials and mechanical and electrical systems, including insulation, glazing, heat pumps, heat recovery, mechanical ventilation systems, passive cooling measures and LED lights.
3. Renewable energy: maximise contributions from natural resources such as sun, ground, wind, and vegetation for renewable energy. For example, orienting roofscapes to maximise opportunities for solar PV generation with south facing roofs. Decentralised sources can be particularly effective, including on-site electricity generation from photovoltaic arrays, wind turbines and community-led initiatives.
4. Low carbon energy: making use of low carbon energy infrastructure at the neighbourhood and building level by using heat pumps and heat networks to reduce the demand for non-sustainable energy sources.

58. Well-designed homes and buildings are efficient and cost effective to run. They have good ventilation, avoid overheating, minimise sound pollution and have good air quality, while providing comfort and personal control for their users. They help to reduce greenhouse gas and air pollutant emissions by incorporating features that encourage waste reduction and sustainable lifestyles. Reducing waste can be achieved by maximising reuse and recycling, ensuring there is sufficient space to store waste in residential and commercial buildings, and include shared service areas for recycling.

59. Some energy issues are most appropriately dealt with at the neighbourhood level, such as heat networks, which distribute heat or cooling from central sources to various buildings. In high density urban areas, heat networks offer a communal solution for low carbon heating.

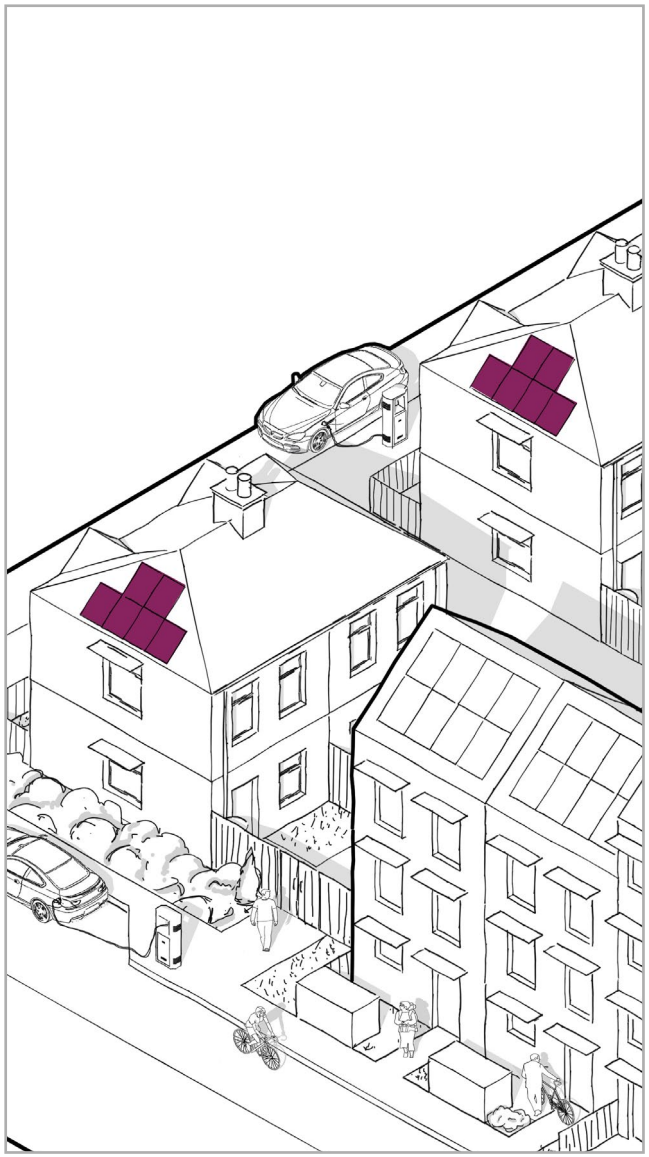


Fig 10 C1 Energy hierarchy: Maximise opportunities for solar PV generation with south facing roofs

C2 Whole life carbon and sustainable construction

60. To reduce operational and embodied carbon emissions and waste, development proposals can use whole life carbon assessment (WLCA) and circular economy principles.

61. Reducing embodied carbon can be achieved by:

- minimising material waste
- reuse and refurbishment in preference to new construction
- embedding circular economy principles
- reducing energy used in construction
- reusing materials
- designing for disassembly

62. A well-designed place is durable and adaptable, reducing long-term resource needs. Reusing and adapting buildings can lower resource consumption. Sustainable construction uses environmentally responsible and resource-efficient processes. Material selection and construction methods influence energy efficiency and whole life carbon emissions.

63. Proposals for new development can use materials that seek to minimise environmental impact by:

- using locally sourced materials where practicable
- ensuring high thermal or solar performance
- designing based on typical material dimensions to reduce waste

64. Modern methods of construction (MMC) encompass off-site manufacturing and on-site techniques as alternatives to traditional construction. MMC improves efficiency, productivity and the quality and performance of new homes and buildings using innovative technologies and digital infrastructure for factory-made building elements and components. Early co-ordination with stakeholders is essential to balance variety and manufacturing efficiency.

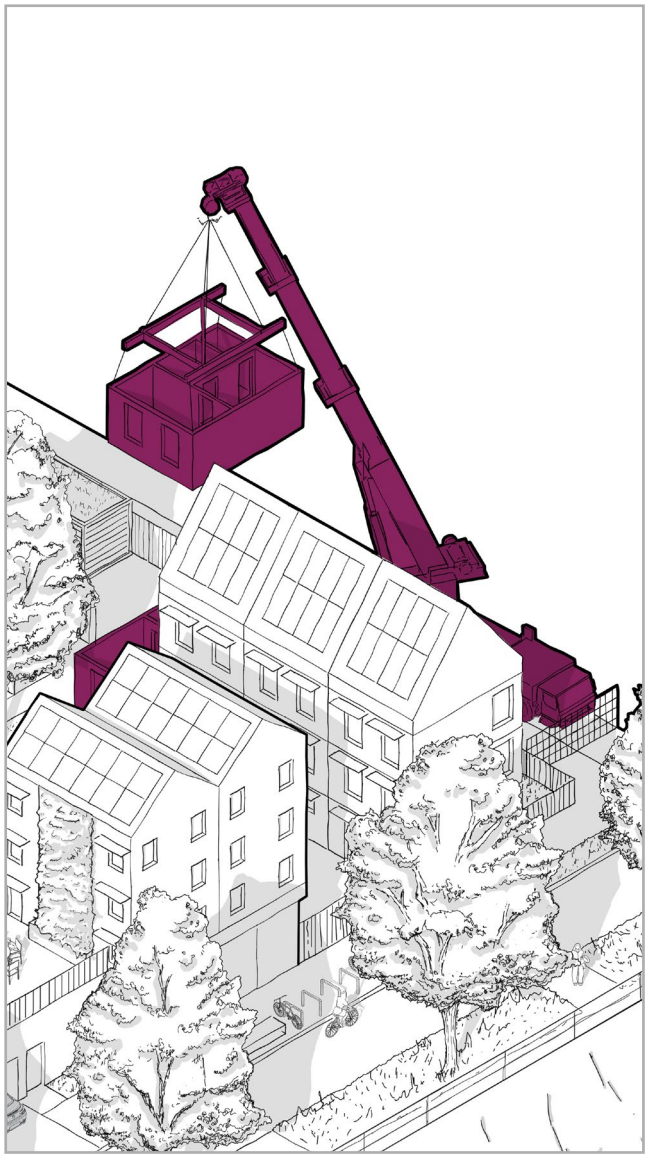


Fig 11 C2 Whole life carbon and sustainable construction: Using modern methods of construction

C3 Minimising climate risks

65. Liveable places are resilient to climate change by being prepared for current and future hazards, risks and impacts. Proposals for new development should address temperature extremes, increased flood and wildfire risks, and intense weather events such as rainstorms, droughts and heatwaves.

66. Buildings and infrastructure need to respond to current and forecast climate conditions by withstanding changes in climate and reducing harm from climate impacts to promote longevity in the built environment.

67. New development should be resilient to climate risks (for example extreme weather events) throughout its lifetime. Climate risk reduction measures should follow this hierarchy:

1. Avoid risk where possible.
2. Reduce risk if not.
3. Compensate as a last resort.

Top *- New Islington, Manchester*

Bottom left *- The Brewery, Portsmouth*

Bottom right *- Goldsmith Street, Norwich*

68. Flood risk should be considered early in the design process, alongside other design factors. Reducing flood risk could be achieved through making more space for water, increasing infiltration, providing new or improved flood defences or through natural flood management techniques. Sustainable drainage systems (SuDS) and other natural flood resilience measures should be used where there are drainage implications (see Nature).

69. Water supply is becoming less predictable due to climate change and areas of the UK are subject to water stress. The design of buildings and places can contribute to the efficient use of water, for example by harnessing rainfall or grey water for re-use on-site. The use of harvested rainfall helps green infrastructure survive heatwaves and drought conditions, and blue infrastructure is important for wildfire resilience.

C4 Overheating and thermal comfort

70. Green infrastructure should be incorporated in new development. This includes trees, other wildlife-friendly planting, green corridors, green roofs and walls, as well as structures and water for comfort. Public space design should create shade and shelter with appropriately planted deciduous trees providing shade to buildings, managing solar gain in warmer months. These landscape features contribute to reducing the urban heat island effect where the temperatures in dense areas, often with tall buildings, are significantly higher than outside them.

71. Urban microclimates should be considered, such as wind impact on exposed sites or areas with taller buildings, as this can affect the usability of public spaces, and the energy demands of surrounding buildings.

72. Passive design strategies can minimise overheating in homes, offices and other buildings, to achieve internal comfort. These include:

- the layout, size, and aspect of internal spaces
- insulation of the external envelope and thermal mass
- measures that minimise unwanted solar gain
- measures that increase the solar reflectivity of walls and roofs
- careful modulations of building heights and roofscape to influence the amount of sunlight to internal spaces and to neighbouring buildings
- good ventilation to reduce overheating

73. They can be supported by other measures such as mechanical ventilation with heat recovery for efficient ventilation in winter.

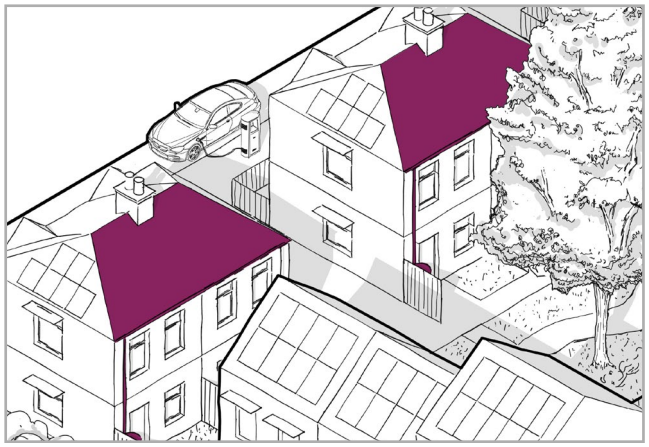
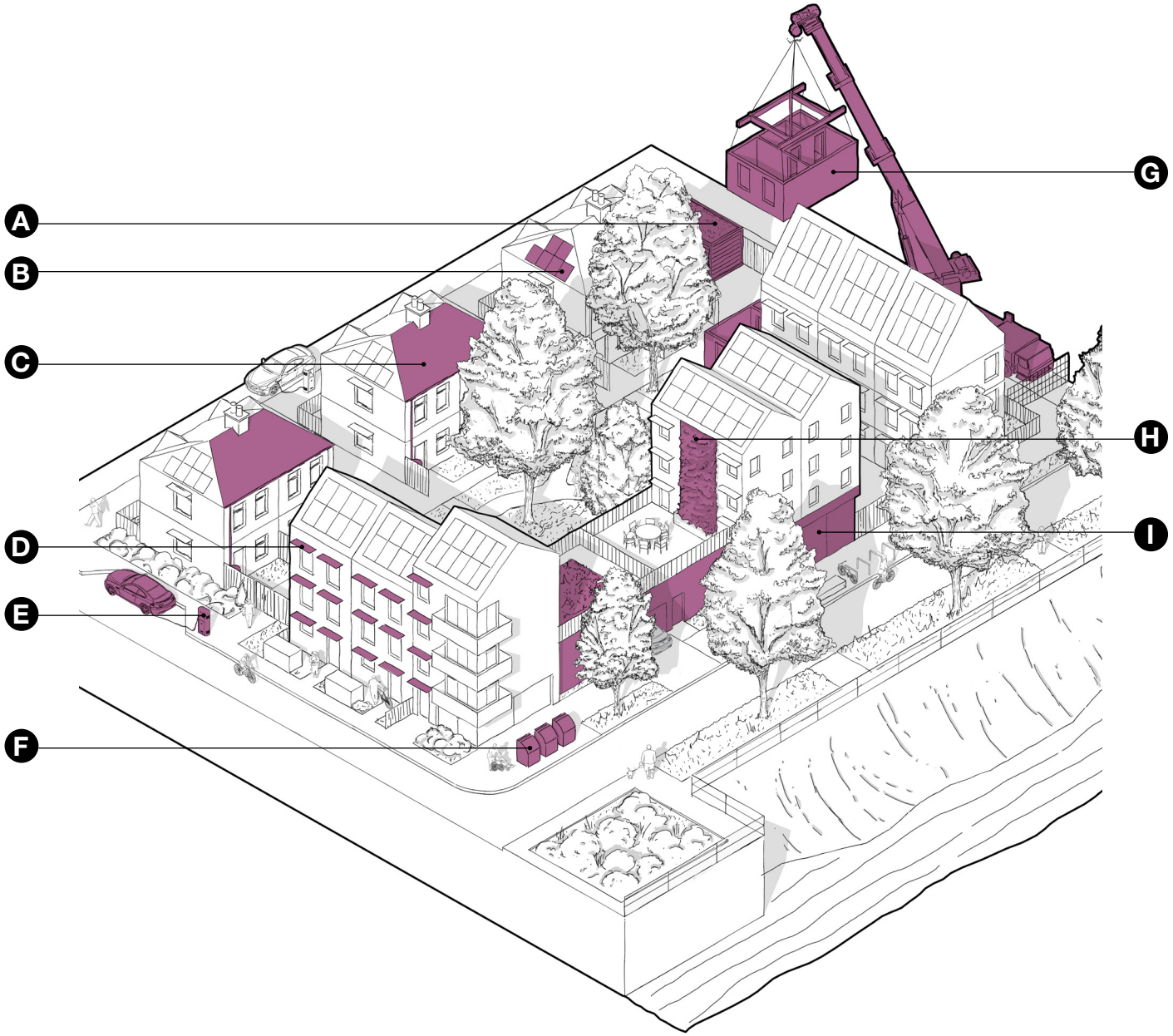


Fig 12 C3 Minimising climate risks: Harnessing rainfall on grey water for re-use on site

Fig 13 C4 Overheating and thermal comfort: Solar shades to minimise unwanted solar gain

Fig 14 A place that reduces emissions and responds to climate challenges



A. Neighbourhood level energy solutions, such as local energy centres and heat networks

B. Maximising contributions from natural resources to renewable energy

C. Harnessing rainfall on site

D. Designing to minimise unwanted solar gain

E. Opportunities for EV charging

F. Incorporating features that encourage waste reduction

G. Improving efficiency of construction through techniques such as MMC

H. Green walls for thermal regulation, with co-benefits for nature

I. Considering flood risk in ground floor uses

Nature

Introduction

74. Nature is essential for biodiversity, health and wellbeing, shading and cooling, noise mitigation, air quality and mitigating flood risk, as well as contributing to tackling the climate emergency. Nature is also central to liveability and affects people's quality of life. Natural features are integrated into well-designed development and include natural and designed landscapes, trees, high quality public green spaces, wildlife-friendly planting and water, to enable biodiversity to thrive.

Supporting nature through design

75. Local design policies, guidance and proposals for new development can support nature by using design to create sustainable places that integrate natural features, enhance biodiversity, and contribute to the creation of liveable places.

76. Well-designed places:

- integrate existing and incorporate new natural features into a multi-functional green infrastructure network that supports quality of place, biodiversity, active travel and water management, and contributes to climate change mitigation, adaptation and resilience
- prioritise nature so diverse ecosystems can flourish to ensure a healthy natural environment that supports and enhances biodiversity
- provide attractive green spaces in locations that are easy to access for everyone and for all to enjoy, to encourage play, recreation, physical exercise and promote health, wellbeing and social inclusion

Design principles supporting nature

Nature and context:

77. Development proposals should prioritise nature with an understanding of their local and wider context. Landscape character, and how places or developments sit within the landscape, should influence the siting of new development and how natural features are retained or incorporated into it. By retaining and incorporating natural features from the existing landscape, and aligning with local nature recovery strategies, new developments

can enhance their context and benefit both new and existing residents. This approach ensures that developments are well grounded in their locality.

78. Local design policies and guidance for development proposals should address the following design principles:

N1 Provide a network of high quality, biodiverse, green infrastructure

79. Green infrastructure is a network of multi-functional urban and rural green and blue spaces and other natural features, which is capable of delivering a wide range of environmental, economic, health and wellbeing benefits for nature, climate, local and wider communities and prosperity. It covers everything from country parks to green roofs and street trees.

80. Green infrastructure in urban areas provides habitats for wildlife and wellbeing benefits, reducing flood risk, the urban heat island effect and other climate change risks. It also mitigates noise exposure by introducing positive sounds like birdsong and water. It should be designed in early to prioritise its proper placement and long-term management. Principles, standards and design guidance for green infrastructure are set out in the Natural England Green Infrastructure Framework.

81. Green and blue spaces are essential for biodiversity, leisure and quality of life. They include public, shared and private outdoor spaces and should be connected to provide a network of multi-functional green spaces that are high quality, robust and adaptable. They should remain fit for purpose and be managed and maintained for continual use.

82. Important green space design considerations include:

- addressing the biodiversity crisis by creating nature-rich areas and retaining existing natural features
- considering wider and local context, existing landscape and ecology
- ensuring accessibility for everyone, with no segregation, to suit a diverse range of needs
- placing of fences and gates to avoid interrupting wildlife networks
- how spaces are connected to each other
- the variety of types and sizes of green and blue space
- the balance between public and private green spaces (see Public Space)

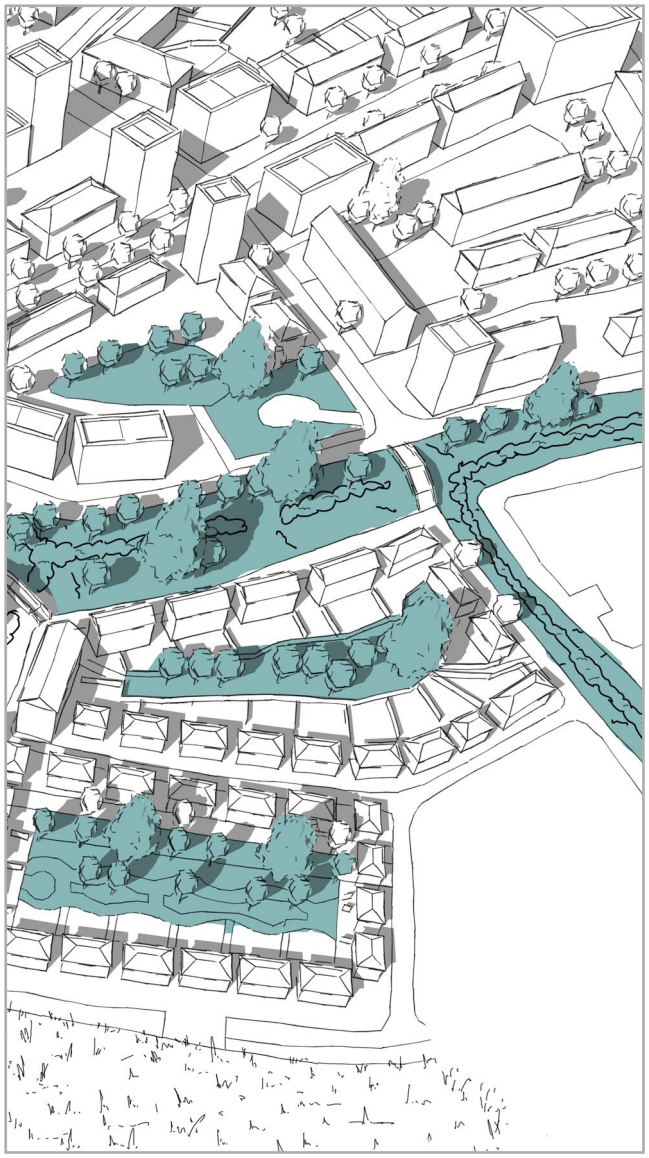


Fig 15 N1 Provide a network of high quality, biodiverse green infrastructure: A variety of types and sizes of green space

- their potential to contribute to a strategic green infrastructure system, and to water management
- their ability to support a range of activities and provide amenity value
- lighting for well-used footpaths and games areas, avoiding light spillage that causes nuisance and harms wildlife
- well-integrated drainage, ecology, shading, and recreation
- good maintenance and management regimes based on an understanding of the costs for occupants or users
- root protection from underground infrastructure and bio-secure planting to avoid introducing pests and diseases

83. Public green spaces are open and accessible to all, providing comfort, relaxation, stimulation and social interaction in a safe environment. To support use by all groups of people, new public green spaces should be within a short walk of homes, either onsite or nearby, and designed to be versatile.

Top *- Appleby Blue Almshouse, London*

Bottom left *- Upton Site C, Northamptonshire*

Bottom right *- Houlton, Rugby*

N2 Improve and enhance water management

84. Effective water management maintains healthy water systems, supports sustainable drainage and can reduce flood risk, improve water quality and provides habitats and opportunities for recreational activities. Water features should be integrated with landscape, biodiversity, drainage and existing watercourses. Combined with green and brown roofs, swales, rain gardens and rain capture, they create multifunctional sustainable drainage systems (SuDS) that enhance green spaces and offer recreational opportunities.

85. When sensitively designed and integrated, developments near water features such as rivers, docks and wetlands enhance the value of blue infrastructure as public realm, habitat and ecological corridors.

86. Buildings may face the water and leave a buffer zone to allow for maintenance of watercourses and banks, as well as for flood defences. Development proposals should encourage walking and cycling routes along watercourses, opening up culverts, reinstating meanders and restoring and naturalising riverbeds and banks to benefit wildlife, public access and flood attenuation.

N3 Sustainable drainage

87. Sustainable drainage systems (SuDS) mimic natural drainage to manage surface water effectively, reducing run-off, flood risk, water pollution and storm overflow discharges. SuDS benefit biodiversity, water quality and amenity. The National Standards for SuDS provide information for the design of surface water drainage systems, and include the following hierarchy for managing surface water run-off:

1. Collected for non-potable use.
2. Infiltrated to ground.
3. Discharged to an above ground surface water body.
4. Discharged to a surface water sewer or another piped surface water drainage system.
5. Discharged to a combined sewer.

88. Site specific factors such as density, watercourses and ground conditions will influence the design of SuDS.

89. To ensure effective use of land and ease of access for maintenance, SuDS need to be considered early in the design process taking into account the site context including how water would flow across the area and integration with green space, biodiversity provision, recreation and highways.

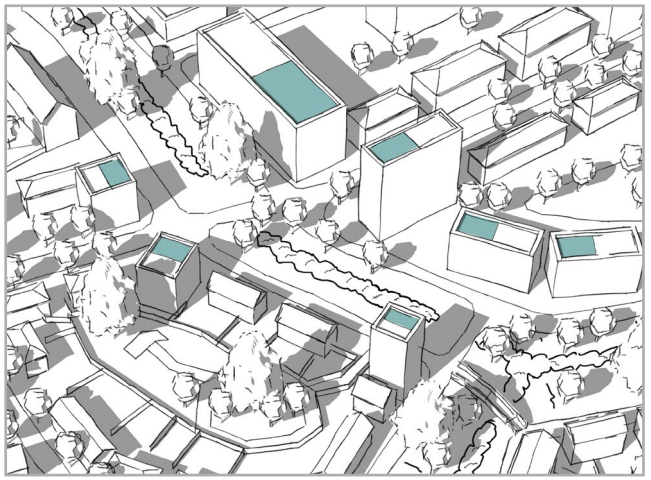


Fig 16 N2 Improve and enhance water management: Green and brown roofs can contribute to multifunctional sustainable drainage systems

Fig 17 N3 Sustainable drainage: Swales provide attenuation while also channelling water to other features such as ponds

90. New development should use SuDS where there are drainage implications.

N4 Support rich and varied biodiversity

91. Green corridors should be used to extend and connect existing ecosystems, ensuring valuable biodiversity is protected and enhanced, with priority given to rare or critical species and habitats. New development can also include site specific enhancements to achieve biodiversity net gain (*see planning practice guidance on* Biodiversity net gain).

92. The design of development should protect and enhance natural assets such as ancient woodlands, designated sites, mature trees, and protected species, while considering priority habitats and species. New development should ensure green spaces support local nature recovery strategies (LNRS), enhancing valuable existing areas and meeting wider environmental outcomes. Each LNRS sets nature recovery priorities and actions for specific locations.

93. These design principles can ensure development integrates and enhances biodiversity through:

- planting to provide nectar, nuts, seeds, native vegetation and berries along with trees and shrubs, logs and stones
- creating and connecting natural habits through, for example, trees, wildflowers and ponds, and hedgehog highways
- incorporating features for species, such as bat and bird boxes, and bee and bird bricks (including swift bricks)
- enhancing habitats with management of native planting, foraging grounds for bats, feeding grounds and wetlands for birds and forest floor habitats
- creating a range of ecological niches for biodiversity to thrive, such as wetland areas and open grassland
- retaining and enhancing existing features and natural assets such as trees, woodlands, hedges, wetland areas, chalk streams and other nature features where possible
- using river restoration techniques to create and enhance habitat and reduce flood risk
- creating mosaics with a range of elements and structures as small patches of bare ground, tall flower-rich vegetation, or scattered trees and scrub
- incorporating trees and hedgerows into public realm and other green spaces, as well as private development where appropriate
- designing SuDS and rain gardens to provide benefits to nature by including planting and habitat niches

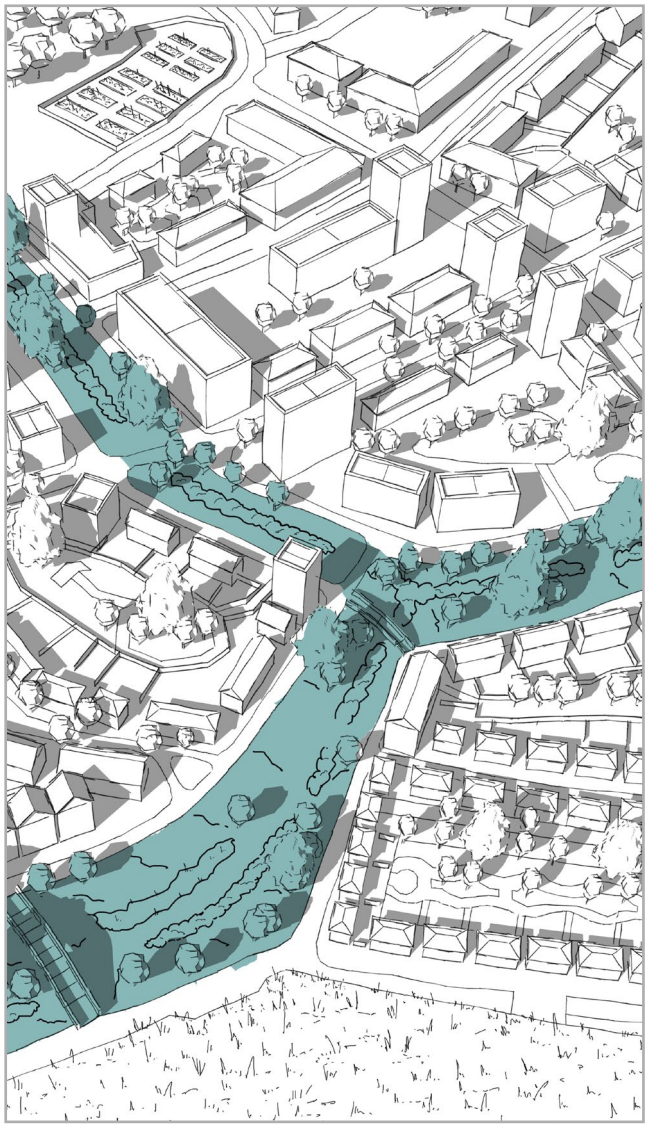


Fig 18 N4 Support rich and varied biodiversity: Green corridors extend and connect existing ecosystems

- using masterplans to create an interconnected ecological network
- using green façades to provide nesting opportunities and food for wildlife, creating habitats on roofs which are especially beneficial for birds and insects

N5 Urban trees

94. Urban trees and other landscape features are key components of liveable places. The inclusion of trees and natural features in public and private open space provide habitat, shading, cooling, air quality improvements and carbon sequestration.

95. Well-designed public spaces can incorporate trees and natural features using the following design principles:

- incorporating a variety of appropriate tree species to support biodiversity and build biosecurity resilience
- careful positioning to allow space for the mature tree without causing obstruction or interfering with property, infrastructure, street lighting or junction sightlines
- ensuring that urban trees and green infrastructure provide for a range of functions and benefits, and are sufficient to help improve air quality and reduce noise from the street network
- coordinating tree planting with utilities providers and service ducts early in the lifetime of a development to ensure that trees do not interfere with underground services
- ensuring the long-term maintenance of newly-planted trees through appropriate measures, such as establishing root protection areas and using biosecure planting to avoid the introduction of pests

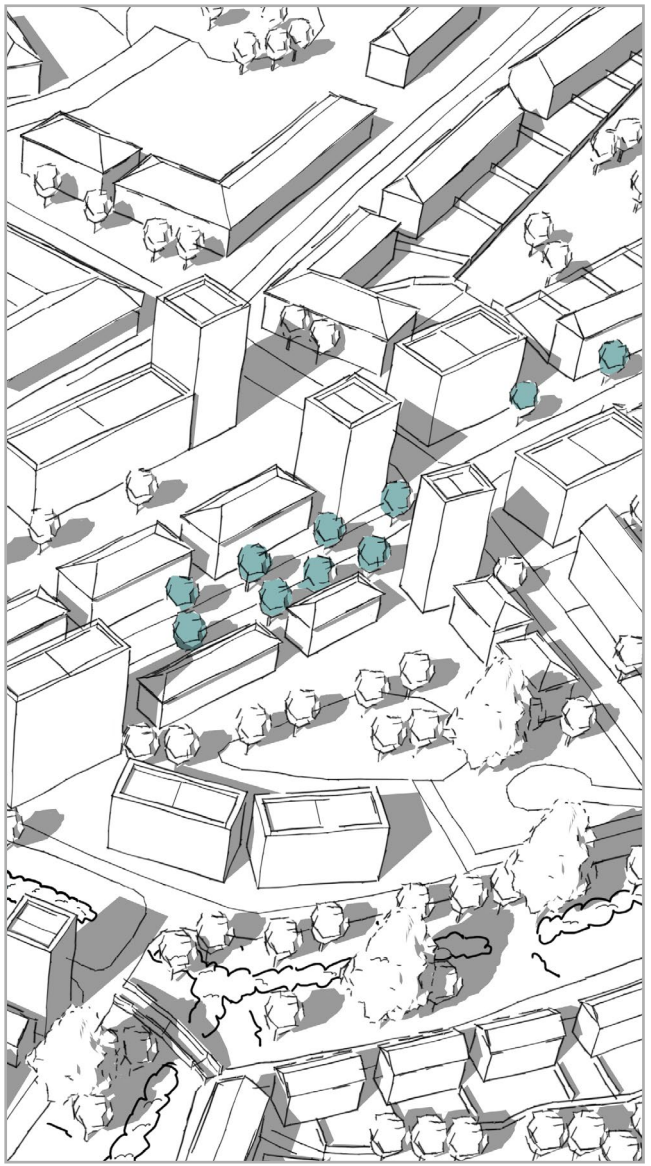


Fig 19 N5 Urban trees: Trees integrated into public and private space

Fig 20 Integration of nature that supports biodiversity, wellbeing and climate resilience

A. Protecting and enhancing natural assets such as ancient woodlands

B. Blue infrastructure for biodiversity, wildfire resilience and sustainable infrastructure

C. Integration of swales and other sustainable drainage features

D. Allotments and community growing projects

E. Green and brown roofs for sustainable drainage and biodiversity, with co-benefits for thermal performance

F. Connecting ecosystems with green corridors

G. Retaining existing hedgerows

H. Creation of ecological niches to help biodiversity thrive

Movement

Introduction

96. Places should accommodate different types of movement and journey types, supporting a vision-led approach to transport planning. Different patterns of movement include walking, wheeling and cycling, access to facilities and employment, servicing and parking, and the convenience of public transport. Movement should be considered at all spatial scales and be designed inclusively to remove barriers to access for all life stages and abilities from the start.

Promoting sustainable transport through design

97. Local design policies, guidance and proposals for new development can influence transport choices and patterns of movement which contribute to making high quality liveable places. Successful development depends upon a movement network that connects destinations, places and communities within the site and beyond its boundaries, and has a positive impact on the quality and character of place.

98. Liveable places that support movement for all have:

- a connected network of routes and clear pattern and hierarchy of streets that provide safe and accessible movement for all
- streets, walking and cycling routes, and public transport services that consider people's diverse needs and support a genuine choice of sustainable transport modes
- design measures that limit the impacts of car use by prioritising walking, wheeling, cycling and public transport, and improving air quality
- streets and spaces that promote activity and social interaction, including the movement of children, and enhance health, wellbeing, accessibility and inclusion
- green infrastructure, including street trees, incorporated as part of street design, to improve air quality, mitigate overheating in urban areas, and support biodiversity

Design principles contributing to movement

99. Movement and context:
Development proposals should demonstrate an understanding of the surrounding area, to effectively incorporate a successful movement network in a development. This helps make sustainable transport choices more attractive, supports the role of a development in improving connectivity for its wider area and helps manage transport impacts of new development in terms of:

- its land-use, servicing and layout
- the provision and quality of transport infrastructure
- the accessibility and quality of existing service provision
- the transport needs of different users

100. Local design policies and guidance for development proposals should address the following design principles:

M1 A connected network of routes for sustainable modes of transport

101. A well-designed and connected network offers a genuine travel choice and reduces car reliance, by linking people to important destinations through a choice of comfortable, safe and accessible ways to make journeys.

Top *- Ridgeway at Eddington, Cambridge*

Bottom left *- Alkerden Gateway, Alkerden Village, Ebbsfleet Garden City*

Bottom right *- The Avenue, Essex*

It should be considered at different spatial scales, to maximise development opportunities in accessible locations. Development should integrate with existing and planned public transport and active travel routes. Co-ordinating travel routes with green infrastructure can make a positive contribution to health, wellbeing and climate change mitigation and adaptation, and help reduce air pollution and people's exposure to it.

102. A connected network of routes should follow the user hierarchy from Manual for Streets:

1. People walking and wheeling.
2. People cycling.
3. Public transport, service and emergency vehicles.
4. Motor vehicles.

103. All transport modes should be integrated into the built form and public spaces. The layout, landscape, street trees, lighting, street furniture and materials (see Public Space) will ensure streets are safe, attractive and characterful, helping to make sustainable transport modes more appealing.

104. A connected network and hierarchy of routes forms the circulatory system of any settlement and facilitates links to public transport. This supports the safety of women and girls and enables safe and secure movement for everyone, including:

- people with mobility impairments
- people who are blind or partially sighted
- people with non-visible disabilities

105. Clear street layouts and hierarchies make journeys and navigation easy, with different types of streets accommodating different levels of vehicle movements such as:

- wider spaces between buildings suiting busier streets served by public transport
- narrow streets for limited vehicle movement and low speeds
- mews, courtyards and culs-de-sac suitable for very minimal vehicular movement, including routes for walking, wheeling and cycling

M2 The street network

106. The street network sets a long-lasting framework for movement often outliving the buildings it serves. It includes a clear street hierarchy, reflecting each street's movement and place function. Street design should reduce the dominance of motor-traffic and create opportunities for play, rest and social interaction benefitting the whole community.

