Cardiff Residential Design Guide

Supplementary Planning Guidance

January 2017

CARDIFF
CAERDYDD

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Mae'r ddogfen yma hefyd ar gael yn Gymraeg.
This document is also available in Welsh

Introduction

Welsh Government support the use of Supplementary Guidance (SPG) to set out detailed guidance on the way in which development plan policies will be applied in particular circumstances or areas. SPG must be consistent with development plan polices and national planning policy guidance. SPG helps to ensure certain policies and proposals are better understood and applied more effectively. They do not have the same status as the adopted development plan but are a material consideration in the determination of planning applications.

This supplementary planning guidance (SPG) outlines the issues that a design for new residential development in Cardiff should address as it seeks planning permission. It applies to major residential development proposals providing 10 dwellings or more, and which require a Design and Access Statement. Design advice for smaller residential projects can be found in the *Infill Sites SPG*.

This guidance supplements and is in line with current Welsh Government policy on design, as presented in *Planning Policy Wales* (Welsh Government, constantly updated) and *Technical Advice Note 12: Design* (Welsh Government, constantly updated). It also supports the proper implementation of *Manual for Streets* (Department for Transport, 2007). It should be read in conjunction with policies in the current *Cardiff Local Development Plan 2006-2026* (Cardiff Council, 2016), the *Cardiff Liveable Design Guide* (1) (Cardiff Council, 2015) and other relevant Cardiff Council supplementary planning guidance which are cross referenced at appropriate points in the text.

Designers should be mindful of the need to also satisfy Building Regulations, and should develop schemes which will conform to both regulatory regimes.

This guidance is written in the full knowledge that Cardiff Council has to work closely with the house building industry and be aware of the market conditions that may apply. Uncertainty, delay and changing requirements late in the planning process are major concerns for both developers and the planning authority, and so this guidance provides a clear statement of what the planning authority expects both in terms of how design information should be presented, but also how design issues should be addressed. Planning applications submitted in line with these requirements can be dealt with efficiently.

The use of images

Please note that the images in this document are included to illustrate particular points referenced in the text. Inclusion of an image does not mean a general endorsement of other attributes of the scheme.

1. This guide can be read in conjunction with the Cardiff Liveable Design Guide which provides place making, planning and urban design guidelines that the Council will apply to strategic development sites throughout the city.
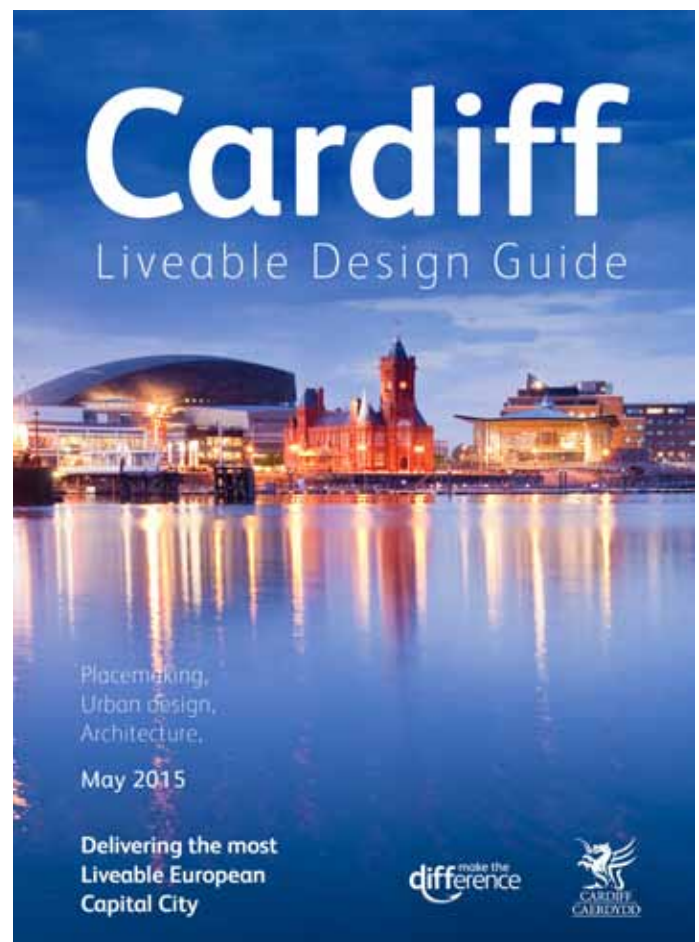
Residential environments in Cardiff

Cardiff is a reasonably compact city with a successful city centre and regenerating bay. Reflecting its history, it contains rings of residential development that reflect its periods of growth. It contains many popular neighbourhoods which are close to significant open spaces, well served by public transport and offering a convenient mix of uses. In the inner suburbs people can get about on foot. Neighbourhood uses tend to be accessibly located on radial streets. Cycling infrastructure is improving.

The city has some celebrated Victorian and Edwardian housing around very attractive urban parks (2), and contains a popular garden suburb (3). The outer suburbs built during the last 30 years tend to contain neighbourhood environments which have given priority to the car (4). It is less popular to walk and the environments can tend to lack places of distinct character. Provision of neighbourhood uses has tended to be provided in free standing buildings which can be dominated by car parking. These neighbourhoods reflect the characteristics of similar developments that have occurred elsewhere in the UK.

The last few decades have also seen significant growth in apartment living in both the city centre and Cardiff Bay. These areas have a preponderance of 1 and 2 bedroom homes, and whilst the apartments have been successful, often with a great setting overlooking the bay, sometimes they have been designed in an insular or gated form and haven't always resulted in much pedestrian vitality in their contexts, or the establishment of really great streets or public spaces between them (5).

Cardiff's Local Development Plan makes provision for the delivery of 41,000 new dwellings in Cardiff over the plan period. This significant growth emphasises the importance of this guidance as we try and ensure that new homes are planned and designed to reinforce or establish new sustainable neighbourhoods and places in line with best contemporary urban design practices.

Across the UK new ways of thinking and practicing have led to great improvements in new residential developments to overcome some of the recognised failings of previously developed schemes, and both policy and guidance produced by the Welsh Government gives powers through the planning system to ensure that developments here in Cardiff are also designed and developed to the highest standards.

2. Cardiff contains many popular Edwardian residential areas which remain popular today.

3. Rhiwbina Garden Village

4. Outer suburbs built during the last 30 years tend to contain environments which have given priority to the car.

5. Some recent apartments have been designed in an insular or gated form which hasn't always resulted in much pedestrian vitality in their contexts.

The organisation of this guide

Good design will only emerge when good designers are given the chance to complete the right planning and design process. This guide starts by outlining how we would expect that process to be organised so that designers have the time and opportunity to address the issues presented here.

Following this we offer advice about the full range of issues that concern us, organised around similar themes and questions presented in the house building industry endorsed *Building for Life 12 Wales* (6) and the associated house builder quality mark *Built for Life*. We start by looking at how the scheme should fit into an existing, or help to establish a new, neighbourhood. Then we discuss how developments should result in distinctive places that relate well to their contexts. Finally we discuss how new homes should fit into well-designed streets. Organising the guidance in this way helps you find the part of the guidance most relevant for your scale of development. Designers of larger schemes should be familiar with all of it, whilst smaller projects can focus on the issues, for example, related to buildings and streets.

Many of these issues are best communicated through the right plans and other images presented coherently in a design and access statement (DAS). Good advice on how to produce a DAS can be found in the Welsh Government's *Technical Advice Note 12: Guidance on Design and Access Statements* (7). We recommend that any DAS should directly illustrate and explain how any design responds to the issues discussed here, and in the order that we present them.
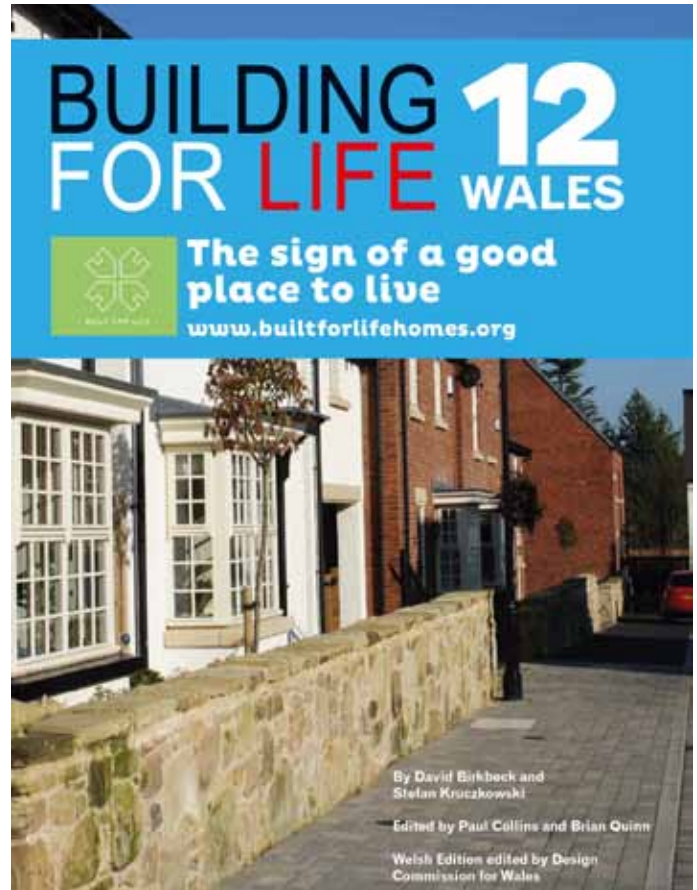
6. This guidance is based on issues and criteria presented in Building for Life 12 Wales
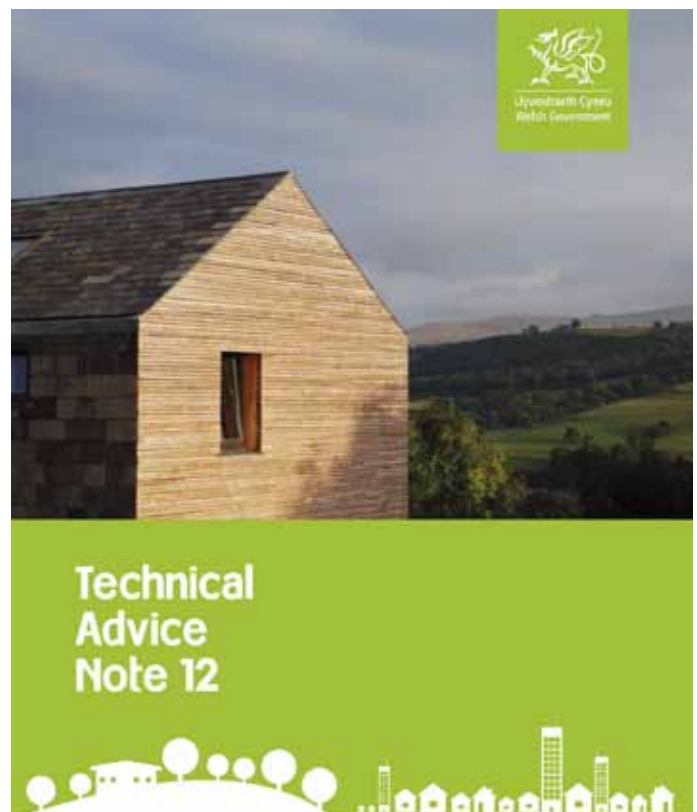
7. Good guidance on how to produce a Design and Access Statement can be found in TAN12 guidelines

Cardiff planning policy context

Cardiff's adopted Local Development Plan has a robust set of planning policies and guidelines controlling and promoting the good design of developments in the city. We recommend that a thorough review of policy and guidance is undertaken to understand what might apply to a site. Although it is not necessary to provide a dry list of relevant policies and guidelines in a design and access statement, it is important to explain how the features of a design have considered the requirements.

In particular we recommend a review of:

- Planning policy designations
- Special landscape designations
- Conservation area character appraisals and the details of any scheduled monuments or listed buildings or other heritage assets that influence a site
- Tree preservation orders
- Any relevant site specific development briefs
- Other supplementary planning guidance
- The planning history of the site

Other relevant supplementary planning guidance related to residential developments also includes guidance on highway and parking standards, the provision of affordable housing and open space, planning obligations, tall buildings, public art, public rights of way and development, trees and development, community facilities and residential development and waste collection and storage. As necessary, new forms of guidance are always being created. If you are uncertain about which supplementary planning guidance might be relevant to your development, the Council will be able to advise you as to which might be most relevant at a pre-application discussion.

Relevant information is available on the Cardiff Council website, including the current *Cardiff Local Development Plan* and the full list of supplementary planning guidance.

Appraisal of the scheme against national and local design policies, guidance and standards is undertaken by officers of the Council with recommendations made to the planning committee as part of the development management process.

A number of specific policies in the Local Development Plan relate to the design quality of major residential schemes, and this SPG aims to provide more information about how we expect these design qualities to be achieved:

Policy for Master Planning on Strategic Development Sites

Policy KP4 in the *Cardiff Local Development Plan* requires that any development on a strategic site of more than 500 homes adopts a master planning approach. Details of how to conform to this requirement can be found on the Cardiff Council website in:

- *Cardiff Local Development Plan Masterplanning Framework*
- *Liveable Design Guide: Placemaking, urban design, architecture*

Policy KP4 states that major developments should accord with the following Master Planning General Principles:

1. Development schemes will be planned in a comprehensive and integrated manner, reflecting partnership working and setting out the phasing of development along with a timely provision of supporting infrastructure. Masterplans will need to encompass the whole of a development area regardless of land ownership patterns, and this will require partnership working, involving all relevant parties;
2. High density residential and mixed-use development shall be focused along public transport corridors and in neighbourhood centres, with lower densities provided elsewhere to deliver an overall range and choice of accommodation to meet different needs;
3. Dedicated sustainable transport corridors shall include provision for public transport, cycling and walking which will form key elements of the overall master plan and effectively link into the wider network;
4. Walking, cycling and public transport will be attractive, practical and convenient travel choices for all;
5. Provision of a full range of social and community facilities will be concentrated within mixed use neighbourhood centres located along public transport corridors and easily accessed by walking and cycling;
6. The masterplanning process will effectively respond to the local context and the context of climate change, to create new, well designed neighbourhoods with a distinctive character which residents will be proud of;
7. New development shall respond to local deficiencies and provide good connectivity to adjoining areas and be informed by feedback from existing communities;

8. Multi-functional and connected green open spaces shall form strategically important links to the surrounding area to provide routes for people and wildlife and open spaces for sports, recreation and play;
9. Existing landscapes, biodiversity and historic features of the site shall be sympathetically integrated into the development, taking opportunities to protect, enhance and manage important features along with mitigation and enhancement measures to provide satisfactory compensatory measures;
10. Innovative and creative management solutions for energy, management of surface water and waste shall be adopted to make new developments more environmentally sustainable.

In addition development will also accord with guidance set out in site-specific master planning frameworks, if they have been prepared.

Policy for Good Quality and Sustainable Design

Policy KP5 in the *Cardiff Local Development Plan* is the principal policy requiring high quality, sustainable design which makes a positive contribution to the creation of distinctive communities, places and spaces. This guidance elaborates on how the requirements of this policy can be secured in residential development led schemes. The policy requires that development:

- Responds to the local character and context of the built and landscape setting so that layout, scale, form, massing, height, density, colour, materials, detailing and impact on the built and natural heritage are all addressed within development proposals;
- Provides legible development which is easy to get around and which ensures a sense of continuity and enclosure;
- Provides a diversity of land uses to create balanced communities and add vibrancy throughout the day;
- Creates interconnected streets, squares and spaces as distinctive places, which are safe, accessible, vibrant and secure and incorporate public art where appropriate;
- Provides a healthy and convenient environment for all users that supports the principles of community safety, encourages walking and cycling, enables employment, essential services and community facilities to be accessible by sustainable transport and maximises the contribution of networks of multi-functional and

connected open spaces to encourage healthier lifestyles;
- Maximises renewable energy solutions;
- Achieves a resource efficient and climate responsive design that provides sustainable water and waste management solutions and minimises emissions from transport, homes and industry;
- Achieves an adaptable design that can respond to future social, economic, technological and environmental requirements;
- Promotes the efficient use of land, developing at highest practicable densities and where appropriate achieving the remediation of contaminated land;
- Ensures no undue effect on the amenity of neighbouring occupiers and connecting positively to surrounding communities;
- Fosters inclusive design, ensuring buildings, streets and spaces are accessible to all users and are adaptable to future changes in lifestyle; and
- Locates tall buildings in locations which are highly accessible through walking and public transport and within an existing or proposed cluster of tall buildings.