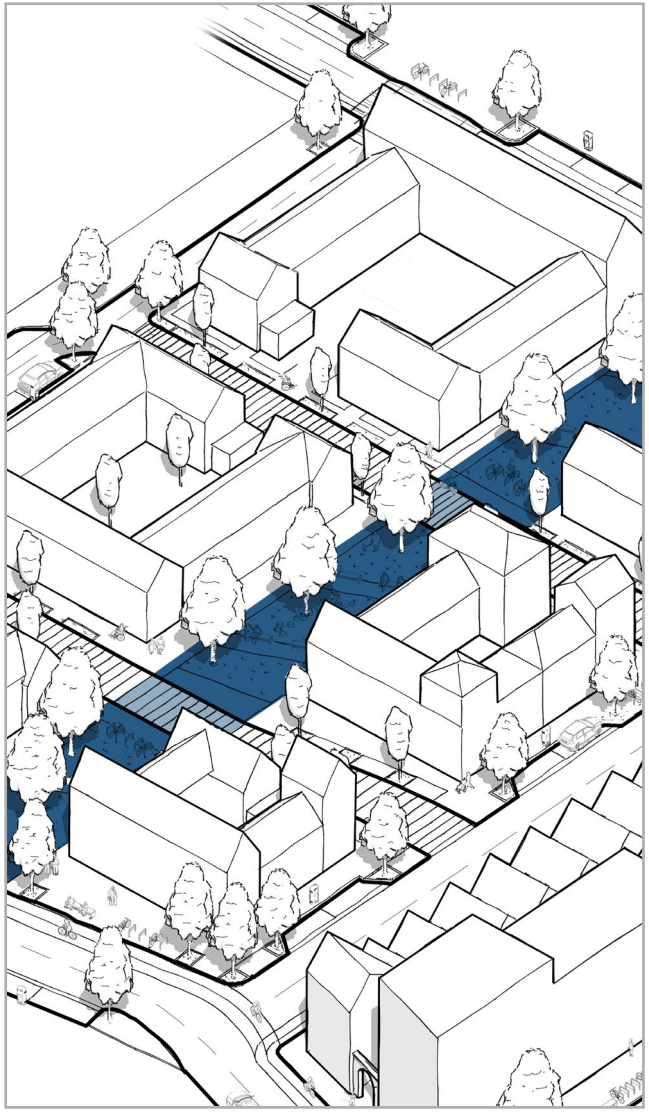


Fig 21 M1 A connected network of routes for sustainable modes of transport: Making streets attractive for sustainable modes of transport

107. A connected street network offers a variety of routes for efficient journeys making walking, wheeling and cycling more attractive and increasing activity and safety. Connected street networks are robust, flexible, consider environmental impacts and stand the test of time.

108. Streets should have more than one connection to another street within a development or local area and to streets outside it. A grid layout is preferable but where culs-de-sac are included, development proposals should consider providing more than one connection for walking, wheeling and cycling, paying particular attention to natural surveillance. Junctions and crossings must be safe, convenient and attractive with formal crossings on primary streets and high streets. Crossings should follow pedestrian or cycle desire lines and give pedestrians clear priority to promote active travel and reduce the risk of collisions.

109. Permeability for different users should be built into the movement hierarchy at the outset. Measures to limit movement to specific modes can be added at a later stage, for example through signed restrictions such as bus gates or bollards that allow walking, wheeling and cycling. Connections across a site and with surrounding communities helps integrate new development into its context.

110. Addressing safety and security issues in street layouts and footways is crucial, especially in busy areas. Active frontages and the presence and interaction of people provide informal surveillance enhancing safety and vitality. Integration of natural surveillance, good lighting, street activity and in crowded public spaces, hostile vehicle mitigation, deters crime and ensures people feel safe.

M3 Public transport

111. Convenient access to public transport makes it an attractive choice for everyday journeys beyond the immediate neighbourhood, reducing reliance on private cars and expanding access to opportunity for those unable to drive.

112. Good connectivity by public transport ensures homes, workplaces and services have easy access for all to public transport services to important destinations. DfT publication Local Transport Note (LTN) 1/24 provides more information on designing for bus services.

113. A starting point for design is that from the start of their journey, people are usually prepared to walk up to 10 minutes (about 800 metres) to a railway station or tram stop and five minutes (about 400 metres) to a bus stop.

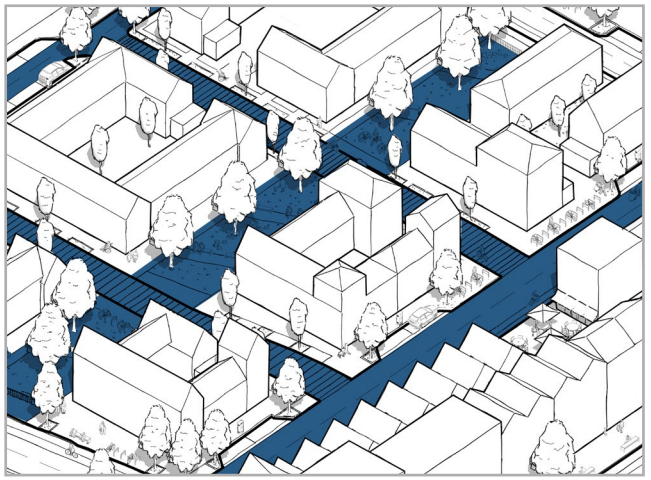


Fig 22 M2 The Street Network: A connected street network makes walking, wheeling and cycling an attractive choice for short journeys

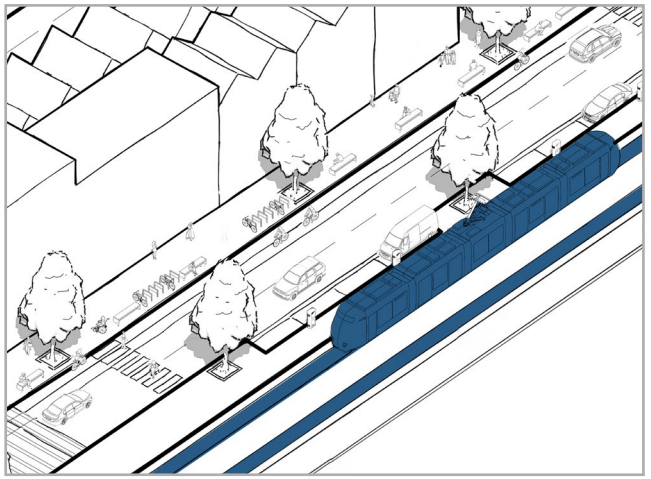


Fig 23 M3 Public Transport: Public transport enabling easier access to important destinations

However, this is significantly influenced by the:

- nature and quality of the public transport service
- attractiveness of the walk and how safe it feels
- gradient of the route
- quality of the stop (including provision of shelters and benches)
- total length of the journey in question

114. Higher density development depends on easy access to a range of local facilities and good public transport provision to important destinations. To optimise density, development should be situated in locations that are, or can be made sustainable and can support more public transport use. A transport hub can increase local density, taking local context and character into account.

M4 Active travel

115. Walking, wheeling and cycling should be considered first, creating safe, direct, convenient and accessible routes for people of all ages and abilities, that minimise exposure to air pollution. This will help make walking, wheeling and cycling the first choice for short local journeys, including as the first stage of longer onward journeys by public transport. Streets should be designed with good sightlines and well-placed junctions and crossings to encourage active travel. Public rights of way should be protected, enhanced or extended to link them to the wider network of pedestrian and cycle routes. Development proposals should:

- ensure people don't need to rely on the car for everyday journeys where possible to places such as workplaces, shops, schools and other facilities, open spaces or the natural environment
- provide safe, direct routes that incorporate green infrastructure and have visible destinations or clear signposting to encourage walking, wheeling and cycling
- include appropriate facilities (for example, secure cycle storage and changing facilities at workplaces), which are essential to enable and encourage journeys to be made by active travel (see Active Travel England Planning for Active Places tool and Sport England Active Design guidance)

M5 Parking, servicing and utilities infrastructure

116. How parking is arranged has a fundamental effect on the quality of a place or development.

117. Where car parking is provided at home and at other destinations, it should be designed to ensure it is well used.

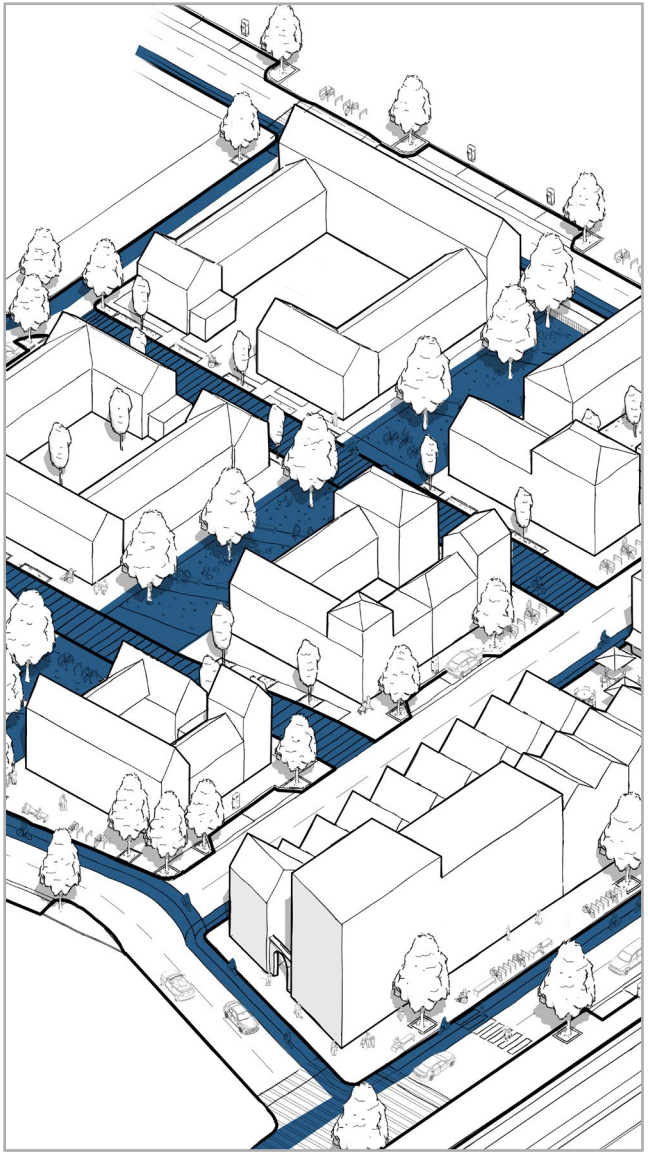


Fig 24 M4 Active Travel: Provide, safe, direct and attractive routes to access important destinations

Cycle parking should be provided at convenient locations, such as close to building entrances.

118. Car parking can be provided:

- on street
- off street including within building curtilages
- in small, overlooked parking courts

119. Car parking should be designed to consider the needs and safety of occupants and visitors including disabled people and support compact and connected forms of development that optimise density and are walkable.

120. Parking which is attractive, well-landscaped and sensitively integrated with the built form will reduce its impact on the street scene. Design considerations to improve the impact of parking include:

- integrating with green infrastructure, including trees, which can soften the visual impact of cars and improve air quality, mitigate overheating in urban areas and contribute to biodiversity
- designing parking relative to buildings to limit impacts, ensure security and discourage anti-social parking, including pavement parking
- siting and designing electric vehicle spaces and charging points to avoid street clutter and narrowing the footway, causing obstructions for pedestrians

121. Access for servicing, including refuse collection, deliveries and removals should be integrated into the design of developments at an early stage. Bin stores and collection points should be designed so they are carefully located within the streetscape and are not visually obtrusive.

122. For utilities services and infrastructure (including water supply, sewerage, drainage, gas, electricity, full fibre broadband, digital infrastructure and telephones) siting and layout should take into account:

- space requirements and visual impact, ensuring they don't give rise to street clutter
- convenient maintenance while not impeding planting street trees
- reinstating highway surfaces to match existing
- implications for foreseeable future changes in demand

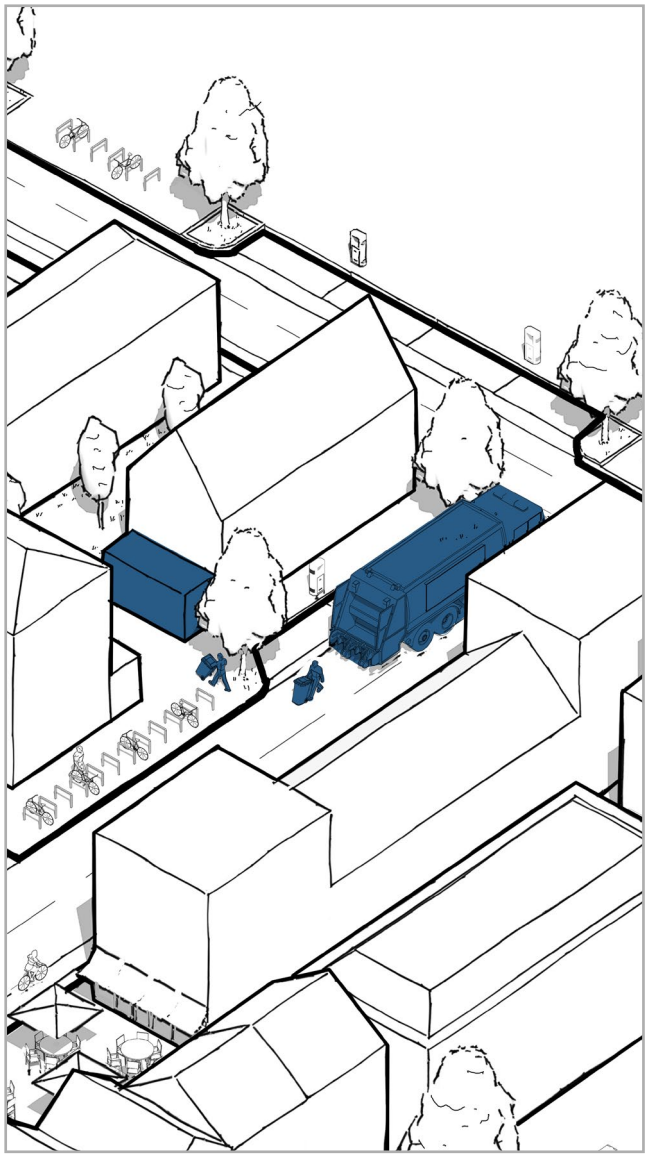
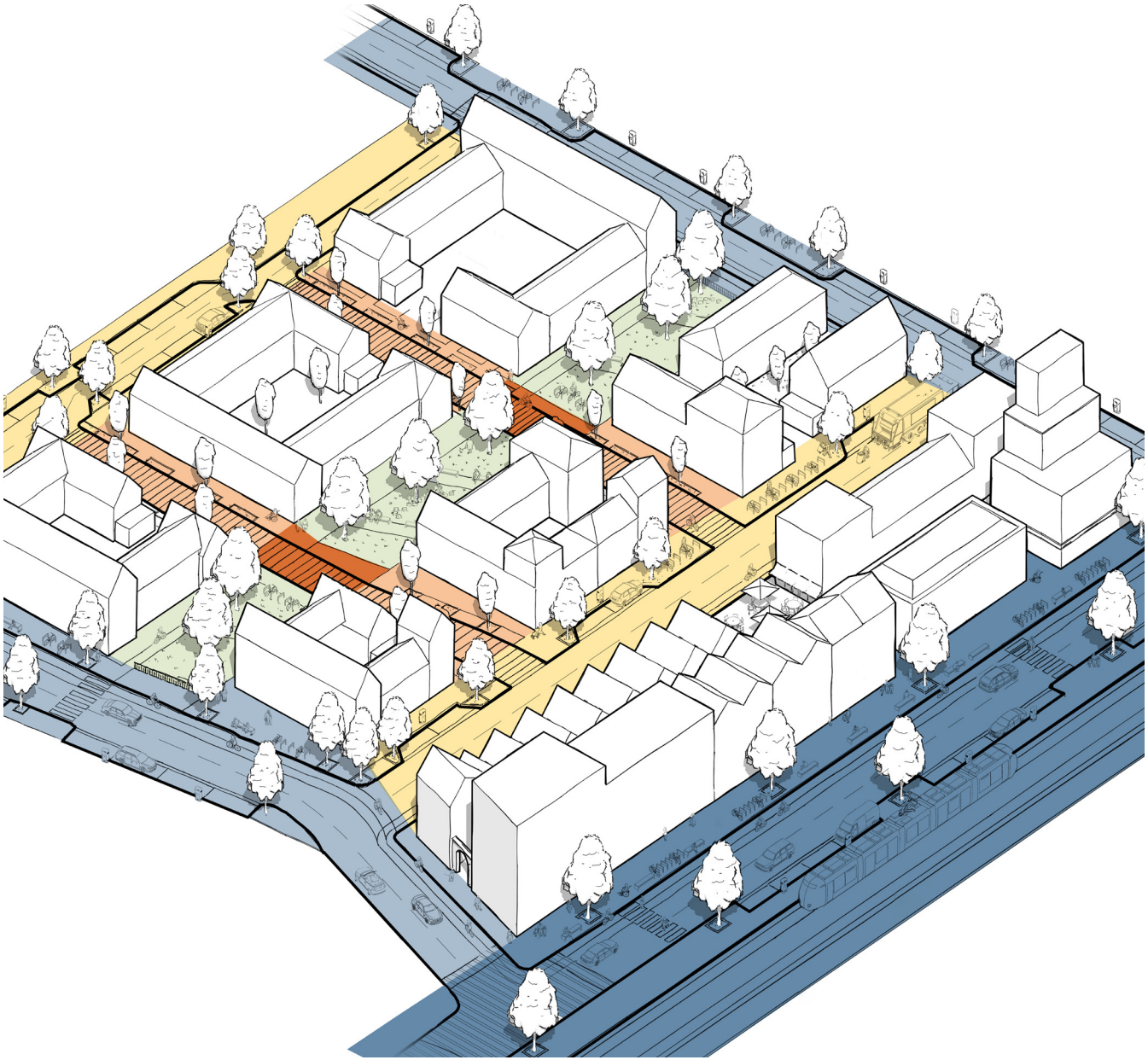


Fig 25 M5 Parking, servicing and utilities infrastructure: Integrating servicing ensuring the street remains accessible for all

Fig 26 A connected network of routes to enable safe and secure movement for everyone



- Primary street
- Secondary street
- Local street
- Tertiary street
- Landscaped pedestrian route
- Crossing with pedestrian priority

Built form

Introduction

123. Built form is the three-dimensional pattern of development blocks, streets, buildings and open spaces that makes up the built environment. The interrelationship between these elements creates liveable and attractive places and contributes to their local character, identity and sense of place. Built form is part of cities, town centres, suburbs and villages providing a coherent framework for designing individual developments.

Built form in design

124. Local design policies, guidance and proposals for new development can shape the functionality, accessibility and sustainability of homes and buildings to support health and wellbeing.

125. Liveable places have:

- compact and connected forms of development that optimise density and are walkable, contributing positively to wellbeing and placemaking
- recognisable streets and other spaces with their edges defined by buildings, making it easy for anyone to find their way around, and promoting safety and accessibility
- memorable features or groupings of buildings, spaces, uses or activities that create a sense of place, promoting inclusion, cohesion and belonging
- good quality internal and external environments for their users, promoting health and wellbeing
- proportionate security features designed into development to promote safety and wellbeing

Design principles contributing to built form

126. Built form and context:
Development proposals should be based on an understanding of local and wider context including patterns of built form. Compact and connected development can be shaped by local precedents for routes and spaces and the built form around them. Well-designed new development is demonstrably based on an understanding of the existing situation including patterns of built form and should

inform the layout, grain, form and scale of new buildings.

127. Local design policies and guidance for development proposals should address the following design principles:

B1 Compact and connected form of development

128. Compact and connected development optimises density so an area can best support shops, local facilities and public transport, maximising social interaction and promoting active travel.

129. Effective use of land balances the amount of development and mix with green infrastructure, to optimise site capacity.

130. The design of built form relates to:

- the site, its context and the opportunities they present
- the proposed identity and character for the development in the wider place
- lifestyles of occupants and other users
- resource efficiency, climate change mitigation and adaptation (see **Climate**)

131. Density is one indicator for how compact a development or place will be and how intensively it will be developed. However, it is an output of the design process and density metrics alone are insufficient to address the range of measures required to achieve design quality or to determine the appropriateness of a development in an existing neighbourhood. Density metrics should therefore be used alongside other design interventions.

B2 Appropriate building types and forms

132. Development proposals should use the appropriate mix of building types, forms and scale of buildings and public spaces for the context and the proposed density, to create a coherent form of development that people enjoy. Strategies for parking and amenity that support the overall quality of place should be adopted.

133. The character of an area is also influenced by the variety of building forms, size and uniformity. Large buildings may occupy entire blocks, or the same area could be developed with a mix of smaller buildings enhancing rhythm and variety intrinsic to the character of the area. While large buildings are appropriate in some places, an area dominated by them can lack character and resilience and increase the potential for uncomfortable microclimates.

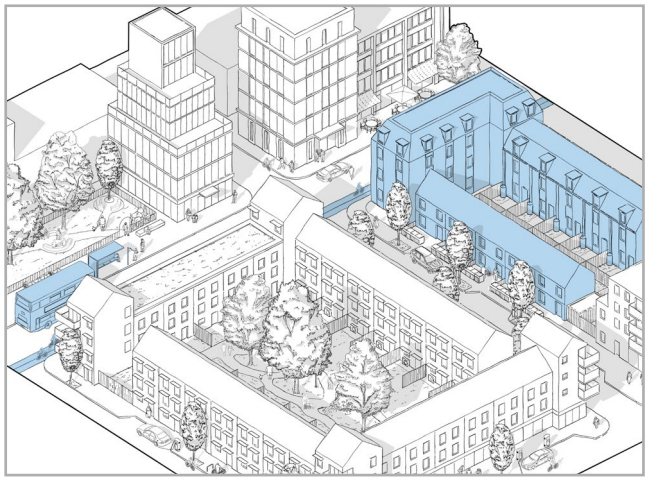


Fig 27 B1 Compact and connected form of development: Compact development optimising density

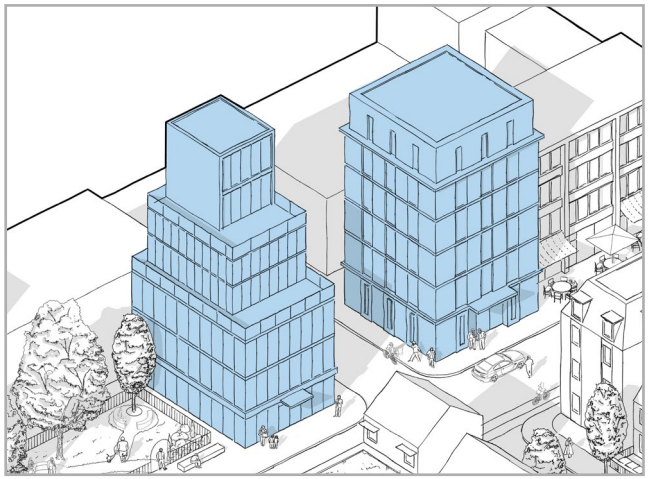


Fig 28 B2 Appropriate building types and forms: Tall buildings with a consistent building line serving as landmarks

134. Urban grain derives from plot size and configuration and shapes the character of development. Masterplans should indicate plot structure and building configurations to determine the development's character. Key components influencing built form are:

- blocks: can create a clear distinction between public fronts of buildings and private backs enhancing safety, security and legibility
- building line: a consistent approach creates a coherent identity, whether straight or irregular, continuous or broken
- heights: can shape a place's identity and environment and impact on local environmental conditions such as daylight, sunlight, overshadowing, wind, air quality and microclimate

135. Tall buildings can serve as landmarks and enhance views and skylines. Their proposed location can be part of the local plan. Proposals for tall buildings require special consideration to ensure they positively contribute to an area. Tall buildings should maximise the comfort of users and neighbours by considering orientation, overshadowing, quality of external spaces at ground level, wind tunnel effects, noise pollution and dispersion of pollutants.

B3 Healthy and comfortable buildings

136. Good design promotes quality of life by ensuring buildings are functional, comfortable, safe, secure, accessible and adaptable. Internal layout and external form of buildings should be considered together. Internal layouts in development proposals should consider:

- room sizes
- floor-to-ceiling heights
- internal and external storage
- sunlight, daylight and ventilation
- privacy
- minimising noise impact
- minimising exposure to pollution sources

137. Homes should support homeworking and provide private outdoor spaces. To mitigate the impact of noise, development proposals should consider the orientation of dwellings and specifying materials that help reduce sound between dwellings and from outside. Local plans may adopt the Nationally Described Space Standards and those for accessibility and water efficiency. In higher density developments, access, privacy, daylight and external amenity space are particularly important.

Fig 29 B3 Healthy and comfortable buildings: Private shared outdoor spaces encouraging community interaction

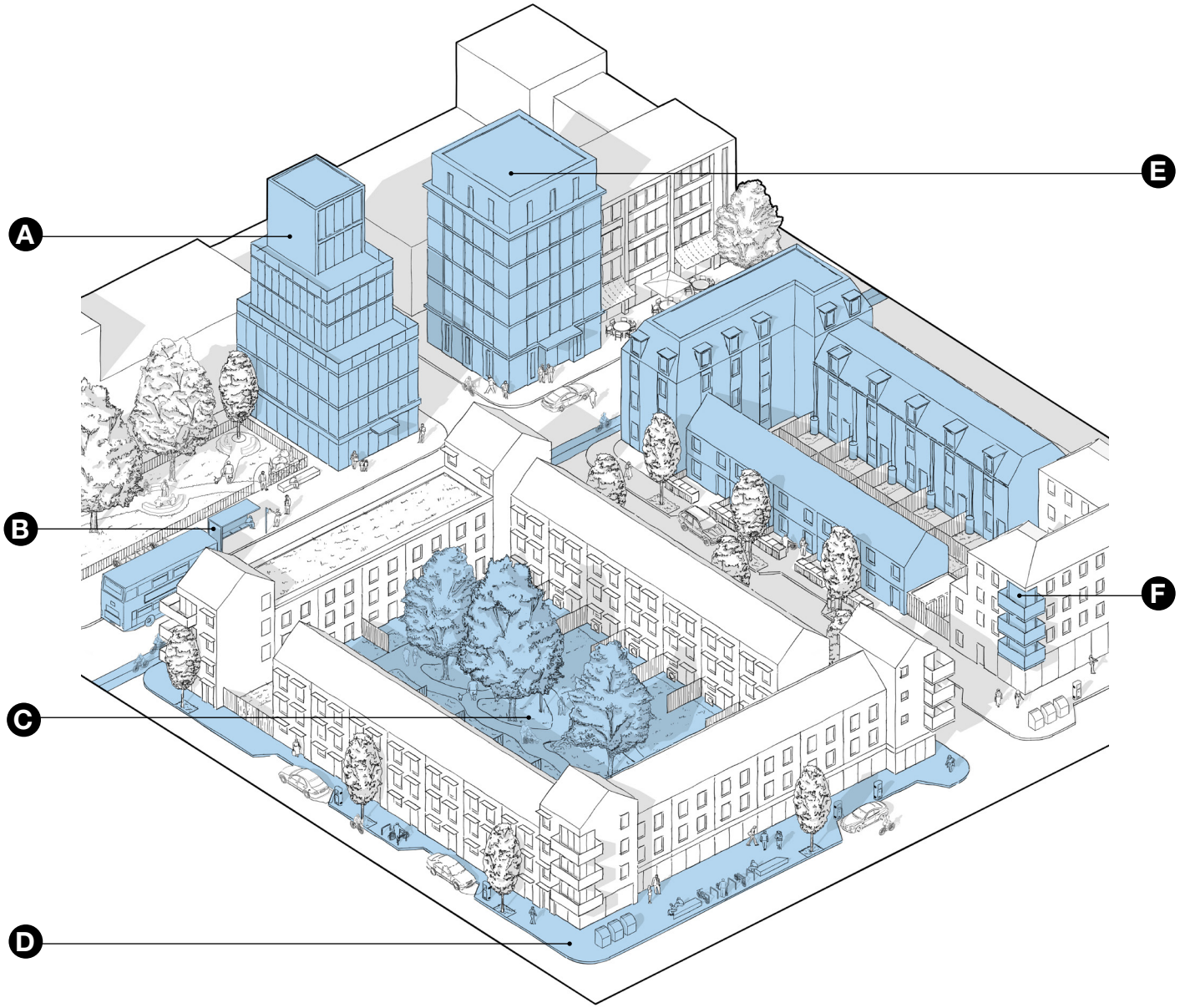
138. A sense of security within a home is influenced by the design of the home and the way it relates to its neighbours, gardens and parking. Layout of neighbourhoods should promote safety and security (see Secured by Design guidance) ensuring natural surveillance, encouraging community interaction, engagement and participation. Boundary treatments or planting should be used to protect privacy to the front and rear of housing plots.

Top *- Hortsley, East Sussex*

Bottom left *- Prince Charles House, St Austell, Cornwall*

Bottom right *- Blackfriars Circus, London*

Fig 30 A built environment with a compact and connected form of development



A. and E. Tall buildings with a consistent building line serving as landmarks

B. Compact and connected development optimising density

C. Private outdoor spaces encouraging community

D. Blocks defining the edges enclosing street spaces

F. Dual aspect dwelling maximising access to natural daylight

Public space

Introduction

139. The quality of spaces between buildings is as important as the buildings themselves. Public spaces such as streets and squares, are open to all and form part of the movement network. Their design includes integration into the wider street network, hard and soft surfaces, street furniture, lighting, signage and public art, considering the needs of people walking, wheeling and cycling.

Creating high quality public spaces through design

140. Local design policies, guidance and proposals for new development can influence the design of public spaces, which have a significant impact on people's lives. Well-designed public spaces, particularly streets, can support an active life for everyone and social interaction. Development proposals should consider the design of public spaces in conjunction with built form, the movement network and green infrastructure.

141. Well-designed public spaces:

- are well located, accessible and support a variety of activities and social interaction, to promote good physical and mental health, wellbeing, and social and civic inclusion
- form part of a network of spaces that range from large and strategic to small and local spaces, including parks, squares, greens and pocket parks
- are designed with safety and security in mind and are attractive for all to use
- have natural features including trees, other wildlife-friendly planting and water for people to enjoy, integrating security features and providing cooling through shading and evapotranspiration, improving air quality and climate change adaptation

Design principles contributing to public spaces

142. Public space and context: Development proposals should demonstrate an understanding of the surrounding area to inform the design of public spaces, which have an important placemaking function supporting local distinctiveness. The design of public spaces and the street hierarchy should reflect local context including:

- the topography of the site
- views to landmarks
- responding to the local built form
- types of planting and materials
- the pattern of uses and level of activity

143. Local design policies and guidance for development proposals should address the following design principles:

P1 Create well-located, high quality and attractive public spaces, including streets

144. Public spaces, particularly streets, should support activities such as socialising, informal play, resting and movement. Their success depends on being functional, attractive and accessible places that people enjoy.

Top *- KAMPUS, Manchester*

Bottom left *- Accordia, Cambridge*

Bottom right *- Rochester Riverside, Medway*

145. Streets and roads make up three quarters of all public space so how they are designed has a significant impact on people's lives, by being:

- designed to enable walking, wheeling and cycling over car use, particularly for short journeys
- accessible to all, considering the needs of older people and disabled people
- designed to address the needs of people with visual impairments, including shared space that removes or reduces the distinction between the pavement and carriageway
- easy to navigate with inclusive wayfinding strategies, particularly for people with visual impairments or people with sensory or neurodivergent needs

146. Section M2 refers to a street hierarchy that identifies each street's function in terms of movement and place. All streets need to balance movement and place functions and their position in the street hierarchy will influence their design.

147. Street design should adapt to trends such as the changing nature of transport and increased active travel, reallocating space from private motor traffic to active travel and public transport. It can address people's different needs at all life stages, business and local community needs, and climate change, while incorporating sustainable drainage systems and street trees. The design of streets should consider their form and character as historic places. Historic England provide advice on specialist design considerations in the Streets for All guidance.

148. Natural elements such as trees, wildlife-friendly planting or water may be sited within the space, associated with the buildings around its edges or in the backdrop of views (see Nature). Landscape design influences the microclimate, mitigates the urban heat island effect and enhances tranquillity and public safety.

P2 Provide well-designed spaces that are safe

149. Designing for safety in public spaces, considering people who occupy the buildings around them, visitors and passers-by, helps overcome crime and the fear of crime enabling everyone including women and girls to enjoy them.

150. Designing security features early on helps people feel safe, secure, creates a sense of belonging, and deters those with malicious intent, without the need for retrospectively adding security measures. Security features should be designed to support the safety of women and girls.

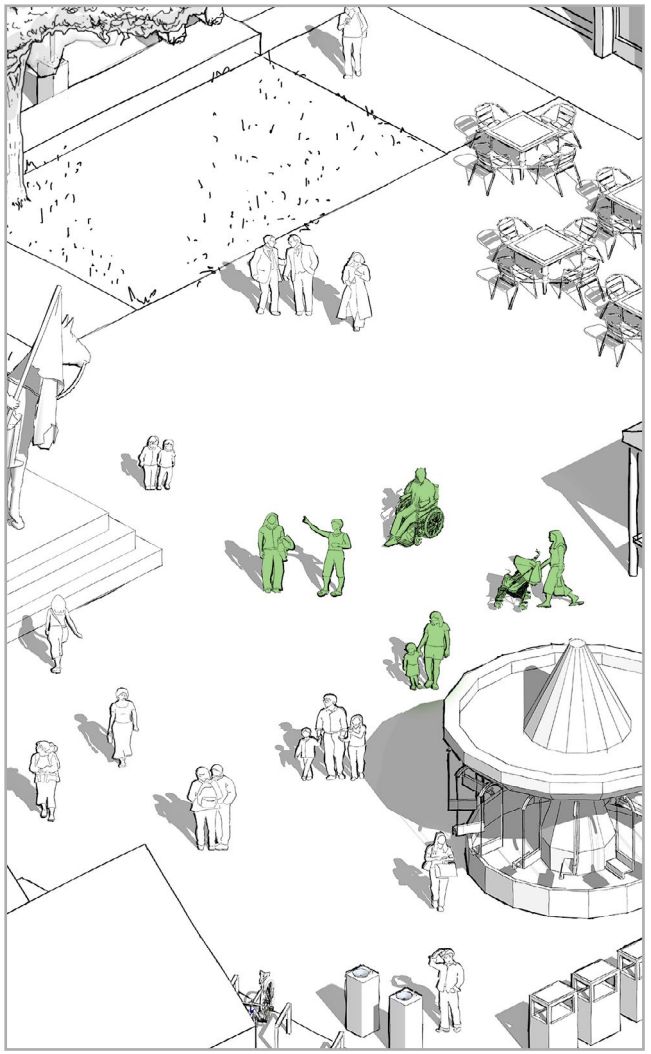


Fig 31 P1 Create well-located, high quality and attractive public spaces, including streets: Public spaces designed to be accessible and enjoyed by all

These include:

- buildings with active frontages around the edges of a space and windows overlooking it, so that people come and go at different times
- natural surveillance provided by windows and balconies and high levels of street activity
- reasons for people to enter the space, for an activity or destination or because it is on a desire line
- security measures integrated into positive design features early on through security risk assessment and mitigation

151. Insecure places disproportionately affect marginalised groups. In devising and implementing design principles, local authorities must comply with the public sector equality duty under the Equality Act 2010 and in doing so must have due regard to the need to: eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under the Act; advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it; and foster good relations between persons who share a relevant protected characteristic and persons who do not share it.

152. Safety and security can be enhanced by following Secured by Design principles:

- access and movement: well-defined routes, spaces and entrances for convenient movement without compromising security
- safe pedestrian routes: straight, wide, well lit, without hiding places, well maintained and overlooked
- structure: avoiding conflict between different uses
- lighting: appropriate, non-obtrusive lighting levels
- private space: clear separation between public and private spaces
- surveillance: overlooked public spaces
- ownership: promote a sense of ownership, respect, responsibility and community
- physical protection: necessary, well-designed security features
- activity: appropriate levels of activity to reduce crime and enhance safety
- management and maintenance: designed to discourage crime now and in the future

P3 Security in public space

153. Early safety and security planning reduces crime risks, lowers costs by avoiding retrospective changes and ensures seamless integration of protective measures into places, infrastructure, and buildings, creating a safer

Fig 32 P2 Provide well-designed spaces that are safe: Active frontages and natural surveillance can help people feel safe

environment. Neighbourhoods should be designed to make everyone feel safe following Secured by Design recommendations. Advice is available through designing out crime officers (DOCOs) offering advice on proven crime prevention techniques and measures into the layout and design of places and spaces.

154. The design of public spaces must also consider the threat of terrorism. Town centres, shopping streets and other crowded public spaces need to consider potential terrorist attacks. Early integration of security features into landscape and urban design solutions, including hostile vehicle mitigation and clear sightlines to facilitate surveillance in open spaces creates opportunities to detect suspicious behaviour. The intended use and layout of buildings and public spaces should be assessed to allow for risk assessments and the consideration of proportionate protective security measures during the design stage.

155. Further support is available from regional police counter-terrorism security advisors. Further guidance on hostile vehicle mitigation and other public realm protective security considerations are also available in Appendix B.

P4 Make sure public spaces support social interaction

156. Well-designed public spaces are social hubs, providing meeting places, comfort, relaxation and stimulation for all, regardless of the type or tenure of surrounding homes and buildings. They help reduce social isolation and loneliness (see **Liveability**) by accommodating diverse needs, including those of older people, disabled people and people who are neurodivergent.

157. Streets, public squares and play spaces bring people together and act as a focus for community life to enable strong social and intergenerational relationships and support networks. Such spaces should be open, accessible and connected into the movement network so that people naturally pass through them and feel comfortable when doing so. They are enhanced by versatile design and a range of activities. Surrounding uses reinforce their appeal and role as destinations.

158. A network of multi-functional public spaces including city and town squares, marketplaces and village greens serve as focal points at the heart of the community. These spaces support activities like meeting, resting, playing and events. They can be enclosed green spaces or paved surfaces for use as markets and public events.

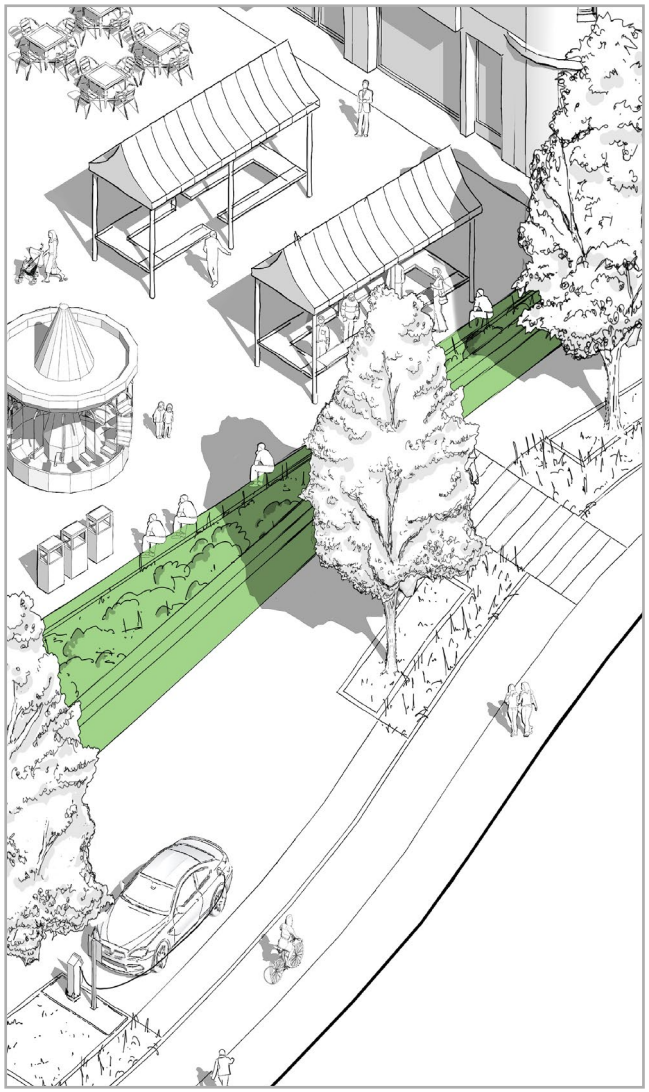


Fig 33 P3 Security in public space: Features increasing security, such as hostile vehicle mitigation, designed into spaces at the outset

159. Local open space and green infrastructure, shaped by a network of public spaces and supported by other open spaces (which may not be publicly accessible but serve important community functions), provide opportunities for sport, play, recreation and nature. Play spaces, including doorstep spaces in residential areas, support play and social interaction for all ages. Allotments and community growing projects support local food production, learning, and encourage social interaction.

160. Natural England's Accessible Greenspace Standards seek to ensure everyone has access to good quality green and blue spaces close to home for health and wellbeing and for contact with nature, by recommending access to green and blue spaces within a 15 minute walk from home.

161. In designing public spaces, development proposals should consider:

- natural capital: its contribution to a network of high quality, biodiverse, greenspaces, improving water management, sustainable drainage and supporting a rich and varied biodiversity
- boundary: consider whether the space, or part of the space, is fenced and gated, and impacts on accessibility and wildlife networks
- entrances: access points and paths to be conveniently located on desire lines for walking, wheeling and cycling
- surveillance: open spaces, particularly access points, to be overlooked from surrounding buildings, streets and spaces
- activity: sufficient choice, variety and amount of space for outdoor sports facilities to meet local needs, play, and spaces for retreat and calmness whilst proactively managing any conflicts between them and with other uses
- maintenance: take account of maintenance and adoption requirements
- access: accessible and welcoming to everyone
- lighting: for entrances, well-used footpaths and games areas includes lighting that create safe and well-lit spaces, whilst minimising harm to wildlife
- active travel routes: provision of segregated active travel routes and local destinations for walking, wheeling and cycling journeys and the provision of supporting facilities

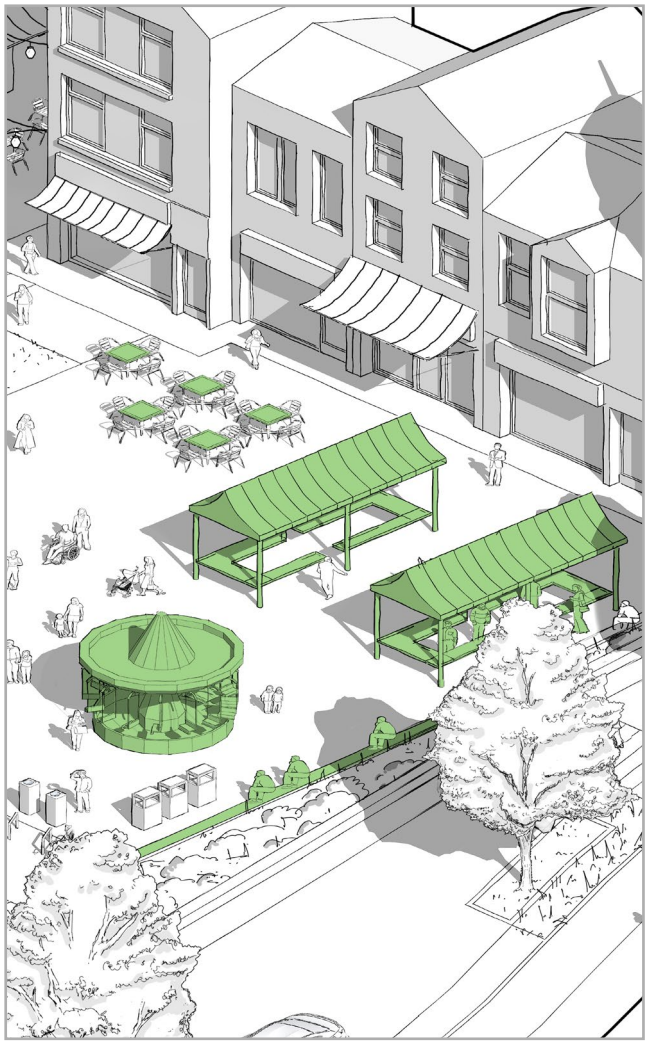


Fig 34 P4 Make sure public spaces support social interaction: Multi-functional public spaces can foster social interaction

Fig 35 Attractive public spaces that are safe, secure and support social interaction

A. Active frontages and natural surveillance can help people feel safe

B. Public spaces designed to be accessible, enjoyed by all and be an appropriate size to accommodate the number of people using it

C. Multi-functional public spaces can foster social interaction

D. Features increasing security, such as hostile vehicle mitigation, designed into spaces at the outset

Identity

Introduction

162. The identity or character of a place comes from the combination of buildings, streets and spaces, landscapes and infrastructure and how people experience them. A place's identity is not just about the buildings or how a place looks, but how it engages all the senses. Local character makes places distinctive and memorable and aids navigation. Well-designed, liveable places have a strong identity and create a sense of place and belonging. A sense of place makes somewhere special and memorable so people stay or return.

Creating identity through design

163. Local design policies, guidance and proposals for new development can enhance or create identity by recognising and preserving features of design that give a place character and by promoting qualities that make places distinctive. This includes by reflecting the needs of local communities and other users. The identity of an area is improved where new development, including re-use and conversions, identifies and draws on the positive features of the existing built and natural environment to make places coherent, attractive and memorable.

164. New places, buildings and spaces:

- have a positive, coherent identity that enhances the area, encouraging health and wellbeing, inclusion and cohesion
- respond to the context, reflecting history, and current and future lifestyles
- are visually attractive and durable, delighting occupants and users
- complement and enhance the surroundings by reflecting existing character or creating new identity

Design principles contributing to identity

165. Identity and context:
Development proposals should contribute to the identity of a place and understand the context in which they sit. A place's identity is shaped by local and regional history, culture and heritage (designated and non-designated) and how this is reflected in the existing built and natural environment of an area.

166. Influences on local and regional identity include:

- urban grain
- layout
- building types
- landscape character or views at an area scale
- architectural details and materials at a building scale

167. An understanding of the local context is important to inform what needs to be retained, what needs to change, and what needs to be introduced to protect or to create what makes a place special.

168. Local design policies and guidance for development proposals should address the following design principles:

Top *- Timekeepers Square, Salford*

Bottom left *- Park Hill Phase 2, Sheffield*

Bottom right *- Murrays' Mills, Manchester*

I1 Value heritage, local history and culture

169. Understanding a site's history and how a place has evolved should inform designs for new development. Sensitive re-use or adaptation helps integrate heritage into proposals in an environmentally sustainable way.

170. Development proposals should consider:

- the history, cultural influences, heritage and landscape character of the site and its surroundings (for landscape character see Natural England's Character Area profiles)
- the setting of specific features, including how heritage assets can be conserved and enhanced in a manner appropriate to their significance
- the local vernacular, including historical building typologies (terrace, town house, mews, villa, mansion block, factories, or mills), façades, materials and details

171. New developments extend the history of a place and can become valued heritage, representing 21st century architecture and placemaking.

I2 Respond to existing local character and identity

172. New development should complement its surroundings reflecting local or regional character, built and natural form, vernacular, landscape and distinctive elements of the area. Key considerations include:

- natural elements: integration of nature, wildlife, light, dark skies, shade, colour (through environmental colour assessment) and water
- street scenes, functions and building composition: height, scale, massing and relationships between buildings
- views and landmarks: legibility and roofscapes
- public spaces: scale, proportions of streets and spaces, hard and soft landscape and street furniture
- building design: scale, proportions, façade design, details of windows and doors, colours, textures and patterns

173. In addition to local planning authorities and communities, developers should consult architects and statutory consultees familiar with the local area early in the design process to ensure new development responds to the existing character and identity of its immediate or wider surroundings.

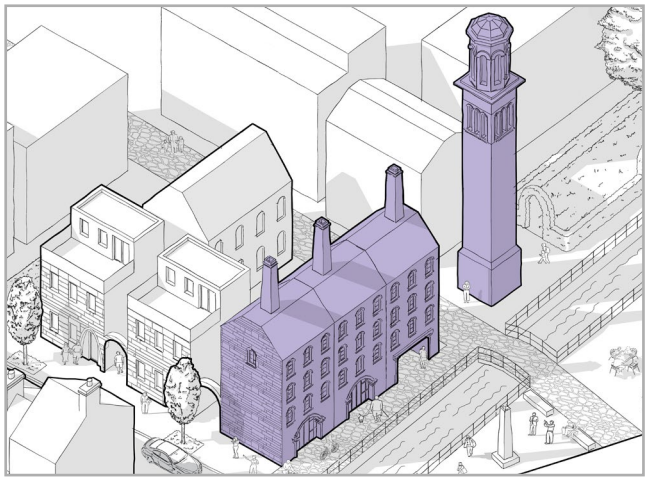


Fig 36 I1 Value heritage, local history and culture: Existing heritage assets

Fig 37 I2 Respond to existing local character and identity: Integrating and enhancing historic routes

I3 Create character and identity

174. Design decisions at each spatial scale shape the character of a new place or building. Character is influenced by the siting of development, its layout and grain. Design for new development should:

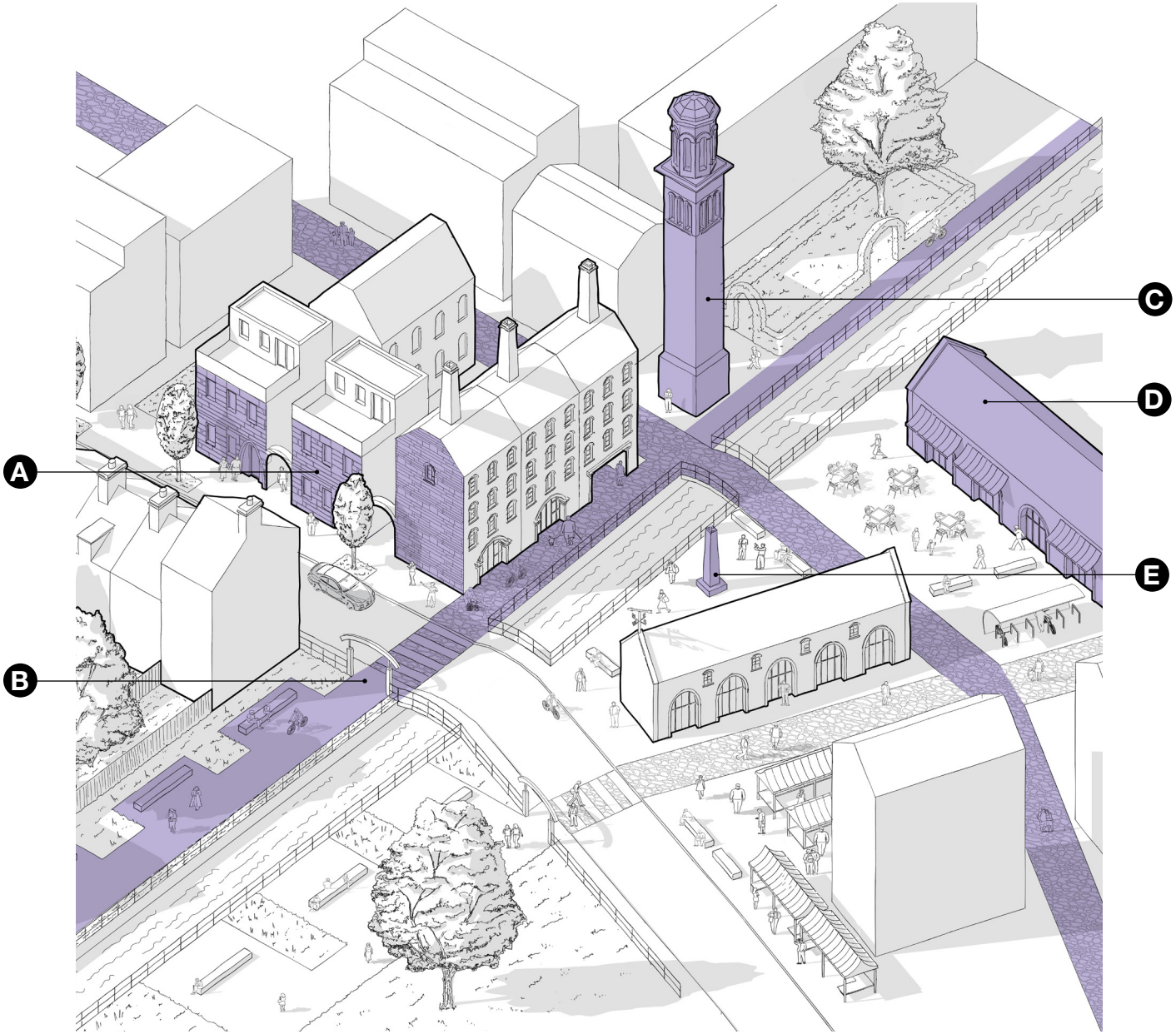
- draw on local architectural precedents
- use local topographical, landscape or building features, materials or planting
- introduce new character paying attention to whether buildings are grouped and how buildings meet the ground and sky
- create a coherent identity for residents and communities

175. Where the scale, nature or density of new development is very different to the existing place, creating a new identity may be more appropriate. Over time, this new character and identity may become more established and prominent in the wider area and influence newer development. Innovative and exceptional development may also justify departure from existing character. Larger new developments, such as garden towns or urban extensions, can benefit from a variety of character areas with their own identity. Masterplans can enhance local identity, drawing on surrounding influences.

176. In areas with limited positive qualities, a new and positive character will enhance and create identity.

Fig 38 I3 Create character and identity: Draw on local architectural precedents and materials

Fig 39 Identity enhanced or created by valuing existing character and promoting distinctive qualities



A. Create a coherent identity, drawing on local architectural precedents and existing built form

B. New development should be cohesive with existing uses, for example integrating and enhancing established movement networks

C. Recognise the significance and setting of heritage assets

D. New development should complement its surroundings, reflecting existing use and function

E. Public art can be incorporated through new development to acknowledge and celebrate local history and culture

Part 2:

Design quality in the planning process

Introduction

177. Creating well-designed and sustainable places is a fundamental goal of the planning system. Design quality should be integrated throughout the planning process, supported by effective community and stakeholder engagement and participation, from plan-making to decision-making.

178. Part 2 explains how to apply the seven features of well-designed places introduced in Part 1 at the appropriate stages of the planning process. It covers design considerations during plan-making, the use of masterplans, design codes and design guidance to ensure clear and proportionate detail and design instruction, and how these tools support better decision-making. It emphasises that achieving design quality extends beyond granting planning permission for development and requires ongoing monitoring and long-term management.

179. Place specific and detailed criteria for good design are most appropriately defined at the local level and should complement rather than repeat national and regional policies. Local criteria may take the form of design policies, design guides or design codes, prepared by local authorities, or design codes prepared by applicants, to accompany planning applications.

Integrating design and spatial planning

180. Taking a spatial approach to design ensures quality is considered at every stage of the planning process and at all scales, not just individual sites. This enables local plans to set clear place specific goals for design which design tools can support the delivery of. In the planning system, a design tool is any method, framework or process that establishes principles, three dimensional parameters, or specific, detailed or measurable criteria to guide good design and assess whether it has been achieved, such as masterplans and design codes.

181. Design operates at multiple scales:

- strategic planning shapes the wider landscape and integrates development with infrastructure
- local plans guide patterns of growth and set principles for development in different locations
- urban design defines relationships between buildings, streets and open spaces

- architecture determines how buildings look, function and their longevity, inside and out

182. Local planning authorities should consider design at three spatial scales:

- authority wide: the entire local plan area
- area specific: places undergoing change or regeneration, such as town centres or suburbs
- site specific: large site allocations, such as urban extensions, where the relationship between buildings and spaces must be carefully planned

183. Securing design quality should be proactively pursued at all stages of the planning process, as shown in Figure 40.

184. This approach ensures clarity for the design and quality of development for developers, landowners and applicants and can be factored into development costs early on, helping to mitigate potential viability concerns.

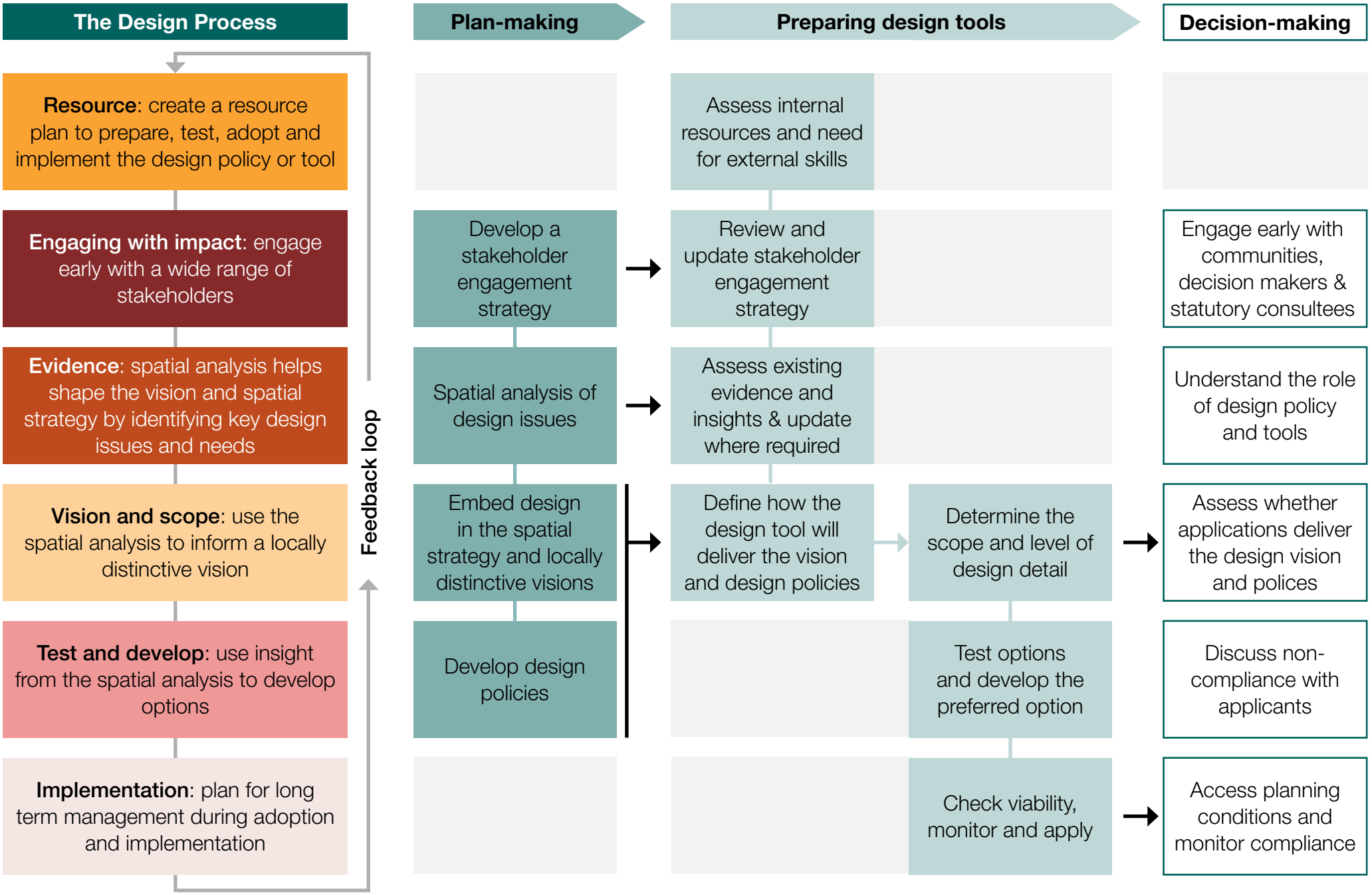


Fig 40 The process for proactively pursuing design quality at all stages of the planning process

Design processes

185. This section explains how design processes are used to embed design quality across spatial scales, and every stage of the planning process. The subsequent guidance in Part 2 on Plan-making and Preparing design tools is structured around the following design process:

Resource

- invest time and resource to develop a clear project brief from the outset
- map skills and resource to identify what can be done in-house and what support might be needed from external consultant
- build an interdisciplinary team – this can include urban design, planning, highways, architecture, landscape, ecology, sustainability, heritage, drainage engineer
- plan ahead, map out potential risks and be prepared to adapt the approach along the way

Engaging with impact

- identify local communities and stakeholders and how they will be involved at the right time in the right way

Evidence

- gather evidence and summarise the key insights
- recognise that data (such as viability and infrastructure) is time sensitive, review and update as new evidence emerges

Vision and scope

- agree the key priorities and design issues the design tool will address
- be clear about which components are fixed and which are more flexible

Test and develop

- combine practical and creative thinking throughout the process, integrating evidence and outputs into a coherent whole
- use the site's context and opportunities as a foundation for design
- work at all scales to integrate placemaking
- focus on implementation and viability right from the beginning

Implementation

- identify the mechanisms to implement the design tool
- ensure the design tool is easy to navigate
- embed robust decision-making and review mechanisms, including testing of design codes with real applications mid-way through the drafting process

Community and stakeholder engagement

186. Community engagement enables local voices to influence design policies and development. When done well, it empowers people, builds local capacity and employment opportunities throughout the design process, and supports better outcomes.

187. Local planning authorities and applicants should demonstrate how all views are actively listened to and considered. Embedding community and stakeholder views at every stage can improve the quality and positive impact of completed developments.

188. Engagement should be:

- clear and transparent
- proportionate to the scale of development
- include cross-boundary stakeholders
- led by the appropriate party (such as local planning authority for strategic tools, developers for site specific proposals

189. Independent facilitators may support inclusive dialogue, using creative methods to promote intergenerational engagement.

Initial engagement

190. Before starting, prepare an engagement strategy and consider any networking, research and how you will identify stakeholders and interests. Activities could include:

- meetings with community representatives, councillors and statutory consultees
- a wide survey of local people's hopes, preferences and concerns
- community panels or forums to represent the views of local communities
- engaging with internal stakeholders for local authority-led projects
- engaging developers and landowners to agree roles and responsibilities
- training to raise awareness and build skills

Inclusive engagement

191. To maximise community participation:

- tailor sessions to stakeholder needs and be clear about the purpose
- work with community organisations
- hold events at convenient times, use accessible venues
- combine in-person and digital engagement methods
- use digital engagement techniques to engage wider audiences
- for in-person engagement, use a mix of methods, including workshops, interactive events, drop-ins and exhibitions
- widely publicise engagement activities, prioritising underrepresented groups
- proactively engage underrepresented groups, by joining existing meetings or networks – engage children and young people
- engagement should be proportionate to the scale of change or development, with some conducted authority wide, and others at the neighbourhood level
- engage throughout plan-making and design tool preparation
- clearly show how feedback has informed subsequent iterations

Engagement tools and techniques

192. Community engagement should be co-designed with community groups. Traditional methods may include:

- visual material (such as 3D drawings and models): gather feedback on types of places, streets and buildings and functional aspects such as play spaces or parking
- place assessment tools (such as Building for a Healthy Life, Placecheck, Spaceshaper): help evaluate the quality of places
- workshops and charrettes: explore site or area challenges and opportunities, analyse options and develop design proposals collaboratively
- community panels or forums: allow community voices to be heard throughout the process
- drop in events and exhibitions: provide feedback in-person

193. Digital methods may include:

- social media, apps, email and websites: promote events, share information, enable online participation and gather feedback
- digital models and 3D visualisation tools: help communities better understand development proposals and their wider impact
- gaming platforms: engage younger audiences
- community data collection: gather and display public opinion in accessible, transparent ways

Design review

194. Design review is an independent, early evaluation of development proposals by a multidisciplinary panel of experts. It supports applicants, planning officers and councillors by advising on design quality, helping to build confidence in decision-making. It complements, rather than replaces, advice from statutory consultees, local authority design expertise, or community engagement.

195. Design review can be used for large and small-scale developments where the scale or impact justifies the investment. Panel size and expertise should reflect the complexity of the proposal and the sensitivity of the place.

196. An effective design review panel:

- operates under clear terms of reference to ensure transparency, objectivity and public benefit
- is diverse and inclusive, with a range of built environment expertise; consistent panel membership across reviews of the same scheme ensures continuity in feedback
- considers local community and stakeholder perspectives

197. An effective review of a development proposal:

- follows clear criteria, aligned with local and national design objectives
- considers the wider site and policy context, including socio-economic factors; site visits enhance understanding of local character and context
- communicates clearly written feedback in a transparent, accessible way for all stakeholders

198. Design review is most valuable when undertaken early and revisited during pre-application and implementation stages to build on previous recommendations.

Related resources:

Urban Design Learning National Design Review Code of Conduct

Post occupancy evaluation

199. Post occupancy evaluation (POE) assesses completed developments against design intent and user experience. It should be planned from the outset and inform future projects and stewardship.

200. To make effective use of post occupancy evaluation (POE):

- plan early, embedding any requirements for POE in compliance checklists, planning conditions or development briefs and ensuring it is scoped and budgeted from project inception
- clearly define the scope of the evaluation and how it will cover building and neighbourhood performance, including energy, comfort, and social value
- consider scheduling evaluations at 6–12 months post-occupation, with follow-up every 3–5 years
- collect the right data, considering:
  - technical data: for example energy, water, ventilation, temperature, air quality
  - resident feedback: satisfaction, usability, wellbeing
  - social and environmental indicators: health, accessibility, biodiversity
- use mixed methods, combining surveys, interviews and sensor data for robust insights
- share findings and feed lessons into future projects and policy
- ensure accountability for POE within governance structures
- encourage continuous learning by benchmarking and collating good practice

Design in plan-making

201. Local planning authorities should refer to Creating and Updating Local Plans guidance when reading this section, working collaboratively and proactively with communities and stakeholders to integrate design into the local plan. Successful planning and placemaking are grounded in a strong understanding of the local area and a clear, locally distinctive vision.

202. To create a robust framework for design local planning authorities should:

1. **Evidence:** Undertake spatial analysis of design issues
2. **Vision and scope:** Develop a locally distinctive vision and spatial strategy that is visual, place based and informed by evidence
3. **Test and develop:** Prepare design policies and apply them across authority-wide, area specific and site-specific scales

These actions will ensure design quality is embedded in planning decisions from the outset.

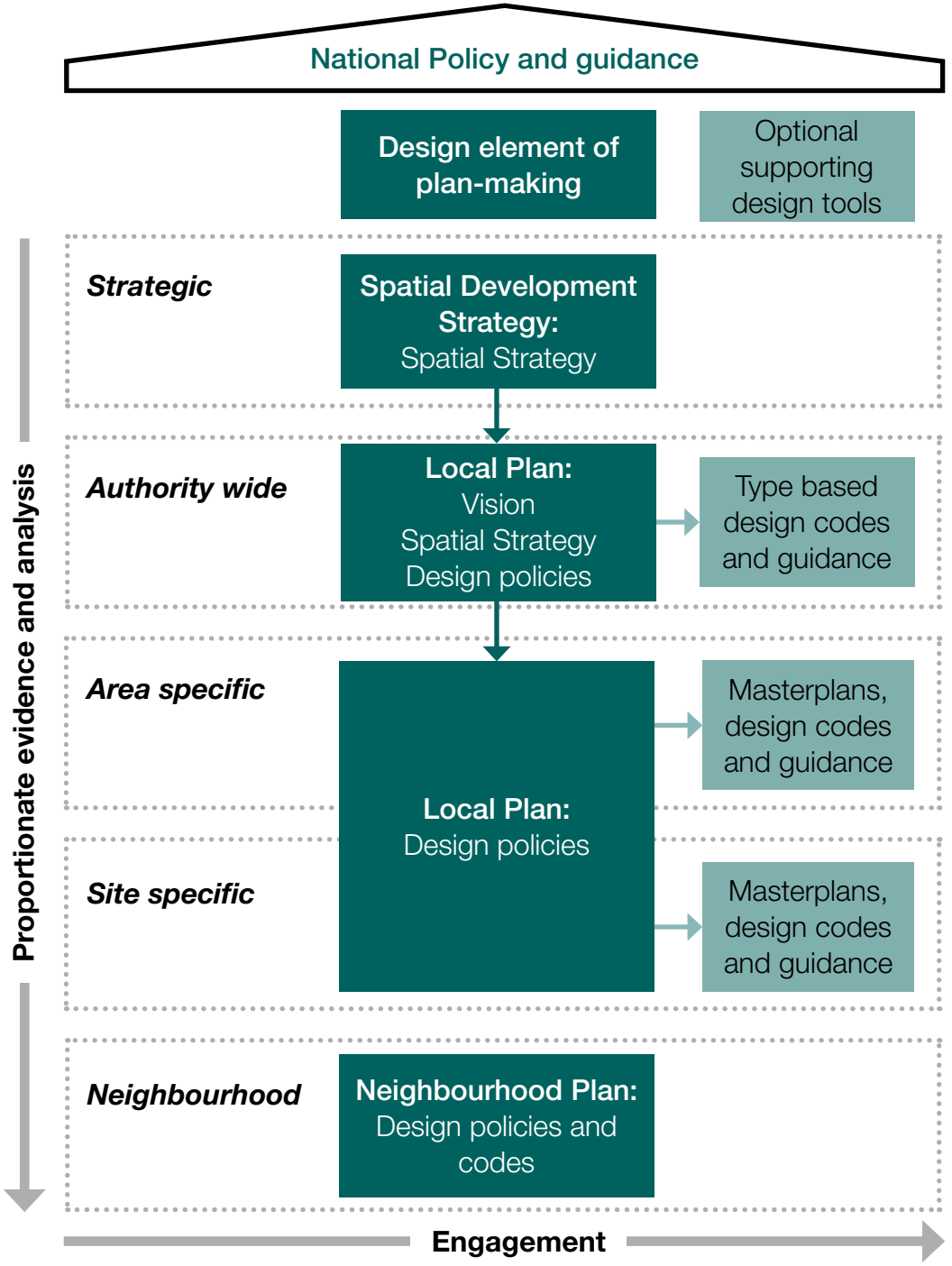


Fig 41 Integrating design in plan-making

Engaging with impact

203. A stakeholder engagement strategy helps identify key internal and external stakeholders, outlining who to engage, how, and when. To ensure effective engagement:

- engage early with a wide range of stakeholders, including those with land interests
- involve local groups, anchor institutions, businesses, less well heard voices and end users
- engage development management and specialist teams (such as urban design, conservation, ecology) to identify recurring design issues and trends in past and current planning applications to inform new policies
- decide how to report project progress and updates to stakeholders, to ensure they stay informed and have a chance to provide feedback

Evidence

Spatial analysis of design issues

204. Spatial analysis helps shape the local plan vision and spatial strategy by identifying key design and placemaking issues and needs across the local authority. This can be achieved by taking the following steps:

Step 1 - Gather and analyse existing evidence:

- review existing design and placemaking evidence in development plan policies, neighbourhood plans and supplementary planning documents
- assess relevance and identify gaps
- engage strategic planning authorities to understand cross-boundary infrastructure and landscape policies set out in the spatial development strategy

205. Design and placemaking evidence could include:

- context and character of the area
- priority design issues aligned with the seven features of well-designed places (see **Part 1**):
  - character and townscape
  - landscape and green infrastructure
  - environmental quality
  - movement and connectivity
  - heritage
  - community engagement

Step 2 - Gather and analyse additional evidence (if needed):

- fill gaps with proportionate evidence considering the area or development's scale, nature, vulnerability and location

Example evidence:

- assessments relating to urban design, townscape and landscape character, transport and accessibility, heritage
- evidence of poor design and design challenges from analysis of previous planning applications and appeals
- existing or other planned strategies, including those relating to:
  - connectivity, movement and street hierarchy
  - green and blue infrastructure, open space
  - play space
  - housing, including for older people
  - health

206. Design evidence should support the identification of local priorities, drawing on the seven features of well-designed places to inform the place led vision.

Vision and scope

Use the design spatial analysis to inform a locally distinctive vision, building on the approach set out in Creating and Updating Local Plans guidance.