Responding to Evidenced Social Needs

Policy KP13 seeks developments which: deliver sustainable neighbourhoods, tackle deprivation and improve the quality of life for all. This includes:

- Providing a range of dwelling sizes, types and affordability including seeking to provide a target of 6,646 affordable dwellings over the remaining 12 years of Plan period
- Supporting the vitality, viability and attractiveness of existing District and Local Centres and their regeneration, including retail and other commercial development and housing of an appropriate scale;
- Encouraging the provision of a full range of social, health, leisure and education facilities and community infrastructure for both existing and new communities that are accessible to all by walking and cycling and public transport;
- Supporting the regeneration of deprived communities within the city and maximising the additional benefits that new communities can bring to adjoining or surrounding communities;
- Encouraging the enhancement of communities through better equality of access to services for all, promoting cultural and wider diversity for all groups in society, and creating places that encourage social interaction and cohesion;
- Developing new cultural and sporting facilities

to build upon Cardiff's role as a major tourist, cultural and sporting destination for visitors and residents alike; and

- Designing out crime and creating communities which are safer and feel safer.

Climate Change

Policy KP15 seeks to mitigate against the effects of climate change and adapt to its impacts. Development proposals should take into account the following factors:

- Reducing carbon emissions;
- Protecting and increasing carbon sinks;
- Adapting to the implications of climate change at both a strategic and detailed design level;
- Promoting energy efficiency and increasing the supply of renewable energy;
- Avoiding areas susceptible to flood risk in the first instance in accordance with the sequential approach set out in national guidance; and
- Preventing development that increases flood risk.

Water Sensitive Urban Design

Policy EN10 requires development to apply water sensitive urban design solutions (the process of integrating water cycle management with the built environment through planning and urban design). To include the management of:

- Water demand and supply;
- Waste water and pollution;
- Rainfall and runoff;
- Watercourses and water resource;
- Flooding; and
- Water pathways.

Walking and Cycling

We are committed to delivering forms of development that meet the requirements of the Active Travel (Wales) Act.

Policy T1 of the *Cardiff Local Development Plan* requires developments which enable people to access employment, essential services and community facilities by walking and cycling. The Council will support developments which incorporate:

- High quality, sustainable design which makes a positive contribution to the distinctiveness of communities and places;
- Permeable and legible networks providing safe, convenient and attractive walking and cycling routes;
- Connections and extensions to the *Cardiff Strategic Cycle Network* and routes forming part of the *Cardiff Walkable Neighbourhoods Plan*;
- Measures to minimise vehicle speed and give priority to pedestrians and cyclists;
- Safe, convenient and attractive walking and cycling connections to existing developments, neighbourhoods, jobs and services;
- Infrastructure designed in accordance with standards of good practice including the Welsh Government *Design Guidance - Active Travel*, and the Council's *Cycling Design Guide*;
- Supporting facilities including signing, secure cycle parking and, where necessary, shower and changing facilities; and
- The provision of car-free zones.

Community Safety and Creating Safe Environments

Policy C3 requires that all new developments and redevelopments shall be designed to promote a safe and secure environment and minimise the opportunity for crime. In particular development shall:

- Maximise natural surveillance of areas which may be vulnerable to crime such as publicly accessible spaces, open space, car parking areas and footpaths;
- Have well defined routes, spaces and entrances that provide convenient movement without compromising security;
- Maintain perceptible distinction between public and private spaces through well-defined boundaries and defensible space;
- Provide a good standard of lighting to public spaces and routes while minimising energy use and light pollution; and
- Be designed with management and maintenance in mind, to discourage crime in the present and future.

Health

Policy C6 requires developments to reduce health inequalities and support healthy lifestyle choices by ensuring that they provide a physical and built environment that supports inter-connectivity and active travel choices, as well as enhancing road safety.

The right design process

Good designs can only emerge from a strong design process which will also readily provide content for a design and access statement. Suitable designers will be very familiar with this process.

Design team

A strong design team with a proven track record in delivering good residential developments will understand the issues presented here and be able to refer to suitable precedents. Our experience tells us that good design teams deliver successful projects efficiently, and that the requirements presented here might require the input of professionals with various forms of expertise.

It is important to put together the right team to address any relevant issues, including experts in residential development, architecture, quantity surveying, landscape architecture, urban design, highway engineering, active travel, ecology, planning, heritage and archaeology.

Design drawings

The preparation of good drawings for both the planning application and design and access statement is central to both thinking about and communicating the relevant design qualities of a scheme. The Council expects clear graphic evidence related to the issues raised in this document, and time can be wasted in the planning application process if relevant images are not provided at the start. Drawings should illustrate the following requirements:

Site Analysis

Welsh policy on design, presented in TAN 12, stresses the importance of context and site analysis:

"*Understanding the site and its immediate and wider context is the basis for a meaningful and sustainable design response, and is the responsibility of all those involved in the design process, particularly planning applicants and their agents...*" TAN 12 Design

The Welsh Government and Design Commission for Wales (DCFW) have also prepared separate guidelines called *Site and Context Analysis: Capturing the value of a site* which explain how to approach the task (8). They were prompted to do this because of the inadequacy of analyses associated with schemes submitted to the DCFW for design review. We will apply these guidelines

in the assessment of schemes submitted in Cardiff.

Designers should complete and present a thorough analysis to ensure that they fully understand the context and site that they will be working on. The list of issues that might become relevant is non-exhaustive as all contexts are different, but we suggest a presentation of the following information, if it relates to the scheme:

Wider context

- The network of green infrastructure or ecological systems, areas of landscape character and the location of any protected species and habitats;
- Public rights of way and the wider network of roads and cycle routes;
- The public transport context, including the wider network of rail and bus services and the hierarchy of highways, including cycle routes;
- The location and content of nearby neighbourhood, employment and service centres.

Site & Context Analysis Guide: Capturing the value of a site
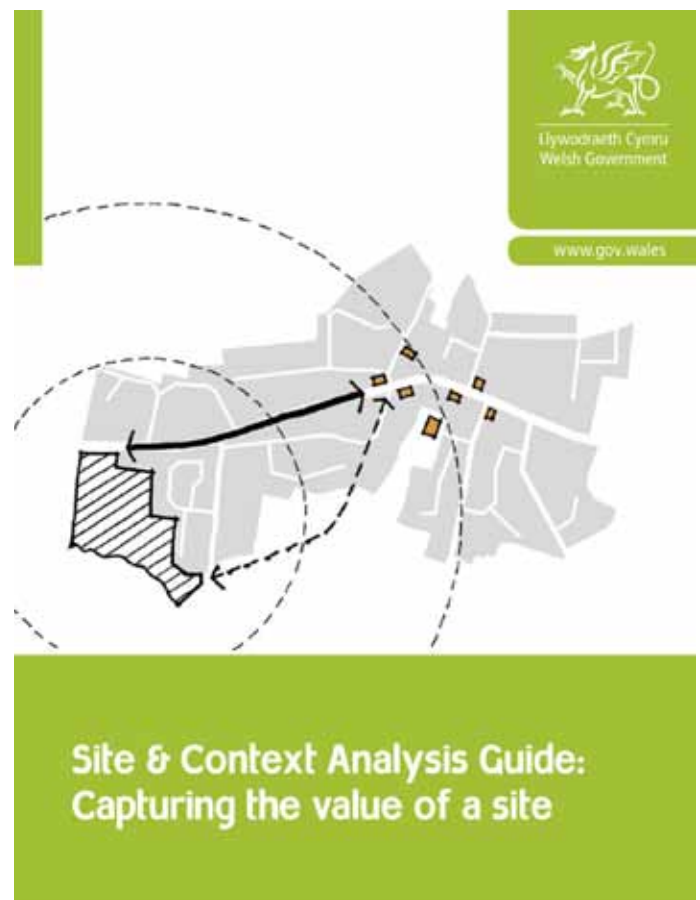
March 2016

8. We will apply guidance on how to complete and present a site and context analysis produced by the Design Commission for Wales.

The Neighbourhood

- The provision of local supermarkets and shops in the vicinity, highlighting the walking distance and route quality from the site;
- The location of other local facilities such as schools, religious buildings, nurseries, doctors, dentists, community buildings and pubs, also highlighting the walking distance and route quality from the site;
- Key aspects of the neighbouring urban form including net residential densities and building heights (advice on how we measure net residential density is on page 20);
- Any specific areas of character in residential areas surrounding the scheme, and whether and how this might influence a design. Advice on what should be included in a character statement is provided below in the section *"Is the design specific to the scheme?" (page 21).*

Transport and Accessibility

- Public transport frequency, routes and stops to key destinations;
- Pattern of access through the wider context and to and across the site for active travellers such as pedestrians and cyclists;
- Pattern of access through the wider context and to and across the site for other vehicle users.

Natural Features and Open Spaces

- Site topography;
- Water courses, drainage systems and areas of potential flooding;
- The location of the site in relation to the wider strategic landscape system, including major open spaces and areas of ecological value;
- The location and quality of existing play spaces and sports fields, including local and destination children's play areas, equipped teen play areas and formal sports and recreation open spaces;
- Sun path and any areas of shadowing.

Social Profile

- The social profile of the neighbouring areas;
- A market analysis of recent sales in the area;
- Crime map data highlighting any significant issues.

Other Site Specific Aspects

- **Topography** of the site, indicating which areas can be built on and which might be difficult;
- **Utilities:** Gas mains, water mains, electricity pylons, cables and sub stations, including any necessary easements;
- **Trees and other planting** on the site, including which might be protected and which removed;
- **Historic features:** archaeology, conservation areas and listed and other buildings or other features to be retained;
- **Specific and important views** from and through the site to important local landmarks;
- **Orientation** of neighbouring homes, indicating their fronts and backs and giving an indication of both the quality of the backs and any relevant points of access;
- **Boundaries:** The type and quality of boundaries to the site;
- **Other site constraints:** contaminated soils and filled areas, microclimate and noise sources.

Opportunities and constraints

The results of the context and site analysis should be summarised in an opportunities and constraints map and provide a list of points which highlight how the surveys have informed the emerging concept and subsequent design. Such a map and statement help people understand and appreciate how you have responded to the issues related to the site and its context. Opportunities presented should start to show interesting ideas for the scheme.

Design concept

Larger schemes will benefit from the preparation of a design concept diagram which highlights the key strategic design features of a scheme, such as the principal pattern of access, the location of centres and uses other than housing, the protection of green corridors or creation of open spaces and key landscape features, the network of highways and cycle routes, the density profile across a scheme, building heights, the distribution of any character areas and key built form or townscape characteristics. Guidance for each character area and any specific key built form features should also be produced to inform reserved matters applications.

Design drawings

Design drawings should represent the scheme within its context and, where relevant, show the location and form of neighbouring development.

All drawings should be drawn and reproduced at a scale that will enable proposals to be assessed. Plans should have a north arrow if the top of the image is not north.

As we look at a lot of drawings at various scales electronically, it is useful to have a scale bar on plans, and/or tell us at what scale the image should be printed

out, and the scale that applies at this scale (eg 1:500 @ A1).

Design rationale

For larger projects, drawings or diagrams that unpick the qualities of the scheme should explain different aspects of the design. The images should clearly notate how the designs respond to the themes and issues presented in this guidance and that are relevant to the site. These should appear in the Design and Access Statement.

Design and Access Statements

Design and access statements (DAS) offer a significant opportunity to explain and justify your design. Developers are required to submit a DAS that illustrates and explains the decisions leading to the final design. It should provide adequate graphic and written evidence to a level of detail which shows how the proposal has achieved good design in relation to both design policy and guidance and also for the site in its context. Details of what a DAS should contain and how it should be presented can be found in the Welsh Government's *Technical Advice Note 12: Guidance on Design and Access Statements (7).*

Consultation and engagement

Following the receipt of a pre-application enquiry, we welcome discussions or workshops which help establish the design parameters against which a future planning application will be assessed, and a chance to offer initial advice about what might be proposed. Such discussions are most effective where the above process has been followed through, time for design has been found and relevant drawings have been produced.

New developments can sometimes be controversial with existing residents. Opportunities for engagement with local councillors, civic and community groups and citizens should also be considered at an early stage of the design process, so that emerging designs can be informed by local concerns and ideas.

The Welsh Government has introduced a statutory requirement for local planning authorities to provide pre-application advice, whilst there is also a requirement for all applicants for major developments to undertake pre-application publicity and consultation on their plans. Details of the Cardiff pre-application service, and requirements for publicity and consultation, can be found on the Cardiff Council Planning web site. The aim of these processes is to raise any significant planning issues prior to the submission of a formal application. This provides applicants with the opportunity to consider these issues and, if necessary, amend the proposals before they are finalised and submitted as a planning application.

Design Review with the Design Commission for Wales

Relevant projects may be submitted to the Design Commission for Wales' Design Review Service for comment and advice (9). This is best done prior to the submission of a planning application. The process helps to identify early opportunities for good design quality in development proposals and assists us in securing public value through design excellence. This process may be initiated by the applicant or the Council. Further information about this process can be found at DCFW.org.
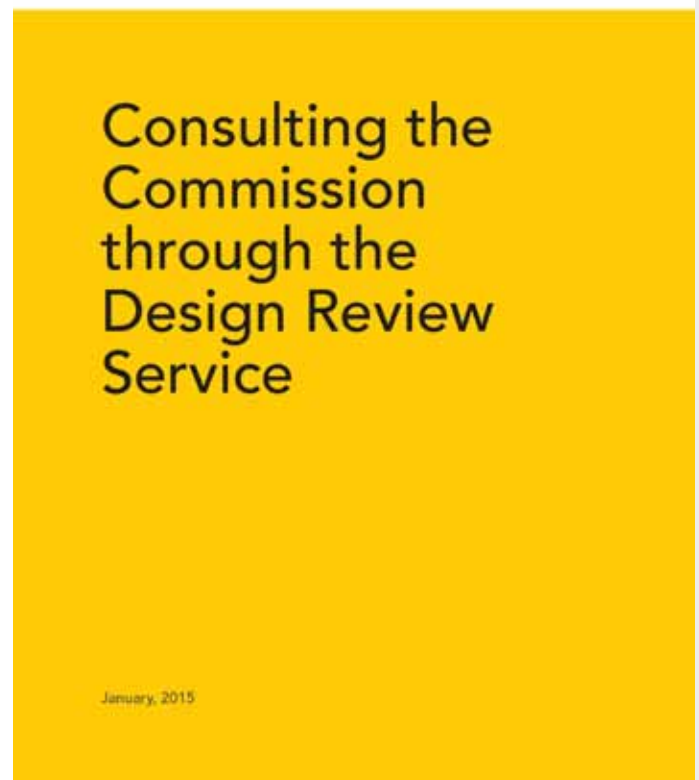
9. The Design Commission for Wales provides its own advice about how to submit schemes into the Design Review Service.

The wrong design process

Sometimes design processes are used which do not result in good developments. The most common are:

- Not employing good designers right from the start. We know that good designs are produced by good designers. Investing in them will help both the design and planning process.
- Slavish use of standard house types which have not been designed for use in the relevant layouts.
- The design of larger schemes without any reference to a clear concept which would shape the overall structure and character of the development.
- The employment of urban designers to produce a good design for an outline planning application which establishes a site's value and capacity, and then the submission of poorer detailed reserved matters plans.
- Not obtaining a *Stage 1 Road Safety Audit* or a *Combined User Audit* for the outline design. This omission has the risk that the design could include features that introduce a road safety problem or issues which may be difficult and costly to rectify at a later stage.
- For larger schemes, the submission of vague plans which look graphically convincing, but which provide no useful detail to guide or control the structure or character of subsequent phases.
- The design of schemes without adequate understanding of a site or its context.
- The use of minor amendments to water down well designed features of a planning consent.

We will resist schemes that emerge through these and similar processes where we observe a poor or declining quality to a design.

Summary of the key design questions that must be addressed

Part of the neighbourhood

- Does the development provide, or is it close to, neighbourhood facilities that are reachable safely by walking and cycling?
- Is there an accommodation/tenure mix that reflects the needs and aspirations of the local community?
- Does the development have good access to public transport?
- Is the scheme well connected internally and to its context?

Creating places

- Does the development make efficient use of land and provide homes at a reasonable density?
- Is the design specific to the scheme?
- Does the scheme sympathetically integrate with existing buildings, landscape or topography?
- Do the buildings and layout make it easy to find your way around and result in an attractive townscape?
- Does the scheme include adequate provision of well-designed public spaces?
- Do the buildings and layout help to make it feel safe and secure and reduce opportunities for crime?
- Does the development have features that reduce its environmental impact?

Street and home

- Are the streets and spaces defined by buildings and landscape so that the highways do not dominate their character?
- Are streets and public spaces designed with a clear purpose and to a standard that meets the needs of all potential users?
- Is resident and visitor parking sufficient and well integrated so that it does not dominate the street scene?
- Are the individual houses well designed to meet the needs and aspirations of future occupants and also in relation to their context?
- Does the design conform to necessary amenity standards?
- Does the design include adequate and well-designed waste and recycling facilities, and show care in the location and integration of meter cupboards?
- Is the streetscape both attractive and robust?

Part of the neighbourhood

New homes and other uses should enhance and become part of an existing neighbourhood, or help create a distinctive and popular new one. Good neighbourhoods are central to opportunities to live a more sustainable and healthier lifestyle.