207. The vision and outcomes should describe:

- the types of place(s) the plan aims to achieve
- how these places support sustainable development
- design expectations for future development and investment

208. An effective vision informs proposals at the area specific or site specific scale. These proposals should:

- define the key components, character and qualities of the place
- define the economic, social and environmental outcomes
- use words, images and diagrams to clearly describe future development
- support identifying site capacity, key constraints and infrastructure dependencies

Ensure diagrams representing different spatial scales have a clear purpose

209. Presenting visual information showing the pattern, scale and location of development can reduce the need for lengthy text and clearly communicate how an area is expected to change. Early community and stakeholder engagement can help shape the content of these diagrams.

210. Diagrams at the area and site specific scales can provide clear spatial context for development and how it relates to the wider local plan spatial strategy. These can be included in the local plan or supporting masterplans (see **Test and develop: design policies**).

Authority wide scale

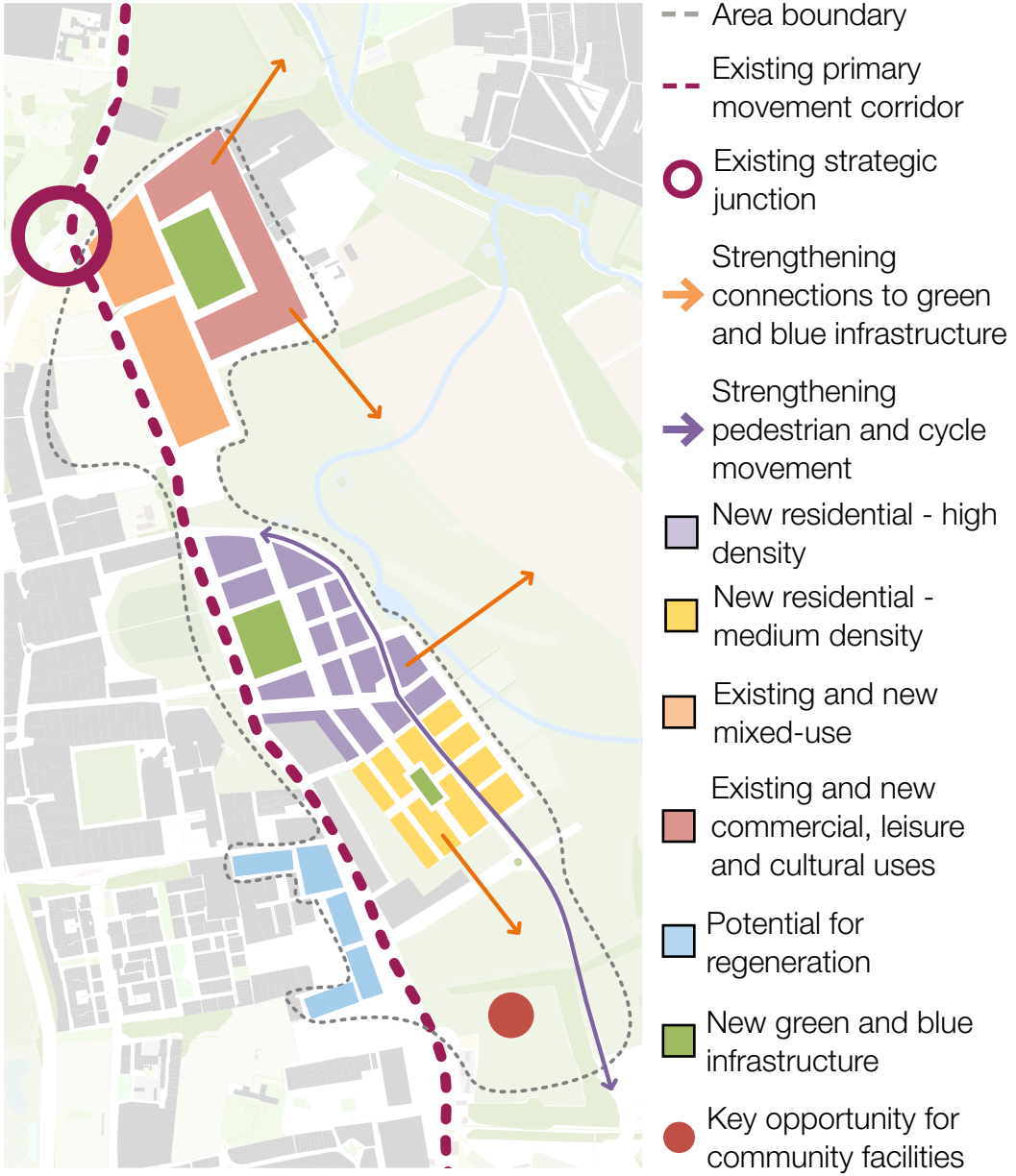
211. The local plan key diagram will visually express the spatial strategy and, alongside the policies map, can identify sustainable development patterns and strategic cross boundary considerations, including:

- areas of growth, regeneration and protection
- strategic site allocations
- strategic infrastructure improvements
- strategic green and blue infrastructure networks

212. **Area specific diagrams** (for example: town centre regeneration, new settlements or urban extensions), can illustrate planning context, opportunities, and constraints related to:

- character, built form, and land use
- transport, environment, and infrastructure

Fig 42 Example area specific spatial diagram



213. **Large site allocation** diagrams should show the site's context, how it integrates with its surroundings and:

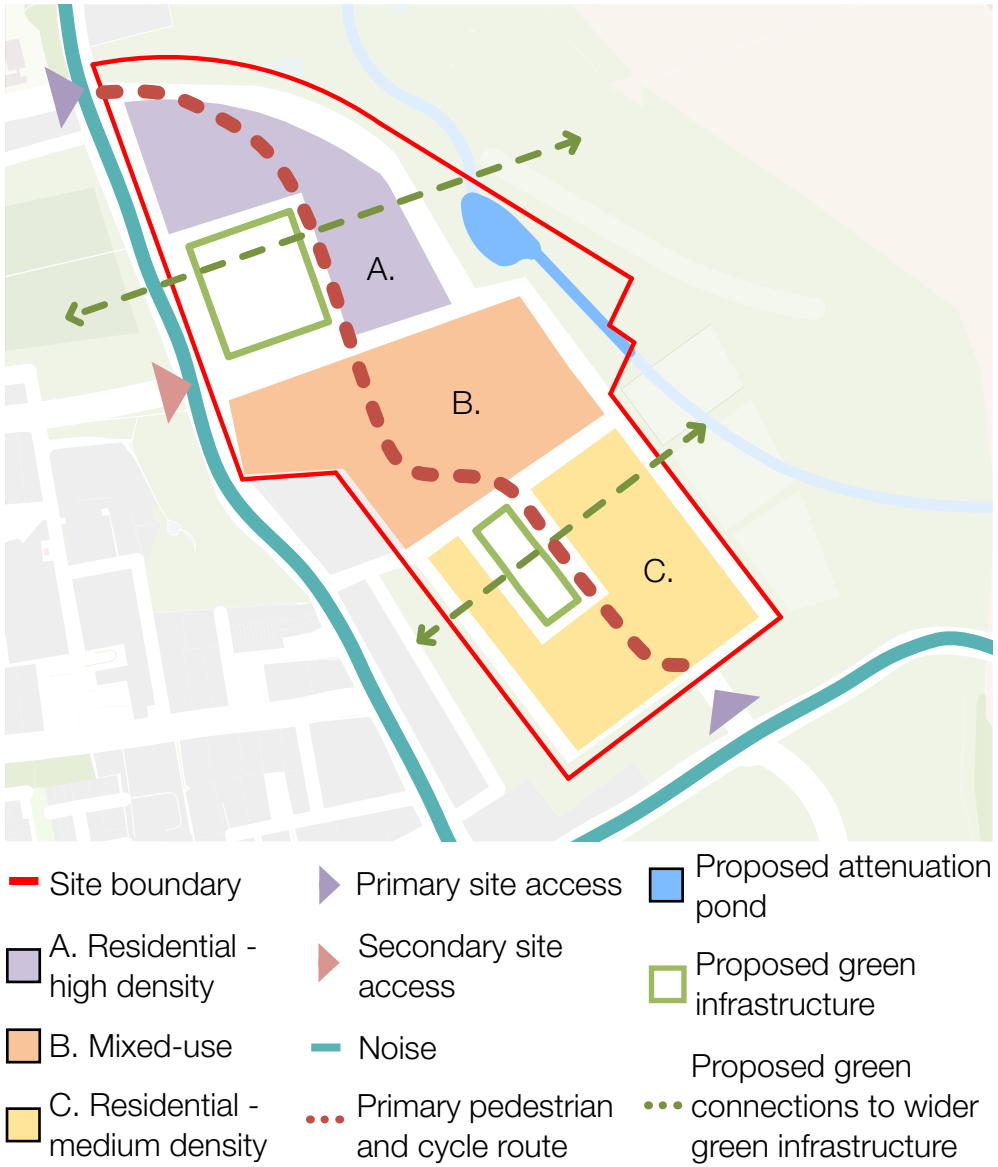
- articulate key design objectives
- help shape new design policies

214. Masterplans for large site allocations can illustrate key spatial parameters and design information such as:

- site context: showing the site's relationship to its surroundings, including key active travel routes, sustainable transport connections and green infrastructure networks, informing suitable locations for housing growth
- landscape, heritage, and placemaking features: identifying elements to enhance or protect, alongside key placemaking principles
- indicative access and movement strategy: including proposed access points, key connections and sustainable transport routes
- high level land use layout: showing the general distribution of land uses and green / open space

215. As the diagrams are conceptual, the supporting evidence base should be proportionate and not overly detailed.

Fig 43 Example large site allocation spatial diagram



Test and develop

216. Design policies should support the implementation of the local plan vision and spatial strategy and respond to place specific issues. They should cover the relevant spatial scale to support placemaking and set clear expectations for design quality.

Authority wide policies can:

- identify where masterplans are necessary to guide development in areas of significant change and for specific site allocations
- specify design codes for settlement types or site types including those brought forward outside the local plan-making process
- include design policies for place specific issues, such as recognising strategic views of important heritage assets
- identify other design tools and process requirements, such as design review arrangements

Area specific policies can:

- identify where future masterplans, design codes and area specific design guidance are needed to coordinate development and resolve issues across multiple phases and different land ownerships
- refer to existing design tools

Establish a clear framework for securing design quality for allocation policies for large sites by including:

- strategic design considerations, such as infrastructure requirements (social, physical and green) and mitigation measures, active and sustainable travel, heritage protection and environmental safeguards
- details on how subsequent design information will be prepared and approved including the use of masterplans and design codes, who will prepare them, and the approval process and sequencing
- masterplanning requirements to ensure comprehensive development across multiple phases maintain design quality and support delivery – these may reference strategic policies or set out site specific requirements
- additional tools to secure design quality, such as design review processes, pre-application meetings or Planning Performance Agreements (PPAs)

Other site allocation policies can:

- refer to any strategic policies on masterplanning, design codes and design guidance, or alternatively:
- identify the need for site specific masterplans, design codes and design guidance

Design tools

217. Design tools, such as masterplans, design codes and design guides help secure design quality from planning to implementation. Informed by evidence, analysis, engagement and design review, they provide clarity and certainty about expectations for design quality and placemaking, for communities, stakeholders and applicants. Local planning authorities need in-house design expertise to lead this work and bring in the right external skills.

218. Design tools can be combined and tailored to suit the scale and type of development. Local plans can outline the design tools that are needed, when they will be used and how they support design quality, especially for large sites and areas of change.

219. The use of masterplans, design codes and design guides are encouraged by the National Planning Policy Framework and should be informed by the seven features of well-designed places (see **Part 1**).

220. Masterplans typically include plans for:

Liveability	Land uses, community facilities and infrastructure.
Climate	Low carbon initiatives, biodiversity, nature recovery.
Nature	Multi-functional green and blue infrastructure, street trees, SuDS.
Movement	Movement hierarchy, public transport, access, walking and cycling routes.
Built form	Blocks, plots, streets and spaces.
Public space	Public realm and open spaces.
Identity	Site constraints and opportunities.

Masterplans

221. A masterplan is a flexible, placemaking tool, providing a three-dimensional spatial framework and long-term vision for the development or regeneration of area specific or site specific locations. It guides investment and delivery, by showing how people, resources, processes and tools can interact to shape change.

222. A masterplan is used for significant change and can cover multiple sites and phases. A masterplan can be applied in the following contexts:

- new settlements and urban extensions requiring significant upfront infrastructure to meet housing needs and support economic growth
- regeneration projects including improvements to a large housing estate
- town centres and high streets needing investment and coordinated development across different sites
- sensitive areas to protect an environmental or heritage asset

223. Masterplans should be reviewed regularly to ensure they remain viable and may be supported by a design code.

Design codes

224. Design codes are requirements which specify parameters for the physical development of a site, area or development type. They help deliver the local plan vision by translating broad planning policies into specific, visual and measurable design parameters, and design code guidance (see **Part 3**).

225. Design codes can be applied at different scales, from authority wide to individual sites, and across all development types including residential, commercial and mixed use (see **Making decisions about design**). They are most effective when prepared collaboratively, to secure agreed design outcomes and maintain viability, particularly for phased and multi-developer schemes.

Model Design Codes

226. MHCLG intends to develop a series of Model Design Codes. These will be template design codes for common development types, helping local planning authorities save time and resources by avoiding the need to create local design codes for repeatable development types.

Design guidance

227. Design guidance sets general design principles and objectives for an area, building on policies in the development plan.

228. Local design guidance should reflect a clear understanding of local character and opportunities. Good design guidance is concise, accessible and visually engaging, using illustrations, checklists and examples. It should be used alongside other design tools to assess the quality of proposals.

The differences between design codes and guidance

229. Design codes and guidance serve different purposes and have distinct roles. It is important to specify when codes and guidance are being used and distinguish between them.

	Design Codes	Design Guidance
Purpose	Set clear, measurable design requirements	Explain good design principles and approaches
Language	Directive (for example must) for precision, rather than to provide weight	Advisory (for example should, could, where appropriate)
Flexibility	Low – focused on certainty and consistency	High – allows for interpretation and variation
Format	Visual and rule-based, with diagrams and numeric parameters	Descriptive, with examples and guidance
Use	When specific design control is needed	When encouraging good practice and flexibility

Preparing design tools

230. Preparing design tools takes time, skills and resources. Early planning ensures everyone understands the project's goals, agrees on key design issues and has a clear engagement strategy.

231. The process for preparing design tools should build upon the plan-making process (see Fig 44).

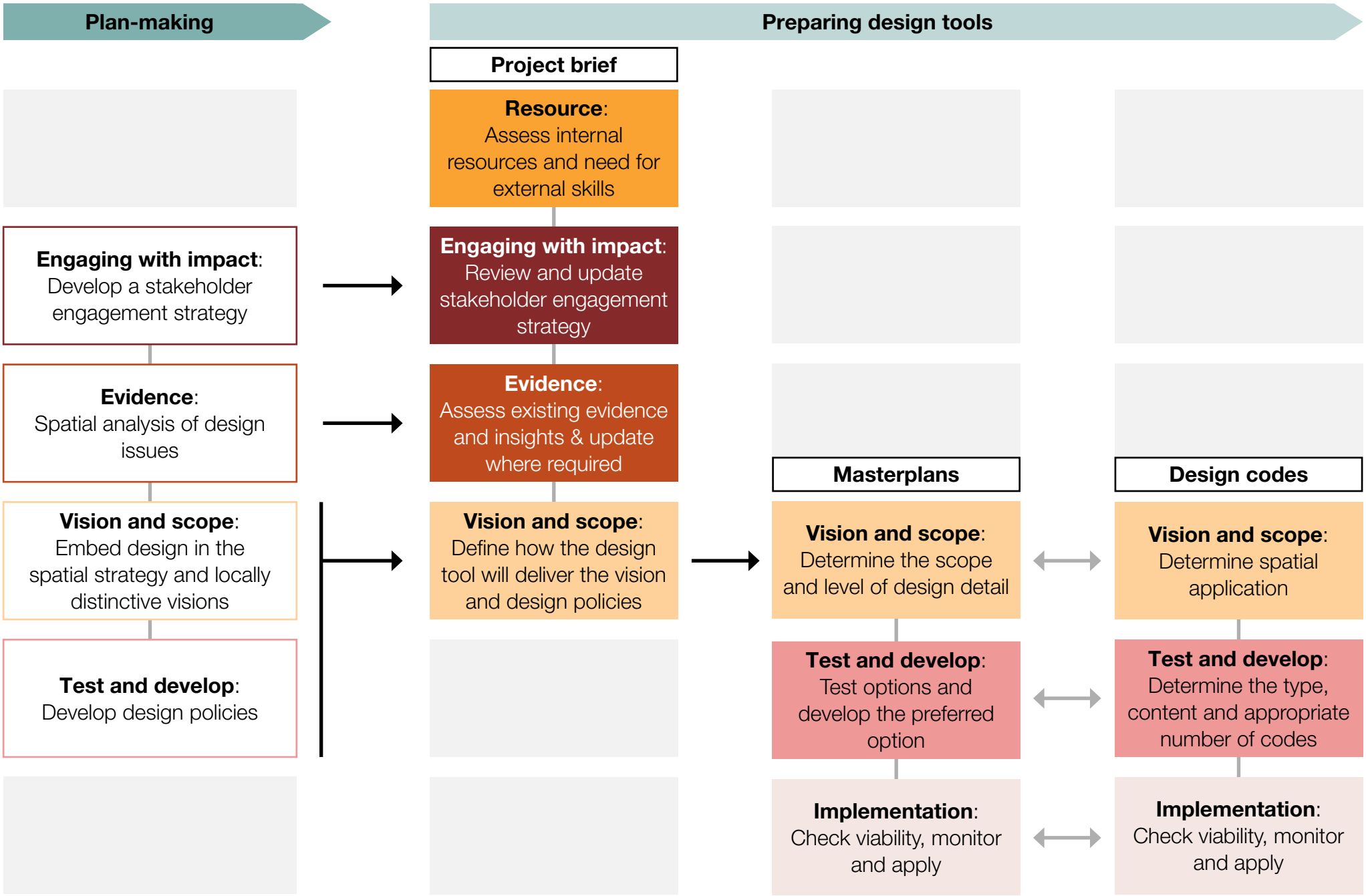


Fig 44 How the process for preparing design tools should build upon the plan-making process

Preparing a project brief

An effective project brief

232. A well-prepared brief builds shared expectations and secures senior and stakeholder support before work begins. It is essential to bring together scoping information and clearly set out the tool's purpose, objectives, coverage (for example authority wide or site specific). It is important to involve development management officers in the brief preparation. A typical brief may include:

- project context: key planning policies, priorities and challenges
- coverage, status and weight: geographic scope, role in the planning framework, influence on planning decision-making
- project team: governance structure and senior/ political buy-in
- KPIs: clearly define success criteria with stakeholders and include these in the project brief to ensure alignment from the outset
- timetable (key milestones and deadlines): effective project management should support creative collaboration, robust decision-making and structured reviews; planning these early helps create a flexible, realistic delivery plan

233. If consultants are being appointed, a typical brief may also include:

- scope of services: description of professional services and engagement approach
- contract requirements: draft legal agreement
- procurement (consultant selection process): check for pre-approved consultant frameworks, ensure their skills meet the project brief requirements and factor the time and resource needed for consultant selection and appointment into the project plan

Related resources:

The Architect Directory

Resource

Assess internal resources

234. Create a resource plan to outline what is needed to prepare, test, adopt and implement the design tool. It should cover:

- project duration
- estimated costs
- required skills

Internal capacity and needs for external skills

235. Assess skills across departments and seniority levels, from officers to directors. Identify priority areas such as urban design, highways, architecture, and planning; as well as specialist skills such as ecology, sustainability or heritage. Highlight any gaps that may require external support.

236. Define the internal team with at least one team member dedicated to the project. Key skills include:

- strategic thinking
- design leadership
- project management

237. Design leadership should include executive and elected members to champion design quality and build buy-in from stakeholders and the community.

238. Plan for long-term management during adoption and implementation. A responsibility matrix can be beneficial, particularly if the design tool will be handed over to a different team.

Related resources:

Design Council Pathfinder Insights Phase 3: Making Resource Efficiencies

Homes England Capacity Analysis Tool

Engaging with impact

Review and update the stakeholder engagement strategy

239. There may be an existing stakeholder engagement strategy in place to promote inclusive and collaborative design processes, for example in the preparation of the local plan. Review and update this strategy or prepare a new one if one is not in place following the guidance set out in **Part 2 Community and stakeholder engagement** and **Design in plan-making**.

Evidence

Assess existing evidence and insights and update where required

240. Design tools are based on a thorough understanding of the site's context, informed by evidence gathered as set out in **Part 2 Design in plan-making**. The majority of evidence required to develop a design tool may already exist as local plan evidence. Any evidence gaps should be identified to determine if more information is needed to develop and test emerging proposals. This may include more targeted, community engagement or engaging with officers to audit common planning application types and frequent decision issues. Local issues expressed in previous public consultations will also highlight key challenges the tool should address.

241. Learning from existing design tools and visiting completed developments can help define project goals and quality standards. Including images and case studies in the project brief can communicate design quality aspirations.

Related resources:

Housing Design Awards website

Vision and scope

Define how the design tool will deliver the vision and design policies

242. The design tool will support the delivery of the vision and placemaking outcomes that are set out in the local plan spatial strategy and design policies, developed following the steps set out in **Part 2 Design in plan-making**. It is important to clearly set out the purpose of the design tool in delivering this vision and outcomes.

Preparing a masterplan

243. Follow the steps for preparing a project brief, and then:

Vision and scope

Determine the level of design detail

244. The level of detail in a masterplan depends on:

- the context, including the scale and complexity of the site or area
- the vision and objectives
- the implementation strategy, including specifying whether it is led by the local planning authority or developer, how it integrates other tools such as design codes and guides, and how it will be implemented through the planning stage; including local plan preparation, pre-application, community consultation, outline or detailed application stages

Test and develop

Test options

245. As the masterplan evolves, explore different approaches to address site opportunities and constraints. Use insights from this analysis to develop masterplan options:

- create visual material to clearly communicate how each option addresses the vision and objectives to different audiences
- agree evaluation criteria with stakeholders to ensure transparency in decision-making

Fig 45 Masterplan and placemaking layers

- conduct technical studies to assess each option's strengths and weaknesses, and identify improvements
- engage stakeholders and the community and use their feedback to evaluate and refine the options

Develop the preferred option

- refine the masterplan documents to ensure technical accuracy and alignment with the vision, objectives, and feedback
- present technical details visually so they are clear and accessible

Implementation

Prepare delivery strategy

246. Align the masterplan with the statutory planning process to strengthen its role in guiding delivery, ensuring development proposals are feasible and viable. The delivery strategy sets out how the masterplan will be implemented and may include:

- an outline business case identifying risks, analysing the financial viability, accounting for social and environmental benefits and setting out how this will be tested and updated through delivery
- an infrastructure delivery plan: what is needed for transport, green and social infrastructure, where, how and when it will be provided, including funding, land assembly, phasing, delivery models / community ownership
- a community and stakeholder engagement plan to build ownership and trust
- the approach for further planning and design work such as design review, design codes and guides
- the strategy for monitoring and updating the masterplan including tracking progress with all delivery partners

Preparing design codes

247. This guidance outlines steps to prepare local design codes in different geographical contexts. To speed up the process, Model Design Codes will include template design requirements which can be used and adapted locally.

248. Follow the steps for preparing a project brief, and then:

Vision and scope

Determine the spatial application

249. Design codes should be tailored to the context and scale of development, with flexibility to adapt to changing conditions. Their application depends on the spatial scale and type of code.

250. Part 3 outlines the range of design issues that codes can address. Not all issues will be relevant in to every circumstance. The content should reflect the specific context, scale and nature of development. Types of design code can include:

Authority wide (type based design codes)

These can apply across multiple developments with shared characteristics, such as residential new build, small sites or specific street types. They raise baseline standards, offer certainty and streamline decision-making by addressing common, repeated design issues.

Area specific design codes

Used in growth or priority areas, such as town centres, regeneration corridors or new urban extensions, to support co-ordinated placemaking across multiple sites, ownerships or phases, linked to a masterplan. They can respond to local character, including in heritage and environmentally sensitive locations. Type-based codes still apply, unless there is evidence to vary them in response to specific constraints or needs.

Site specific design codes

Prepared for individual sites, typically under single land ownership and linked to a masterplan, providing commitment and certainty of design quality for example, supporting outline planning applications.

Area types

251. Area types are a way to standardise setting design requirements for places that have common characteristics. They group places with shared physical characteristics, such as land use, street patterns, density and house types. They help define common design requirements across similar areas, making them suitable for large site allocations, regeneration corridors and cross-boundary sites. Examples include urban extensions with different suburban area types, town / city centres, local centres, industrial areas and rural settlements.

252. Within a single area type, design codes may focus on detailed features like building elements and public spaces.

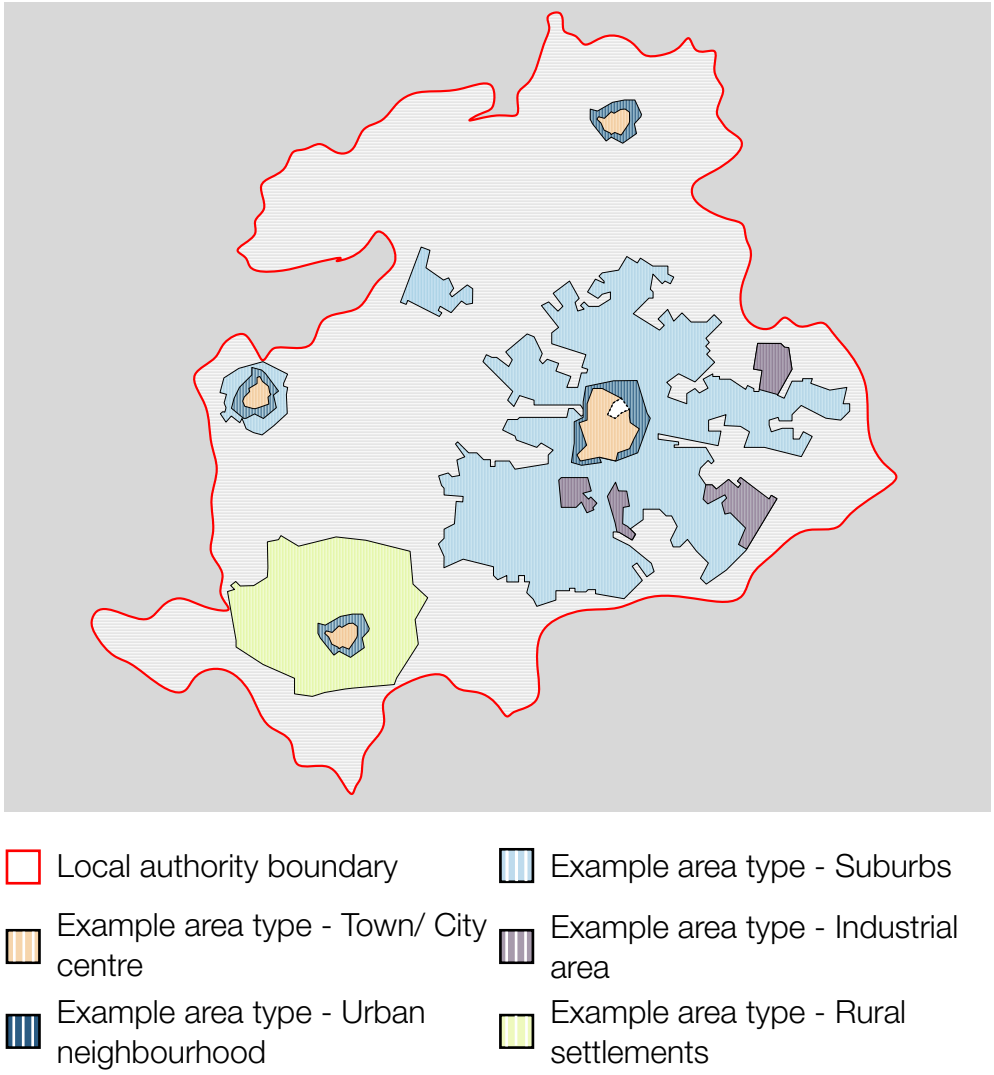
Character areas

253. Character areas are distinct qualities of existing places, such as cultural attributes, built form, architectural qualities and materials. They are useful for managing incremental change in established neighbourhoods, such as infill development or householder applications. Where too many character areas exist, they can be consolidated into broader area types to simplify application of design codes. Character areas can ensure design codes respect and reinforce the individuality of a place.

Illustrating design code coverage

254. Design codes should clearly state their geographic coverage. A coding plan (a map and key) can show the design code boundary and distribution of area types and character areas. A coding plan does not need to cover the entire authority area.

Fig 46 Example coding plan



255. Digital design codes can link design requirements to specific locations interactively. A non-digital code should clearly state the area it applies to in writing.

Test and develop

Determine the type, content and appropriate number of codes

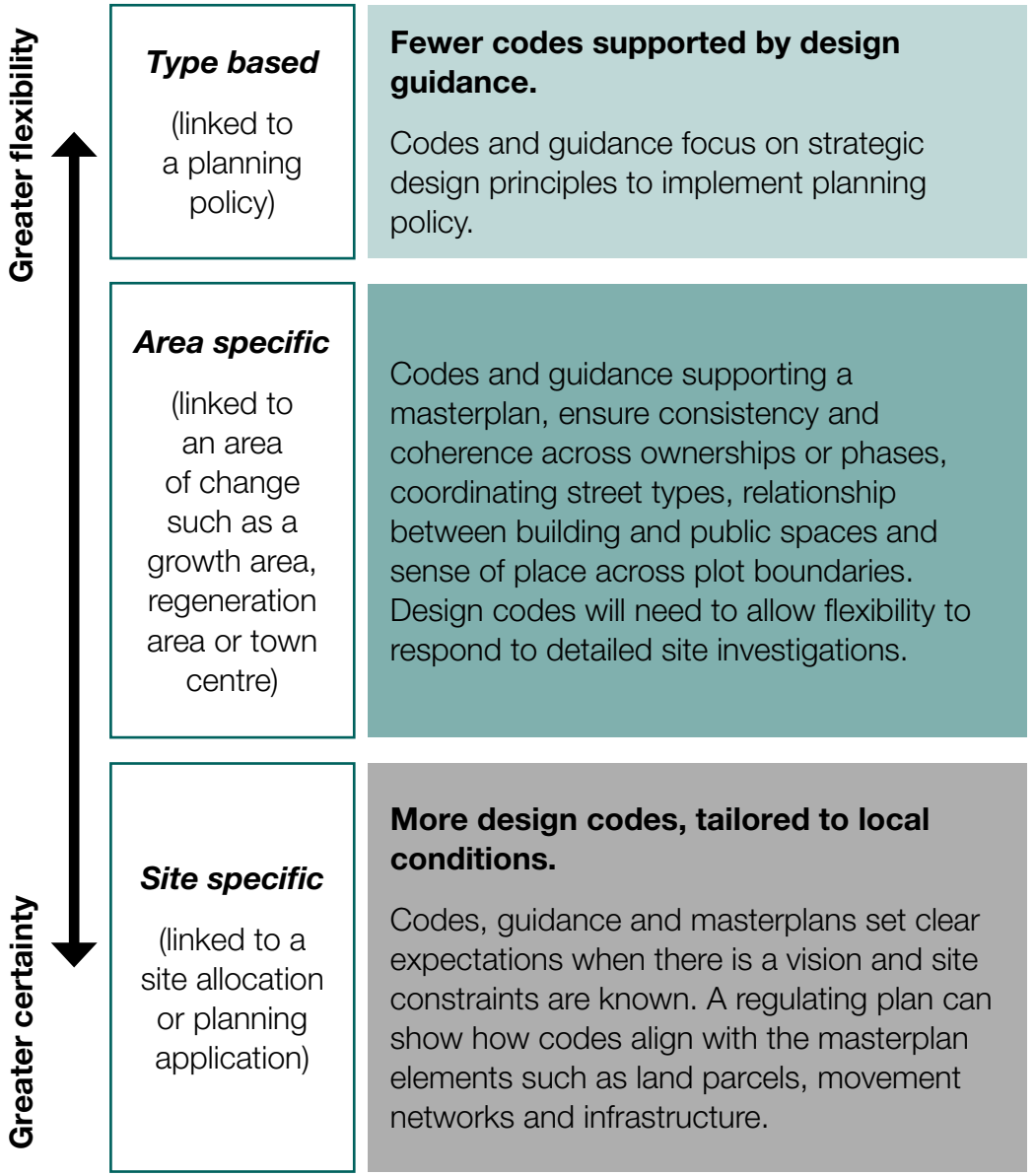
256. Design codes are not always the best tool for every development or design issue, and can be combined with guidance and masterplans. The balance of flexibility and certainty should match the scale of development and understanding of site constraints, as set out in Fig 47.

Implementation

257. An implementation strategy for the design code should be considered from the start and throughout the preparation process. This can be achieved by the following steps:

- Early and continued engagement with those who will be implementing the design code and making decisions on applications. Development management officers should be involved from the outset so that codes can address their needs. It is important to consider other key stakeholders, including other local authority departments, statutory consultees, council members, developers, and community groups.
- Regularly test and refine design codes with key stakeholders through the preparation process to ensure they are user friendly, content can be readily found, interpreted and applied. Regular review as development proceeds can ensure lessons learned are incorporated and addressed so that the overall design vision and quality of development is not weakened.

Fig 47 Certainty and flexibility in design tools: determining the appropriate number of codes



- Plan early to monitor and update the design code by defining key outcomes, criteria, necessary data gathering, storage, maintenance, and how monitoring will be integrated into decision-making. This data can be used to inform future updates to the code and policy responses. Monitoring will be simpler if requirements are clear.
- If prepared by the local authority, consider how the design code can carry weight in decision-making. This will be for local authorities to determine the most appropriate approach that reflects local circumstances (see **Design and plan-making**). Consider how design codes can be linked to a delivery mechanism, such as a local development order or plot passport, to speed up delivery.
- Consider the use of design review panels to assist decision-makers with identifying if development proposals which do not comply with a design code are of high enough quality to justify departure.

Making decisions about design

258. The ambition to create well-designed buildings and places does not end with the adoption of design policies and tools. Applicants should understand design expectations (processes and requirements) when preparing a planning application and local planning authorities should embed design considerations throughout the planning process, from pre-application to post-approval, to secure good design outcomes.

259. This section explains how design tools, and in particular design codes, can be applied to inform design decisions. It sets out the design information needed for different types of planning application to support faster, more consistent decisions.

Integrating design into decision-making processes

260. Design policies and tools, such as design codes, guidance and masterplans, provide clarity for applicants and give confidence to decision makers. Applicants should understand design expectations before submitting an application, and local planning authorities should use design tools to inform decisions at every stage. Early engagement between applicants and development management officers is essential to clarify design expectations and avoid delays.

Training

261. Local planning authorities should provide training for relevant staff and councillors involved in planning decisions.

- Identify who may need training: development management officers and councillors as a minimum. This may also include highways, environment, and heritage officers, and enforcement teams. Consider county council officers, statutory consultees, planning consultants and developers.
- Address skills gaps: A skills assessment can identify priority needs.
- Be practical and flexible: Training formats should suit the content such as online for explaining new design tools and in-person for interactive learning. Work with key user groups to understand what methods work best. Induction materials can support ongoing learning.
- Use external support where needed: Design review panels, consultants, or partner authorities can assist, where in-house capacity is limited. New design review panels will require induction and may require training.

The pre-application stage

262. Pre-application engagement improves the quality of planning applications and increases their chances of success. Pre-application discussions should:

- help applicants understand design expectations, including where design codes apply or if design review is appropriate
- be proportionate to the scale and complexity of the development proposal
- begin with strategic principles before moving to detailed design
- provide an opportunity to reflect community views early in the process – take into account design codes and guidance, which can help establish common ground improving the quality of submissions
- use voluntary planning performance agreements (PPA), for large and more complex schemes, to agree engagement with design review panels

263. Design assessment tools, such as Building for a Healthy Life, can support pre-application discussions.

Consultation on planning applications

264. Setting clear design expectations in design codes and guidance can streamline consultation with local communities and statutory consultees on individual applications. To ensure success, adopted design tools should be easy to access, well-publicised and up to date.

Decision-making

265. To be effective, design codes, guidance and masterplans should be given appropriate weight in planning decisions, ideally as part of the development plan. It is for planning authorities to consider how to do this, for example in the local plan or as a supplementary plan.

Applying design tools

- Development management officers should identify relevant design requirements and assess whether proposals comply. Where non-compliance occurs, work with applicants to resolve issues.
- Decision makers should be confident in refusing planning permission for proposals that do not satisfy the requirements of design codes and guidance. Where requirements conflict, balance decisions against the development plan and other material considerations.

Demonstrating compliance

- Applicants should show compliance with design codes in design and access statements, planning statements, or using a design code compliance checklist. Compliance checklists can streamline decisions and may be included as an appendix to the design code.
- Officers can facilitate consistency of decision-making by referencing compliance with design codes in their committee reports.

Design review

- Design review panels provide independent, early assessment of development proposals, including against adopted design codes.
- Where a design review panel has provided feedback on a proposal as part of the planning process, decision makers should reference and respond to it as part of their decision.

Planning conditions

- Conditions can ensure developments align with approved plans and drawings, and that materials and design details are consistent with the aspirations of the development.
- Apply proportionately, recognising that design details may need to be finalised later.
- Conditions can secure good design for outline applications.

Post permission: compliance checks and monitoring frameworks

- Use design tools to ensure design integrity is maintained from planning permission through to completion of development.
- Use compliance checklists or design review panels when assessing amendments to existing permissions, particularly where changes affect design quality. Use monitoring frameworks to track the performance of the design tool, collecting feedback and data on their effectiveness and impact.
- Define performance metrics for design tools during their preparation, using baseline data from the evidence-gathering stages. For example, track the percentage and types of applications refused on design grounds, and design issues most frequently cited.
- Decision makers should record when applications are assessed against a design tool to monitor both individual cases and long-term trends. This data should inform updates to the tool and improvements to decision-making processes.

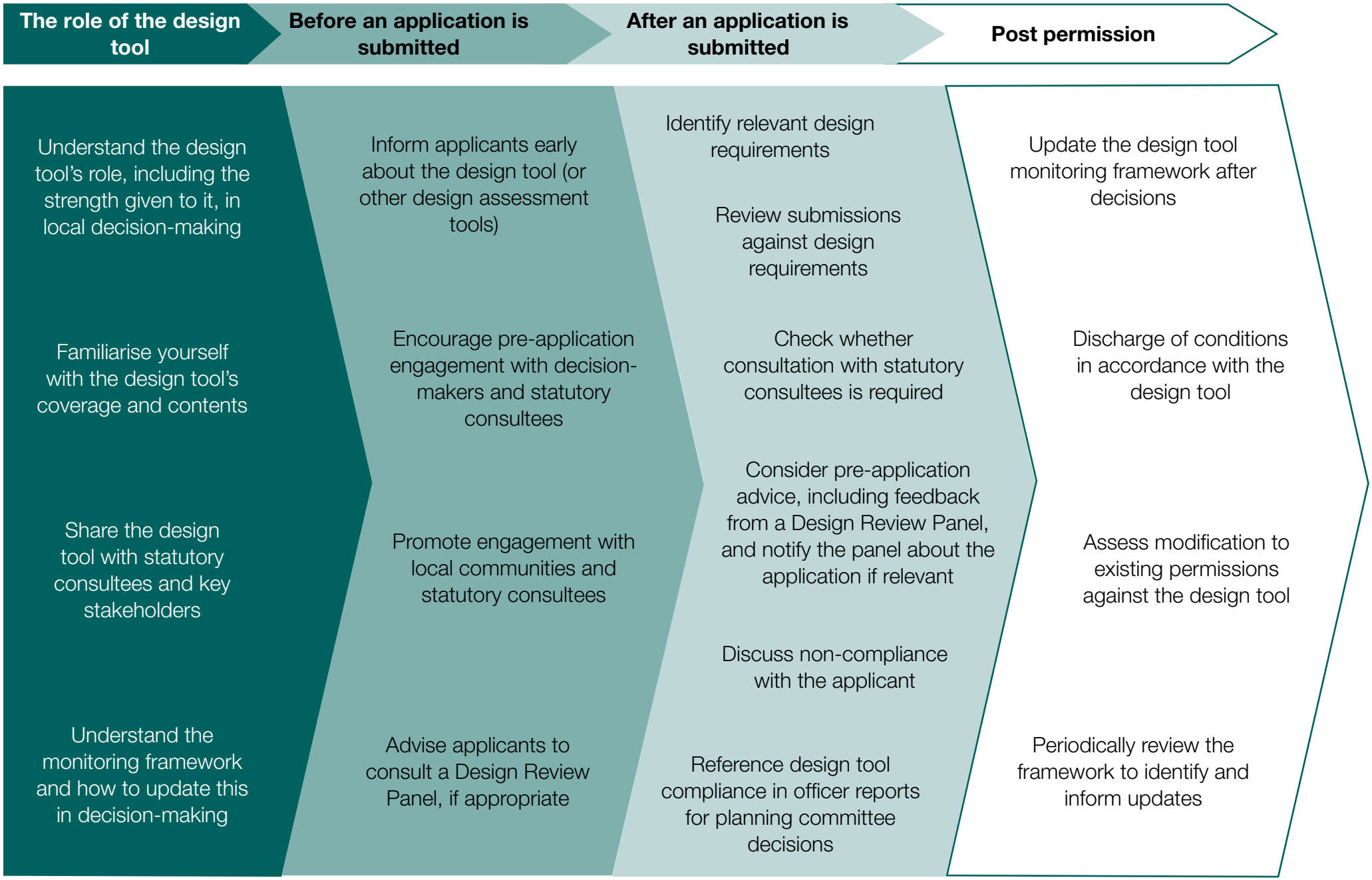


Fig 48 Integrating design in decision-making

Design detail in planning applications

266. The design details in a planning application should be proportionate to the application type. This section outlines appropriate design information for different application types:

- householder applications
- full planning applications
- outline planning applications
- reserved matters applications
- hybrid planning applications

267. Planning applications must include relevant plans and drawings, including a plan which identifies the land to which the application relates and any other plans, drawings and information necessary to describe the development.

Design and access statements

268. A design and access statement is required for all major developments (as defined by article 2 of the Town and Country Planning (Development Management Procedure)(England) Order 2015). It describes a development's design rationale and principles, explains why certain design solutions are chosen and how the proposal responds to the site and surroundings, based on baseline information.

Design and access statements should:

- Be specific, concise and proportionate.
- Show how local design policy, design codes and guidance are reflected in the proposal.
- Guide future decisions on planning conditions or reserved matters, for outline applications.
- Remain objective and not advocate for approval. Details about the acceptability of proposals should be included in a Planning Statement.

Parameter plans

269. These can set broad design requirements for outline planning applications, covering land use, layout (including movement hierarchies, green and blue infrastructure, block structure), access, urban design features such as character and landmarks, and overall amount of development. They can inform environmental impact assessments.

Parameter plans establish clear thresholds for the physical development of a site, to secure long-term design quality, particularly for large or complex schemes, while allowing flexibility to respond to site constraints. They are not a substitute for a clear design vision and masterplan.

Compliance is usually secured through planning conditions following approval at outline stage, and reserved matters applications must align with them.

Householder applications

270. These involve small scale changes to homes, such as extensions, conservatories, loft conversions, or garages, with limited impact on wider design and placemaking issues. To achieve good design through decision-making:

- applicants should provide clear design information including on materials
- concise, non-technical design codes or guidance can help applicants meet design standards and support quicker decision-making
- relevant design tools should be easy to find and access

Fig 49 Appropriate design tools during the planning applications process: householder planning applications

Pre-submission ↓ *Post-decision*

Design tools	Pre-application	Decision-making	Post-permission
Design guides	●	●	●
Design codes	●	●	●
Plans and drawings	●	●	●
Planning conditions		●	●
Design tool monitoring framework		●	●

Local planning authority led

Applicant led

Full planning applications

271. These require comprehensive design information to assess the acceptability of the proposal's design. To achieve good design through decision-making:

- design codes can improve the quality of submissions and speed up decision-making on design
- applications should demonstrate compliance with design codes. Proportionate use of conditions can secure good design

Outline planning applications

272. These establish whether the principle of development is acceptable with detailed design addressed later as reserved matters. Outline applications are typically used for larger or more complex development proposals. For major development, certain requirements apply (for example design and access statements) but the following guidance is considered good practice for other types of applications:

273. To achieve good design through decision-making:

- identify key design principles at outline application stage
- include masterplans with outline applications for large or complex sites, where these are not identified in the local plan
- use design codes or guides to set design expectations for outline and future reserved matters applications
- apply planning conditions to secure further details on design at the reserved matters stage

274. To support decision-making on design matters, outline applications should include:

1. a design and access statement: explaining design principles, context, how designs respond to national and local policy, and consultation feedback (required for major applications)
2. a masterplan: showing land use, layout (movement hierarchies, green and blue infrastructure, block structure), access, overall amount of development
3. parameter plans: setting broad design parameters

275. For strategic sites, masterplans and parameter plans should be submitted at outline stage, especially where no local authority-led design tool exists. A design code may be required as a condition and submitted with the first reserved matters application (and apply to all subsequent reserved matters).

Reserved matters applications

276. Details not submitted as part of an outline planning application are decided later as reserved matters. These can include details on access, appearance, landscape, layout and scale. To achieve good design through decision-making:

- reserved matters must align with approved parameters plans, and any adopted design codes
- even if access is a reserved matter, the location of access points must be indicated at outline stage

Hybrid planning applications

277. These combine full and outline applications in a single application for different parts of a site. To achieve good design through decision-making:

- for the full planning application element, detailed design information is required
- for the outline application element, masterplans, design codes and parameter plans should be submitted
- a design code can secure quality whilst allowing flexibility across phases, providing a framework for reserved matters approvals
- planning conditions can be used on the outline element to secure further details on design at the reserved matters stage, particularly for major development

Fig 50 Appropriate design tools during the planning applications process: full, outline and hybrid planning applications

Pre-submission → *Post-decision*

Design tools	Pre-application	Decision-making	Post-permission
Design guides	●	●	●
Design codes	●	●	●
Design Review Panels	●	●	●
Plans and drawings	●	●	●
Design and Access Statements	●	●	
Masterplans	●	●	●
Parameter plans	●	●	●
Design codes	●	●	●
Planning conditions		●	●
Design tool monitoring framework		●	●

Local planning authority led

Applicant led

Part 3:
Setting effective design codes

Introduction

278. Part 3 provides technical guidance on setting design codes that:

- are measurable using visual and numerical parameters rather than detailed policy wording
- are simple, concise and specific to the development type or place that they apply
- provide developers certainty of what will be accepted to make the planning process more predictable and efficient
- raise the baseline standard of design quality and create consistency in the design and character of new and existing places
- allow flexibility and a suitable degree of variety, creativity and innovation

279. Design codes are not relevant to every circumstance, and some will be better suited to specific development types or places than others. Part 3 sets out a comprehensive list of the issues design codes can cover, based on the seven features of well-designed places (see **Part 1**) to help identify the issues to code for locally and set clear, consistent requirements.

280. Design codes are interconnected, and it is important to consider how different design codes relate to one another. The liveability feature is treated differently to the other features in Part 3. It is an overarching consideration when setting design codes rather than a specific issue that can be coded for. Part 3 provides guidance on using design codes to create liveable places which are inclusive, where people can live healthy, safe and equitable lives.

281. When setting design codes, decisions should be made in response to context analysis, visioning and engagement. These steps are outlined in **Part 2: Preparing design codes**.

282. Figure 51 lists the issues design codes can cover, indicating whether these are more appropriate to apply to development types or places (a specific area or site). It can be used in conjunction with the technical guidance on setting design codes to identify a shortlist of codes to be applied locally.

Issues design codes can cover

Fig 51 Issues design codes can cover

Feature	Typically applies to	Ref	Design issue
Climate	Areas and sites	C1i	Passive design
		C2i	Reuse and adaptation
Nature	Development types	N1i	Green infrastructure provision
	Areas and sites	N1ii	Green infrastructure design
		N2i	Development next to water
		N3i	Sustainable drainage systems
		N5i	Tree provision
Movement	Development types	M1i	Access to local services and community facilities
		M2i	Permeability
		M3i	Access to public transport
		M4i	Design for active travel
		M4ii	Junctions and crossings
		M5iii	Services and utilities
	Areas and sites	M5i	Car parking design
		M5ii	Cycle parking design
Built form	Development types	B3i	Light and aspect
		B3ii	Privacy
		B3iii	Private amenity provision
		B3iv	Space standards
		B3v	Tenure neutral development
	Areas and sites	B1i	Density
		B2i	Building types
		B2ii	Building Lines
		B2iii	Heights
Public space	Development types	P4i	Open space and opportunities for physical activity
		P4ii	Play space provision
		P4iii	Active frontages
	Areas and sites	P1i	Scale and enclosure
		P1ii	Access
		P1iii	Landscape design
		P1iv	Street furniture
		P3i	Security and counter terrorism
Identity	Areas and sites	I3i	Building form
		I3ii	Facade design
		I3iii	Materials

Using design codes to create liveable places

283. Design codes specify parameters for the physical development of a site, area or development type. Liveability cannot be defined through a single design code; liveable places are achieved through a combination of a carefully balanced set of design codes across different features. The following section describes where design codes can be set for different issues in conjunction with one another to achieve the principles of liveability in **Part 1**.

L1 Effective use of land

284. A series of interlinked design codes can be carefully balanced to promote effective use of land, creating certainty for applicants to speed up delivery:

- **M1i Access to local services and community facilities**, **M3i Access to public transport** and **M2i Permeability** – areas with greater permeability and access to services, open space and public transport can support higher densities
- **B1i Density** – can be used to set standards for how efficiently land is used, requirements which determine the maximum developable area of a site will inform the density range it can achieve, and should be considered alongside any minimum density standards
- **B2ii Building types** – building types that combine multiple uses, including apartments, and buildings types which join, such as terraced housing, use land more effectively
- **N1 Provide a network of high quality, biodiverse, green spaces** – to ensure development integrates green infrastructure to support biodiversity and healthy, active lifestyles
- **M5i Car parking design** – minimising requirements for car parking by locating development in sustainable locations and ensuring that where parking is needed it is configured to reduce the amount of land required

L2 A mix of uses

285. Design codes can be applied to specific uses such as schools, employment and community facilities. By allowing flexibility these can support change of use over time, such as:

- **B2i building types** – design codes for building types can enable multiple uses to come forward by ensuring the required parameters for different uses, such as depth of floor plan, can be accommodated within them
- **B2ii Building line** – building line requirements should consider how public and private outdoor space requirements for different uses can be accommodated to positively benefit the street scene
- **B2iii Heights** – considering the requirements of different uses when setting minimum floor to ceiling heights can ensure flexibility for change of use
- **B3ii Privacy** and **P1ii Access** – a flexible code will accommodate the specific access and privacy requirements of multiple uses

L3 A mix of home tenures, types and sizes

286. Design codes can support the creation of well-designed homes, regardless of tenure, by setting baseline requirements for residential quality, including:

- **B3i Light and aspect** and **B3ii Privacy** – design codes can ensure that all new homes are healthy with adequate light levels, orientated to reduce risk of overheating and privacy from surrounding uses
- **B3iii Private amenity provision** – by setting minimum requirements for private amenity, design codes can ensure that all new homes provide the health and wellbeing benefits of access to a garden, terrace or balcony
- **B3iv Space standards** – design codes can set space standards for homes to ensure they meet the needs of a range of occupants, protect health, and allow for adaptation
- **B3v tenure blind development** – design codes can require that there is no distinction between the visual appearance and general location of different tenures

L4 Socially inclusive

287. It is vital to ensure any design code considers and is informed by the needs of all users to create inclusive places. Part 2 sets out how a process of meaningful community engagement can support this. Consideration should be given to:

- **M1i Access to local services and community facilities** and **M3i Access to public transport** – socially inclusive neighbourhoods ensure that everyone has equal access to facilities and transport
- **N1i Green infrastructure provision** – ensuring all new development provides access to high quality and connected natural spaces supports improved health and wellbeing
- **P1 Create well-located, high quality and attractive public spaces, including streets** and **B3 Healthy and comfortable buildings** – requirements for public space and building design should respond to the needs of different users to prevent the built environment from forming a barrier to people accessing different places and spaces
- **I3 Create character and identity** – design codes for character and identity should respond to and celebrate the culture of the local community

L5 Buildings relate well to surrounding spaces

288. Design codes can set clear expectations for how buildings relate to the public realm to create safe and connected public spaces which accommodate a range of uses:

- **P1i Scale and enclosure** – setting the level of enclosure will inform the character of a public space and its relationship with key buildings, and can support the creation of a comfortable microclimate for the activities that take place within it
- **P1ii Access** – specifying access arrangements of buildings and open space can influence the way public spaces are used and how people interact within them
- **P4i Open space and opportunities for physical activity** – direct access to public space and doorstep play space from surrounding homes supports play and social interaction in the immediate neighbourhood
- **P4iii Active frontages** – specifying that key routes and public spaces are well activated by surrounding buildings can create places which feel safe and overlooked
- **M5 Parking, services and utilities infrastructure** – specifying arrangements or details to integrate these elements will ensure streets and public spaces are functional whilst supporting good placemaking principles

L6 Well-managed and maintained

289. Working in partnership early on with those responsible for management of spaces, such as local highways authorities, can ensure design codes create public and communal spaces that are easy to use, manage and maintain, and speed up collective decision making:

- **M4i Design for active travel** and **M4ii Junction and crossings** – setting clear rules for how different road users are accommodated in different street types and public spaces can avoid conflicts between them
- **M5iii Services and utilities** – setting requirements for bin storage and the access needs of emergency services and waste providers across the areas that they operate can help spaces function well in use
- **N5i tree provision** – specifying the appropriate species and placement will ensure trees are suitably located and can grow without causing damage to the surrounding built environment
- **P1iii Landscape design, P1iv Street furniture** and **N3i Sustainable drainage systems** – agreeing design codes with the local highways authority will ensure streets are easy to manage and maintain; and retain or create character and identity

Technical guidance on setting design codes locally

290. Figure 52 sets out how the guidance on setting design codes is structured for each design issue. It has been formatted to encourage local design codes to be digital or digitally ready. For further information see the planning data draft design code specification and accompanying guidance. Design codes following this draft data specification can be widely understood by all relevant parties and can lead to time savings for local planning authorities and applicants in the preparation, implementation and monitoring of design codes.

Fig 52 Structure of guidance on setting design codes

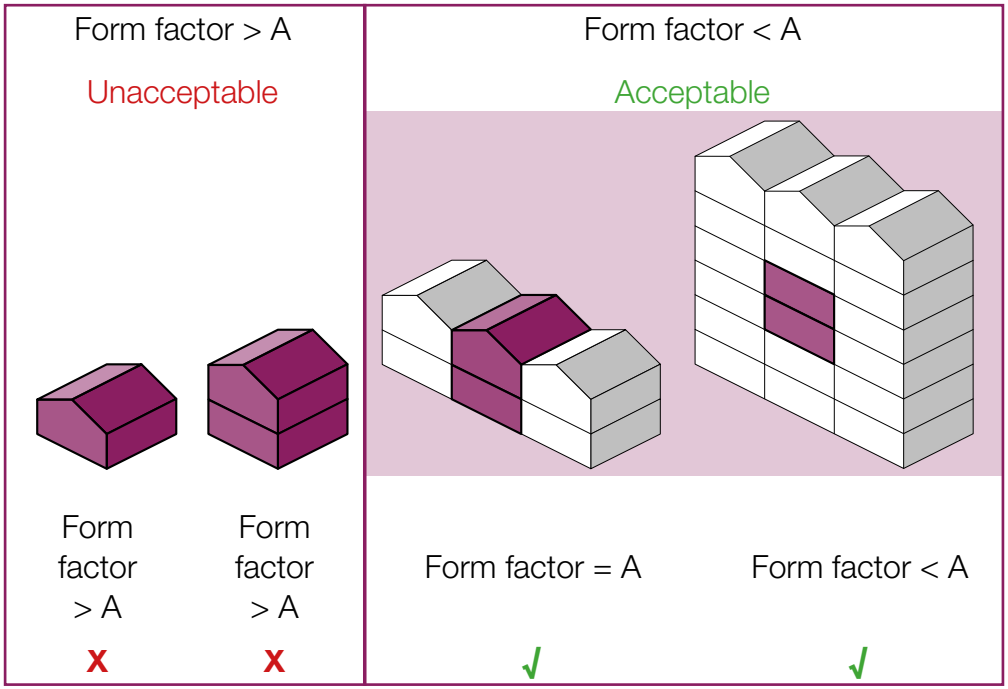
Reference	Design issue
Code content guidance	The different options for setting definitive requirements for each design issue.
Reason	Every design code should have a clear reason for its use to assess departures from the code. In this section, text from the relevant feature in Part 1 has been referenced to set out the reason for design codes responding to each design issue.
Coverage	It is not necessary to set requirements for every issue, and some issues will be more relevant to particular development types, areas or sites than others. This section expands on the issues design codes can cover (see Fig 51) to understand where it is appropriate to set requirements across different development types, or places.
Other considerations	Design codes are interconnected and work together to create liveable places. They may also link with other standards such as building regulations and government legislation, including biodiversity net gain (BNG). This section summarises the other design codes and standards which should be considered in addition to national and local planning policy when setting requirements to create liveable places and avoid duplication or contradiction.

How to illustrate
Design codes should be clearly illustrated. This section describes how to illustrate design codes, including example illustrations which can be downloaded and used or adapted for local design codes.

C1 – The energy hierarchy

C1i	Passive design
Code content guidance	Design codes can be specified for: **Layout and orientation**: specifying orientation of buildings that reduce energy needs and maximise opportunities for solar energy generation. This can include specifying how buildings relate to natural landscape to aid cooling. **Form factor**: specifying a maximum form factor to be achieved to improve energy efficiency, accounting for the efficiency of a building's shape or form.
Reason	**C1 The energy hierarchy**: well-designed places and buildings prevent or reduce the need for energy through passive measures including form, orientation and fabric.
Coverage	Large development sites or areas of significant change.
Other considerations	**B3i Light and aspect**: setting requirements for the orientation of buildings will impact natural light levels to habitable rooms. **B1ii Building types**: specifying requirements for orientation, layout and form factor may impact the function, internal arrangement and use of a building. **Building Regulations**: design codes should not duplicate or contradict standards for overheating as per the functional requirements of the building regulations under Part O, and statutory guidance to support compliance in Approved Document M.
Other considerations (Cont.)	**L5 Well-related to external amenity and public spaces**: requirements for passive design can consider noise mitigation measures.

Fig 53 Example of how a code could illustrate acceptable form factor



How to illustrate

Illustrations can include:

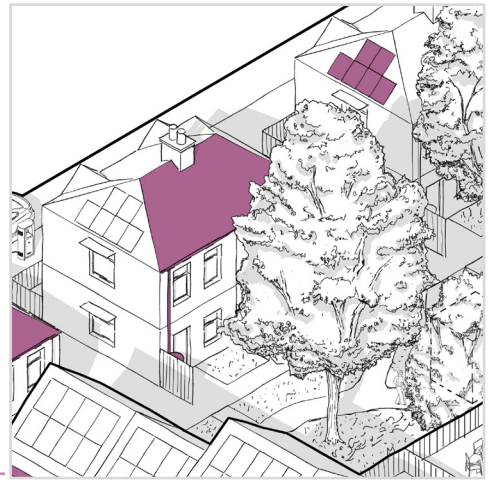
- diagrams that show acceptable layout and orientation of buildings with an accompanying site plan specifying the location(s) they apply to
- a site plan and / or diagrams illustrating the appropriate form factor and the location that form factor requirements apply to

C2 – Whole life carbon and sustainable construction

C2i	Reuse and adaptation
Code content guidance	Design codes can specify how alterations to existing buildings can be carried out, to improve energy performance whilst respecting the identity of the area. This could include: **Technical details**: specifying acceptable architectural or construction details and materials (such as to windows and external insulation) to make alterations to improve thermal performance to meet building standards for protected buildings with shared characteristics. **Renewable energy and resource efficiency**: how renewable energy sources, including solar panels and water management measures such as green and brown roofs can be integrated within existing buildings, such as where they can be located in relation to the street, and how low-energy overheating measures, such as external shutters, can be used while respecting local character.
Reason	**C2 Whole life carbon and sustainable construction**: reusing and adapting buildings can lower resource consumption.
Coverage	For many buildings, alterations will be covered under Permitted Development Rights (PDR). Design code coverage should be limited to existing buildings with shared characteristics where PDR do not apply, such as enabling retrofit in conservation areas, listed buildings and flats, and should be developed with the relevant technical expertise.

Other considerations	**I3ii Facade design** and **I3iii Materials**: when setting requirements for retrofit, careful consideration is required, for example eves details where walls are externally insulated.

Fig 54 Example 3D drawings showing alterations to existing buildings and window details to improve resource efficiency



Rainwater collection and solar panels on elevation not facing the street

External shading on south facing facades

How to illustrate
3D drawings, simplified technical details, partial plans and sections illustrating acceptable alterations.

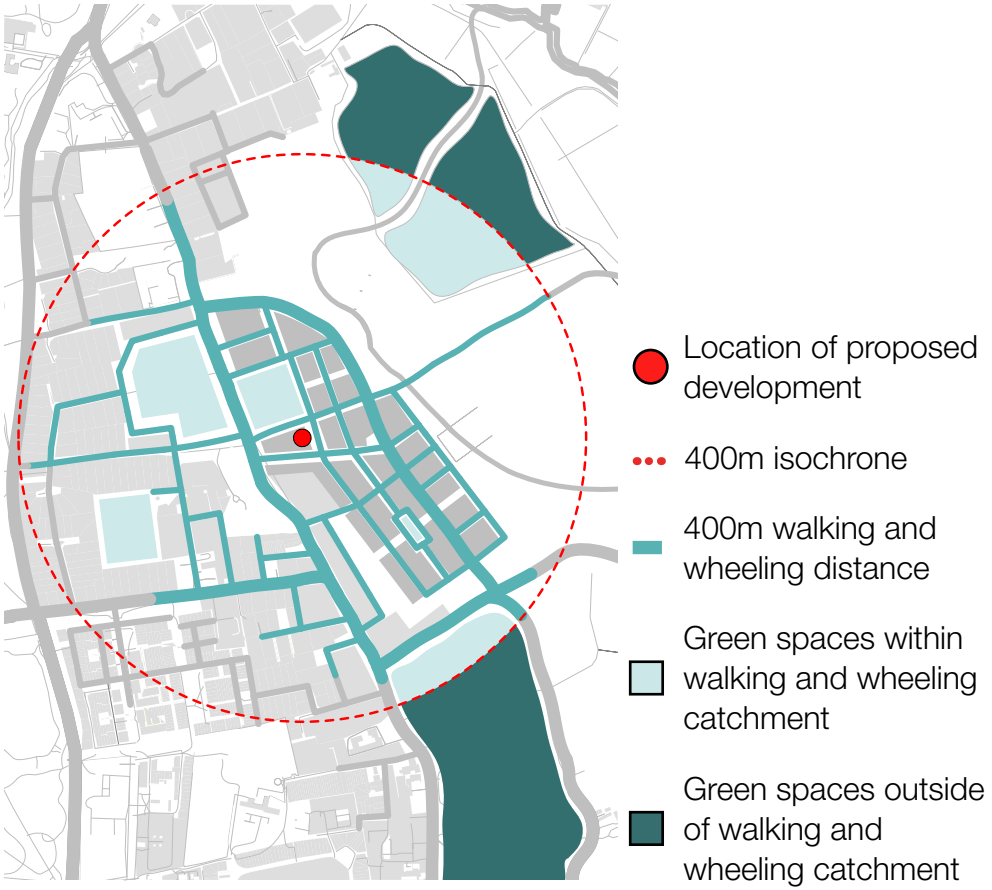
N1 Provide a network of high quality, biodiverse, green infrastructure

N1i	Green infrastructure provision
Code content guidance	Design codes can specify the provision and access to new and enhanced green space. Natural England provides standards for green infrastructure as part of the Green Infrastructure Framework (GIF). These should be used as a basis for setting local design codes and can be adapted in response to local evidence. Approaches to setting green infrastructure requirements include: **Distance**: distance to different types of green space from new development. **Provision**: quantum of different types of green infrastructure (such as local nature reserves and wildlife sites) to be created for different scales of development. **Urban greening factor**: targets for development to create new green space and enhance existing green space. **Enhancement**: specifying how enhancements to the quality of existing green infrastructure can be provided as an alternative to new green infrastructure provision, and how this will be achieved. This could be particularly relevant for developments with good levels of accessibility to existing open spaces. Design codes should clearly define what can be included in green infrastructure calculations and how this should be measured.

Reason	**N1 Provide a network of high quality, biodiverse, green infrastructure**: green and blue spaces are essential for biodiversity, leisure and quality of life.
Coverage	Most appropriate for setting provision of green infrastructure in large new residential developments. In some instances, may be applied to existing areas where there is under-provision of green infrastructure.
Other considerations	**M4i Design for active travel**: codes should consider how green infrastructure can be integrated within and connected to wider active travel networks. **P4i Open space and opportunities for physical activity**: codes should consider the balance between protecting biodiversity and ensuring open green spaces are available for a variety of public uses. **N3i Sustainable drainage systems (SuDS)**: codes should consider how SuDS provision is integrated within wider green infrastructure provision.

N1i	Green infrastructure provision

Fig 55 Example of how a code could illustrate how walking and wheeling catchment to green space can be measured

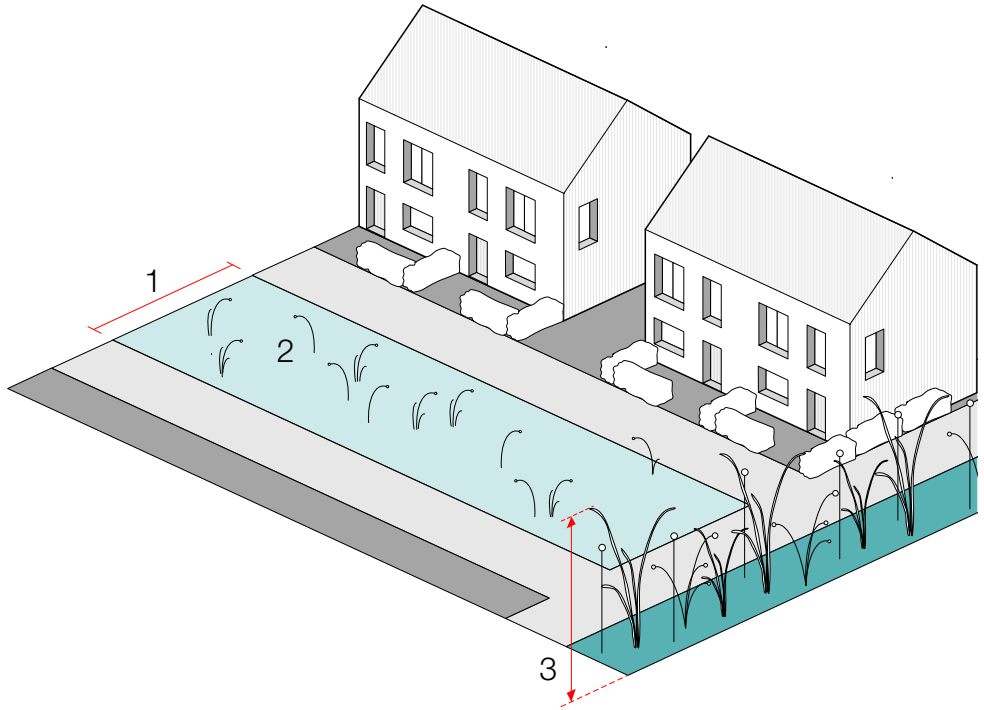


How to illustrate
Diagrams illustrating requirements for green infrastructure provision, for example showing maximum walking and wheeling distances from different types or sizes of green space, specifying how walking and wheeling distance is measured.

N1ii	Green infrastructure design
Code content guidance	Where specific habitat types are being created, restored or extended across multiple or complex sites, design codes can support a masterplan by setting requirements for green infrastructure design such as: **Placement**: specifying the placement of native plant species and natural features within the built environment, considering how this might impact light levels, shading and visibility. **Connectivity**: such as setting maximum distances between green infrastructure features, to support the creation of green corridors. **Protection**: specifying design measures to protect nature whilst allowing for quiet enjoyment and contributing to good placemaking, such as the design of tree guards and fences.
Reason	**N1 Provide a network of high quality, biodiverse, green infrastructure** Green and blue spaces should be connected to provide a network of multi-functional green spaces that are high quality, robust and adaptable.
Coverage	Most appropriate for large areas or sites delivering multiple new or enhanced green spaces, where there is good understanding of existing provision and site constraints and design codes are linked to a green infrastructure strategy. In some instances, may be applied to existing areas where there is under-provision of green infrastructure.

N1ii	Green infrastructure design
Other considerations	**L6 Well-managed and maintained**: when determining placement of features and species, it is important to consider safeguarding and future management; for example, by locating new and retained hedgerows within the public realm. **P1iii Landscape design**: consider how green infrastructure can respond to local character and landscape. **N3i Sustainable drainage systems**: codes should consider how the design of SuDS is integrated within wider green infrastructure provision.

Fig 56 Example of how a code can illustrate requirements for green infrastructure



1. Green infrastructure - min. width.....(m), min. area ..... (sqm)
2. Planting Type A (excluding trees) - max. height.....(m) to allow good visibility
3. Planting Type B - no maximum height of planting

How to illustrate
Diagrams illustrating spatial requirements for design of green infrastructure, such as placement of features, how features connect or protection.

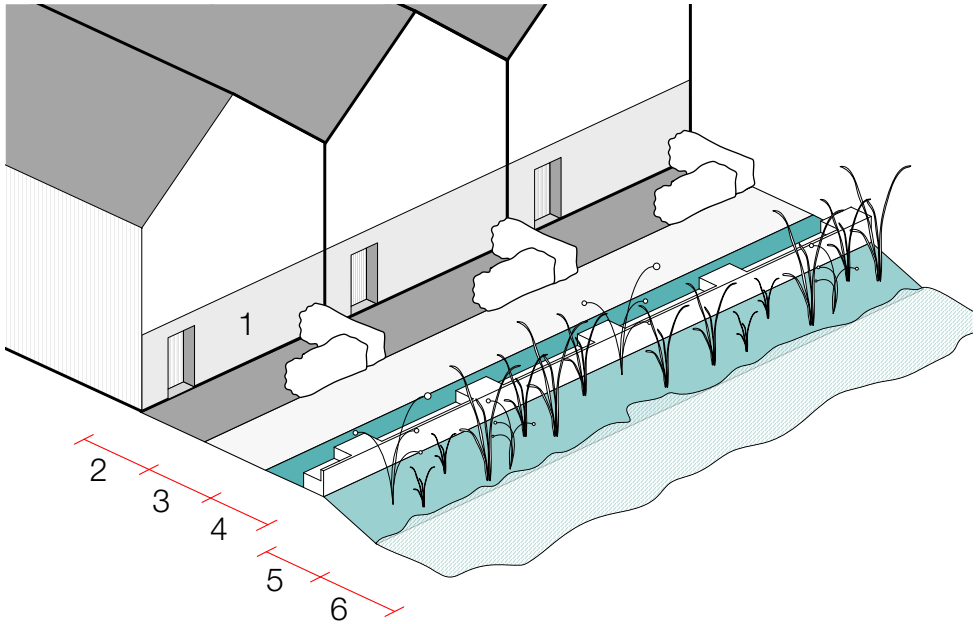
N2 Improve and enhance water management

N2i	Development next to water
Code content guidance	Design codes can specify how development should respond to different bodies of water, such as rivers, canals and coastal areas. This could include: **Setback**: minimum set back of buildings from the water's edge. **Safety features**: such as specifying the placement of footpaths and how barriers should be incorporated within the public realm. **Accessibility**: setting requirements for public access to water for leisure and accessible paths along the water's edge. **Ground floor usage**: specifying the types of ground floor uses which can be provided along the water's edge. **Flood defence design**: specifying how flood defence measures can be incorporated into the public realm and contribute towards a sense of place.
Reason	**N2 Improve and enhance water management** When sensitively designed and integrated, developments near water features such as rivers, docks and wetlands enhance the value of blue infrastructure as public realm, habitat and ecological corridors.