They can reduce the need to travel by providing most of the facilities and services we need within walking distance of our homes. This mix of uses can include well located convenience shops, doctors' surgeries, community buildings, open spaces, nurseries and primary schools, pubs and religious buildings; all allowing people to meet their daily needs without having to travel far from their home.

They should also be socially mixed, providing a range of dwelling types and tenures, at a range of densities, to ensure that a full range of local demands and needs are met.

The pattern of routes should prioritise active travel choices, making it easy and convenient to walk and cycle, both within the development, but also to other parts of the context. This requires that developments are permeable.

Finally developments should support the provision and use of public transport by making it easy and safe to get to well located public transport stops, allowing residents convenient access to the rest of the city without being reliant on a car.

Does the development provide, or is it close to, neighbourhood facilities that are reachable along direct and safe walking and cycling routes?

As part of a commitment to securing both sustainable and healthy forms of development and promoting active forms of travel, suitably large developments will need to provide a good mix of facilities within walking distance from homes, whilst smaller schemes will need to ensure that they contain layouts that connect efficiently and safely to those that exist locally. We will require forms of development which are oriented towards pedestrian, cyclist and public transport users.

We will resist forms of development that are located without access to adequate facilities close to people's homes and which suggest that future residents will be car dependent when trying to reach things traditionally provided within walking distance. We will also resist forms of development where the principal routes to such facilities are indirect, unattractive or would feel unsecure.

We will adopt a range of measures to judge the reasonable distance from homes to any relevant facilities. We will use these distances as a *rule of thumb* to judge the vicinity of either existing or planned neighbourhood uses.

Issues to address

Provide direct access to existing or new shops and other neighbourhood uses, schools, leisure facilities and open spaces along well designed walking and cycling routes

(10). The layout of a development and the quality of connections it provides can have a significant impact on walking distances and people's travel choices.

Further information:
- Welsh Government (2014) *Design Guidance Active Travel (Wales) Act 2013*
- Cardiff Council, *Cardiff Cycle Design Guide*
- Sustrans (2014) *Handbook for cycle friendly design*

Provide denser forms of residential development closer to neighbourhood centres in order to provide enough people locally to support their viability (11 see over). For further information see the Cardiff Council *Liveable Design Guide.*

Locate any new facilities in residential areas at distances that allow both existing and new residents easy access to them on foot or by bike (12). Integrate these facilities into the fabric of the wider development to avoid creating isolated buildings dominated by car parking and highway infrastructure .

Fully integrate homes for elderly people within safe walking distance to local facilities and services and also public transport, in order to help maintain residents' independence.

Design homes in relation to district and local centres or shopping parades so that they might easily be converted to retail or other uses in the future.

10. Provide direct access to existing or new shops and other neighbourhood uses, schools, leisure facilities and open spaces along well designed walking and cycling routes. Integrate neighbourhood uses into the street network so that they are convenient and comfortable to walk to and between.

11. Provide denser forms of development close to neighbourhood centres and any other retail provision in order to help the viability of the commercial uses and public transport.
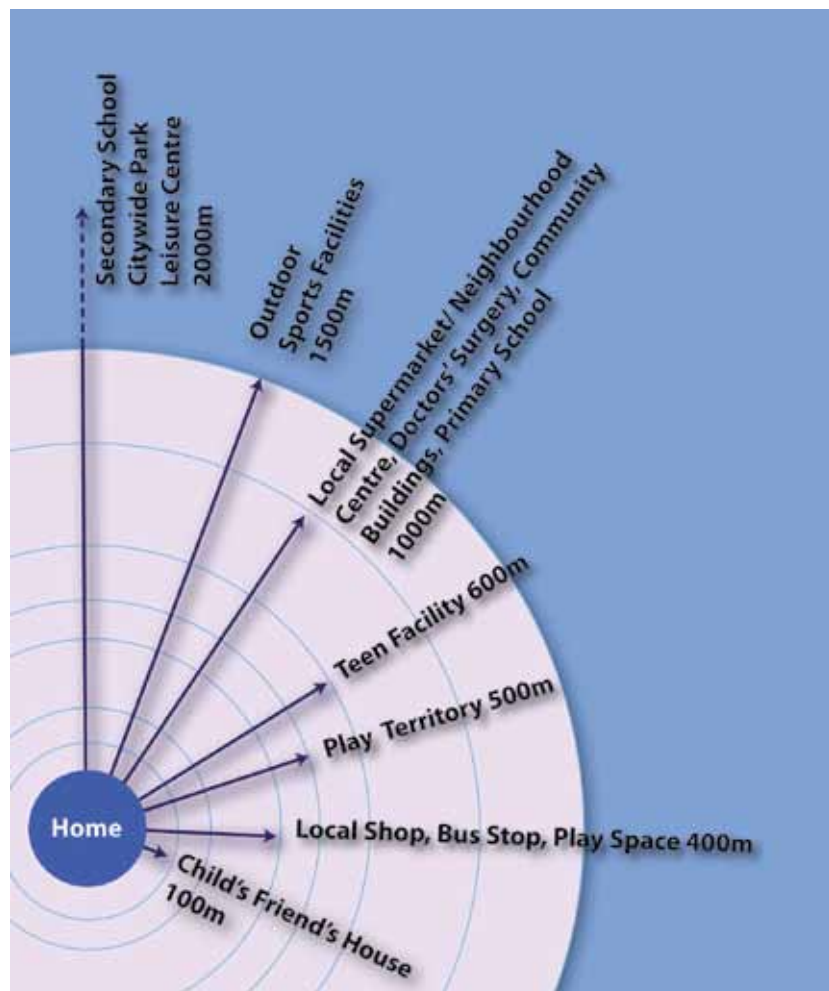
12. Locate any new facilities in residential areas at distances that allow both existing and new residents easy access to them on foot or by bike. We will adopt these distances as a rule of thumb for judging the accessibility of sites and distances to facilities and services.

14

Is there an accommodation/tenure mix that reflects the needs and aspirations of the local community?

Schemes should provide an appropriate mix of dwelling types to establish or contribute to a broad based community. Whilst we would accept the best parts of a scheme will attract the most prestigious homes, designs in general should also result in streets that are tenure blind so that it is not possible to differentiate between homes that are market sale, affordable rented and low cost home ownership. We will resist forms of development that highlight social divisions through the form of the layout or significant distinctions in façade treatments or landscaping.

Issues to address

Provide a range of dwelling types to establish or contribute to a balanced community.

The Council requires all affordable rented units (social rented and intermediate rented) to meet the standards identified in the Welsh Government's (2005 or subsequent amendments) *Development Quality Requirements.* Designs will also ensure that, despite these standards and their impact, all homes of whichever tenure are integrated into the overall design concept and externally finished to a similar standard (13).

13. We will resist social or affordable housing that is not seamlessly integrated into a layout.

Does the development have good access to public transport?

Providing pedestrian access to public transport stops, connecting homes to the rest of the city, is central to supporting more sustainable forms of development and giving transport and travel choices to residents. These stops should be well lit, overlooked by neighbouring properties and integrated into the street scene. Significant interchanges should include secure cycle storage so that people can combine cycle and bus trips. The Council will always welcome innovative schemes which explore ways of reducing car use and the negative impacts of cars on streets and public spaces.

Issues to address

Maximise the number of homes on sites that are close to good, high frequency public transport routes, reached along safe routes (14).

14. Development should maximise the number of homes on sites that are close to good, high frequency public transport routes.

Embrace key connections and desire lines to off-site local transport facilities and stops.

Promote sustainable inter-modal travel opportunities by providing safe and sheltered cycle storage at all homes or near relevant public transport stops.
Further guidance on standards for cycle parking can be found in the *Managing Transport Impacts and Parking Standards SPG*, and advice on the choice of public cycle parking, in the *Cardiff Public Realm Manual*.

Explore scope for car free developments or car-pooling schemes.

15. We will resist forms of development in which public transport stops are not fully integrated into the layout, and properly overlooked by neighbouring properties.

Ensure that public transport stops and shelters are integrated into the layout, are overlooked by neighbouring properties and well lit (15).

Further guidance on the design of recommended bus shelters can be found in the *Cardiff Public Realm Manual*.

Is the scheme well connected internally and to its context?

In contrast to previous approaches to highway design, which often resulted in few pedestrian choices and longer and sometimes busier routes between parts of a community, we now expect the pattern of streets to put equal emphasis on meeting the access requirements of pedestrians and cyclists. Well-connected or permeable layouts give pedestrians and cyclists more choice and shorter routes. Often they can choose to walk or cycle along routes with less traffic. This helps make walking and cycling a positive choice.

Streets in the scheme should be well connected internally and to their context. Public routes should also be overlooked by the principal frontages or specifically designed side elevations of homes.

We will resist forms of development which provide a poor pattern of access for any category of user, or where routes are not safe.

Issues to address

Link routes directly with surrounding footpaths, cycle ways and roads (16).

Patterns of access should not result in a preponderance of private rear gardens being located next to public spaces (17).

Allow for reasonable access to future neighbouring development sites.

Foot and cycle networks should be more permeable than those provided for other vehicles, allowing direct patterns of access for active travel.

In larger schemes, do not use a block structure and pattern of access that separates public pedestrian and cyclist routes from other highway users, such as a Radburn layout.

Further guidance on design to support active travel can be found in Welsh Government (2014) *Design Guidance Active Travel (Wales) Act 2013*.

16. New routes should link directly with surrounding footpaths, cycle ways and roads so that pedestrians and cyclists can gain direct access.

17. We will resist forms of development which result in a preponderance of private rear gardens located next to public streets and spaces.

Creating places

Rather than resulting in bland residential environments, housing developments in Cardiff will contribute to building on or establishing distinctive places.

In the past many housing developments have been criticised for ignoring aspects of their context, or resulting from the the imposition of standard highway and housing designs.

People buy houses, but we want those houses to be part of great places. Homes will be laid out to establish distinctive, diverse, attractive, safe, well used and cherished places where a wide range of people choose to live, and which will have qualities to help them remain economically, environmentally and socially sustainable.

Great places result from the explicit thought given to the qualities of the spaces between buildings, rather than just the design of the homes. Individual homes all contribute in some way to the qualities of a place, and developments should: ensure there are enough people to support a range of facilities and services; respond to the specific qualities of the context; include a range of distinctive streets and other public spaces; be easy to find your way around; have an attractive townscape, feel safe and include design features that reduce the impact of the development on the environment.

Does the development make efficient use of land and provide homes at a reasonable density?

The vitality and viability of neighbourhood centres and public transport services are dependent upon having a good number of potential customers within their catchment areas. Low density forms of development can reduce their viability, and often result in less sustainable forms of development which can't be readily reached by active travel modes. In order to support the vitality and viability of local shops and services we will welcome designs that can increase development densities within walking distance, where they also conform to other guidance presented here.

In addition, variations in the density of development can allow for greater variety in the spatial and visual character of a scheme which can enhance the townscape and help people find their way around.

There is no relationship between development density and the ability of a scheme to provide adequate green spaces or meet amenity standards, although the form of green space might go from providing private to more shared forms of garden or open space. We will always welcome interesting approaches to providing amenity spaces.

Our LDP policies for strategic sites typically present desired net densities for particular types of development across a neighbourhood and we will apply similar principles to other relevant locations (18). How we work out the net development density is presented in Figure 20 (see over).

The shift from housing to apartments typically occurs at about 35 dph, and the introduction of apartments can have a significant impact on the number of units provided on a site. This can be seen in Ninian Park and Phoenix Way examples shown in Figure 20. To meet the density requirements the introduction of apartments into some areas of a scheme might be necessary.

Issues to address

Provide residential densities adequate enough to support local commercial, community and public transport services within walking distance of people's homes.

Denser, more compact and taller forms of development, coupled with additional attention to design detail, can positively define key spaces, frontages and main streets (19).

Street or area	Net dwellings per hectare *
Within a mixed use district centre	45 +
Fronting a spine street which also facilitates public transport links to a district centre	45 +
Within 400m of a district centre	35 +
Other parts of the residential area	30 +

18. Expected net development densities for different areas within a neighbourhood based on LDP policies for strategic sites. These will be applied unless character and context factors require a more sensitive approach.

* Where an LDP policy is not a factor we may consider a measure of bed spaces per hectare to justify a density. Where this measure is considered, we will typically treat 3 bed spaces and equivalent to 1 dwelling.

19. Higher densities or taller buildings can be used to positively define key spaces, frontages and main streets. Newhall, Harlow.

20. Net Residential Densities

The net residential density is an average across the housing area only. The land take for the assessment includes the land taken for houses, private gardens, pavements, minor access roads, car parking and 'incidental' open space. It excludes land used for 'significant' public open spaces (1), parks, play spaces, schools and their grounds (2), and land or parking associated with commercial (3) or community buildings (4).

If the boundary does not include housing on both sides of a street, the boundary is drawn down half of the highway.

Radyr Siding 29 dph

Phoenix Way 66 dph

Ninian Park 47 dph

Porth Teigr 70 dph

Is the design specific to the scheme?

Good designs seek to establish distinctive and interesting residential areas. Clear ideas for place making will inform design ideas for street- and landscapes as well as how house or other building types will be combined. We welcome the use of standard building types where they are used and adjusted to suit their position in a carefully conceived layout and townscape. We will, in particular, encourage special care in approaches to urban design in important locations requiring special townscape treatments. We will support schemes that are informed by a thorough character analysis of the context and site, although this does not mean we expect designs to mimic those within the context. We welcome innovation in the design of homes where an awareness of context has been demonstrated.

Issues to address

Standard house types should be grouped and adjusted to suit their position in a carefully conceived layout and townscape.

Present the design in relation to its context.

Develop a clear design vision for the development in order to demonstrate its response to character and context. It could be *in keeping* with areas of good character, and in particular conservation areas affected by the scheme, or create a positive new identity that complements an existing character.

Designs should be based on a thorough plan for the built form (22 see over). This could include ideas for:

- key views out of (towards distant features and landscapes) or through a site;
- key vistas created within the site;
- principal frontages, including suggestions about built form character, building scale and massing, parking arrangements (to reduce its impact on a townscape), roof forms, landscaping ideas to reinforce the special character including tree planting, soft and hard landscaping and ideas about boundary treatments;
- key nodal places to be defined by special landscape **and** built form treatments and possibly requiring more bespoke design solutions;
- secondary nodal places to be defined by a special landscape **and/or** built form treatment and requiring careful use of what might be standard house types, adjusted to this setting;
- landmark buildings (located to vary the townscape – to close a vista or create punctuation);
- key corners requiring specially designed buildings with an equal treatment of two facades and not just windows on two elevations.

For significant schemes we will expect this material to be presented to scale at the outline planning application stage.

For any category of feature highlighted at the outline planning stage, specific design guidance, precedent images and drawings should highlight the expected treatment of the feature in any subsequent reserved matters application.

21. We will resist schemes where the poor use of standard house types, and a lack of ideas for streetscape, results in bland or placeless environments.

22. Outline planning applications should contain built form and landscape diagrams similar to that below, and which present a design with the important categories of issue considered. This will give us confidence that we will achieve certain qualities in a final scheme, like that at the bottom, but still allow flexibility in the development of a detailed design. See also guidance on character statements.

3 storey etc	Townscape trees (indicating specimen size when fully grown)	Corner building designed to front two streets
2.5 storey		Nodal spaces with bespoke architecture and landscape
2 storey and block structure	Avenue trees (also indicating specimen size when fully grown)	Secondary spaces with bespoke landscape and adjusted standard houses
	Public green spaces and verges	

Key view out of or through the site

Principal frontage with parking behind the building line, care in the use of any standard house types, and an interesting roof line

Key vista to special building or group of buildings

For larger schemes, character areas should be specified on a relevant plan (23). There should be a logic to this choice of areas linked to aspects of the layout. We will resist designs where we cannot understand the logic of character areas in relation to the layout. Ideas for character areas will only be considered useful if a distinctive character is likely to result.

For each area highlighted in the character area plan, design ideas for the categories of issue presented in Figure 24 should be provided as relevant.

Precedent images should also be used in any design and access statement to illustrate specific aspects of any design, and also linked to the categories in Figure 24. Generic precedent images unlinked to a specific aspect of a design will not be considered useful.

We will expect key nodal spaces to be phased into a development in a way that guarantees their qualities, either by delivering them in one go, or through approval of a design code which specifies its key qualities.

Representations of trees in plans and 3D views should represent the selected tree species at their approximate fully grown height and crown circumference, to confirm the adequacy of the growing space provided for it (22).

Design Codes may be used to ensure that master plans are implemented, the quality of development between phases is consistent, and the planned character areas are clearly distinct (25 see over).

23. Character area plan. For each area, the aspects of the design that create a distinctive and successful character should be presented in a character statement. The aspects of the design that can be presented and illustrated are listed in Figure 24.