Coverage	Can be applied to all development near a body of water. Different design codes may be set to respond to individual places and different water body types. Coverage may include multiple bodies of water where the landscape or built environment share common characteristics.
Other considerations	**Engagement**: the local flood authority **L6 Well managed and maintained**: codes should consider the ongoing management and maintenance requirements for flood defences and safety features. **N3i Sustainable drainage systems** and **C3 Minimising climate risks**: codes should consider how they can support the reduction of flood risk and ensure flood avoidance and resilience measures are in place. **M4i Design for active travel**: codes should consider how routes along bodies of water can be connected to wider active travel networks.

N2i	Development next to water

Fig 57 Example diagram setting out requirements for how buildings and the public realm relate to water



1. Non-habitable spaces at ground floor
2. Private zone
3. Footway
4. Street furniture and flood defence zone - min. width ....(m)
5. Natural features along waters edge - min. width .....(m)
6. Water

How to illustrate

Illustrations can include:

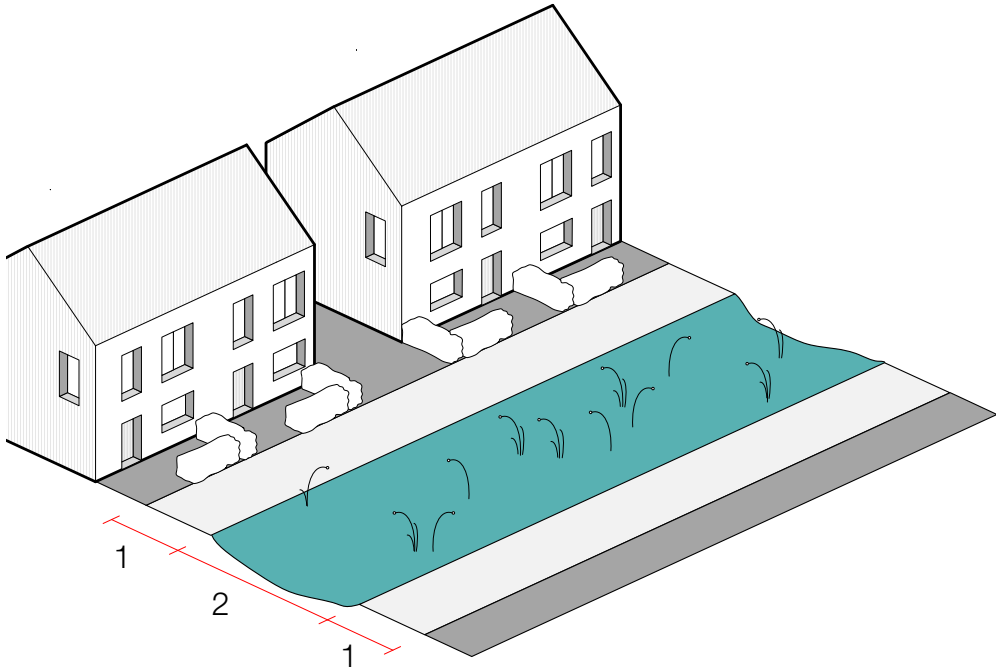
- diagrams such as sections setting out requirements for how buildings and the public realm relate to water
- a map or site plan showing how different codes apply to different water body types

N3 Sustainable drainage systems

N3i	Sustainable Drainage Systems
Code content guidance	Design codes can specify the design of sustainable drainage systems and how they are incorporated into the public realm to ensure they are multifunctional and have placemaking benefits. This can include: **Types**: SuDS features for different locations and development types. **Planting**: specify appropriate amenity provision and biodiversity in planting for SuDS. **Quantity**: minimum quantum of nature-based SuDS, such as wetlands and marshes. **Design**: specifying how to incorporate SuDS features and permeable or vegetated surfaces into public space, such as specifying minimum proportion of permeable paving.
Reason	**N3 Sustainable drainage systems** SuDS manage surface water effectively, reducing run-off, flood risk, water pollution and storm overflow discharges. SuDS benefit biodiversity, water quality, and amenity.
Coverage	Most appropriate to apply to areas and sites where site constraints are understood to support the delivery of a SuDS strategy. This could include existing areas undergoing significant change or large new areas of development.

N3i	Sustainable Drainage Systems
Other considerations	**Engagement**: the local highways authority and the local flood authority **L6 Well-managed and maintained**: Design of SuDS should follow the National standards for sustainable drainage systems **N1i Green infrastructure provision**: design codes should consider the multifunctional role SuDS can perform as part of wider landscape proposals. **N4 Support rich and varied biodiversity**: codes should consider how SuDS features can enhance biodiversity value.

Fig 58 Example of how a code could illustrate how SuDS can be integrated within the public realm



1. Footway

2. SuDS features integrated within multifunctional landscape zone. Designed with max. gradient..... to enable safe access to landscape

How to illustrate

Illustrations can include:

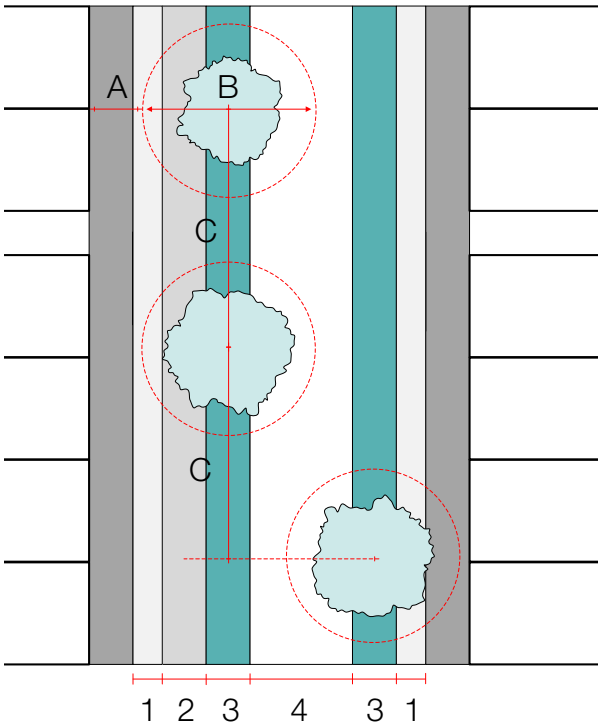
- a diagram showing how SuDS features can be integrated in relation to wider green infrastructure, public space, types of planting, maximum steepness of the incline of drainage, and proximity to houses
- a map showing appropriate SuDS features for different locations

N5 Urban Trees

N5i	Tree provision		
Code content guidance	Design codes can specify how to incorporate trees within the design of public space such as: **Canopy cover**: setting minimum requirements for different areas of public space, specifying how canopy cover should be calculated. This will allow greater flexibility to create individual character and respond to below ground constraints. **Position, spacing and frequency**: specifying the position of trees in public space, such as setting requirements for incorporating trees in different street types. This can include setting minimum and maximum spacing between trees and specifying the position of trees within public space, such as distance from buildings (considering the canopy spread) and relationship to the footway, carriageway and parking. **Species lists**: specifying a long list of acceptable tree species. This could include specific tree characteristics such as size, ecological role and canopy spread. **Surface treatment**: specifying planting medium, types of tree protection, tree pits, landscape details and materials.	Coverage	Most appropriate on large sites with new trees in public spaces, including streets, but can be applied to development creating new public realm, including streets. Different design codes may be set for different areas or street types in response to site constraints or to contribute to the unique character of a place.
Reason	**N5 Urban trees** The inclusion of trees and natural features in public and private open space provide habitat, shading, cooling, air quality improvements and carbon sequestration.	Other considerations	**Engagement**: ecologist and / or tree officer, highways officer **L6 Well-managed and maintained**: design codes should consider management requirements, such as pruning methods and frequency of maintenance. Any requirements should be agreed with those responsible for managing trees, such as the local highway or parks authority. **M5 Parking, servicing and utilities infrastructure**: codes should consider the placement and frequency of street trees in relation to car parking and utility ducts. **M4 Active travel**: codes should ensure the positioning of trees do not obstruct movement routes or visibility at junctions.

N5i	Tree provision

Fig 59 Example of how a code could illustrate placement of trees in the public realm



1. Footway
2. Cycle lane
3. Landscape and natural features zone min. width .....(m)
4. Carriageway

Trees

A. Min. .....(m) from canopy spread to building

B. Max. .....(m) canopy spread at full maturity

C. Max. .....(m) between trees

How to illustrate

Illustrations can include:

- a map/ plan indicating canopy cover requirements for areas of public realm
- diagrams indicating required placement and frequency of trees for different types of public realm, such as street types
- diagrams setting out design and technical specifications

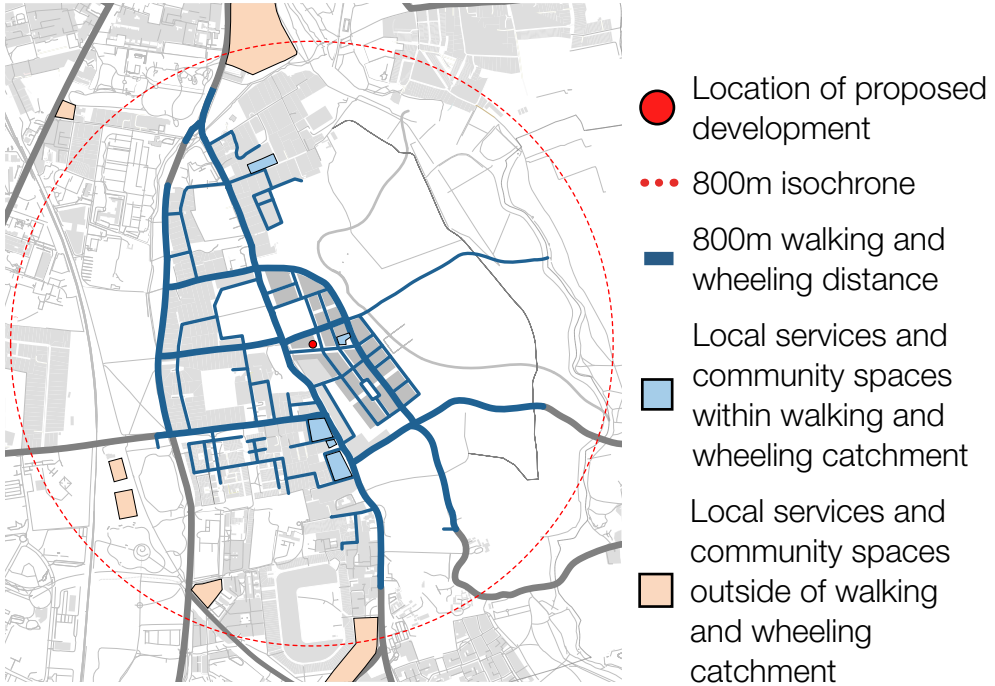
M1 A connected network of routes for sustainable modes of transport

M1i	Access to local services and community facilities
Code content guidance	Design codes can support the positive delivery and integration of local services and community spaces into neighbourhoods, including: **Provision**: specifying provision of new local services and facilities required to serve the community's needs for different types and sizes of development. **Walking and wheeling distance**: setting maximum walking and wheeling distances for new homes from different types of local services and facilities, along accessible routes. **Location**: specifying where different local and community services can be located (for example in relation to the public transport network, within a certain area or co-located with other facilities) to maximise accessibility to communities outside the development, ensuring safety and supporting existing shops and services. This could be informed by connectivity metrics, such as outputs from the DfT Connectivity Tool.
Reason	**M1 A connected network of routes for sustainable modes of transport** A well-designed and connected network offers a genuine travel choice and reduces car reliance, linking people to important destinations by providing a choice of comfortable, safe and accessible ways to make journeys.

Coverage	Typically applied to residential developments, particularly large development sites or areas of significant change. There may be a need to set different requirements responding to constraints (such as shorter walking and wheeling distances to account for topography) and showing existing service needs and provision.
Other considerations	**M2 The street network**: a permeable street network can maximise the number of homes that are within walking and wheeling distance of services and facilities. **M4 Active travel**: safe, attractive, accessible and convenient active travel routes will support the use of local services and facilities. **B1 Compact and connected form of development**: higher density development can increase the number of homes that are within walking and wheeling distance of services and facilities and help create a critical mass to make the provision of services more viable.

M1i	Access to local services and community facilities

Fig 60 Example of how codes can illustrate how walking and wheeling catchments to local services should be measured



How to illustrate

Illustrations can include:

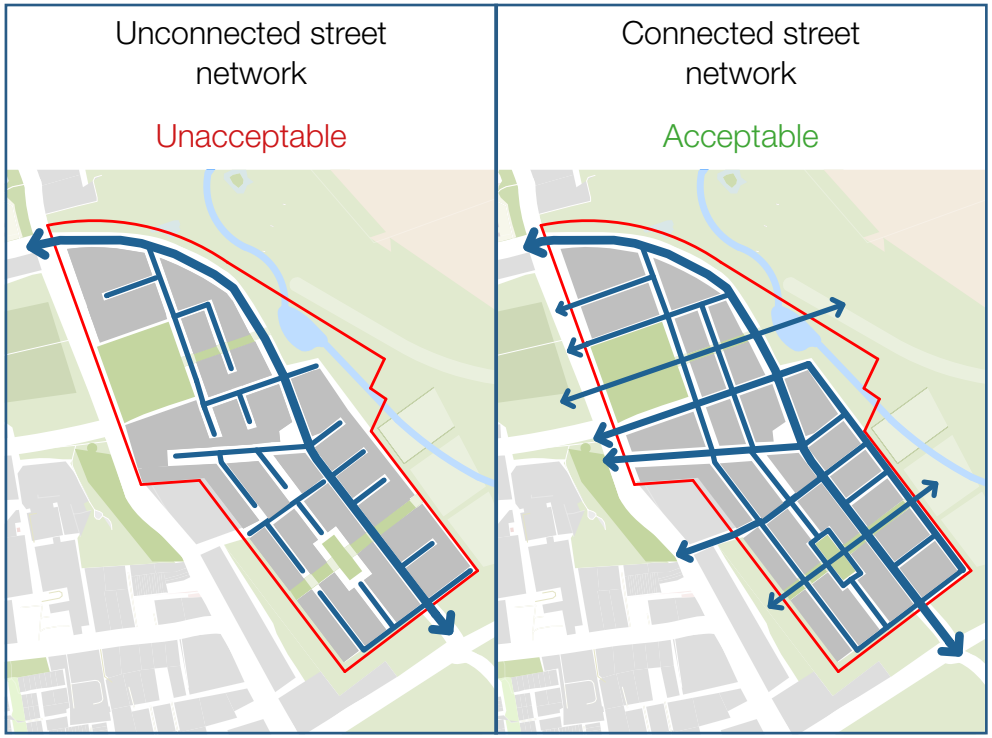
- where a code applies to a development type – a diagram showing how to measure walking and wheeling catchments taking account of any barriers, including stairs and gradients
- where a code applies to a specific place – a map or site plan identifying existing provision or locations for planned local services and facilities, and their walking and wheeling catchments

M2 The street network

M2i	Permeability
Code content guidance	Design codes can be set to ensure connectivity between sites and support the delivery of a permeable street network, including: **Layout**: setting requirements for the layout and design of a connected street pattern to support attractive, direct and safe active travel routes. **Filtered permeability**: defining acceptable options for incorporating permeability measures, for example to limit movement for specific modes, to allow shorter and more direct routes for walking, wheeling, cycling and buses, whilst still allowing access for emergency services. **Links to adjacent sites**: specifying how future links to neighbouring sites or future phases should be designed to promote permeability for walking, wheeling and cycling routes.
Reason	**M2 the street network** A connected street network offers a variety of routes for efficient journeys making walking, wheeling and cycling more attractive, increasing activity and safety.
Coverage	Can be applied to all development providing new streets and active travel routes, such as large areas and sites, including regeneration. Specific design codes may be required to respond to local constraints and barriers, such as topography, rivers and motorways.

M2i	Permeability
Other considerations	**M1i Access to local services and community facilities**: a permeable street network can maximise the number of homes within walking and wheeling distance of services and facilities. **M3 Public transport**: a permeable network of routes enhances public transport access by increasing walkability to services. Filtered permeability ensures bus services are more direct than private car routes. **M4 Active travel**: a movement hierarchy that considers walking, wheeling and cycling first, can encourage take up of these modes. **B2 appropriate building types and forms**: well-defined blocks and clear building lines help strengthen the street hierarchy.

Fig 61 Example diagrams illustrating an unconnected and connected street network



How to illustrate

Illustrations can include:

- an illustrative map or diagram defining permeable and connected street networks, and how these can be achieved through and beyond a site boundary
- diagrams illustrating how acceptable permeability design measures can be achieved, such as future connections to adjacent undeveloped land or crossing and junction layouts showing how active modes can be prioritised

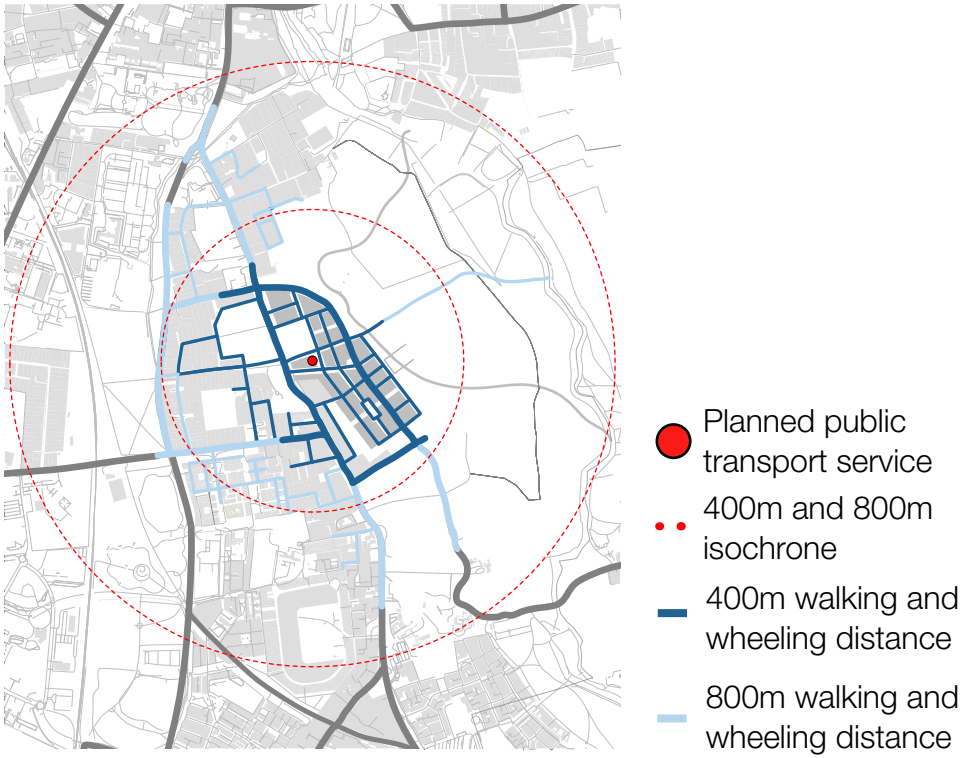
M3 Public transport

M3i	Access to public transport
Code content guidance	Design codes can support increased access to public transport and will need to respond to the range of public transport available in the area (such as bus, rail, light rail). This can include: **Walking and wheeling distance**: setting maximum walking and wheeling distances to access public transport from specific uses, such as new homes. This should specify what transport can be included, such as rail and light rail provision, and the frequency of services and connectivity required to key destinations, such as employment areas. **Location**: requiring specific trip generating uses to be located conveniently, within a certain walking and wheeling catchment of specific transport interchanges. **Facilities at transport interchanges**: setting requirements for facilities that support onward trips by active modes, for example cycle hubs, and facilities to support disabled people.
Reason	**M3 Public Transport** Convenient access to public transport makes it an attractive choice for everyday journeys beyond the immediate neighbourhood, reducing reliance on private cars and expanding access to opportunities for those unable to drive.

Coverage	Typically applied to new residential developments and can be applied to non-residential developments that generate trips including employment, education, community and leisure uses.
Other considerations	**L4 Socially inclusive**: the location of public transport stops should consider the needs of all users. **M1i Access to local services and community facilities**: the requirement for development to be sustainably located can be supported by access to public transport where it is not feasible to deliver some services and facilities locally. **M2 The street network**: a permeable network of walking and wheeling routes supports public transport by increasing access to services and enabling more direct bus routes than car routes. **B1 Compact and connected form of development**: higher density development brings more people within the catchments of public transport, making it viable. **P2 Provide well-designed spaces that are safe**: design codes can set standards to ensure public spaces are designed to meet users' needs, including facilities such as seating at public transport stops.

M3i	Access to public transport

Fig 62 Example of how codes could illustrate how walking and wheeling catchments to public transport can be measured



How to illustrate

Illustrations can include:

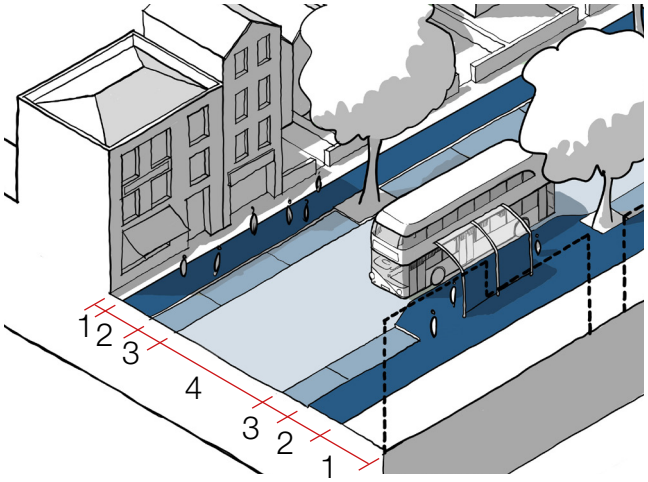
- where a code applied to a development type – a diagram showing how walking and wheeling distance should be measured
- where a code applies to a specific place – a map or site plan identifying existing or planned public transport services and stops, and the walking and wheeling catchments from these

M4 Active travel

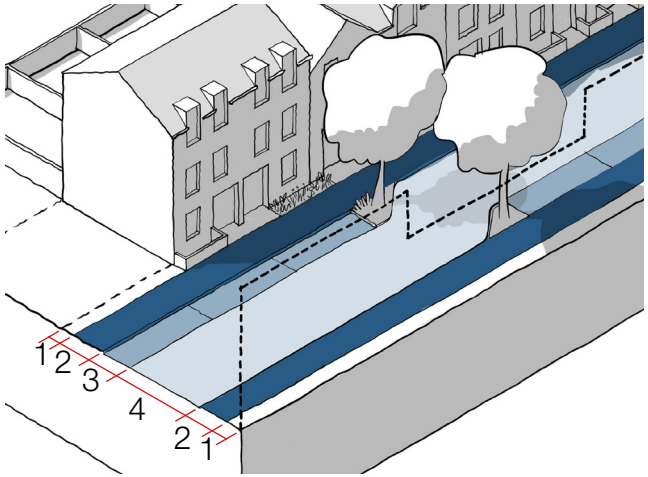
M4i	Design for active travel
Code content guidance	Design codes can support active travel through highway design, and routes beyond the highway, including: **User hierarchy**: specifying how different modes of travel can be integrated within different street types (as defined in Manual for Streets), including for segregated routes. **Technical requirements**: Using Manual for Streets and Local Transport Note (LTN) 1/20 Cycle infrastructure design to set appropriate requirements for street types that are appropriate to its place and movement functions. This can include setting widths for the carriageway, footway, bus and cycle lanes for different street types and surface materials and treatments of junctions and crossings.
Reason	**M4 Active travel** Walking, wheeling and cycling should be the first choice for short local journeys.
Coverage	Can be applied to all developments delivering new streets and active travel infrastructure to provide certainty by ensuring technical design details for highway design are agreed in advance of a planning application.

M4i	Design for active travel
Other considerations	**L6 Well-managed and maintained**: design codes should be developed with the local highways authority to ensure they result in adoptable streets and spaces, considering advice in Manual for Streets and Local Transport Note (LTN) 1/20 Cycle Infrastructure Design. Engaging emergency services, waste providers and utility providers in the production of design codes can ensure their needs are accommodated without compromising design quality. **L4 Socially inclusive**: the widths and configuration of footways and cycleways in relation to the highway should consider users with different access needs, identifying and managing any potential conflicts. **P1 Create well-located, high quality and attractive public spaces, including streets**: design for active travel should be considered early and alongside the design of public space, including access to buildings by walking, wheeling and cycling, surfacing and lighting of public spaces and how cycle parking and wayfinding are incorporated into the public realm.

Fig 63 Example of how a code can illustrate active travel requirements for different street types



1. Commercial frontage zone - min width ..... (m)
2. Footway - min width ..... (m)
3. Bus stops, natural features, cycle and car parking - min width..... (m)
4. Carriageway - max width ..... (m)



Residential

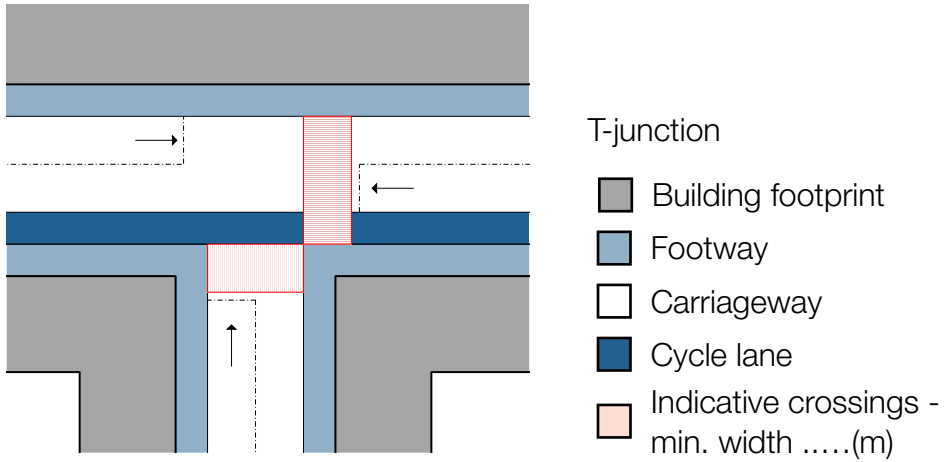
1. Private zone incl front gardens - min width..... (m)
2. Footway - min width ..... (m)
3. Natural features, cycle and car parking (can create a chicane effect) - min width ..... (m)
4. Carriageway - max width ..... (m)

How to illustrate
Diagrams specifying what is required in each street type (for example, lane widths and street hierarchy at junctions).

M4ii	Junctions and crossings
Code content guidance	Design codes can be set for intersections between road users, including: **Street crossings**: specifying the position and design of crossings for different street types, considering different uses and proximity to transport nodes to reflect trips generated, including how active travel routes should be prioritised. **Junction types**: set appropriate designs for junctions between different street types (for example from a primary to a secondary route, as defined in the street hierarchy), drawing on advice in Manual for Streets on corner radii and continuity of footways and cycle routes, and visibility splays. This should include how legible active travel routes should be prioritised. **Public transport stops**: specifying how public transport stops, such as bus stops, should be incorporated on different street types, considering segregated and non-segregated cycle routes. **Light rail and tram tracks**: set requirements for active travel crossings over light rail and tram tracks.
Reason	**M4 Active travel** Streets should be designed with good sightlines and well-placed junctions and crossings to encourage active travel.
Coverage	Can be applied to all developments creating new streets and active travel infrastructure to provide certainty by ensuring technical details for highway design are agreed in advance of a planning application.

Other considerations	**L4 Socially inclusive**: the design approach where footways meet the carriageway or cycle paths should consider the different access needs of users. **M2 The street network**: the treatment of junctions and crossings is important to maximise permeability for active modes. Design codes for junctions and crossings can aid legibility, for example by specifying junctions and pavement treatments follow pedestrian desire lines. **M4 Active travel**: junctions and crossings along active travel routes represent potential conflict points to consider.

Fig 64 Example of how a code can illustrate acceptable junction arrangements



How to illustrate
Diagrams showing different acceptable junction and crossing types, including widths, corner radii and visibility splays.

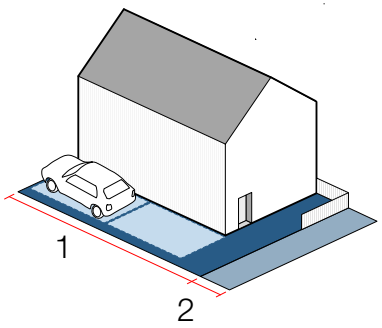
M5 Parking, servicing and utilities infrastructure

M5i	Car parking design
Code content guidance	Design codes can ensure the design of car parking makes a positive contribution to the street scene whilst meeting functional requirements: **Layout**: setting design requirements for how parking can be incorporated into public and private spaces to contribute to good placemaking. This could include identifying appropriate parking arrangements (such as tandem or under croft parking on plot, or parallel parking on street) for different locations, uses, street types and building types. **Coverage**: specifying maximum car parking coverage as a proportion of the site or other footprints such as individual plot or total residential coverage to promote efficient parking layouts to increase opportunities for other land uses, such as green infrastructure.
Reason	**M5 Parking, servicing and utilities infrastructure** Parking which is attractive, well-landscaped and sensitively integrated with the built form will reduce its impact on the street scene.
Coverage	Can be applied to all development types generating a need for car parking. Different requirements may be set for specific development types or street types, or in response to area specific constraints. For larger sites this should factor in the relative accessibility across the whole area, and there may be a need to set different requirements based on connectivity across the site.

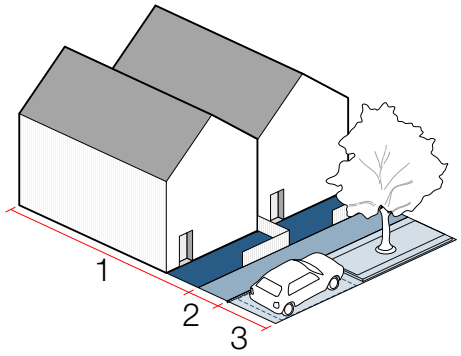
Other considerations	
	L1 Effective use of land: requirements for car parking have a significant impact on the extent to which a site can deliver compact forms of development that maximise land efficiency and sharedopen space provision. **L4 Socially inclusive**: the design and appropriate location of disabled bays, car share and requirements for electric vehicle charging should be considered to ensure the appropriate parking options can be accommodated across different street types, as set out in Part M and S of the Building Regulations. **P1 Create well-located, high quality and attractive public spaces, including streets**: parameters for hard and soft landscape can influence car parking design. **P2 Provide well-designed spaces that are safe**: parking and landscape design should consider how to discourage pavement parking.

M5i	Car parking design

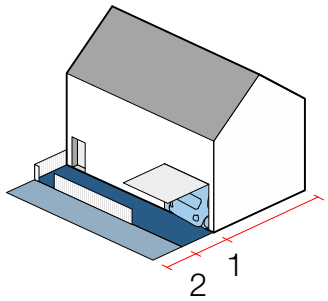
Fig 65 Examples of how a code could illustrate acceptable parking arrangements



On plot tandem parking



On street parking with natural features



On plot garage parking

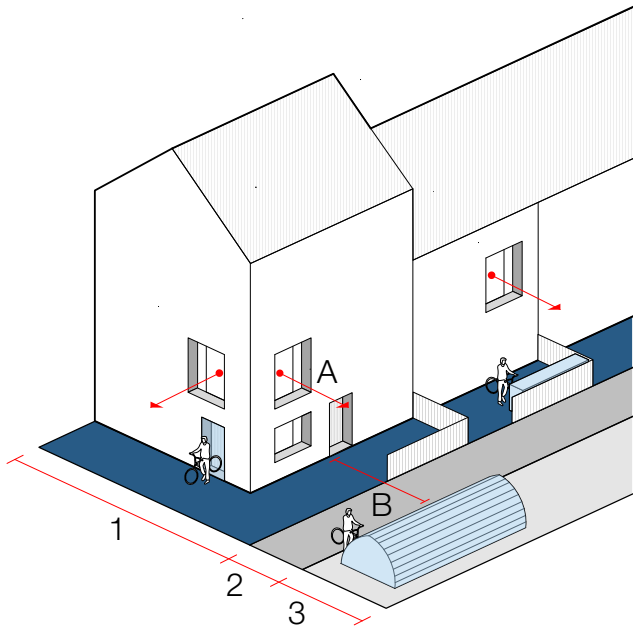
1. Private zone (including secure on plot bin storage)
2. Footway
3. Street trees, natural features, furniture, cycle and car parking

How to illustrate
Example drawings of different types of on plot and on street parking spaces, in conjunction with the appropriate building and street types where relevant.

M5ii	Cycle parking design
Code content guidance	Design codes can support the design of short stay and long stay cycle parking for different uses to ensure cycle storage and parking are well-designed, conveniently located and meet user needs. This can include: **On street cycle parking**: setting design requirements for how cycle parking can be incorporated into public spaces to contribute to good placemaking, such as its position in relation to the destination it is serving, and how it is overlooked. **Secure cycle storage**: specifying how this should be designed and configured for different uses, for example in homes, workplaces and education facilities. This should set out acceptable design solutions for providing safe, secure and accessible cycle storage in a range of scenarios including houses and flats. Appropriate cycle storage and parking solutions can be presented alongside different house and flat types. **Workplace facilities**: specifying any additional facilities required alongside cycle storage, such as showers, lockers and drying rooms, and design requirements for convenient access.
Reason	**M5 Parking, servicing and utilities infrastructure** Cycle parking should be provided at convenient locations, such as close to building entrances.

M5ii	Cycle parking design
Coverage	Can be applied to all development types and may be more appropriate for large new developments where there is greater flexibility to accommodate different cycle parking solutions, or building types which face particular design challenges, such as flats. Requirements may vary according to local constraints and needs, street type and building type.
Other considerations	**Department for Transport** Guidance Local Transport Note (LTN) 1/20 sets out guidance for cycle parking provision. **L4 Socially inclusive**: cycle parking facilities should be easy and convenient for the community to use, considering the needs of non-standard cycles including adaptive cycles and cargo bikes. **P1 Create well-located, high quality and attractive public spaces, including streets**: specifications for the design of street furniture can include cycle provision. **P4iii Active frontage**: the design and location of cycle parking provision within buildings can impact the amount of active street frontage.

Fig 66 Example of how a code can illustrate acceptable cycle parking arrangements



1. Private zone (including secure on plot cycle parking)
2. Footway
3. On street cycle parking and storage, natural features and furniture

Cycle storage and parking solutions (on plot, in street and integrated within building)

A. Natural surveillance

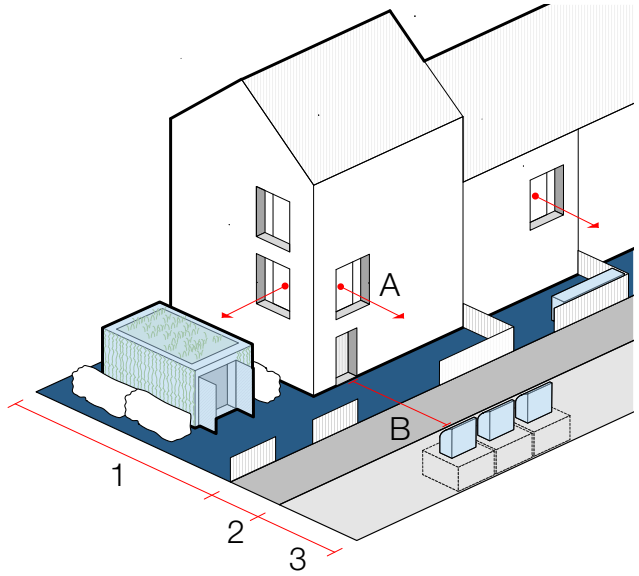
B. Max. distance from home ..... (m)

How to illustrate
Example drawings of acceptable types of cycle parking and storage for homes and buildings, specifying appropriate locations in relation to uses, building types and street types.

M5iii	Services and utilities	Other considerations	**M2 The street network**: access for emergency services can be maintained through filtered permeability when vehicle access to streets is limited to support walking, wheeling and cycling. **M4 Active travel**: active travel should be safely integrated into streets whilst maintaining access for servicing. **P1 Create well-located, high quality and attractive public spaces, including streets**: design codes should consider how landscape design can be integrated into servicing arrangements including below ground services.
Code content guidance	Design codes can ensure servicing and utilities arrangements are functional whilst meeting good placemaking principles: **Bin storage**: requirements for acceptable location and design of bin storage and bin collection points for different building types and uses, having regard to national and local requirements for the number and size of bins. **Servicing**: specifying the space required for loading and the location and design of service yards for different uses, for example in relation to residential amenity and walking, wheeling and cycling routes. **Location of utilities ducts**: specifying parameters can minimise street clutter, reduce the need for excavation and avoid conflicts with tree roots.		
Reason	**M5 Parking, servicing and utilities infrastructure** Access for servicing, including refuse collection, deliveries and removals should be integrated into the design of developments at an early stage.		
Coverage	Can be applied to all developments, with specific requirements for developments providing new streets and public realm. There may be a need for multiple design codes for different uses, building types, street types and size and type of development.		

M5iii	Services and utilities

Fig 67 Example of how a code can illustrate acceptable servicing arrangements



1. Private zone (including secure on plot bin storage)
2. Footway
3. On street bin storage, natural features and furniture

Bin storage solutions (on plot, in street and integrated within bin store)

A. Natural surveillance

B. Max. distance from home .....(m)

How to illustrate

Illustrations can include:

- diagrams of acceptable arrangements for bin storage and collection points related to different building types
- diagrams of service yards and access points for non-residential uses
- parameter plans setting out the locations of utilities ducts

B1 Compact and connected form of development

B1i	Density
Code content guidance	Density is an output of the design process, and to incentivise efficient use of land, a design code can set minimum density standards for a given area in conjunction with requirements which specify the maximum built envelope. The design code should specify how density should be measured, including whether the site area should be gross or net to account for undevelopable land such as public open space. This can include setting requirements for: **Dwellings per hectare**: a commonly used density metric for residential development which allows for easy and general comparison across different areas. **Bedspaces per hectare**: allows a more accurate comparison where there is variation in the mix of homes. Bedspaces per hectare can give an indication of the demand for supporting infrastructure. **Plot ratio or floor area ratio (FAR)**: ratio of total development floor area to site area, can be used to set minimum or maximum site capacity, or intensity of development on a site, for buildings of any use. **Site coverage**: ratio of ground floor area to site area, can be used to set the minimum or maximum proportion of the site covered by built footprint typically for commercial buildings. It is a measure of built footprint to overall site area.

Reason	**B1 Compact and connected form of development** Effective use of land balances the amount of development and mix with green infrastructure, to optimise site capacity.
Coverage	Typically applies to specific locations for example specifying minimum densities for residential development based on its connectivity level. It may be appropriate to set a range of density requirements across larger areas or sites to establish different character areas.
Other considerations	**B2i Building types**: as an alternative to density, specifying building types which create a compact form of development, including terraced homes, maisonettes, apartment blocks and mixed used development can achieve efficient use of land. **I3 Create character and identity**: the density of development will impact the form of development and contribute to the character of the area. **M1 A connected network of routes for sustainable modes of transport**: a design code could set different density requirements according to how well connected an area is, to promote sustainable development. **P4ii Play space provision**: play space provision requires careful consideration in higher density developments to ensure a consistent level of access to play to support health and wellbeing and social integration.

B1i	Density

Fig 68 Example diagram showing how net developable area should be calculated for density

Site boundary

Net developable area

Strategic road network

A,B, C — For large sites density requirements can be specified for specific locations

How to illustrate

Illustrations can include:

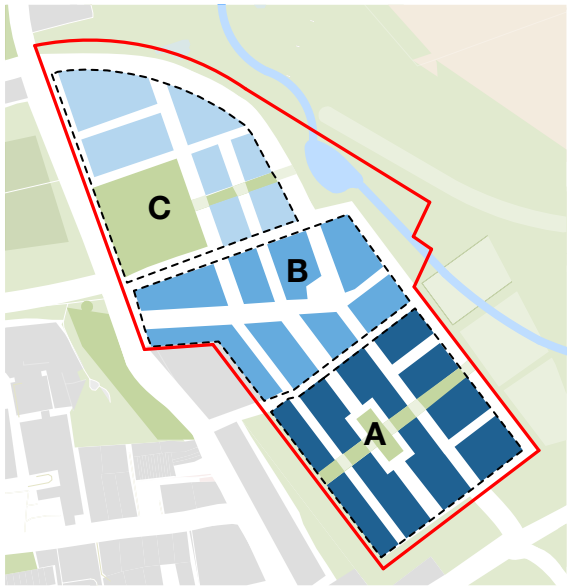
- diagrams to explain how density should be calculated, specifying how the site area should be measured
- a map or site plan clearly indicating applicable density requirements for each area

B2 Appropriate building types and forms

B2i	Building types
Code content guidance	Design codes can be set for: **Mix**: to specify the different building types which can be provided in a given area. This could include specifying building types which can facilitate a variety of uses to reflect local needs and support community life and higher densities, for example building types which can accommodate mixed uses including flats, and different house types. **Location**: specifying the appropriate location for different building types, for example across a large site to support the creation of mixed communities and contribute to variation in character.
Reason	**B2 Appropriate building types and forms** Development proposals should use the appropriate mix of building types, forms and scale of buildings and public spaces for the context and the proposed density, to create a coherent form of development that people enjoy.
Coverage	Specifying building types will give applicants confidence that certain building types will be accepted in an area. Typically applied to large new developments or areas undergoing significant change. Can be applied to existing areas with common building types to support the intensification through conservation, rebuild or extension.

B2i	Building types
Liveability considerations	**L1 Effective use of land**: the choice of building types will affect how effectively land can be used. **L2 A mix of uses**: design codes can specify building types which can accommodate a range of uses to allow for change of use over time. **I3 Create character and identity**: choice of building types will inform the identity of the area.

Fig 69 Example of how a code can illustrate the acceptable building types in different locations

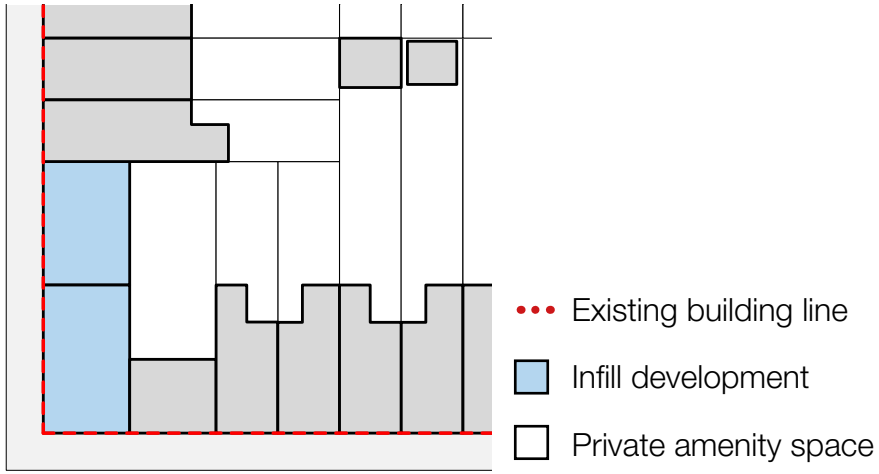


How to illustrate
Illustrations can include:
- a diagram defining each building type
- a map or site plan clearly indicating the acceptable building types in different locations

B2ii	Building lines
Code content guidance	Design codes can be set for: **Building line variance**: specifying how far buildings can depart from the building line depending on the importance of the frontage. In certain areas no variance will be acceptable. Elsewhere, buildings or parts of buildings might set back or project forward of the building line by a prescribed distance. **Building line compliance**: specifying the minimum proportion of the building line occupied by buildings. **Buildings joining**: specifying how buildings join, for example setting minimum and maximum distances between two semi-detached properties.
Reason	**B2 Appropriate building types and forms** A consistent approach to building line creates a coherent identity, whether straight or irregular, continuous or broken.
Coverage	Most appropriate for large areas and sites. Can be applied to existing neighbourhoods that share common building line characteristics or used to repair existing building lines through infill and small site development.

B2ii	Building lines
Other considerations	**L1 Effective use of land**: when buildings join to neighbouring buildings the form of development is more compact than when they do not. Freestanding buildings generally occupy wider plots, which affects both density and compactness. **L5 Buildings relate well to surrounding spaces**: the proportion of the building line occupied by buildings is directly related to the opportunity to create active frontages.

Fig 70 Example diagram illustrating infill development completing the existing building line



How to illustrate

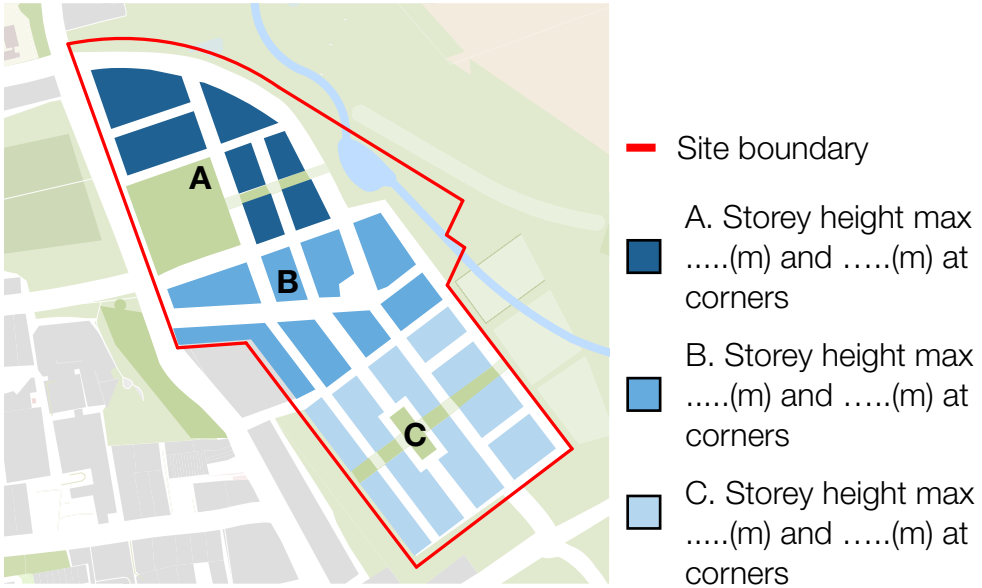
Site plan or parameter plan setting out:

- key building lines, specifying any setback dimensions or distance from the street edge.
- the street network and division between public and private space

B2iii	Heights
Code content guidance	Design codes can be set for: **Building envelope**: setting a minimum or maximum height for eaves, parapet, roof and total height for a specific building, street type or area identified through a masterplan. **Tall buildings**: the policy on the location of tall buildings is likely to be part of the local plan, for example through a tall buildings strategy. Design codes can support the strategy's implementation by: • setting criteria for the locations of tall buildings • specifying the location and height of individual tall buildings for a specific area or site linked to a masterplan • defining criteria to allow exceptions to height parameters in specific circumstances, for example to create a local landmark The definition of tall buildings should be clearly defined for the purpose of the code, for example any structure that exceeds the general height parameters for a particular building type or character area. Typically, this will be the height above pavement level. An alternative approach is to use AOD (above ordnance datum) measurements. These are likely to be more appropriate in area types with slopes, or where ground levels may be reconfigured.

B2iii	Heights
Reason	**B2 Appropriate building types and forms** Heights can shape a place's identity and environment and impact on local environmental conditions such as daylight, sunlight, overshadowing, wind, air quality and microclimate.
Coverage	Can be applied to all developable land but is most appropriate in existing areas undergoing significant change or for large new areas of development. They can be used to define how new development within or adjacent to areas with protected characteristics like conservation areas and protective view corridors will enhance streets.
Other considerations	**I1-3 Identity**: the location of tall buildings should be informed by character assessments and design strategies, dealing with issues such as urban form, historic character, building types, prevailing sunlight and daylight levels, green infrastructure, amenity space and quality of external spaces at ground level. **P1i Scale and enclosure**: building heights, particularly tall buildings, will impact on the microclimate of public spaces, including dispersion of pollutants, and increased shading can impact vegetation in green and blue infrastructure. **M1 A connected network of routes for sustainable modes of transport**: accessibility measures such as distances and travel times to key facilities can inform whether a location is suitable for taller buildings.

Fig 71 Example diagram of how a code can specify building heights across a sit



How to illustrate

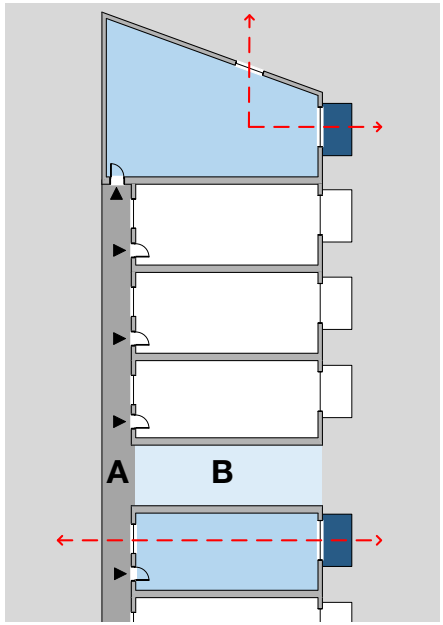
Illustrations can include:

- a site or parameter plan indicating areas subject to minimum or maximum heights, or protected views
- sections can illustrate how building height should be measured or approach to set-backs at a site or area scale, including maximum heights for commercial and residential uses, considering required floor to ceiling heights for different uses
- diagrams can illustrate the principles of the code, for example illustrating acceptable heights in existing neighbourhoods

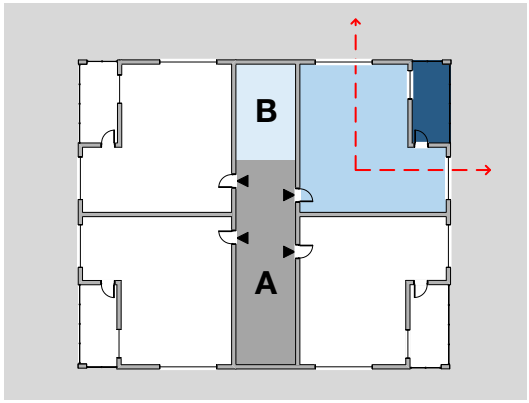
B3 Healthy and comfortable buildings

B3i	Light and aspect
Code content guidance	Design codes can be set for: **Aspect**: specifying building orientation that maximises access to natural daylight and ventilation for example setting requirements for dual aspect homes and preventing single aspect homes where these would be exposed to poor air quality. **Light levels**: specifying the level of daylight / sunlight to be achieved in new development, including how it should be measured.
Reason	**B3 Healthy and comfortable buildings** Good design promotes quality of life by ensuring buildings are functional, comfortable, safe, secure, accessible and adaptable.
Coverage	Will typically apply to all residential development, or development adjacent to existing residential development. There may be a case to set requirements for other uses such as schools. Depending on local context, there may be a need to provide different codes for different development types such as major sites and small infill sites, or in response to local site constraints.
Other considerations	**Building Regulations** Approved Document L: design codes should avoid duplication or contradiction with standards set through building regulations.
Other considerations (Cont.)	**C1i Passive design**: requirements for light and aspect may be considered in conjunction with passive design to reduce energy needs and maximise opportunities for solar energy generation.

Fig 72 Example of how a code can illustrate how dual aspect units can be achieved



Plan showing dual aspect apartment with deck access



Plan showing dual aspect apartment with internal access corridor

Example dwelling
B. Stair and lift core
Example amenity space
Entrances
A. Circulation
Aspect

How to illustrate

Illustrations can include:

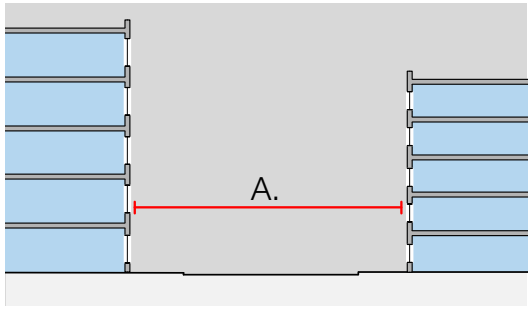
- diagrams showing how dual aspect units can be achieved
- diagrams showing how new development should relate to existing properties

B3ii	Privacy
Code content guidance	Design codes support privacy for homes, including: **Overlooking habitable rooms**: specifying how overlooking habitable rooms of neighbouring properties should be mitigated, for instance by providing angled or obscured glazing, or setting minimum separation distances and how they apply to the front, back and side of properties. **Overlooking gardens**: specifying how overlooking neighbouring gardens from habitable rooms should be mitigated. **Defensible space**: specifying requirements to achieve privacy to ground floor habitable rooms at the front of the property, by specifying minimum setbacks from the street for front gardens and privacy strips, including specifying boundary treatment, such as type and maximum height of walls, hedges or fences.
Reason	**B3 Healthy and comfortable buildings**: a sense of security within a home is influenced by the design of the home and the way it relates to its neighbours, gardens and parking.
Coverage	Will typically apply to new residential development or any development in proximity to existing residential uses. There may be a need for different requirements for specific areas to consider local character and context.

Other considerations	
	L1 Effective use of land: minimum separation distances could affect how effectively land can be used, forming a barrier to intensification in existing areas with tight urban grain. In these situations, measures such as building orientation and footprint, angled or obscure glazing can help prevent overlooking. **L5 Buildings relate well to surrounding spaces**: requirements for privacy need to be carefully balanced with the need to create activated streets and public spaces which are overlooked and feel safe.

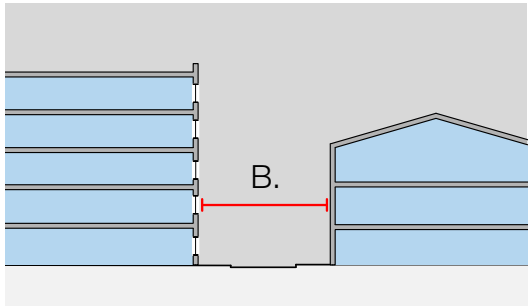
B3ii	Privacy

Fig 73 Example of how a code can illustrate how privacy distances can be applied



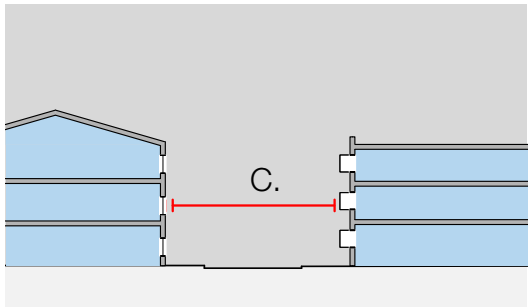
Distance between an existing principal facing window and a new window

A. Min. distance ..... (m)



Distance between an existing principal facing window and a blank wall

B. Min. distance ..... (m)



Distance between an existing principal facing window and a new window facing sideways to limit direct overlooking

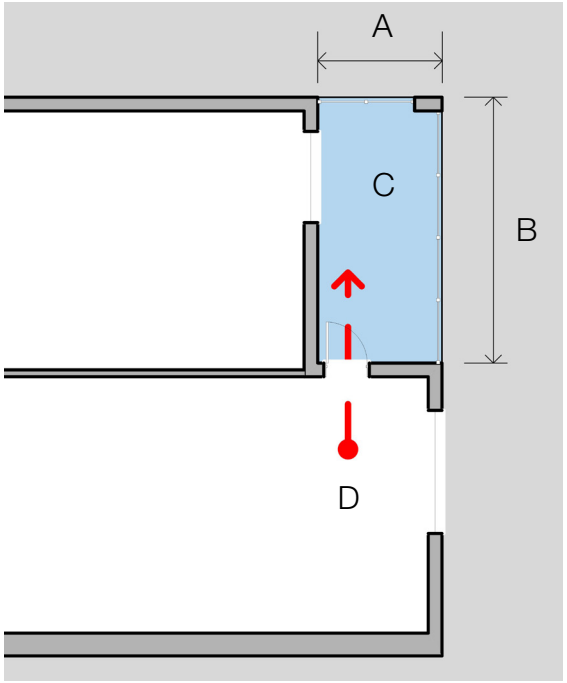
C. Min. distance ..... (m)

How to illustrate
Diagrams showing how privacy distances or other mitigations to achieve privacy are applied.

B3iii	Private amenity provision
Code content guidance	Design codes may include minimum standards for the provision of private open space for individual homes and shared private open space: **Gardens and balconies:** this may include the size of gardens and balconies related to the size or expected occupancy. **Communal amenity:** its provision for different sizes and types of development and uses it should accommodate.
Reason	**B3 Healthy and comfortable buildings**: In higher density developments, access, privacy, daylight and external amenity space are particularly important.
Coverage	Will typically apply to new residential development. There may be a need to set requirements for private amenity for other uses, such as schools and nurseries. There may be a case for setting specific design codes, which respond to specific environmental constraints that impact the quality of outdoor space, specific building types or to respond to the needs of a particular community.
Other considerations	**L1 Effective use of land**: requirements should be carefully balanced to allow functional private amenity provision for the size of home whilst enabling effective use of land. **P1 Create well-located, high quality and attractive public spaces, including streets**: to ensure communal open space is high quality, requirements can specify how they should be orientated in relation to buildings, entrances and parking.

B3iii	Private amenity provision
Other considerations (Cont.)	**N1 Provide a network of high quality, biodiverse green infrastructure**: the biodiversity of private amenity spaces can be enhanced by reducing wildlife barriers between open spaces and private gardens.

Fig 74 Example of how a code can illustrate design requirements for private amenity



A. Min. width .....(m)

B. Min. length .....(m)

C. Min. area .....(sqm)

D. Access from main living space

How to illustrate
Diagrams defining minimum private amenity provision requirements, including access arrangements, minimum dimensions and area to ensure usability.

B3iv	Space standards
Code content guidance	Design codes can specify requirements for internal space including: **Space standards**: applying minimum internal space standards for specific uses where justified. **Ceiling heights**: setting minimum ceiling height requirements for different uses to allow flexibility for change of use over time and supporting the creation of active frontages in key locations such as town centres.
Reason	**B3 Healthy and comfortable buildings**: good design promotes quality of life by ensuring buildings are functional, comfortable, safe, secure, accessible and adaptable.
Coverage	Will typically apply to new residential development. In specific cases, there may be a benefit in setting internal layout requirements for non-residential uses to improve design quality and flexibility.
Other considerations	**Technical housing standards** – nationally described space standard: For internal space in residential development, this is the only nationally described space standard which can be applied, specifying whether it is applied in full or in part. **L4 socially inclusive**: the needs of all should be considered when setting space standards. **B2i Building types**: space standards may influence the type of building that can come forward.

B3iv	Space standards

Fig 75 Nationally described space standards: minimum gross internal floor areas and storage (sqm)

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

How to illustrate
A table setting out internal space standards and where they apply.

B3v	Tenure neutral development
Code content guidance	Design codes can support tenure neutral residential development: **Tenure neutral design**: requiring no distinction between the quality between tenures by siting, accessibility, environmental conditions, external facade or materials. and general location of different tenures, specifying how this can be achieved. **Shared facilities**: setting requirements for shared entrances and facilities such as play space for all tenures across a building or site. **Distribution of tenures**: requiring tenures to be evenly distributed across large sites, specifying how this can be achieved.
Reason	**L3 A mix of homes tenures, types and sizes**: new development should ensure different tenures integrate well and are designed to the same standards to create tenure neutral homes and spaces, where no tenure is disadvantaged.
Coverage	All residential development providing a mix of tenures. Some building types may require specific codes, such as flats.
Other considerations	**L6 Well-managed and maintained**: when setting design code requirements for tenure blind development it is important to engage with local housing providers to ensure the design of shared spaces, particularly flats, will meet their management and maintenance requirements.

B3v	Tenure neutral development

Fig 76 Example diagram showing how to achieve tenure blind development by dispersing tenures across a site

How to illustrate
Diagrams showing tenure blind requirements, such as the appropriate way to distribute tenures across a site or appropriate access arrangements for shared facilities.

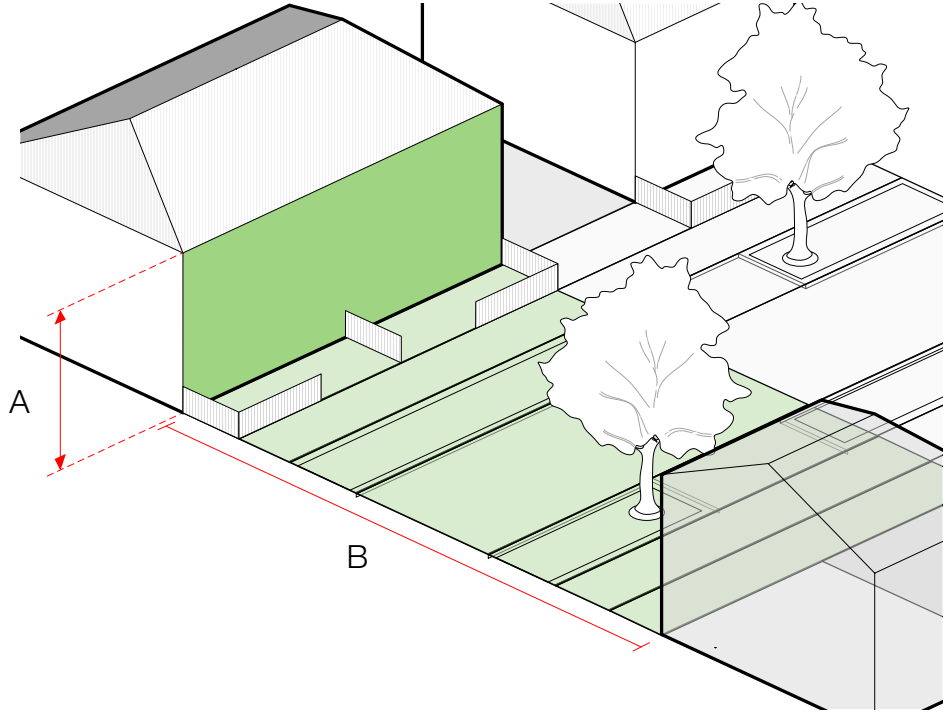
P1 Create well-located, high quality and attractive public spaces, including streets

P1i	Scale and enclosure
Code content guidance	Design codes can specify the building enclosure of different street types and public spaces such as play areas, green spaces and public squares, including: **Enclosure ratios**: setting the height of buildings in relation to the width of the space. **Setbacks**: for example from the carriage way to enable certain uses to be accommodated. **Boundaries**: whether spaces should have boundaries and the form these should take. This could specify the design of boundary treatment to allow visibility.
Reason	**P1 Create well-located, high quality and attractive public spaces, including streets**: the success of streets and public spaces depends on them being functional, attractive places that people enjoy. **L5 Buildings relate well to surrounding spaces**: new development should integrate buildings with their surroundings including external amenity and public spaces that are well-designed and functional.
Coverage	Will typically apply to large sites delivering new public spaces linked to a parameter plan. Can also apply to areas of change, for example town centre regeneration, where multiple smaller development sites adjoin public spaces.

Other considerations	
	M2i permeability: the level of enclosure and setbacks should support the street hierarchy, accommodating the movement network alongside other uses and creating wayfinding nodes at key landmarks or gateways. **N1 Provide a network of high quality, biodiverse, green infrastructure** and **B2 appropriate building types and forms**: the impact of scale, height and massing of buildings on the microclimate in public spaces, including impact on green infrastructure, needs careful consideration. **P2 provide well-designed spaces which are safe**: the level of enclosure will impact the opportunity for natural surveillance of streets.

P1i	Scale and enclosure

Fig 77 Example of how a code can illustrate street enclosure ratio requirements



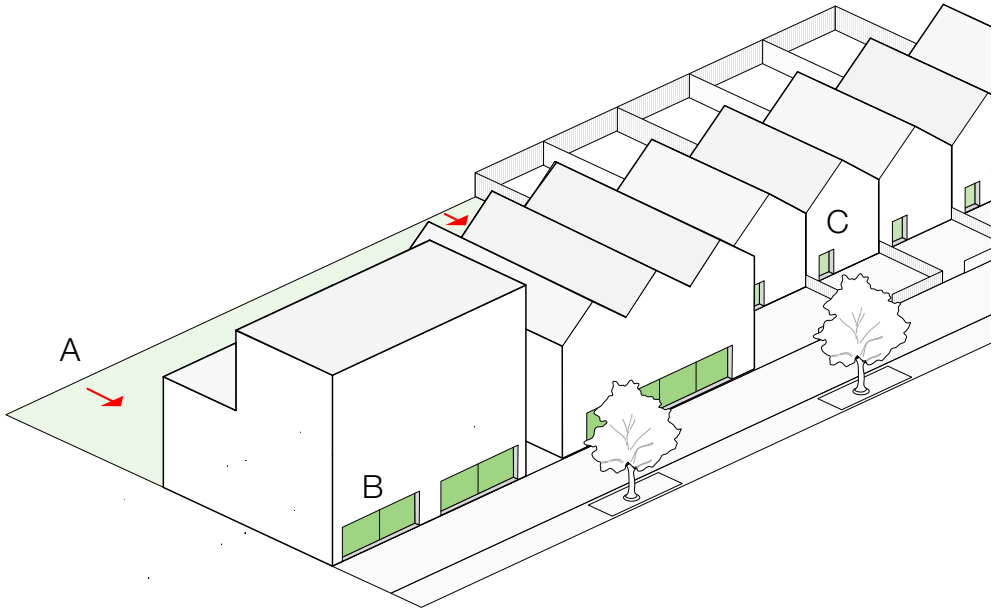
A. Height .....(m) B. Width .....(m) Enclosure ratio = A:B

How to illustrate
Cross-sections and axonometric diagrams showing the enclosure and scale that is appropriate for different street types, public spaces or locations within a site.

P1ii	Access
Code content guidance	Design codes may specify how access to buildings and public spaces relate to the location and design of pedestrian, cycle and servicing access on streets, including: **Entrance location**: requiring these to be clearly identifiable and conveniently positioned, for example in relation to the primary building frontage, street type or foot/cycle paths. **Design of entrances**: for example, requiring step-free access to the main access point and ensuring it is free from barriers, or to require the main access point to be visible from the street. **Circulation**: to ensure open spaces are legible, promote wayfinding, respect topography, and are easy to navigate, for example by prohibiting dead ends.
Reason	**P1 Create well-located, high quality and attractive public spaces, including streets**: public spaces should be easy to navigate with inclusive wayfinding strategies.
Coverage	Will typically apply to large sites and areas of change such as town centre regeneration, where multiple sites are linked to individual streets and public spaces, or across a wider area where streets and buildings share common characteristics.

P1ii	Access
Other considerations	**L4 Socially inclusive**: design codes should ensure that access is step – free and free from barriers. **P2 Provide well-designed spaces that are safe**: entrances to buildings can support street activity and increase the level of natural surveillance. **B2ii Building lines**: the location of the building line will impact how buildings are accessed and interact with the street. **P4ii Play space provision**: Front or rear access to doorstep shared spaces, without having to cross a road, can provide safe children's play space.

Fig 78 Example of how a code can illustrate appropriate access arrangements on a high street



A. Vehicular servicing access to non-residential uses to be located at the rear of the properties

B. Main entrances to non-residential uses to be located on the high street

C. Entrances to residential properties set back min. .....(m) from the high street

How to illustrate

Indicative site plans and diagrams showing appropriate location of pedestrian and vehicular access. Different diagrams may be used to show how access and circulation can relate to different street types and building types.

P1iii	Landscape design
Code content guidance	Design codes can be set for materials and landscape design, responding to the local character and integrating green infrastructure to strengthen distinctiveness and identity. These can include: **Materials**: specifying a palette of materials for surfacing streets, public spaces and play spaces, as well as different street elements such as shared space and cycle lanes. This could vary across locations to create areas of different character. **Details**: specifying required technical landscape details.
Reason	**P1 Create well-located, high quality and attractive public spaces, including streets**: the success of streets and public spaces depends on them being functional and attractive places that people enjoy.
Coverage	Will typically apply to large development sites or areas of change. Can be applied across a wider area where new public spaces share common characteristics or maintenance requirements, for example linked to the local highways authority's adoptable standards.

Other considerations	
	C3 Minimising climate risks: In areas of wildfire risk, design codes should consider how requirements create defensible spaces, for example enabling firebreaks to be incorporated into development layouts and planting schemes. **Nature**: green infrastructure requirements can be set for specific public spaces to ensure they are responsive to local character and landscape characteristics, and that the landscape design integrates nature-based solutions. **M4i Design for active travel**: consideration should be given to how materials meet the functional requirements for the footway, carriageway and cycleway, car parking and servicing, whilst contributing to the character of the area. **I3iii Materials**: to create or enhance local character, a design code could specify building materials in conjunction with the landscape design. The local highway authority should be engaged in the design code preparation to ensure new public spaces are durable and easy to maintain whilst meeting good placemaking principles.

P1iii	Landscape design

Fig 79 Example table that can specify the material palette for different highway components in specific streets, areas or places

Highway component	Palette A	Palette B	Palette C	*Insert other palettes as required*
e.g footway, cycle lane	**e.g for specific street type, area or place**	**e.g for specific street type, area or place**	**e.g for specific street type, area or place**	*e.g for specific street type, area or place*
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....

How to illustrate

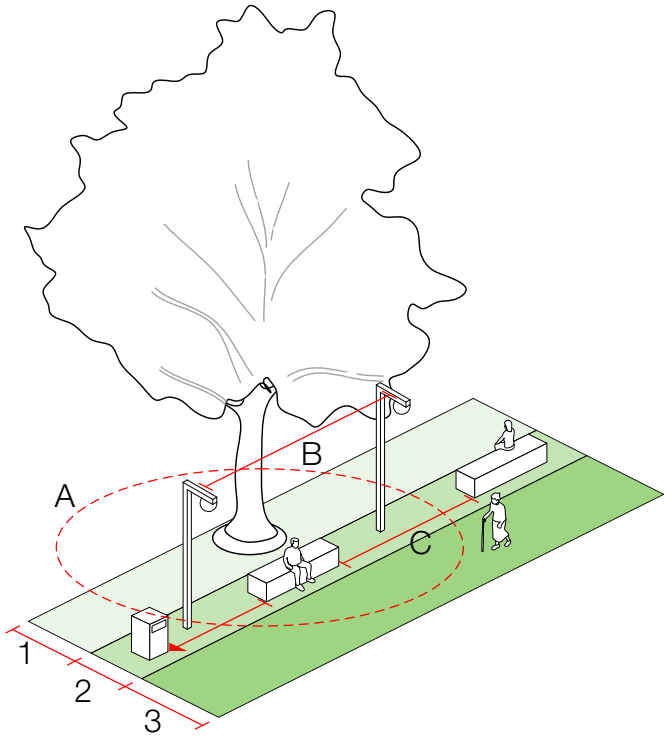
Illustrations can include:

- an illustrated guide to the palette of materials for hard landscape
- drawings or diagrams of required landscape details

P1iv	Street furniture
Code content guidance	Design codes can specify street furniture including seating, lighting, litter bins, wayfinding and shelter: **Type**: specifying the type of street furniture required in a specific location. This may include further details on the required provision, such as informal seating that is designed into the landscape. **Placement**: specifying the position of street furniture in relation to activity within public spaces, such as specifying the location of a street furniture zone. This can include how different types of street furniture relate to one another, buildings and natural features, such as setting requirements to ensure lighting is not obstructed by trees and vegetation or specifying the placement of seating in relation to shelter (including natural features, such as tree canopies) to provide shade or protection from the rain. **Frequency**: setting out the maximum distances between each type of street furniture, such as the frequency of lighting to ensure it does not lead to shadows and dark places, or frequency of seating to providing resting points on key routes. **Materials and details**: specifying the palette of materials or technical details which can be used for different types of street furniture.