Farm Village

Dense village grain (mixed use and 40-60 DPH)

General village character (30-50 DPH)

Village gardens

Village avenue

24. Categories of detail which can be used to inform character statements

Streets	Street hierarchy sections and building lines
	Qualities of principal frontages (see Figure 19)
	Parking strategy for residents and visitors, including principles to reduce the impact of parking on prominent frontages and integrate parking into the street scene
	Key street section dimensions
	Highway standards
Plots and buildings	Plot widths and depth, indicating front and rear garden area
	Building lines
	Building types
	Building heights
	Roof lines and forms
	Building styles or architectural details
	Materials used in houses and ancillary buildings
	Cycle parking provision
	Treatment of utility boxes
	Treatment of refuse areas
	Boundary treatments ⬚ front, side and rear
Public realm	Materials in the streetscape
	Tree and hedge protection
	Tree planting types and principles
	Other landscape designs
	Lighting
	Signage
	Public art
Special groups and spaces	Treatment of special views and vistas, nodal and secondary spaces, and special corner buildings (See Figure 19)

Regulating Plan

Density

Character Areas

Rooflines

Building Lines

CONSISTENT BUILDING LINE WITH VARIED VERGE WIDTHS AND LIMITED GAPS IN THE BUILDING LINE

WITH VARIED GAPS BETWEEN BUILDINGS TO ALLOW FOR GARDENS, ROADS AND DIFFERENT PARKING STRATEGIES

INFORMAL BUILDING LINE TO CREATE A 'DEATHSCAPE' ZONE TO MAX AMOUNT OF LANDSCAPING

Boundaries

Low level irregular course stone wall with tiled coping

Low level brick wall and/or metal railing

Hedge between brick piers with coping stone

Railing

Low level landscaping or open

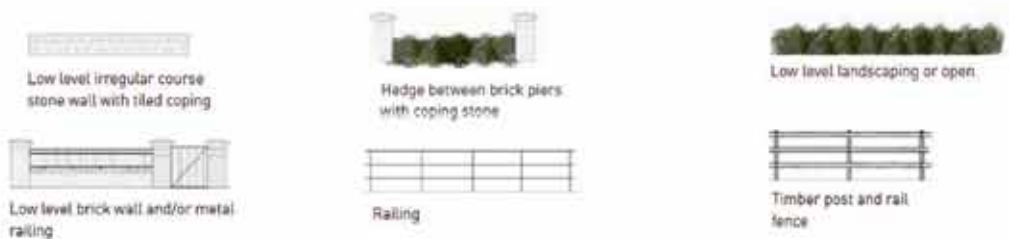Timber post and rail fence

25. Design Codes may be used to ensure that: master plans are implemented, the quality of development between phases is consistent, and the planned character areas are clearly distinct. (Images: Pegasus Group)

24

Does the scheme sympathetically integrate with existing buildings, landscape or topography?

All development sites are different, and we expect designs to try and enhance this distinction. This is particularly the case where sites have characteristics that need protecting or which might enhance a scheme. Such things include the topography of the land, features providing a distinctive historic character or identity, aspects of the ecology and landscape including trees, or views into, through or from the site.

National government guidance in *TAN 5 Nature and Conservation* requires developments to integrate biodiversity into all planning decisions, as well as ensuring species and habitat protection and mitigating the effects of climate change. *TAN 12 Design* stresses the importance of context and site analysis in highlighting any important assets as a precursor to enhancing them in a design.

Working with or enhancing these aspects of a site will add value to a development because these features are often important to and popular with both established and the future residents in an area. We will resist schemes which have not understood and appreciated these specific aspects of a site.

Issues to address

Use landscape architects to produce a landscaping strategy which integrates the scheme with the surrounding context.

Respond to and reinforce locally distinctive patterns of development (listed buildings (26), conservation areas and historic parks and gardens) and landscape designations (TPOs, SSSI, sites of importance for nature conservation).

Respond to any specific aspects of the topography, by either building along contours or, where possible, creating some drama in the townscape by exploiting the slope.

Protect or enhance any site elements which contribute to local character, where they have a long term sustainable future as part of the development.

High ground or sloping topography can make development prominent in surrounding views of the site and particularly sensitive design is required in such cases.

Exploit existing or new views to attractive aspects of the context or features of the new scheme (27 see over).

Complement the scale and massing of neighbouring built forms, unless a specific acceptance of a change in scale and massing has been indicated as acceptable.

Integrate established trees (28 see over), hedgerow and other landscape elements that must be retained through the clear designation and treatment of ecotones or buffer zones.

Explore opportunities to protect, enhance and create connected wildlife habitats and also encourage biodiversity. Strategic woodland corridors affected by

26. Integrate any listed buildings or other historic features of a site into a scheme in an acceptable way

28. Integrate existing trees into new public spaces

urbanisation can be protected through the introduction of appropriately wide green corridors (29).

We will ensure that the habitats of protected species are maintained and enhanced as a result of development proposals, through both the design of a scheme and plans for public space management.

Translocate habitats for any protected species affected by a development and which can't be successfully accommodated within a site.

Don't create awkward or unusable pieces of land which have no clear function or aesthetic value, or which will be difficult to manage and maintain (30).

Improved connectivity between woodlands

30 m belt to provide a dark flight corridor for bats between woodlands and the river

New 60 m tree and open space belt connecting woodland.
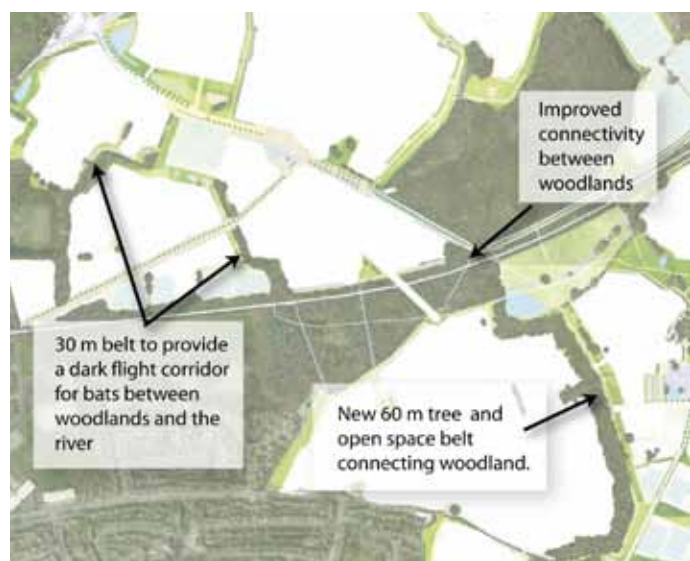
29. Strategic wildlife corridors

30. "Left over" areas of land should be designed out of schemes.

Do the buildings and layout make it easy to find your way around and result in an attractive townscape?

New residential areas should be easy to understand for both residents and visitors. A neighbourhood that is easy to understand tends to feel safer and more secure, whilst people will know how to travel directly across a wider area. This requires a clear network of reasonably direct and distinctive streets and urban spaces that are interesting, welcoming and people-friendly. People are helped to navigate themselves along this network where there are also distinctive landmarks and focal places, memorable views, works of art and also well placed signage. By contrast, indistinct housing or even walls or fences located along standard roads forming winding cul-de-sacs can make it feel less safe whilst also being more difficult to know where you are or where a route might be going. Sometimes the design of buildings and the urban space at key junctions should be treated with particular care. These are the points that people need to know where they are, whilst the design of the environment should provide orientation to where people might want to go.

We will resist developments which result in an indistinct or placeless character, and where we anticipate people will become easily lost.

The residential townscape is determined by how buildings and aspects of the landscape are grouped to form different views and vistas, and create different places in a scheme. The quality of a townscape is also influenced by some aspects of the exterior landscape and architectural detailing which will be discussed when we look more closely at the design of homes and streetscapes.

Views, vistas and the resulting places can be well composed and attractive, or poorly considered and chaotic or even dull. A good townscape will result in places in a scheme being distinctive and memorable. Thinking about the townscape is an established tradition in urban design. Understanding key views requires images that show the three dimensional aspects of a design from the viewpoint of a user. Normal plans and elevations don't always clearly express what people will see in places. Aerial 3D views don't show us evidence of what people will see from ground level. Good street-level views should be used to design what is experienced at the human scale, even in developments which might include large buildings.

Cardiff already has many attractive townscapes, but an interest in townscape doesn't require the re-creation of traditional or established forms. We will encourage either traditional or contemporary townscapes which exploit the opportunities for place making afforded by the *Manual for Streets*.

Places that lack distinctiveness and interest will be less popular and might be less interesting to walk or even cycle around. Boring places make even short journeys feel longer. As part of a wider commitment to supporting active travel we must ensure that walking routes are attractive so that walking becomes a positive choice. A good townscape involves ideas about the strategic views and places to be introduced into a scheme, but it can also involve thinking about how houses are grouped together. We will ensure that standard houses, in particular, have been used and adjusted to create a considered townscape.

Issues to address

Link new residential areas to key uses, facilities and open spaces in the established settlement via direct and legible routes which are well overlooked and lit.

Establish a direct and connected pattern of streets and spaces for pedestrians and cyclists within the scheme.

Design the street sections to establish a spatial hierarchy which allow the status of streets to be reflected in their form, whilst creating variety in the layout (31).
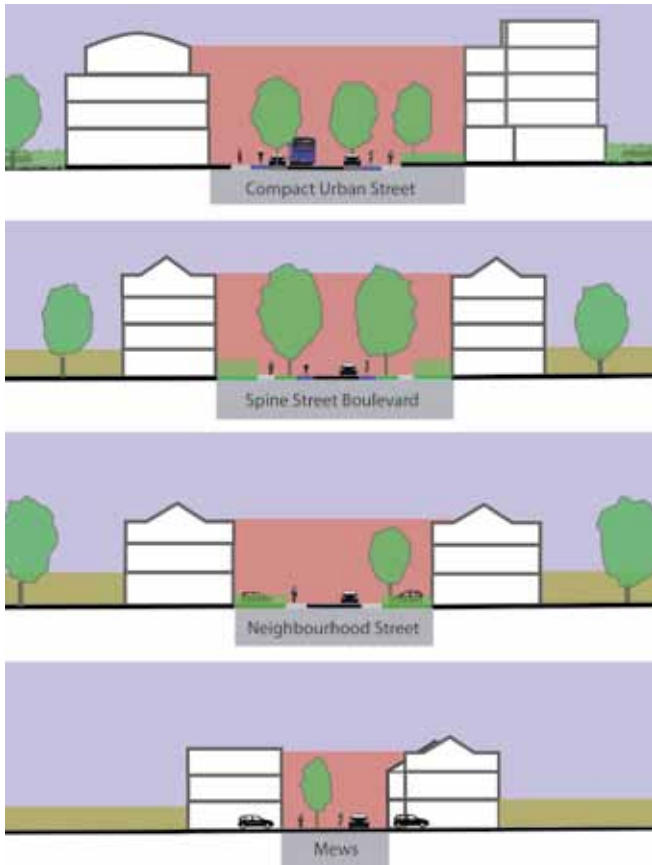
31. Varying street sections will establish a spatial hierarchy

Frame streets and public spaces with key building facades and active frontages, and not walls and fences, to help highlight them as distinctive places and maintain overlooking.

Integrate key views into the design towards significant landmark buildings or features either outside of, or inside the site. These will be identified in a thorough site and context analysis.

Locate and design any marketing suite and homes so that they do not impact on the long term design integrity of any prominent street or space.

Use key uses or create distinctive building groupings, views, gateway and landmark features to aid way finding by establishing a memorable townscape at key points in the scheme (32).

Use changes in scale and massing of buildings, or elements of a building, to highlight important spaces and intersections (32).

Locate distinctive urban spaces in a development at focal points created by the pattern of access. People can use them to orientate themselves, they can form a social focus for residents from a group of streets, and they can accommodate parts of a sustainable urban drainage scheme, larger trees and possibly also local play facilities (32).
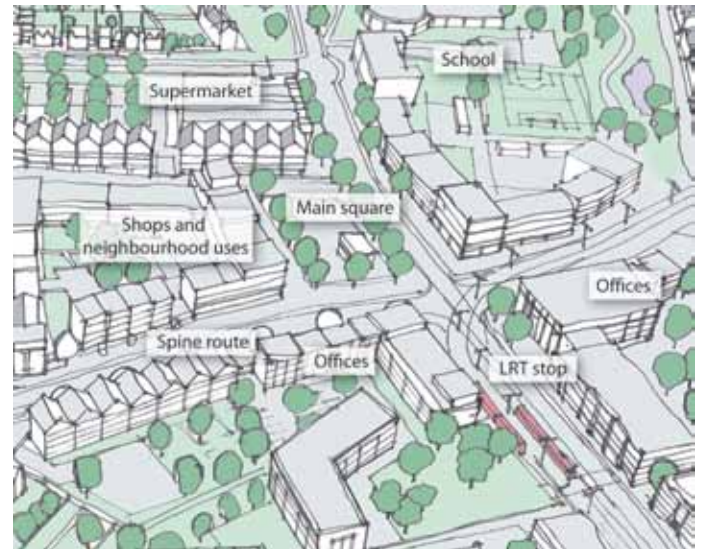
32. Key points in a scheme, where important routes meet, can be the location for any commercial and neighbourhood uses, a prominent public space, and buildings forming a distinct townscape.

The relationship between streets and public spaces and homes should be as direct and straight forward as possible for both residents and visitors, so that people can easily find front doors.

The entrance to apartment blocks should be legible and welcoming. Apartment blocks should also be identifiable with clear signage providing block numbering or naming.

Ensure that pedestrian level views of the townscape are prepared so that the townscape character can be understood and adjusted.

Design buildings at prominent corners to reflect their position in a layout. Ensure they have a suitable scale and massing, with facades that are equivalent in terms of materials and detail, and windows that offer adequate surveillance of the two streets (33 see over).

Close or punctuate significant views through a scheme with specially designed buildings or landscaping (34 see over).

33. Buildings on significant corners should be designed to have a degree of prominence, whilst also having a plan and facade that offer a frontage treatment when seen from either street. Ingress Park, Greenhithe.

34. Close or punctuate significant views through a scheme with specially designed buildings or landscaping

35

Ensure landscaping and boundary treatments reduce the impact of frontage parking on street views (35).

Avoid close-boarded fences on boundaries that front onto public spaces and parking areas as they can have a poor visual appearance (36a). Introduce more attractive solutions (36b).

36a

36b

Does the scheme include adequate provision of well-designed public spaces?

Public spaces should be designed by landscape architects. These professionals know how the design of public space should be approached. They understand that a good quality of public space is central to residents' satisfaction with their neighbourhood. Public spaces include the streets, but also other types of urban or green spaces, including play areas. Their quality can make walking and cycling a pleasure, and therefore support healthier lifestyles. They can reinforce a sense of place, local identity and pride, and they can help people find their way around. They are one of the places that neighbours will meet.

In the past the success of public spaces was sometimes judged by the amount that was provided. Today we know that an over-provision of poorly designed public areas has not been successful, and so we are interested in securing the right amount, but also ensuring it is of good quality, with plans for its ongoing use, management and maintenance.

Standards for the provision of different types of open space in new residential developments will be found in the relevant chapter of the *Green Infrastructure SPG*. Concern for standards is not, however, enough.

37. Principles for informing and evaluating the design of public spaces in residential areas. Adapted from 12 Quality Criteria*, Gehl Architects.*

Safety and Protection

Feeling safe from traffic, and protection from potential traffic collisions Appropriate highway design to promote safe driver behaviours.	**Protection from crime and the fear of violence** Surveillance, good lighting, vitality.	**Protection against unpleasant sensory experiences** Appropriate protection from wind, rain, pollution, cold, noise.

Health and Comfort

Opportunities for active travel Prevention of traffic flows and infrastructure design creating community severance, room for walking and cycling, interesting routes, good surfaces, inclusive access.	**Opportunities for sitting** Zones for sitting, utilising good views of townscape, landscape and people, access to the sun, well designed seating, quiet enough to talk.	**Opportunities for play and exercise** Play facilities for young children and teenagers. Play and sports provision. Opportunities to play informally in streets and opens spaces.

Enjoyment

Scale Buildings and spaces designed at a human scale	**Positive sensory experience** Good design and detailing. Good materials.	**Design with nature** Access to and understanding of natural processes, protecting trees and habitats, promoting biodiversity, space for large trees, sustainable water management

Different forms and character of public space are at the heart of place making. We will expect designs for larger schemes to introduce a variety of residential settings and spaces to give parts of the scheme character, as well as accommodating a variety of types of open space. Key public spaces must be located appropriately, rather than resulting from left over space following the positioning of highways and homes.

Public spaces should be designed to successfully combine ecological, visual or social functions. As a result we will also judge the design of spaces against a consistent set of principles which will ensure that all spaces are safe, healthy and comfortable, and also providing spaces that residents will enjoy (37).

Spaces must be designed to both be and feel safe, and protect residents from any unpleasant impacts which might be felt from a site's context. They should be designed to allow use for active travel, sitting and socialising.

Families are keen to know that their communities contain suitable play areas, and a hierarchy of play spaces for both young children and teenagers should be integrated into a design to ensure that there are opportunities for all ages and abilities in convenient, safe, accessible and attractive locations which are well overlooked, but will not attract anti-social behaviour. These spaces should reflect current thinking and be of a high quality to attract children and families and become a valued part of the local environment. Poor quality or unimaginative spaces will not be attractive to young people, will not be valued by a local community and might fall into disuse.

The scale of urban spaces should be at a human scale, with concern for both the hard and ecological landscape. The details of a space should be robust and attractive and designs should support sustainable patterns of drainage, protect important natural assets and otherwise promote biodiversity. We will make use of specialist advice regarding ecology and trees, and particular attention will be given to protecting existing good quality trees and finding space for new large trees in developments.

Spaces should be developed as homes are built, and we shall seek to ensure that phasing of a wider development accounts for this.

Finally we will want to ensure that sustainable plans are in place for the future management and maintenance of public spaces.
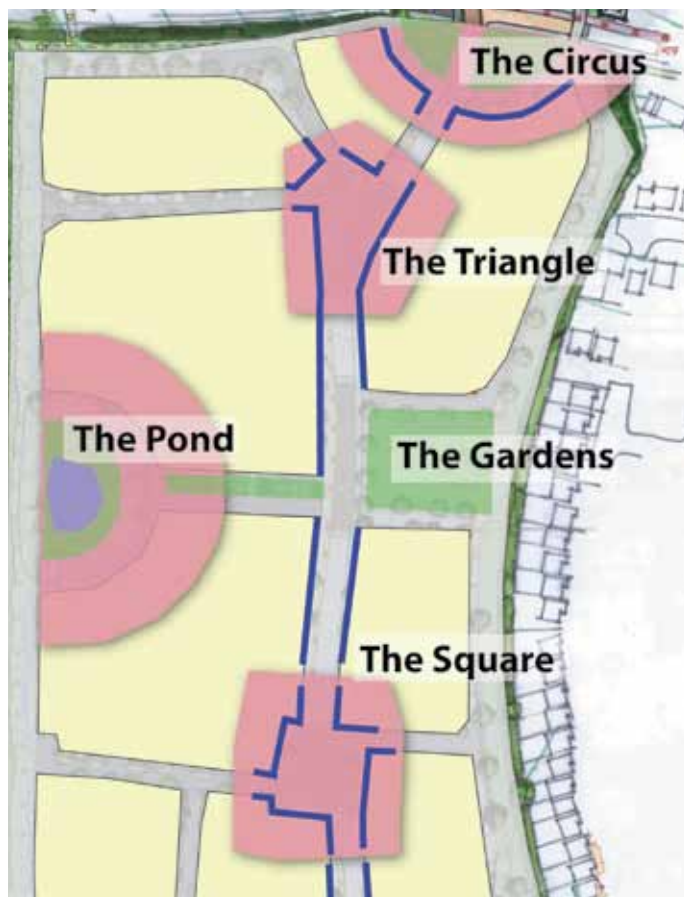
38. Developments should be designed around ideas for distinct places within a scheme. Schemes exclusively dominated by the character of highways will be resisted.

39. We will resist forms of development that do not front neighbouring public spaces

Issues to address

Designs will show how they accommodate a range of urban spaces within the built form (38).

Design landscaping to maintain sight lines across spaces and provide a reasonable degree of overlooking of public spaces from neighbouring homes. We will resist forms of development that do not front onto neighbouring public spaces (39). Open space that is tucked away in the corner

of the site, or has housing with high boundary fences backing onto it, should be avoided as this frequently leads to long term problems of anti-social behaviour. Open spaces that are out of sight and difficult to access are seen as a threat rather than a positive asset by residents. The key design aim is to create a sense of ownership and safety.

In outline applications landscape/ green infrastructure parameters plans should clearly set out strategic open space and green infrastructure concepts which can be carried forward to reserved matters applications. Such plans should set out objectives for different areas and routes and consider long term management. This might include areas for householder/ community management.

Attention should be paid to resulting micro-climates in all planned open spaces to ensure that the anticipated effects of wind and shadow will not affect the planned use of spaces.

Lighting schemes will be provided which enhance feelings of safety in all public areas of a development.

Although extreme conditions are reasonably rare, we will want to ensure that open spaces are not badly affected by exposed conditions, and in particular traffic, pollution and noise. Spaces will be located to offer excellent environmental conditions for social activities.

Hard neighbourhood spaces should be provided at a human scale. Research has suggested that spaces larger than 60 metres can start to feel over large. Overlarge public spaces between buildings can feel dangerous and anonymous. A rule of thumb is that spaces should be designed so that people in neighbouring properties can recognise the people coming and going across the space. This is called a social distance. The building of dense and tall residential buildings should not result in overlarge neighbourhood spaces.

Access to areas of public space will minimise the impact of traffic through appropriate highway designs, providing treatments which allow young children independent access without the need of parental supervision (40).

Unless otherwise dictated by natural site features, locate the main open space centrally, or where it is easily accessible from all parts of the new development and, where appropriate, other neighbouring developments. This makes it a focal point, helps in orientating visitors entering the development, and encourages use by the whole community.

Designs for open space should account for how they provide a range of activities and benefits for a wide range of residents, in line with the themes introduced in Figure 37. Open space should be multi-functional and flexible to take into account the differing needs of those living, working and visiting the area.

40. Highways should be designed to allow young children access to open and play spaces without parental supervision. Recent guidelines in Manual for Streets are being implemented to allow this to happen. The above examples show shared space solutions.

Open space should build in resilience to climate change, providing flood mitigation for extreme events to protect surrounding buildings and infrastructure. The primary function of the open space however should remain as a space that can be used actively for recreation, with well drained ground conditions allowing good drainage and recovery after extreme weather events.

Plans should provide for both formal and informal play opportunities in line with requirements in the *Green Infrastructure SPG*, and play spaces should be designed in accordance with current thinking.
Further guidance on the provision and design of open and play spaces can be found in:
• *Green Infrastructure SPG (forthcoming)*
• www.playwales.org.uk
• Play England (2008) *Design for Play*

Within an open space the most active areas (eg play areas, teen areas, seating) should be in highly visible locations, but at a sufficient distance from properties to minimise disturbance

Trees are a popular feature of streetscapes which must be located to have ecological and townscape impact in spaces that are suitable for them. Tree planting should be given proper consideration during the early design stages rather than being treated as an afterthought.
Further guidance on planting trees can be found in:
• *the relevant part of the Green Infrastructure SPG (forthcoming)*
• *The Cardiff Public Realm Manual*

Designs should demonstrate how they can accommodate both avenue and large specimen trees, and plans and sections should accommodate the provision of both planting and growing space for all relevant varieties that are selected (41).

We would prefer layouts that accommodate a number of large, long-lived trees planted in *"fit for purpose"* beds, rather than a larger number of small or fastigiated trees, squeezed in wherever there is space left over.

If public spaces are not offered for adoption then a viable strategy for their management and maintenance will be secured through planning condition and legal agreement.

Where necessary, open spaces should be implemented on a phased basis as new, adjacent homes are completed, to ensure that open spaces are created as the community develops, rather than left to the end.

Treatments should be informed by Cardiff's adopted *Public Realm Manual* which provides detailed advice about how to approach the design of the public landscape, including the streets in residential areas.

41. Plans and sections should demonstrate how tree crown and root growth will be accommodated in relevant growing areas.

Do the buildings and layout help to make it feel safe and secure and reduce opportunities for crime?

It is well understood that the design of residential areas can help people feel safe and reduce opportunities for crime.

Four qualities help to achieve this:

- vitality or coming and going by neighbours and the public means that there are people about who can keep an eye on things.
- a clear and effective distinction between public and more private spaces means that people know where there is a right of access or control.
- views from neighbouring homes of all public areas through the use of windows, lighting and good design of the landscape mean that people feel safe, whilst potential criminals might feel observed.
- Footpaths with an open aspect and overlooked by adjoining dwellings means that all areas of public space will have surveillance and feel safe.

We will support schemes that have these qualities, and resist designs which result in places feeling unsafe or creating potential crime hot spots. Further advice on this issue might also be sought from the Secured by Design web site (securedbydesign.com) where there is detailed advice about designing new home and residential spaces.

As part of a wider commitment to supporting active travel we must also ensure that walking and cycling routes feel safe all of the time so that walking and cycling becomes a positive choice.

Issues to address

The network of streets and other public routes should be direct and visually open, and in a network that will encourage good levels of use throughout the day, safely mixing pedestrians and vehicle users (42).

Footpaths and parking areas will be overlooked by habitable rooms.

42. Networks should be direct and visually open, with the main public routes for all users fronted and overlooked by homes.

43. Maintain a clear distinction between public and private space in a resulting block structure

44. Locate utility meters in the public realm, but not as a prominent feature on a building facade

45. We will resist designs that result in public areas of a development which result in blind corners.

Maintain a clear distinction between public and private areas through the design of a scheme, with public routes at the front of dwellings. The pattern of permeability should not result in a preponderance of public routes to the rear of properties (43).

If segregated footpaths are unavoidable they should be well lit and have good site lines along their length to avoid potential hiding places.

Locate utility meters in the public realm, but not as a prominent feature on a building facade (44).

We will resist designs leading to public areas of development resulting in blind corners, and which might be intimidating for users (45).

Where alley ways are being suggested as a supplementary form of access, we will expect them to be gated and controlled by residents if there are otherwise inadequate defensible space measures, such as direct surveillance of the route from neighbouring homes (46).

Gated communities will not be accepted where they negatively impact on the reasonable permeability of a wider area or result in poor surveillance of neighbouring streets and public spaces.

46. Where alleyways are a necessary feature of a design, if they are not overlooked we will expect them to be gated and controlled by residents.

Does the development have features that reduce its environmental impact?

Planning Policy Wales and national planning policy guidance expects the planning system to provide new homes and buildings in a way which is consistent with sustainability principles. This is explained in the Welsh Government publication (2014) *Practice Guidance: Planning for Sustainable Buildings.*

Well-designed schemes are energy efficient and minimise or even enhance their life time impact on the natural environment. More environmentally sustainable homes and developments: require as little energy as possible and exploit renewable energy sources; sustainably manage the use of water within and from the site; and include a landscaping strategy that explores the potential to maintain and develop a site's biodiversity. Major developments of over 100 dwellings are, in particular, required to explore how low carbon and renewable energy technologies and supply systems can be used within their schemes.

Issues to address

Provide a layout that optimises solar gain for homes by ensuring that principal living spaces benefit from a southern aspect (47).

Use designs that minimise energy demand and include alternative or renewable energy sources in the development.

Major developments of over 100 dwellings will need to submit an independent energy assessment investigating the financial viability and technical feasibility of

incorporating renewable and low carbon technologies into their scheme, in line with policy EN12 of the *Cardiff Local Development Plan*.

Adopt a water efficiency strategy and explore opportunities to include rainwater harvesting, grey water recycling systems and green roofs.

Minimise surface water runoff from sealed surfaces such as driveways and paths.

Integrate a sustainable urban drainage (SUDS) system into the site layout, to control surface water runoff and therefore reduce the risks of flooding, promote biodiversity and create a valuable amenity asset (48).

Highlight "blue corridors" in an initial phase of analysis and design to properly account for surface water flow paths and the space needed to accommodate any future water attenuation.

Drainage schemes will be required to attenuate volumes of water to accommodate rainfall events 1 in 100 years, plus a 30% climate change allowance, pending agreement. This significant volume will need to be accounted for in the layout of the development, and preferably with above ground attenuation.

Recent guidance on SUDS can be found in *Welsh Government (2016) Recommended non-statutory standards for sustainable drainage (SuDS) in Wales.* Further advice on SUDS in Cardiff will be found in the *Green Infrastructure SPG* and in a forthcoming SPG dedicated to the topic.

47. Homes designed and located to optimise solar gain can take many forms.

The adoption of sustainable drainage schemes will need to be considered at pre-application stage and it is recommended that early conversations with the Council and Dwr Cymru/Welsh Water are undertaken to ensure that the development is acceptable to the relevant body and adoption agreements are set out in principle.

Include a landscaping strategy which will increase biodiversity based on native species (49). Good advice on designing for biodiversity can be found elsewhere. See for example the forthcoming Green Infrastructure SPG and also: Town and Country Planning Association

(2004) *Biodiversity by Design: a guide to sustainable communities*, or Town and Country Planning Association and the Wildlife Trust (2012) *Planning for a healthy environment - good practice for green infrastructure and biodiversity*, or Wildlife Trust Wales (2016) *Green Infrastructure: a catalyst for the well-being of future generations in Wales.*

48. We will welcome developments integrating sustainable urban drainage which is designed to be an attractive and interesting feature of the environment.

49. We will welcome residential landscapes designed and managed to promote biodiversity.

Street and home

At a detailed level, new homes contribute to forming streets and other types of urban space, whilst they also have an impact on other homes in their immediate context. At this scale we want to see ideas for the character of streets and spaces through concern for detailed aspects of the new townscape. We want to ensure that public spaces are all inclusive, providing safe and convenient access for everyone. We want to ensure that there is enough car and cycle parking which must be well designed into a scheme. Schemes should conform to standards for both privacy and amenity. Homes should provide adequate facilities for the management of waste and recycling. Resulting streetscapes should also be both robust and attractive.

Are the streets and spaces defined by buildings and landscape so that the highways do not dominate their character?

Our streets and other types of public space will be designed to be distinctive places where residents can enjoy a good quality of life. They will be designed for all street users and should be regarded as social spaces which accommodate a mix of activities common to residential areas, including walking and cycling as well as children's play. These spaces will be a key focus in our neighbourhoods, and we will encourage designs which create a distinctive and interesting urban design and landscaping framework. Homes should therefore be designed according to how they contribute to this framework. Of particular need is to ensure that these streets and spaces have frontage and are well overlooked so that they feel safe and are also likely to be well used by pedestrians.

Streets should accommodate necessary vehicular access and parking without giving exclusive preference to meeting the needs of drivers. As such, their spatial and visual character should not be dominated by adherence to rigid highway standards. *Manual for Streets* highlights a movement towards combining distinctive street character types with more traditional standards for roads based on traffic flows and the number of buildings served. We expect the spatial and visual character of different places in a scheme to be designed first, and then any standards to be fully met within the design of the places.

We embrace the guidance presented in *Manual for Streets* 1 and 2. We will therefore resist forms of highway treatment based on either *Design Bulletin 32*, which has now been superseded, or *Design Manual for Roads and Bridges* which is not relevant to these types of highway.

Issues to address

Position buildings and landscapes to establish a distinctive urban form. We will resist developments where the character of a scheme is based around the design of roads (50).

50. It is expected that the character of places within a scheme will be designed before detailed highway ideas and standards are applied to a layout.

Design the spatial character of streets and public spaces to reflect their position in the hierarchy.

Design buildings, or groups of buildings, to turn corners, so that elevations in prominent locations have a design quality consistent with the principal façade (51). Ensure all public areas, including streets and alleyways, are overlooked.

Entrances to buildings should be oriented towards and visible from the street.

The transition from public space to home should be designed to enhance the kerb appeal, with care in the design of boundary treatments, bin storage, landscaping and entrances.

Well-designed boundary treatments, such as walls and fences, reinforce defensible space and can be a prominent and attractive feature of the townscape (52).

Boundary treatments visible from the public realm should be a good quality, with robust materials complimenting those used in buildings. Indistinct fencing, such as close board fencing, can be used in positions not visible from public spaces.

51. Designs should consider how homes turn prominent corners so that surveillance and the attractiveness of the frontages are maintained.

52. A design code for this development specified the need for simple white timber fencing of a particular height, leading to a great variety of designs which enhance the streetscape.

Dimensions accommodating manoeuvring vehicles in the highway area, like hammerheads, shall be accommodated within well designed urban spaces, instead of dictating their form and character (53).

53. Highway engineering measures should be seamlessly integrated into the place making ideas (bottom) rather than dictating and dominating the resulting character (top).

Are streets and public spaces designed with a clear purpose and to a standard that meets the needs of all potential users?

The Welsh Government expects developments to be inclusive, and designed to provide access to the widest range of people, but showing particular awareness of the specific needs of older people, children and people with mobility or sensory impairments. In addition the design of residential streets should accommodate the needs of all users through a process which meets the needs of vulnerable users first, before considering the accommodation of other forms of movement. In general streets should meet the needs of people in the following order: pedestrians, cyclists, emergency vehicles, and then other vehicles. This approach ensures that pedestrian and cyclist routes are short and direct and junctions are easy and safe for them to cross.

Issues to address

Design all routes to accord with current national and local supplementary planning guidance and standards for parking. Further information:
- Welsh Government (2014) *Design Guidance Active Travel (Wales) Act 2013*
- *Managing Transport Impacts and Parking Standards SPG*
- Cardiff Council, *Cardiff Cycle Design Guide*
- Department for Transport (2007) *Manual for Streets*
- Department for Transport (2010) *Manual for Streets 2: Wider application of the principles*

Create streets with built forms and highway designs which result in vehicle design speeds of no more than 20mph.