P1iv	Street furniture
Reason	**P1 Create well-located, high quality and attractive public spaces, including streets**: streets should be designed to enable walking, wheeling and cycling and be easy to navigate. **P4 Make sure public spaces support social interaction**: a network of open spaces supporting activities like meeting, resting, playing and events.
Coverage	Will typically apply to areas or sites delivering large amounts of new public space to create a consistent approach to street furniture to support local distinctiveness and create identity. May apply across multiple locations where public spaces share common characteristics or maintenance requirements, for example developed in parallel to the local highway authority's adoptable standards to support good placemaking.
Other considerations	**L4 Socially inclusive**: The design and location of seating and rest points can meet a range of needs and support different users to access public spaces. **M5ii Cycle parking design**: the inclusion of cycle parking within public space should be considered alongside street furniture. **P3i Security and counter terrorism**: hostile vehicle mitigation measures can be integrated into the design of public realm and street furniture. **Department for Transport's guidance** Inclusive Mobility provides further guidance on street furniture.

Fig 80 Example of how a code can illustrate requirements for the position of street furniture



1. Natural features - min. width .....(m)
2. Lighting, seating, litter bins - min. width .....(m)
3. Footway - min. width .....(m)

A. Canopy cover

B. Max. distance between lamp posts .....(m)

C. Max. distance between resting points .....(m)

How to illustrate
A plan showing appropriate frequency and / or positions of street furniture in different locations, for example by street type.

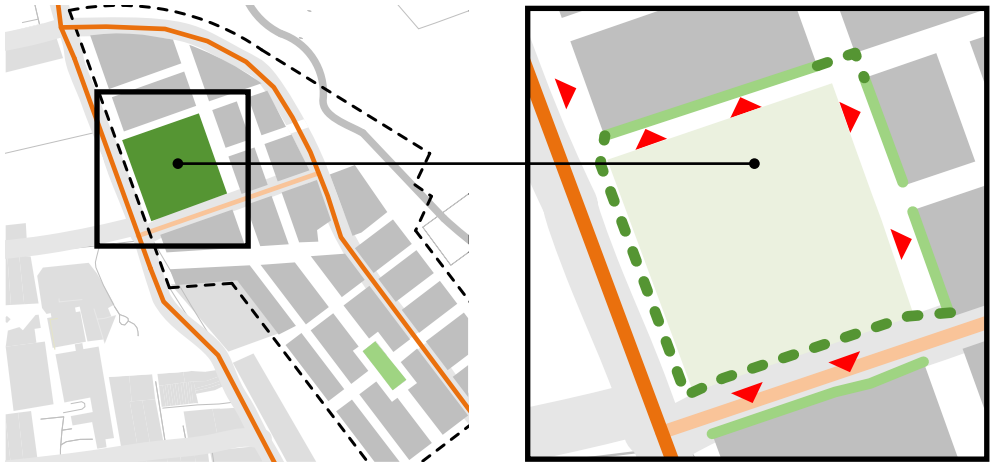
P3 Security in public space

P3i	Security and counter terrorism
Code content guidance	Design codes can specify the location, placement and design of security features to integrate these effectively from the start of development and reduce visual and mobility impacts, including: **Hostile vehicle mitigation**: Appropriately placed measures that should be taken to protect public spaces from hostile vehicle attacks, such as security bollards. Codes can set out requirements for how to integrate these mitigations into design, for example as public art or hard landscape features such as planters/planting. **Natural surveillance**: Codes can require that key routes and spaces are kept free from visual obstruction. This can include introducing maximum heights for hard landscape features, furniture and boundary treatment. **Boundaries**: If additional security measures are required for certain areas or in certain contexts, codes can specify criteria for boundary treatments, such as type, height and material.
Reason	**P3 Security in public space**: neighbourhoods should be designed to make everyone feel safe.
Coverage	Typically applied to sites and buildings that demand higher security or which can be anticipated to generate crowds, whether intentionally or otherwise.

Other considerations	
	L4 Socially inclusive and M2i Permeability: Measures will need to consider the permeability of the space and ensure they do not impede access or obstruct direct throughways for certain user groups, such as wheelchair users. **M5iii Service and utilities**: Counter terrorism measures will need to consider and possibly accommodate access for certain vehicles, including emergency services. **I3i Building form**: The design and placement of security features should not detract from the character of nearby buildings and the surrounding area.

P3i	Security and counter terrorism

Fig 81 Example of how a code can illustrate requirements for how security features could be integrated within the design of public spaces



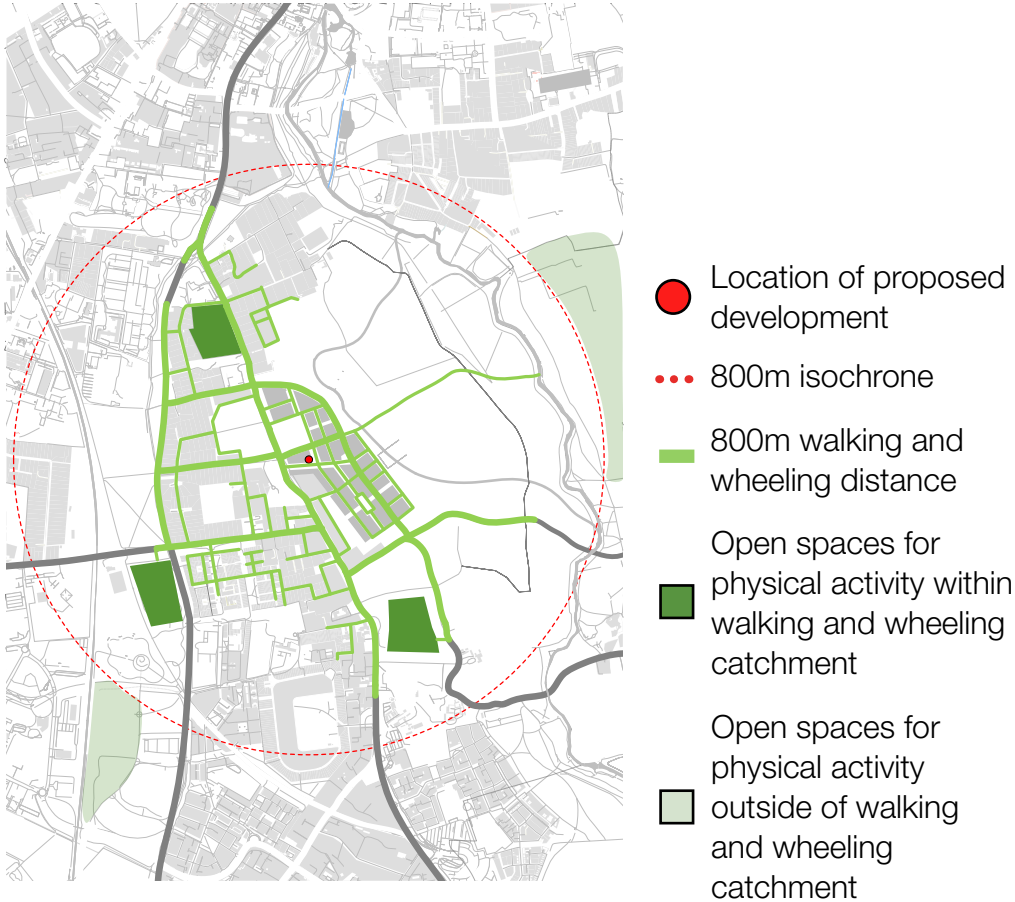
How to illustrate
Diagrams or images of the acceptable security features, including their location and how these can be successfully integrated into development.

P4 Make sure public spaces support social interaction

P4i	Open space and opportunities for physical activity
Code content guidance	Design codes can be set for local open space and spaces for physical activity (such as sport, recreation, community activities and food growing) based upon local need to support communities to lead more physically active and healthy lives, including: **Location**: specifying locations for open spaces, or that provision is accessible within a certain distance to existing or new development. **Quantum**: specifying the amount of open space provision relative to the amount of new development, including dwellings or floorspace. **Facilities**: specifying the equipment and facilities to be provided to support appropriate use of the space and meet different user needs.
Reason	**P4 Make sure public spaces support social interaction**: well-designed public spaces are social hubs, providing meeting places, comfort, relaxation and stimulation for all.
Coverage	Can be applied to different development types and scales. For larger scale developments, it may be appropriate to set requirements for the distribution of spaces to optimise access.

P4i	Open space and opportunities for physical activity
Other considerations	**L4 Socially inclusive**: the needs of different demographics including age, gender, disability, neurodiversity and those underserved in the area should be considered when setting codes for open space. **P1 Create well-located, high quality and attractive public spaces, including streets**: requirements for the design of public spaces can be applied to open spaces and spaces for physical activity, such as setting access requirements to ensure safe connections for different users. **N1i Green infrastructure provision**: open spaces should integrate and complement green infrastructure and the distinct purpose it serves such as to protect or promote wildlife. Lighting impacts, for example, will need consideration. **B1i Density**: open space provision can be more difficult to achieve at higher densities but will still be critical to achieving well-designed places. **Sport England** Active Design guidance: provides guidance to create and maintain active environments, including a network of multi-functional spaces, which can inform design codes.

Fig 82 Example diagram showing how walking and wheeling catchments to open space and space for physical activity should be measured



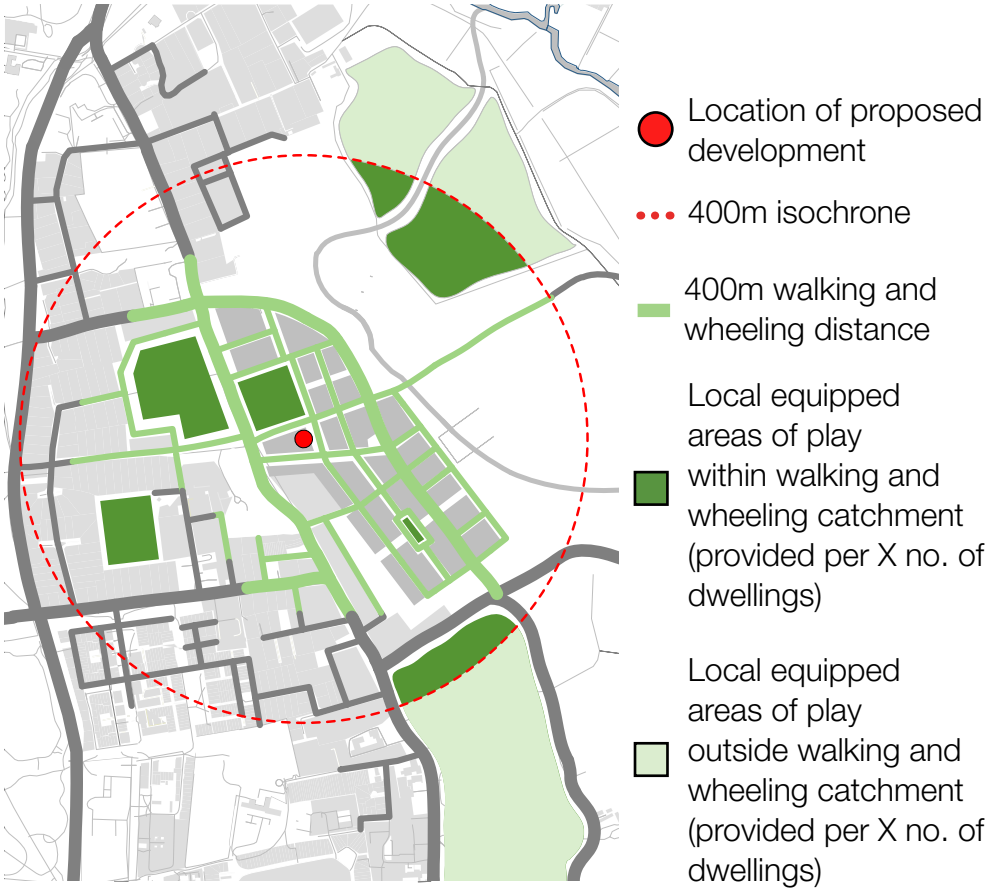
How to illustrate
Diagrams showing size, location and types of open space and spaces for physical activity, including how walking and wheeling distances should be measured and safe routes for access.

P4ii	Play space provision
Code content guidance	Design codes can specify play space provision in an area, including: **Walking and wheeling distance**: specifying the proximity of different types of play space provision from relevant development, for example homes, nurseries and schools. **Quantum**: requiring provision relative to the number of units or projected number of children living on the site. This is particularly relevant for higher density development where a high concentration of children will be using play space. **Facilities**: specify what equipment should be provided at different play spaces, for example what equipment should be provided for provision serving different ages. **Position**: Specifying distances from roads for safety, or other development for natural surveillance or to minimise noise impacts. Design codes should clearly define how play space can be provided, allowing opportunities for informal provision such as doorstep play and play on the way integrated within walking and wheeling networks to encourage active travel.
Reason	**P4 Make sure public spaces support social interaction**: Play space, including doorstep spaces in residential areas, support play and social interaction for all ages.

Coverage	Typically applied to new residential development and development creating new open space. In specific circumstances codes can apply to existing play spaces or areas which are underserved, for example requiring an increase in facilities and access.
Other considerations	**L4 Socially inclusive**: play spaces should be informed by user needs, considering different demographics including age, gender, disability, neurodiversity and those underserved in the area. **P1 Create well-located, high quality and attractive public spaces, including streets**: requirements for the design of public spaces can be applied to play space, such as setting access requirements to ensure safe connections which meet the needs of different users such as children, parents and carers. **M2i Permeability**: connectivity to play spaces should meet the needs of different users, accounting for age and ability, and encourage active travel. **B1i Density**: play space provision should be effectively designed into development, especially for higher density sites. **Fields in Trust** Standards: set out the provision of formal play spaces for different ages which can be used to inform design codes.

P4ii	Play space provision

Fig 83 Example of how a code can illustrate how walking and wheeling catchments to play space should be measured



How to illustrate
Diagrams showing acceptable distances between play spaces, including safe routes to access these. Images showing types of equipment and landscape treatments.

P4iii	Active frontages
Code content guidance	Design codes can facilitate active frontages, including: **Proportion**: specifying a proportion of building frontage that should be active for each street and/ or specifying a proportion of active uses for a particular area. **Corner plots**: specifying how corner plots should create active frontages, such as the location of primary frontage or entrances. **Entrances and primary frontage**: setting requirements for the location of main entrances to new buildings in relation to the street and key public open spaces. **Balconies**: requiring the provision of balconies and larger windows for main living spaces on upper levels for higher density residential development facing public space, or in areas with reduced active frontage at ground floor. **Windows**: requiring ground floor glazing for certain uses and set coverage proportions for example, by specifying a percentage range for retail frontages.
Reason	**M2 The street network**: active frontages and the presence and interaction of people provide informal surveillance enhancing safety and vitality. **P4 Make sure spaces support social interaction**: public spaces are enhanced by versatile design and a range of activities. Surrounding uses reinforce their appeal and role as destinations.

P4iii	Active frontages
Coverage	Typically applied to all new development, including high streets, town centres or in relation to specific public spaces such as communal space or play space. Specific design codes may be required for certain circumstances, such as ground floor locations in flood risk areas where no residential use is permitted.
Other considerations	**M5iii Services and utilities**: servicing, such as deliveries and refuse collection, should be carefully considered to prevent inactive frontages. **M5i Car parking design** and **M5ii Cycle parking design**: the design of car parking and cycle storage should be carefully considered to promote active frontages. **B3ii Privacy**: the need for privacy should be considered together with active frontages, particularly for residential buildings, to ensure safety and natural surveillance of streets, public spaces and shared private amenity spaces.

Fig 84 Example of how a code can illustrate active frontage requirements across a site

How to illustrate

Illustrations can include:

- plans marking the location and proportion of active frontage
- elevations and other diagrams detailing how other active frontage requirements can be met, including integration of services
- diagrams setting out what constitutes an active frontage, for example the frequency of entrances or ratio of windows to solid walls

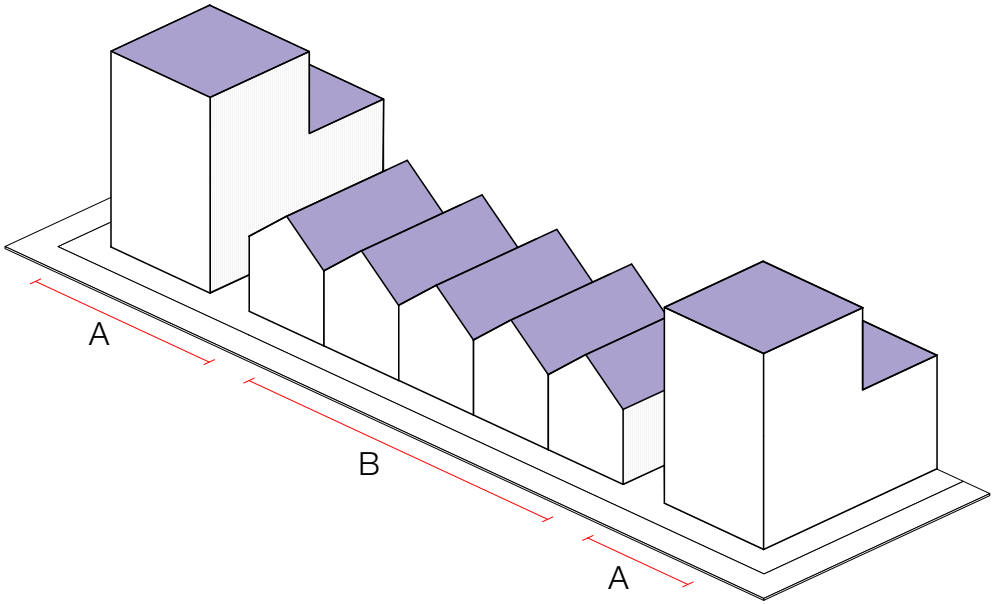
I3 Create character and identity

I3i	Building form
Code content guidance	Design codes can be set for the form of different building types such as houses, mid-rise development and tall buildings to ensure coherent identity for an area or site by protecting or introducing a distinct urban grain. This could respond to the character of buildings and landscapes linked to the heritage of a place, including the need to integrate new development with retained historic buildings. Design codes can be set for: **Meeting the ground**: specifying how buildings are grounded and relate to the street and surrounding landscapes, including configuration of entrances, thresholds, setbacks, boundary treatments and overhangs, and how these are distinguished for different users for legibility and security. **Meeting the sky**: specifying roof or roofline of buildings, including height, form, and, in exceptional circumstances, details including eaves, parapets, and guttering to ensure uniformity or variety. Codes can ensure the scale of buildings are appropriate to their surroundings, particularly in relation to existing landmarks. **Retention and reuse**: identifying building types or features and specifying how these should be retained or integrated within new development, including suitable alterations and uses.

Reason	**I2 Respond to existing local character and identity**: new development should complement its surroundings reflecting local or regional character, built and natural form, vernacular, landscape and distinctive elements of the area. **I3 Create character and identity**: designs for new development should introduce new character paying attention to whether buildings are grouped and how buildings meet the ground and sky.
Coverage	Can be applied to new settlements, urban extensions, areas identified for major regeneration and infill development. Can also be applied to conservation areas to retain and reinforce existing character and identity.
Other considerations	**B2i Building types**: block parameters and types will define the urban grain and contribute to an area's character. **B2iii Heights**: a building's identity will be influenced by height requirements for the wider area and whether the building is considered tall in relation to its surroundings. **M5iii Services and utilities**: provision of service facilities and infrastructure should not undermine character.

I3i	Building form

Fig 85 Example of how a code can illustrate requirements for different roof types



A. ..... roof type on corner plot

B. ..... roof type between corner plots

How to illustrate

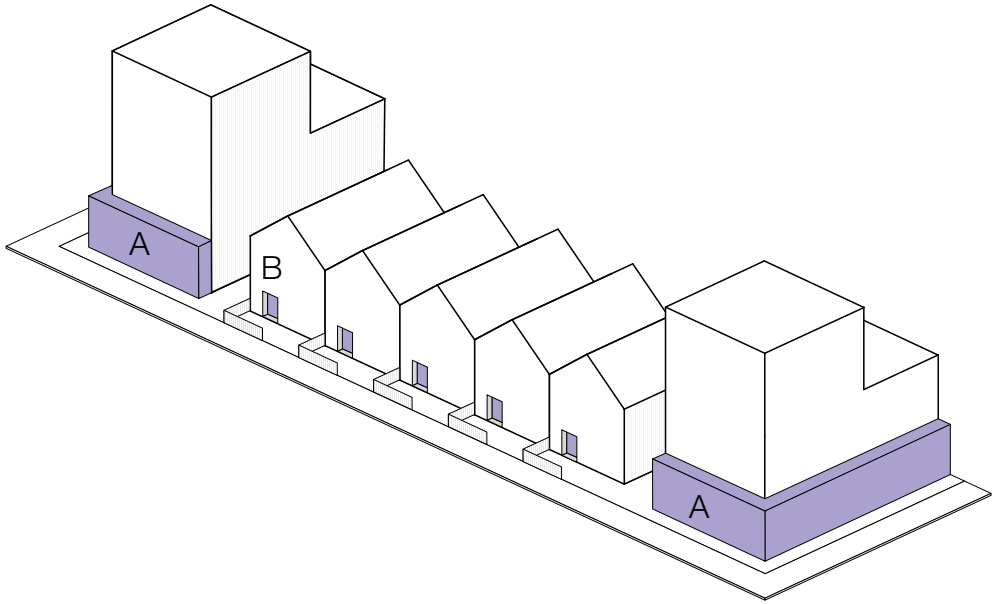
Illustrations can include:

- diagrams showing acceptable options and specific requirements for built form, including conversion and reuse of heritage buildings
- a map showing location of key retained buildings or landscape features

I3ii	Facade design
Code content guidance	Typically, design codes should not set detailed requirements for façades. There are circumstances where it can be appropriate to set requirements such as for development in a conservation area or where detailed façade design is integral to a place's identity. In these instances, design codes can support: **Composition**: specifying position, size, orientation, and proportions (wall-to-window ratios) of windows and openings, considering building orientation and likelihood of overheating, as set out in Part O of the Building Regulations and the statutory guidance to support compliance, provided in Approved Document O. **Articulation**: specifying architectural features to facades, such as setbacks, balconies, porches and bays, can bring rhythm, variety and detail to buildings. Requirements may reflect local context and existing built form. **Building services and maintenance equipment**: specifying how services such as meter boxes and vent pipes are integrated into façades (for example specifying they are provided on secondary elevations or are hidden from view at street level).
Reason	**I3 Create character and identity**: designs for new development should create a coherent identity for residents and communities.

I3ii	Facade design
Coverage	Requirements relating to façade design should always be proportionate to the nature and size or type of development and the local context. Where appropriate, will typically apply to areas subject to wider planning protections, such as conservation areas. This could include infill development and building alterations.
Other considerations	**B3i Light and aspect**: the orientation of buildings and window dimensions will have an impact on daylight provision. **B3ii Privacy**: setbacks can be introduced to increase privacy for occupiers, which will influence articulation. The spaces between buildings will play a role in setting character. **B3iii Private amenity provision**: balconies may be required as a means of securing private amenity space, and these will need to be considered in the articulation of building facades.

Fig 86 Example of how a code can illustrate requirements for entrances



A. Entrances project by ..... (m)

B. Entrances set back by ..... (m)

How to illustrate

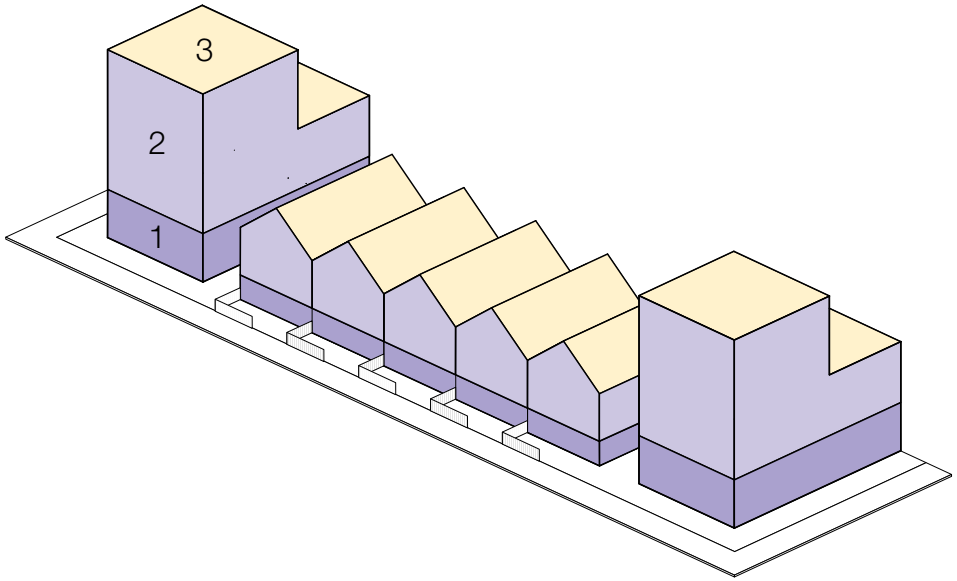
Illustrations can include:

- elevations, sections and 3D drawings showing options or specific requirements for architectural features including articulation and details of facades, demonstrating how entrances, setbacks and other design features relate to the street
- photographs including showing important façade features and where these should be replicated

I3iii	**Materials**		
Code content guidance	A design code can specify details about the materials that new development should use. Where this is proposed, requirements should be reasonable and proportionate to the size, type and location of development: **Type**: specifying the type of materials for different locations in a development or different parts of a building, including primary (whole elevation) and secondary materials (accent part of elevation). This can be particularly relevant when responding to or making alternations to heritage assets. **Colour**: a colour palette acceptable for a given location. **Texture**: specifying material texture to contribute to variety and articulation of facades.	Coverage	It will not always be appropriate to introduce requirements for materials for buildings, and case-by-case consideration with the support of design guidance may be more appropriate. Design codes for identity will typically apply to areas subject to wider planning protections, such as conservation areas. Design codes can be applied to a specific building element, such as exterior walls, roofs, and boundary treatments.
Reason	**I1 Value heritage, local history and culture**: new developments extend the history of a place and can become valued heritage, representing 21st century architecture and placemaking. **I2 Respond to existing local character and identity**: new development should complement its surroundings reflecting local or regional character, built and natural form, vernacular, landscape and distinctive elements of the area. **I3 Create character and identity**: in areas with limited positive qualities, a new and positive character will enhance and create identity.	Other considerations	**C2i Reuse and adaptation**: while respecting identity, new development (such as conversions) will need to consider opportunities to address environmental impacts, looking at material choices, performance and whole life. **P1iii Landscape design**: material requirements for buildings and public spaces will need to be justified, consistent and compatible.

I3iii Materials

Fig 87 Example of how a code can illustrate where a material palette applies



1. Material .....
2. Material .....
3. Material .....

How to illustrate
Photographs of an example material palette and diagrams showing where it applies.

Appendices

Appendix A: Definitions

Accessibility

The ability of people to move around an area and reach places and facilities, including older and disabled people, those with young children and those carrying luggage or shopping.

Active frontage

The front of a buildings with openings onto the space that generate activity and engagement between the building interior and the space outside, particularly entrances.

Appearance

Appearance is the aspects of a building or space within the development which determine the visual impression the building or space makes, including the external built form of the development, its architecture, materials, decoration, lighting, colour and texture. In the case of a space, its landscape also influences its appearance.

Baseline studies

Information about current or planned conditions (for example environmental) that serve as a reference for predicting and assessing from the effects of a proposed development .

Biodiversity net gain

Biodiversity net gain delivers measurable improvements for biodiversity by creating or enhancing habitats in association with development. Biodiversity net gain can be achieved on-site, off-site or through a combination of on-site and off-site measures. See Natural environment planning practice guidance for more detail.

Blocks

A parcel of land surrounded by a connected network of streets and occupied by buildings facing outward onto the street.

Building line

The front face of buildings along a street or other public space. It contributes to the character and identity of a place.

Circular economy

A system based on designing out waste and pollution; keeping products and materials in use; and regenerating natural systems.

Climate change adaptation

See National Planning Policy Framework Annex B: Glossary.

Climate change mitigation

See National Planning Policy Framework Annex B: Glossary.

Climate change resilience

The ability of buildings, infrastructure, natural ecosystems and society to first anticipate and prepare, then endure, adapt and recover from extreme weather events as well as long-term climate changes.

Compact and connected form of development

Development that is planned with a relatively high residential density and an urban layout. Community facilities are closer to one another and their users, preserves more open landscape, and makes efficient use of land and resources.

Design and access statement

A short report accompanying and supporting a planning application. It provides a framework for applicants to explain how a proposed development is a suitable response to the site and its setting and demonstrate that it can be adequately accessed by prospective users.

Design concept

Early design ideas on which a proposal will be based, often expressed in a combination of words and visual material.

Design code

A set of illustrated design requirements that provide specific, detailed parameters for the physical development of a site or area. The graphic and written components of the code should build upon a design vision, such as a masterplan or other design and development framework for a site or area.

Design guide

A document providing guidance on how development can be carried out in accordance with good design practice, often produced by a local authority.

Design policies

Locally specific planning policies that form part of the development plan and set out design expectations beyond the principles described in the National Planning Policy Framework. Design policies respond to place-based issues, such as areas of significant change, small site opportunities, or locations with special character, by setting clear, spatially relevant design requirements that guide development quality and placemaking.

Design tools

Design tools are documents such as masterplans, design codes and design guides that help maintain a focus on design quality from planning to implementation. Based on evidence and spatial analysis, and informed by community engagement and design review, these tools provide clarity and certainty about expectations for design quality and placemaking, for the community, stakeholders, landowners, and applicants.

Destinations

A place that attracts people for a specific purpose, such as shopping, leisure, work, or social activities. Destinations are focal points within a movement network and often influence how routes and spaces are designed. Detailing affects the appearance of a building or space and how it is experienced. It also affects how well it weathers and lasts over time.

Detailing

Detailing affects the appearance of a building or space and how it is experienced. It also affects how well it weathers and lasts over time.

Doorstep space

Doorstep space in residential areas is defined as a space that is directly accessible from homes. It should facilitate social interaction and intergenerational uses, including independent children's play.

Dual aspect

Dual aspect homes have openable windows on two or more external walls, either on opposite sides or on adjacent sides where the building wraps around a corner. This design allows for increased natural light, ventilation and views. (Adapted from Housing Design Standards London Plan Guidance).

Embodied carbon

Embodied carbon emissions are the total emissions associated across the lifespan of the building excluding operational energy and water. This includes emissions from raw material extraction through to end-of-life stage. (Adapted from The Practical, Technical and Economic Impacts of Measuring and Reducing Embodied Carbon in New Buildings).

Enclosure

The relationship between the height of buildings and the width of the space they frame. Taller buildings and a continuous building line increase the sense of enclosure. Different levels of enclosure influence how spaces are used.

External amenity space

Outdoor areas provided for the use and enjoyment of residents, such as private gardens, balconies, terraces, communal courtyards, or shared green spaces. These spaces support health, wellbeing, and social interaction.

Form

The three-dimensional shape and arrangement of buildings and the spaces they create. Form is influenced by:

- size and shape in plan
- height
- volume
- massing (how volume is shaped into a form)
- building lines
- relationship to the plot boundaries

The form of spaces is shaped by the buildings around them.

Form factor

The proportion of floor area to external wall area and can have a significant impact on energy efficiency. Urban building forms such as terraces and apartments minimise heat loss with a low form factor.

Green corridor

An uninterrupted network of natural features within an urban area that acts as a linkage for wildlife, and potentially for people.

Green infrastructure

See National Planning Policy Framework Annex B: Glossary.

Heights

Consistent heights of buildings (or with a slight variation) can create coherence, whereas a large variation of building heights can add dynamism and optimise density.

Heights influence scale, skyline, views and prominence of landmark buildings.

Inclusion

Making sure that all individuals have equal access, opportunity and dignity in the use of the built environment.

Landscape

Landscape is the treatment of land (other than buildings) for the purpose of enhancing or protecting the amenities of the site, the area in which it is situated and the natural environment. Landscape includes landform and drainage, hard landscape such as surfacing, boundary treatments, street furniture and play equipment. It also includes soft landscape – trees, shrubs and other planting.

Layout

A layout shows how routes and blocks of development are arranged and relate to one another to create streets, open spaces and buildings. It defines:

- the structure or settlement pattern
- the grain – the pattern of development blocks and plots
- the broad distribution of different uses, and their densities or building heights

Legibility

How easy it is for people to understand and find their way around a place and how memorable it is.

Local plan

See National Planning Policy Framework Annex B: Glossary.

Local vernacular

An indigenous building style using local materials and traditional methods of construction and ornament, especially as distinguished from academic or historical architectural styles.

Masterplan

A masterplan is a flexible, placemaking tool, providing a three-dimensional spatial framework and long-term vision for the development or regeneration of area specific or site specific locations.

Materials

The materials used for a building or landscape affect how well it functions and lasts over time. They also influence how it relates to what is around it and how it is experienced. The scale, form and appearance of a building influence what materials may be appropriate for its construction. Materials should be practical, durable, affordable and attractive. Choosing the right materials can greatly help new development to fit harmoniously with its surroundings.

New materials and construction techniques are being developed all the time. Modern methods of construction are becoming more common, whether in the form of mass production for modular construction, or off-site bespoke construction for self – or custom-build.

Mixed-use development

Combining two or more different uses, such as residential, employment, community and leisure uses, on a site or in close proximity within a particular area, to create sociable and accessible places.

Movement network

The interconnected system of streets, paths and routes that enable movement for people and vehicles within and beyond a development. It includes walking, cycling, public transport, and vehicular connections, supporting accessibility and connectivity.

Natural surveillance

The ability for people to observe public spaces from buildings and streets, increasing safety by making spaces visible and reducing opportunities for crime. It is achieved through design features such as active frontages, windows overlooking streets, and well-lit, open layouts.

Open space

See National Planning Policy Framework Annex B: Glossary.

Public space

Areas that are open and accessible to everyone, regardless of ownership, for movement, recreation, or social interaction. This includes streets, squares, parks and other spaces that form part of the public realm.

Roofscape

The collective appearance of roofs in a development or area, including their shape, pitch, materials and features, as seen from the street level or above.

Scale

The height, width and length of each building in relation to its surroundings. It includes the overall size and massing of buildings and spaces and the scale of their parts. Scale influences how spaces are used and experienced.

Street clutter

Street furniture and landscape arranged so that streets are difficult to move through, use or are unattractive.

Street scene

The appearance of all of the elements of a street, including the carriageway, pavement, street furniture, planting, and the buildings or structures along its edges, particularly the composition of buildings on each side of the street.

Sustainable drainage systems (SuDS)

See National Planning Policy Framework Annex B: Glossary.

Sustainable transport modes

See National Planning Policy Framework Annex B: Glossary.

Tenure neutral

Housing where no group of residents is disadvantaged as a result of the tenure of their homes. There is no segregation or difference in quality between tenures by siting, accessibility, environmental conditions, external facade or materials. Homes of all tenures are represented in equally attractive and beneficial locations, and there is no differentiation in the positions of entrances.

Shared open or play spaces are accessible to all residents around them, regardless of tenure.

Urban grain

Derives from the size and configuration of plots. Blocks can be developed with buildings of different sizes, based on the arrangements of plots. A larger number of smaller buildings can create greater variety and visual interest.

Whole life carbon

Whole life carbon (WLC) emissions are the total emissions associated across the lifespan of the building. (Adapted from The Practical, Technical and Economic Impacts of Measuring and Reducing Embodied Carbon in New Buildings).

Abbreviations:

AOD: Above ordnance datum

BNG: Biodiversity net gain

FAR: Floor area ratio

GI: Green infrastructure

GIF: Green infrastructure framework

LNRS: Local nature recovery strategy

LPA: Local planning authority

MMC: Modern methods of construction

NDSS: Nationally described space standards

NPPF: National planning policy framework

POE: Post occupancy evaluation

PPA: Planning performance agreement

PPG: Planning practice guidance

SuDS: Sustainable drainage systems

WLCA: Whole life carbon assessment

Appendix B: References

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