Obtain a *Stage 1 Road Safety Audit* and *Combined User Audit* from the Highway Authority to highlight any problems regarding highway safety, active travel, inclusive accessibility and environmental aspects of a scheme. These will highlight any road safety problems that can be rectified before a Stage 2 Road Safety Audit completed as part of the Technical Approval.

Ensure that all public spaces are designed to be inclusive so that all people, including the more vulnerable, can move freely, safely and efficiently within and between neighbourhoods or get a similar quality of access to the rest of the city:

- Levels across a layout must ensure accessibility for all users, with provision of appropriate slope gradients of about 5%, with potential to have no more than 8% over very short distances.

- Buildings should have level entrances.
- Path and drive surfaces should include routes that are firm, level, non-glare and non-slip when wet or dry. Exclusive use of loose materials, such as gravel, cobbles and uneven setts, is not recommended.

Further guidance in inclusive design can be found in: Department for Transport (2005) *Inclusive mobility.*

Consult the City's Access Officer at an early stage of designing strategic developments and schemes involving a significant provision of public space, to seek help in identifying barriers to access and getting guidance on adjustments.

Accommodate direct and safe pedestrian, cyclist and vehicular movements at junctions and corners. Further information:

- Welsh Government (2014) *Design Guidance Active Travel (Wales) Act 2013*
- *Managing Transport Impacts and Parking Standards SPG*
- *Cardiff Cycle Design Guide*

Swept path analysis will be required to prove that highway geometry will be adequate to accommodate emergency, domestic waste and delivery vehicles on all highways and in turning areas, and also for buses on designated routes.

Junctions are key spaces in a neighbourhood and their spatial and visual character should not be dominated by unnecessarily generous visibility splays or excessive corner radii (54).

Ensure that junction designs along busier roads embrace current thinking and practices, meeting the needs of pedestrians and cyclists, whilst allowing efficient and safe vehicular movements.

Design streets as informal social and play spaces by exploring the use of well-designed shared space or "home zone" treatments, reflecting principles and lessons from current guidance. See the specific guidance on page 46/47.

54. On quiet residential streets, traffic goes slower where visibility is constrained, whilst a more vivid townscape is also possible. Shared space treatments can help establish plenty of room for vehicles to manoeuvre.

Street lighting should be located to provide a suitable level of illumination of all public spaces and positioned so that lighting columns do not obstruct footways. Trees and other forms of planting should not be planted where they will grow to limit the reasonable effectiveness of street lighting.

Paths for non-motorised users should be designed to include measures that will deter misuse by prohibited users. The use of barriers (see an example in 53, top image) should be resisted, as these features may discriminate against, or also be barriers for, legal users, and may contravene the Disability Discrimination Act.

Design all highways, cycle routes and footpaths to comply with the minimum dimensional standards presented in Figure 55.

In relation to the Council's winter maintenance of roads, developments may be asked to accommodate grit bins in suitable locations.

55. Required dimensions for highways

Type	Spine Streets / Special Bus Route	Residential Street	Areas designed using home zone principles	Route segregating cyclists and pedestrians and also segregated from traffic	Shared cycle and pedestrian routes, segregated from traffic	Segregated cycling route	Segregated pedestrian route
Description	Significant route providing access through the neighbourhood.	Typical design for a residential street	Shared surface residential streets, designed using home zone design principles.	A route shared by cyclists and pedestrians, but where different users are segregated.	A path shared by cyclists and pedestrians where users mix.	A route used exclusively by cyclists.	A route used exclusively by pedestrians.
Maximum design speed	20 mph	20 mph	< 20mph	-	-	-	-
Number of homes served	No upper limit	Up to 200 dwellings	Up to 100 vehicles per hour at peak times	-	-	-	-
Carriageway requirements	6.3m (min)	5.5 – 4.8 m	See separate guidance on home zone design	-	-	-	-
Junction requirements	-	Tabled from a spine road	Tabled into the shared space		-	-	-
Cycling requirements (plus clearances as given in the 'Active Travel Guidance')	3 metre. Segregated from carriageway and footway.	On street	On street	See DE021 – DE024 in Design Guidance – Active Travel (Wales) Act 2013			-
				3m (clear width)	At least 3m (if busy consider segregation).	3m (clear width)	
Footway requirements	2 m on both sides (clear width)	2 m on both sides (clear width)	Shared surface, but route protected from traffic and parking for vulnerable users.	Pedestrian route 2m.		-	At least 2 m (clear width).
Frontage development	Required	Required	Required	-	-	-	-
Domestic parking arrangements	On plot. Behind the building line, or shielded by front boundary treatments.	On plot, with landscaping to limit the impact of parking on street frontage views.	On plot or on street with landscaping to limit the impact of parking on street views.	-	-	-	-
Visitor or incidental parking arrangements	On street but not impeding the carriageway or anticipated tracking. (Note that parking width will be additional to the 6.3 metre carriageway).	On street, in designated spaces.	On street, in designated spaces.	-	-	-	-

Shared space streets using home zone design principles

Designs using home zone design principles result in residential streets in which the road space is shared between vehicle and other road users (56). The aim is to reduce the impact of traffic, change the way that streets are used and to improve the quality of life in residential streets by making them places for people, and not just dominated by moving or parked vehicles. The design of the environment should make it clear to motorists that they share the street space with other people, and that they should drive accordingly.

Within such environments the street will be designed to reduce normal traffic speeds to below 20mph.

Reducing traffic speeds to the recommended design speed will be achieved more easily where there is a stepped reduction in speed on the approach to the area.

Home zones should be located at the most local end of the road hierarchy and be the destination for most traffic.

Carriageway design should include features which limit forward visibility, and encourage slow driving, but also be designed to accommodate larger vehicles.

The highway width available for all users should not create unacceptably wide paths for motorised users, nor make manoeuvring unduly onerous for larger vehicles that may need to enter. Routes for vehicles will have to be validated by swept path analysis to the satisfaction of the highway authority.

Various techniques may be used to achieve the desired design speed including: shared surfaces; indirect routes for vehicular traffic; careful highway design, areas of planting in the street; careful use of surface materials; features to encourage the use of the street, such as seating and play equipment; and appropriate signs and 'gateways' to mark the limits of the area.

Care should be taken to avoid a "wall to wall" paving treatment that erodes street character. Paving of any shared surface areas can reflect the use of the space, and in particular, highlight the path for vehicles, areas of parking or sitting and play spaces. Material choices for adopted areas should be based on the palette in the *Cardiff Public Realm Manual*.

Vehicles should not have to travel more than 400 metres along a home zone. Longer distances can result in driver frustration.

Home zones should not experience more than about 100 vehicle movements during the afternoon peak hour when there is the chance of most conflict between people driving and other street users, including children playing.

A designated safe route for blind and partially sighted people, but also for other vulnerable street users, should be provided through any shared space element of a scheme. This route, and the approach to it, should be suitably marked to meet the needs of the visually impaired (57).

56. Well designed home zones successfully combine the listed features.

It may not be necessary to highlight junction priority in a home zone.

Home zones can be clearly marked at their entrances and exits with carefully designed 'gateway' features, to minimise the need for signage.

Home zone spaces will be defined by buildings and landscaping, rather than by conventional kerb edges and carriageways.

Dwellings that define the edges of a home zone should overlook the space, and front gardens should not be long, ensuring that there is a direct relationship between the dwellings and the home zone space.

Home zone spaces can include features to encourage social interaction such as communal seating areas and play equipment. These should be carefully sited to avoid any loss of residential amenity.

Some on-street parking will be provided in home zones, but it must be provided in clearly marked bays and arranged in such a way as to not inconvenience pedestrians and/or cyclists.

Opportunities for indiscriminate on-street parking shall be minimised through the careful arrangement of planting and other features within the space, and controlled parking zones might be introduced to regulate the location of parking.

Parking spaces that are provided will be carefully integrated between planting to minimise the visual impact of parked cars.

We will resist shared surface schemes which, through their design, do not benefit residents by virtue of their dimensions, geometries or anticipated spatial or aesthetic qualities (58).

Further guidance on the design of home zones can be found in:
- Biddulph, M (2001) *Home zones: a planning and design handbook*
- IHIE (2002) *Home zones: Design guidelines*

Is resident and visitor parking sufficient and well integrated so that it does not dominate the street scene?

We are interested in how schemes accommodate both car and cycle parking. How we accommodate car parking in particular is a key concern of house buyers, but insensitive solutions can have a significant impact on the visual character of buildings and streets. We must accommodate the right number of parking spaces. Various approaches to accommodating parking are acceptable, and the best schemes often include a mix of solutions, with approaches adjusted to reflect how parking contributes to achieving other urban design objectives and aspirations. We will resist schemes in which off street parking dominates the visual character of the environment when seen from the perspective of a pedestrian. Street views must be designed to have a deliberate townscape and landscaping, into which suitable approaches to parking are added.

At a higher level of detail, the parking needs to be convenient and well overlooked with concern shown for both resident and visitor spaces. The landscaping treatment of parking spaces should also be considered as part of a wider street scene.

59. The best schemes are not dominated by parked cars, and integrate cars into a layout in a variety of ways

Car parking

Issues to address

Provide enough parking for residents located close to people's homes. The best schemes are not dominated by parked cars, and integrate cars in a variety of ways (59). Further guidance on the design and standards for parking can be found in:

- *Managing Transport Impacts and Parking Standards SPG*
- English Partnerships (2006) *Car parking: what works, where*

Ensure parking areas are well overlooked by the people who own the vehicles?

Provide adequate visitor parking located conveniently and intuitively, preferably on or close to the street (60).

In key locations, ensure parked cars are well integrated into the street scene whilst not visually dominating the resulting townscape or frontage. Ensure landscaping or front boundaries are used to soften the visual impact of vehicles parked perpendicular to a building line and/or on-plot and in front of the building line. (61).

60. Visitor parking should be located close to homes, and on or close to the street.

61. Landscaping and good boundaries should shield cars parked perpendicular to and in front of a building line.

62. Undercroft parking must only be used and located where it has least impact on prominent frontages.

Site and design parking so that the principal building frontage and its pedestrian access is from or as close as possible to the street.

Reduce the potential for footway parking through the clear designation of any on-street spaces and the use of features such as kerb build-outs, bollards and planting. Mark individual parking spaces in an attractive way as part of the landscape treatment.

Undercroft parking must only be used and located where it has least impact on prominent frontages. Schemes should ensure that all principal frontages to public spaces are active, with the presence of doors and windows. Key frontages dominated by garages or the screening of parking will be resisted (62).

Access to undercroft parking or entrances through buildings which are uncontrolled by gates should include a sign indicating the maximum height of vehicles that be accommodated under the building. This is to reduce the risk of collision.

Design garages to have materials and detailing consistent with the wider scheme. They should not be positioned at prominent locations in the street scene, such as on corners, in front of consistent building lines or at the end of prominent street vistas.

Where possible, driveway egress widths should be one vehicle wide, so that open driveways do not visually dominate the character of streets.

Ensure rear parking courts are small, so that people who use them will get to know each other. Avoid multiple access points from the public realm, and don't put public routes through them. A safe, direct and convenient route between homes and any rear parking court must be provided. Allow a sufficient budget for appropriate

boundary walls, landscaping and lighting. Think about if their location and the local crime rate justifies the installation of gates (63).

We will resist apartment developments where principal living spaces face directly onto car parking areas or courts with inadequate landscaping to soften the outlook.

For higher density schemes we would encourage basement or ground floor parking to be covered with a landscaped deck providing private or communal amenity space for residents (64).

63. Rear parking courts can be an attractive feature of a scheme if they are small, closely linked to and overlooked by well designed homes and attractively landscaped (bottom image). If any of these qualities are missing they can feel a bleak and may not be used (top image).

50

64. Higher density schemes can establish attractive and useful spaces on parking decks.

Cycle parking

Issues to address

All forms of residential accommodation require adequate bike parking spaces to be designated in a design. Design drawings should show the location and amount of cycle parking being provided in a scheme, and reassure us that this will be sheltered and secure. Further guidance on cycle parking standards and design can be found in:

• Welsh Government (2014) *Design Guidance Active Travel (Wales) Act 2013*
• *Cardiff Cycle Design Guide*, and
• *Managing Transport Impacts and Parking Standards SPG*
• Details on recommended cycle stands can also be found in the *Cardiff Public Realm Manual*

In housing schemes, cycle provision could be designed and built into the front elevations, along with refuse and recycling storage. Any such provision should be designed to be an integral part of the house design, and not appear to be an after thought.

In apartment schemes, convenient, secure, covered cycle parking should be provided within the curtilage of the scheme.

Provide adequate visitor cycle parking in formal public spaces where cyclists might need it. Put it close to key destinations, in locations that have coming and going, are overlooked and well lit. Further advice on standards for on-street cycle parking infrastructure can be found in the *Cardiff Public Realm Manual.*

Are the individual houses well designed to meet the needs and aspirations of future occupants and also in relation to their context?

Individual homes should be well designed and exhibit architectural quality. This does not mean that we are interested in imposing an arbitrary style of architecture on developers or their designers. It means that homes should be designed to realise the qualities required from this guidance whilst also providing a design of homes which fully satisfy both the needs and aspirations of residents. Homes should:

- **provide enough room to accommodate its occupants and their lifestyles in comfort;**
- **provide for inclusive accessibility, in line with Part M of the Building Regulations;**
- **be energy efficient;**
- **be robust and easy to personalise and maintain;**
- **result in a successful kerb appeal and enhance the appearance of an area.**

The best designs might also be innovative and interesting.

Issues to address

We will encourage buildings which celebrate the positive elements of a local context **or** provide a good new contemporary character and form. This means that we will encourage groups of buildings which have good:

- scale and massing;
- roof forms;
- building materials and use of texture and colour;
- window proportions and facade composition;
- boundary treatments;
- detailing of all aspects, including porches, entrances and windows, transitions between materials, rainwater goods, eaves, soffits and weather boards, chimneys and ironwork.

We will highlight situations where access to homes might fall below standards of inclusivity through the introduction of steps or slopes, or uneven surfaces, which discriminate against people who have a mobility impairment.

Levels across a layout must ensure accessibility for all users, with provision of appropriate slope gradients of about 5%, with potential to have no more than 8% over very short distances.

Buildings should have level entrances. Path and drive surfaces should include routes that are firm, level,

non-glare and non-slip when wet or dry. Exclusive use of loose materials, such as gravel, cobbles and uneven setts is not recommended. Further guidance in inclusive design can be found in: Department for Transport (2005) *Inclusive mobility.*

We will resist homes which we think, for any reason, will not provide enough room to comfortably accommodate the anticipated occupants.

We will resist bland developments containing buildings which include little evidence of care in their form and composition, a repetition of uninteresting elements and a complete absence of any relevant detailing.

Ancillary elements of a home, such as the boundaries, garages, sheds, cycle parking and waste storage and recycling structures, should be treated as an integral part of the design. Their quality should match that of the rest of the development.

We will resist forms of development where the scale and massing of any buildings or other element of a scheme, are discordant, or aspects of a scheme are poorly chosen or located in the street scene.

We will work to improve architectural compositions where the proportions within a facade or group of facades appear to be random or ill considered.

Materials should be good quality and fit for purpose. They should be selected to compliment the overall composition and visual character of a scheme and also anticipate the effects of weathering.

The Cardiff *Liveable Design Guide* discusses how we want to encourage energy efficient patterns of development and forms of housing. We will welcome homes designed to be energy efficient or otherwise innovative in form and character where all other matters have been dealt with well, including sensitivity to context.

Does the design conform to necessary amenity standards?

Meeting amenity standards will not, on its own, result in well-designed neighbourhoods, but residents and neighbours are concerned about their privacy, their access to reasonably sized gardens or other types of outdoor space, and also the quality of natural light in their homes. Designs might provide these amenities in innovative ways, and so these common standards will always be used flexibly if a design solution justifies it.

Issues to address

Privacy

- A privacy distance of at least 21 metres will be required between facing windows to habitable rooms on the private side of a development. Design measures can be used to secure privacy by means other than distance, such as by careful window positioning and screening.
- The minimum overlooking distance from a rear window above the ground floor to a private garden area of a facing dwelling should be at least 10.5 metres.
- Where homes are angled at 30 degrees or more to each other, they can be closer together, but measures to limit garden overlooking might be necessary. Such schemes will be judged on their merits.
- The scale and massing of any design must not be overbearing or result in the unacceptable overshadowing of neighbouring properties.

Outdoor amenity spaces

- Provide enclosed and secure private rear gardens for all houses and ground floor flats that might serve as family accommodation.
- Gardens should measure at least 10.5m in depth or 50m² overall. Visual privacy should be provided for at least part of the garden, and ideally the space immediately to the rear of the dwelling.
- Innovative ways of providing outdoor amenity space are always encouraged and will be considered on their merits.
- Well-designed shared amenity spaces such as roof gardens, communal gardens and additional areas of play can be suitable in some forms of development. Where these are introduced to a suitable design, we will allow the required garden standard to be mixed between these private and shared amenity spaces, so long as all other standards are met.
- For communal gardens, a minimum area of 75m² should be provided for up to 5 units with an additional 10m² for each additional unit.
- Communal gardens should be clearly defined, secure and private, accessible to all occupants and integral to the form and character of the development. They should be designed to ensure that all functional requirements of the residents (equivalent to a private garden) are met, such as relaxation, clothes drying or refuse storage.
- Balconies will need to be provided for apartments with no direct, safe or convenient access to a communal garden or other suitable public green spaces within their vicinity. They should be a minimum of 5m². They should be located in positions where they receive direct sunlight for some part of the day, and preferably with a southern aspect.

Balconies should generally be avoided in established suburban locations characterised by larger rear gardens if they will result in significant overlooking.

Outlook

Habitable rooms in individual dwellings, including single aspect flats, should have a pleasant outlook onto streets or amenity spaces, rather than, for example, face a poorly landscaped parking area.

Daylight and sun light

The BRE publication *Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice* provides a series of techniques for assessing the extent to which any development provides adequate daylight and sunlight to habitable rooms within any development, or affected neighbouring buildings.

We will apply these standards to an initial judgement of schemes, and may request further evidence to justify a design approach in certain situations if we are concerned about the likely adequacy and impacts.

We may apply separate assessments to judge the impact of development on a neighbouring outdoor area, such as a patio, and we will typically seek extensions of at least 2 storeys to be away from the property boundary by at least 2m.

How we will apply daylight and sunlight assessments

The assessment of sunlight and daylight is based on the BRE guidance presented in *Site Planning for Daylight and Sunlight- a guide to good practice* .

Although changes to permitted development rights have allowed certain types of infill development which might exceed these standards, where the opportunity to control exists, we will apply the standards in a reasonable manner.

These guidelines will sometimes be used flexibly as we recognise that light can be provided to living spaces via a number of means which might not be evident from the assessment approaches, whilst certain townscape situations might reasonably deserve some flexibility in their use. As such the standards are initially used as a trigger to invite further justification for a design.

We will resist developments which do not meet these standards without further justification or other reasonable measures being in place to provide adequate light.

The standards apply equally to impacts on both new and existing buildings, and should be assessed accordingly.

The standards will not apply to affects resulting from the height of minor gables

Where the standards are not being met, we will always seek ways to improve the situation to the required standard.

Affected rooms

This guidance applies to habitable rooms which, according to the layout plan, are the main daytime living spaces of the scheme. Assessments will not relate to toilets, bathrooms, circulation spaces, storerooms, galley kitchens or similar spaces. Rooms containing beds will only be included in an assessment if they form part of the daytime living space.

Rooms containing more than one effective source of light, such as windows on other facades, light wells or tubes will not be included in any assessment (65).

65. Rooms containing more than one source of light will not be included.

The 25 degree rule

The first assessment relates to windows facing other buildings or relevant structures.

A significant building or structure will be obstructing reasonable light to a relevant window if it breaks a line projecting up from the centre of the relevant window 25 degrees from the horizontal (66).
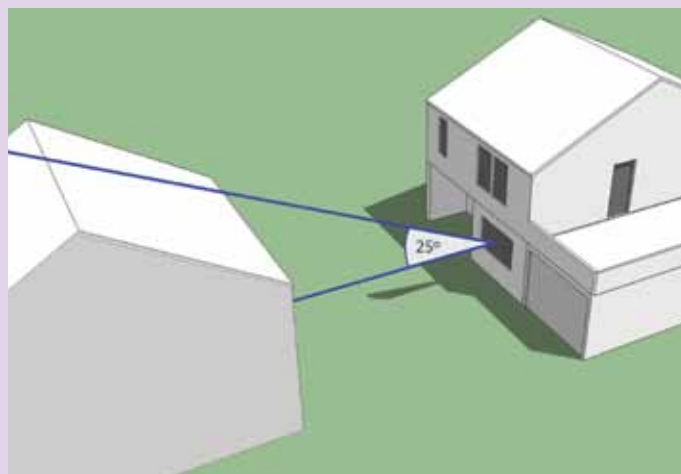

66. The 25 degree line projecting from the centre of the relevant window. In this case the scheme is immediately acceptable.

If this occurs, applicants can prove that windows will not be adversely affected by this structure by quantifying the daylight using the Skylight Indicator or Waldram assessments set out in the BRE publication. The measure of daylight reaching a window should not fall below 27%. Software applications exist to help with such an assessment.

If the window is in a glass door, the line can originate from 2 metres above the relevant floor or storey level.

If a new building is improving an existing situation then the standards may be applied flexibly, and before and after studies should be provided.
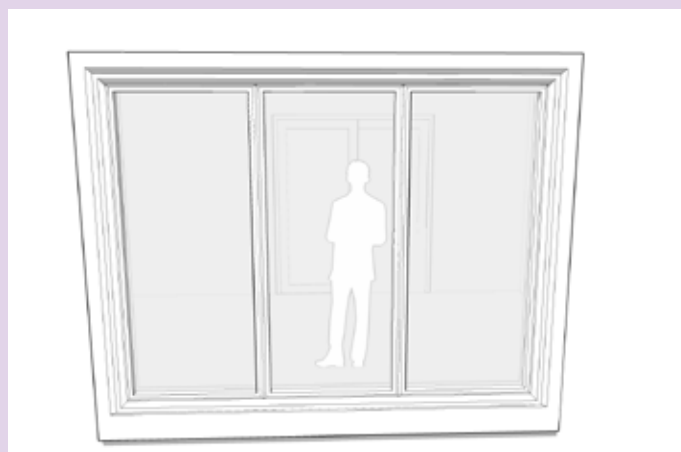
The 45 degree rule

The second assessment relates to any extensions from an existing building line, and windows affected by this extension.

An extension will be obstructing reasonable light to a relevant window if it breaks a line projecting 45 degrees **both** horizontally (assessed in a plan) and vertically (assessed in relevant elevations) from the centre of the window (67).

Extensions with a pitched roof should be assessed from the centre of the pitch.

This measure can also be applied to the assessment of relevant windows in a courtyard.

Facing windows can be assessed using the 25 degree method.

It is particularly important to avoid the tunneling effect, where a window is affected by projecting extensions from two directions.
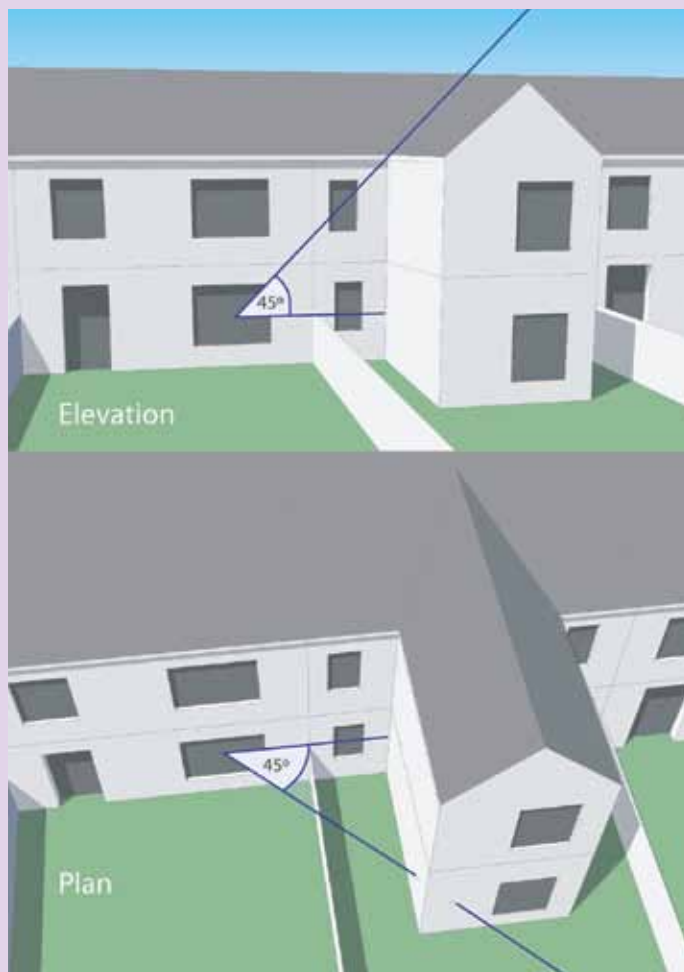
Sunlight

Windows facing within 90 degrees of due south will gain some direct sunlight for some period of the day, if there is no obstruction.

Sensitive design of living spaces will ensure that each dwelling has a main living room which can receive a reasonable amount of direct sunlight.

Overshadowing

Outdoor public spaces designed for optional activities, like sitting and playing, may need to prove, through shadow modelling (68), that the spaces receive direct sunlight between the start of April and the start of October.

68.
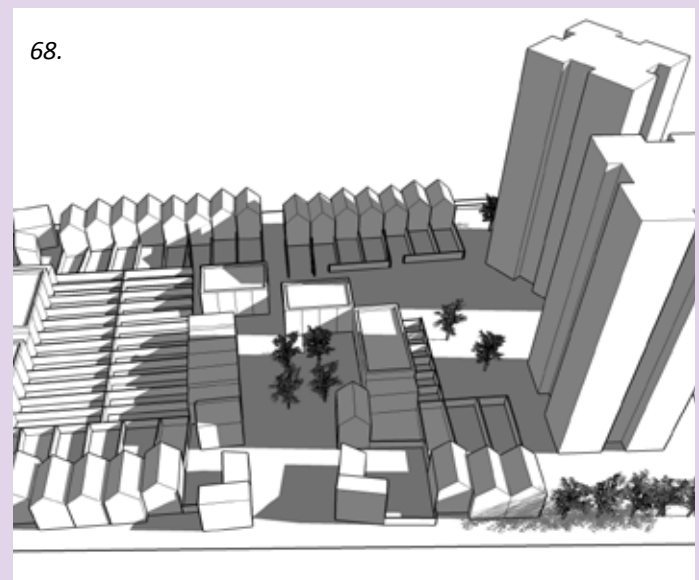
Elevation

Plan

67. A 45 degree line projecting from the centre of the window in both elevation and plan shouldn't hit the relevant extension. In these cases the scheme is acceptable in elevation, but the plan shows the extension is too deep.

Does the design include adequate and well-designed waste and recycling facilities, and care in the location and integration of meter cupboards?

Waste collection and storage facilities can have a significant impact on the visual character of a development, whilst their location in a scheme can impact on their convenience of use and collection. Well designed schemes will consider waste facilities to be an integral part of the architectural or landscape treatment. In a similar way, meter cupboards can be either an unnecessarily prominent feature of a facade, or they can be positively integrated and visually unobtrusive (69).

Issues to address

Specific information about, and standards for design for, waste and recycling collection services and facilities can be found in the *Waste Collection & Storage Facilities SPG*.

Schemes should provide suitable spaces for the storage of general waste bins, recyclable material containers, food bins and garden waste bins (only where a garden is provided). The storage of waste cannot occur on the highway or in public spaces.

A degree of flexibility is required for any waste storage area, due to the ever changing nature of waste collection methods used by this Council. Waste may be separated into further waste streams which may require the storage of more/different containers

Facilities and spaces should be an integral part of the design and be sensitively located, well-screened and easily accessible for both residents and collection crews.

In particular, any refuse storage areas visible from public spaces should be well integrated into the street scene.

Apartment schemes which provide communal recycling and refuse storage spaces incorporated within the building are generally preferred.

Provide sufficient access for waste collection vehicles to pull up and collect bins with the minimum travel distance from the vehicle to the agreed kerbside collection points. Vehicles should be able to get within 25 metres of any storage point, but shorter distances are preferred.

Meter cupboards should be integrated into a design and visually unobtrusive from the street frontage.

Meter cupboards in a contrasting colour from the rest of a building facade can detract from the appearance of dwelling elevations and if they are used at all they should be situated as to best minimise their harmful visual impact.

69. Refuse storage and the position of meters should be integrated into the facade design of any relevant buildings so that they aren't prominent.

Is the streetscape both attractive and robust?

Manual for Streets has seen a quiet revolution in how streets can be designed. Gone are the strict standards of the past, resulting in monotonous environments, to be replaced with opportunities to create a greater variety of residential settings.

This greater freedom requires more care to ensure that streetscapes are well designed, and we will give support to schemes where the streetscape is both attractive and robust, but where it will also be easy to manage and maintain.

In particular, streetscape designs should meet the needs of vulnerable street users.

Issues to address

Surfaces

Where streets are to be adopted, surface materials should be selected from the *Cardiff Public Realm Manual*, and should be appropriate to their function within the street. Please consult the Council early in the design process about any materials to be used on highways that will be adopted.

Streetscapes should have regard to active travel advice and standards provided in the Welsh Government's *Design Guidance: Active Travel (Wales) Act 2013* in

order to support our wider commitment to active travel opportunities.

The range of materials used in a scheme should be kept to a minimum, but be enough to highlight different street functions and, where possible, create visual interest. A simple pallete of good quality and easily available materials will help us maintain adopted street surfaces in the future.

Streetscapes should be designed to support the needs of vulnerable street users. Shared surfaces must be designed to provide a safe route through, free from any traffic or parking, for people, including the partially sighted. Materials should be selected to provide convenient routes to all areas for wheelchair users. Contrast of material should be used to highlight hazards. Arbitrary contrasts and small scale contrasting patterns should be avoided, as these can be distracting and hard to interpret for people who rely on clear visual cues.

Poorly designed streetscapes can contribute to the monotony of residential environments and might suggest an undesirable priority for vehicle users, particularly in shared spaces. We will resist designs where we think a lack of ideas for built form, highway geometry, planting and streetscape design will result in this quality (70).

70. We will resist designs where we think a lack of ideas for built form, highway geometry, planting and streetscape design will result in a bland townscape which might give too much priority to vehicle users.

Street Furniture

The use of street furniture should be an integral part of the design, and will help to establish an area's quality and character. It should be unobtrusive, high quality, fit for purpose and coordinated to compliment the visual character of the wider streetscape design.

Where necessary, items should be grouped together, columns should be shared, or features like street lights attached to buildings to reduce the cluttering effect of uncoordinated designs.

As with other aspects of a streetscape, limit the range of colours and designs used, so that the street furniture does not dominate the view, *but* ensure that items are clearly distinguishable within their context, so that they are visible to people who are partially sighted (71).

71. Street furniture should be clearly distinguishable within its context so that it is visible to people who are partially sighted.

Public Art

Public art has sometimes been a very celebrated feature of new residential environments, and we will encourage its inclusion within relevant developments.

Where required by policy, we would encourage early thought about how art might be integrated into a design and then subsequently maintained. Further guidance on how public art might be developed into a scheme can be found in the *Cardiff Public Art Strategy*. The *Cardiff Public Art SPG* provides detailed guidance of the Council's requirements for the provision of artworks arising specifically through the development process.

We would encourage art to be integrated into the most prominent positions or views in a layout so that it can be seen and enjoyed by the most people (72).

Art should not cause any form of obstruction, and should be clearly visible when viewed, at an appropriate point, against its context.

Public art does not need to be used, in a traditional sense, to create discrete works. Instead it could be integrated into the design of more ordinary aspects of a place, such as surfaces, signage, seating, boundary treatments or ironwork (73).

Art works could be developed with input from future residents in order to establish a sense of ownership and support for works that emerge.

Useful publications referred to in this guidance

Welsh Government

Planning Policy Wales

Design Guidance Active Travel (Wales) Act 2013

Development Quality Requirements

Practice Guidance: Planning for Sustainable Buildings

Recommended non-statutory standards for sustainable drainage (SuDS) in Wales

Technical Advice Note 5: Nature and Conservation

Technical Advice Note 12: Design

Technical Advice Note 12: Design Guidance on Design and Access Statements

Cardiff Council

Local Development Plan 2006-2026
Local Development Plan Masterplanning Framework
Liveable Design Guide: Placemaking, urban design, architecture
Cycle Design Guide
Public Art Strategy
Public Realm Manual

Supplementary Planning Guidance

- *Public Art*
- *Green Infrastructure (forthcoming)*
- *Infill Sites*
- *Managing Transport Impacts and Parking (forthcoming)*
- *Sustainable Urban Drainage (forthcoming)*
- *Waste collection and storage*

UK Government

Department for Transport (2007) *Manual for Streets,* London: DfT

Department for Transport (2010) *Manual for Streets 2: Wider Application of the Principles*, London: DfT

Department for Transport (2005) *Inclusive Mobility*, London: DfT

Others

Biddulph, M (2001) Home zones: a planning and design handbook, Bristol: Policy Press

Birkbeck, D and Kruczkowski, S (2015) Building for Life 12: Wales, Nottingham: Nottingham Trent University

Building Research Establishment (2011) Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice, Watford: BRE Trust

Countryside Council for Wales (2006) Providing Accessible Natural Greenspace in Towns and Cities: A Practical Guide to Assessing the Resource and Implementing Local Standards for Provision in Wales

Design Commission for Wales (2016) Site and Context Analysis: Capturing the value of a site, Cardiff: DCFW

English Partnerships (2006) Car parking: what works, where, London: EP

Institute of Highway and Incorporated Engineers (2002) Home zones: design guidelines, London: IHIE

Play England (2008) Design for Play

Sustrans (2014) Handbook of cycle friendly design, Bristol: Sustrans

Town and Country Planning Association (2004) Biodiversity by design: a guide to sustainable communities, London:TCPA

Town and Country Planning Association and the Wildlife Trust (2012) Planning for a healthy environment - good practice for green infrastructure and biodiversity, London: TCPA

Wildlife Trust Wales (2016) Green Infrastructure: a catalyst for the well-being of future generations in Wales

Appendix 1 Consultees

Public consultation was undertaken between 8th September and the 20th October 2016. A press notice was placed in a local newspaper on Wednesday 7th September 2016. Copies of the draft guidance was placed in all Cardiff libraries and at County Hall Reception. The draft guidance was also published on the Council website. Letters notifying that consultation was being undertaken on the draft guidance were sent to all Councillors, the Welsh Government, Community Councils in Cardiff and any interested persons and the following organisations known to have general interest in planning in Cardiff or a potential interest in this guidance:

Alder King
Alternatives for Transport
AMEC Environment & Infrastructure UK Limited
Arts Council of Wales
Arup
Asbri Planning Ltd
Associated British Ports
Association of Inland Navigation Authorities
Atkins
Austin-Smith: Lord
Baker Associates
Barton Willmore
Bellway Homes (Wales Division) Ltd
Biffa
Bilfinger GVA
Black Environment Network
Blake Morgan LLP
BNP Paribas Real Estate
Bovis Homes
Boyer Planning
Bristol City Council
Bryant Homes (South West)
BT Group plc
Business in the Community Wales
C2J
Cadwyn Housing Association
Caerau and Ely Communities First
Caerphilly County Borough Council
Campaign for the Protection of Rural Wales
Cardiff & Vale Parents Federation
Cardiff & Vale University Health Board (UHB)
Cardiff Access Group
Cardiff Against the Incinerator
Cardiff Bus

Cardiff Bus Users
Cardiff Civic Society
Cardiff Community Housing Association
Cardiff Cycling Campaign
Cardiff Ethnic Minority Elders
Cardiff Greenpeace
Cardiff Heliport
Cardiff International Airport Ltd.
Cardiff Local Access Forum
Cardiff Metropolitan University
Cardiff Naturalists
Cardiff Pedestrian Liberation
Cardiff Transition
Cardiff University
Cardiff West Communities First
Carolyn Jones Planning Services
CDN Planning
Celsa Manufacturing (UK) LTD
Cemex Uk Operations Ltd
CFW Architects
CGMS Consulting
Chartered Institute of Housing in Wales
Chichester Nunns Partnership
Chris Morgan
Chwarae Teg
Civil Aviation Authority
Coal Authority
Coleg Glan Hafren
Communities First Adamsdown
Community Housing Cymru
Community Land Advisory Service Cymru
Confederation of British Industry
Confederation of Passenger Transport
Connections Design
Country Land and Business Association
CSJ Planning Consultants
Danescourt Community Association
David Lock Associates***
Davies Sutton Architects
DavisMeade Agricultural
Derek Prosser Associates
Design Circle RSAW South
Design Commission for Wales***
Development, Land & Planning Consultants Ltd
Disability Arts Cymru
Disability Wales
DLP Consultants
DPP Cardiff
Drivers Jonas
DTB Design
DTZ
Dwr Cymru Welsh Water
Edenstone Homes
Equality and Human Rights Commission
Ethnic Business Support Project
Federation of Small Businesses
First City Limited
FirstGroup plc

Firstplan
Forestry Commisssion Wales
Freight Transport Association
Friends of Nantfawr Community Woodland
Fulfords Land & Planning
G L Hearn
G Powys Jones MSc FRTPI
Garden History Society
Geraint John Planning Ltd
GL Hearn Ltd
Glamorgan - Gwent Archaeological Trust Ltd
Glamorgan Gwent Housing Association
GMA Planning
Graig Community Council
Graig Protection Society
Great Western Trains Company Limited
Grosvenor Waterside
GVA
GVA Grimley
H O W Commercial Planning Advisors
Haford Housing Association Limited/ Hafod Care Association Limited
Halcrow
Hammonds Yates
Harmers
Harmers
Heath Residents Association
Herbert R Thomas LLP
Home Builders Federation
Hutchinson 3G UK
Hyland Edgar Driver
Hywel Davies
Interfaith Wales
Jacobs Babtie
Jeremy Peter Associates
JLL
John Robinson Planning & Design
John Wotton Architects
Jones Lang LaSalle
JP Morgan Asset Management
Keep Wales Tidy
Kelly Taylor & Associates
Kingsmead Assets Limited
Knight Frank
Landscape Insitute Wales
Levvel Ltd
Linc-Cymru
Lisvane Community Council
Llandaff Conservation Group
Llandaff Society
Lovell Partnership
Loyn & Co Architects
LUC
Madley Construction
Mango Planning and Development Limited
Marshfield Community Council
Martin Robeson Plannning Practice

McCarthy & Stone (plc)
McCarthy and Stone (Western Region)
Meadgate Homes Ltd
Mineral Products Association
Morgan Cole
Mott MacDonald
Nathaniel Lichfield and Partners***
National Youth Arts
Natural Resources Wales***
Neame Sutton
Network Rail
Network Rail Infrastructure Ltd
Newport City Council
NFU Cymru
North West Cardiff Group
Novell Tullet
O2 UK
Oakgrove Nurseries
Old St Mellons Community Council
Orange
Origin3
Pantmawr Residents Association
Peace Mala
Peacock & Smith
Pegasus
Pentyrch Community Council
Persimmon Homes***
Peterson Williams
Peterstone Community Council
Phillippa Cole
Planning Aid Wales
Planning Potential
Police & Crime Commissioner
Powell Dobson
Powergen
Prospero Planning
Quarry Products Association
Quinco
Race Equality First
Radyr & Morganstown Association
Radyr and Morganstown Community Council
Radyr and Morganstown Partnership and Community Trust (PACT)
Radyr Farm
Radyr Golf Club
Rapleys
Redrow Homes (South Wales)
Reeves Retail Planning Consultancy Ltd
Renplan
Reservoir Action Group (RAG)
Rhiwbina Civic Society
Rhondda Cynon Taf County Borough Council
RICS Wales
Rio Architects
Riverside Communities First Team
Robert Turely Associates
Roberts Limbrick
Robertson Francis Partnership
Royal Commission on the Ancient & Historical Monuments of Wales

Royal National Institute for the Blind
RPS Group Plc
RSPB Cymru
Save Creigiau Action Group
Savills
Savills (Cardiff)
Scope Cymru
Scott Brownrigg
Sellwood Planning
Shawn Cullen
SK Designs
SLR Consulting
South Wales Chamber of Commerce Cardiff
South Wales Police Crime Prevention Design Adviser
South Wales WIN
Splott and Tremorfa Communities First
Sport Wales
SSE Energy Supply Ltd
St Fagans Community Council
Stedman Architectural
Stewart Ross Associates
Stonewall Cymru
Stride Treglown Town Planning
Stuart Coventry Scott Wilson
Sullivan Land & Planning
Sustrans Cymru
SWALEC
Taff Housing Association
Tanner & Tilley
Taylor Wimpey
Terry Nunns Architects
The 20th Century Society
The Boarding Centre Ltd
The Design Group 3
The Georgian Group
The Institute of Cemetery and Crematorium Management
The Land Mark Practice
The Planning Bureau
The Royal Town Planning Institute
The urbanists
The Victorian Society
The Wildlife Trust of South & West Wales
Theatres Trust
T-Mobile (UK) Ltd
Tongwynlais Community Council
Torfaen County Borough Council
Turley Associates
United Welsh Housing Association
Urban City Ltd
Urdd Youth Group
Velindre NHS Trust Corporate Headquarters
Virgin Media
Vodaphone
Wales & West Housing Association
Wales Council for Voluntary Action
Wales Women's Aid
Watts Morgan
Welsh Ambulance Services NHS Trust - South East Region

Welsh Government
Welsh Government - Economy Skills and Transport Division
Welsh Language Commissioner
Welsh Language Society
Welsh Tenants Federation Ltd
Wentlooge Community Council
White Young Green Planning
Wimpey Homes
Wyevale Garden Centres Ltd.

Comments relevant to the draft guidance were received from the above consultees indicated ***.

Appendix 2   Summary of External Consultation Comments and Responses

Page No.	Comment	Response
General comment	This is a very thorough document that covers in detail the elements that should be considered in the design and review of residential developments. The position of the Council is firm in certain areas setting out clear expectations for developers. The reference to Building for Life 12 Wales as well as the Site and Context Analysis Guide and Planning for Sustainable Buildings written by DCFW is welcomed, as is the reference to consulting the Commission. The sub-section headings provide a helpful set of questions for the review of a development proposal.	No response required
General comment	The scope and content of the design guide is exhaustive. Although this may be helpful in setting out the types of issues to be considered, it has the potential to become unwieldy in both preparing schemes and assessing the design of a development if stringently followed. With the level and nature of design issues raised in the SPG, it is very likely that many principles will conflict with one another and it will rarely be possible for a scheme to incorporate all of the design principles, especially when further consideration such as, site constraints, competing consultee interests and development costs are taken in to account. It is therefore vitally important that a balanced approach to design is adopted and that the issues set out in the SPG are not used as a checklist to be followed in preparing or assessing development schemes. We consider that the draft SPG should comprise general guidance.	The themes and issues within the guide are common to the designers of residential schemes and in line with both TAN 12 and Building for Life 12 (Wales). The level of content provided is broadly in line with previous SPG on this topic from 2008. It addresses the full range of issues which a designer for a major scheme should consider, but it should also be evident that not all issues will be relevant to all schemes. The guidance is written with care in how language is used to clarify areas where the Council will take a strong view, and areas where we would encourage concern. Good designers will be familiar with the material and approach.
General comment	Section and sub-section numbering may help with orientation within the document. Further use of summaries and cross references may help to reduce the amount of text further.	We feel that the structure of the document is clear, with use of straightforward headings and subheadings. It is also graphically structured with a clear table of contents. We are not convinced that summaries would add additional clarity, as the key issues are already summarised under relevant questions.
General comment	Are there differing needs or considerations for inner-city residential development compared to edge of settlement or infill? Has any work been done on understanding the local context of different areas that could be referenced?	The guidance has been written to be generic and relevant to all areas of the city. References in the document to the need for site and context analysis encourage appropriate design approaches to embrace variety in different parts of the city.
General comment	It may also be relevant to cover: development phasing considerations; providing or allowing connections to potential future development sites; and future management and maintenance considerations.	Reference is briefly made to the need for phasing plans to account for the delivery of necessary infrastructure and open spaces (4, 32). It also features in LDP policy KP4. Reference to necessary plans for management and maintenance of public spaces are referred to on pgs. 27, 31, 32 and 34. The need to account for access to future neighbouring development sites is referred to on page 17.
General reference to standard house types	The appearance of dwellings is only one element of the design process and the use of house types from housing developers' pattern books does not preclude a scheme from being of a high-quality of design. Layout, access, relationship to public open space and services as well as public realm considerations are just some of the many aspects that can result in well-designed communities, regardless of the precise appearance of the house types. There are many examples of high-quality development schemes where standard house types have been utilised. We consider that the tone of the message set out in the draft SPG in respect of the use of standard developer house types needs further consideration.	The guidance does not make the point that the use of standard house types is an undesirable form of development, whilst the substance of the guidance reflects a full range of issues. Reference to this issue can only be found on pages 10 and 21. On Page 21 the guidance states: "Avoid excessive use of standard building types (21). Standard house types should be grouped and adjusted to suit their position in a carefully conceived layout and townscape." We will briefly add further text to highlight a positive message about how standard house types are well used in most situations, and delete the first sentence. We will also adjust the text on image 21 to make reference to the streetscape and landscape design as a factor shaping the qualities of a scheme. These issues are addressed further elsewhere in the guidance.
General reference to standard house types	Standard house types can contribute to the creation of an attractive form of development with its own character provided that the standard house types utilised are of a variety of tenures and contain an appropriate degree of variation in scale, material, massing and fenestration.	See above response

11	Summarising the key design questions that must be addressed. Creating Places, third bullet, we suggest the use of alternative wording to 'exploit', such as 'sympathetically integrate with' or 'respond positively to'. As well as providing views from the development, high ground or sloping topography can also make a development prominent in surrounding views of the site and particularly sensitive design is required in such cases.	Wording will be adjusted.
12-17	Guidance under this Section is important but has its limitations if the structure and form of existing developments that define the immediate physical context of a site suffers from serious urban design deficiencies. The approach therefore needs to be honest about the context of existing development and the extent to which new development should respect this context and can be truly integrated with an existing neighbourhood.	This guidance relates to any matters within the control of a designer or developer and not to urban design problems that may exist within the wider context. The guidance may be used to assess the suitability of some sites for sustainable forms of development, and it is correct to say that some may be found unacceptable. We are confident that the scale of development at strategic sites means that these issues can fully addressed within the site.
19	A minimum density of 40 dwellings per hectare on key secondary streets and the spine street may not always be achievable. The minimum density requirements would preclude certain house types from being delivered even though there may be a demand for such housing.	The diagram, originally from the Cardiff Liveable Design Guide, will be adjusted to more closely reflect existing LDP policy for strategic sites, including their spine routes. Within strategic sites there is scope to deliver a full range of house types to meet various types of demand, at various densities.
19	Whilst density is normally a relevant consideration in assessing the efficient use of land, market demand and housing need will have implications on the types and sizes of housing that can be provided, which in turn will influence the type and size of residential development. This will in turn have implications on the scale and density that can be achieved. We suggest that other standards such as plot ratios or habitable rooms per hectare, alongside other considerations such as scale, building heights and forms could be used as these may be more valuable for guiding and testing proposals.	Density is an established indicator associated with sustainable development - to support the viability of local facilities and public transport. The higher density ranges do not preclude a choice of residential typologies being delivered, including terraced or courtyard, and sheltered forms of housing, as well as flats and apartments. In the text we will defer to the LDP policies for the key strategic sites which already refer to the densities we expect. For other sites we will adjust the table to reflect LDP policy more closely, and also create scope for a more flexible approach to delivering density related to bed-spaces per hectare.
19	[Our development] is unlikely to always meet the minimum desired storey heights of developments specified for the varying locations.	We agree in general terms that a discussion about density does not need to embrace building heights which are referred to elsewhere in the document. They will be taken out of the diagram.
19	We feel it needs to be made clearer that the density and height figures for development set out within Figure 18 are the Council's density ambitions as opposed to minimum standards.	Minimum densities are referred to in LDP policy for specific strategic sites. Away from these sites, a commitment to sustainable forms of development requires reference to minimum density standards if we are to deliver forms of development which reduce their environmental impact, as reflected within the LDP generally. Aligning other sites with density expectations for strategic sites in the LDP is consistent.
19	Should density, street type and unit type correlate in this way? For example small apartment blocks or maisonettes on a street of otherwise semi or detached housing could provide a greater variety of housing options and greater diversity.	We partially agree. References to unit type and building height will be removed from this part of the guidance, although reflecting LDP policies we will continue to maintain concern for densities along key routes. It is possible to accommodate a variety of building types within these density ranges.
21	The vast majority of housing to be delivered across Cardiff over the Local Development Plan period will be delivered by national house builders that will have pattern books of house-types that they are capable of delivering. Although these may be able to be varied to some extent, commercially it will not necessarily be possible to provide bespoke house types for specific locations.	The issue of bespoke design is only referred to on page 21 in bullet point 4 in the list, where it is suggested that plans for built form should highlight key nodal spaces "requiring special landscape and built form treatments and requiring more bespoke design solutions". We have changed this to say "possibly requiring".
21	Guidance under this heading on Page 21 states that the City Council will "resist developments that make excessive or inappropriate use of standard building types which dominate the form and character of a scheme". We feel that there is a danger with this statement in that it may prevent the creation of well-planned [developments] which are characterised by simple, homogenous, standard house-types. We therefore request that the Guide is amended to reflect the potential for standard building types alongside bespoke designs in prominent locations, especially those in transport corridors or neighbourhood centres.	The guide has been adjusted accordingly.
29	Apartment blocks should be are clearly identifiable with clear signage providing block numbering or naming. The entrance to apartment blocks should be legible and welcoming.	The points will be added.

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33	Under the issues to address section (pages 33-34) we recommend the inclusion of Landscape/ Green Infrastructure Parameters Plans to clearly set out strategic open space and green infrastructure concepts in outline applications, which can be carried forward to reserved matters applications. Such plans should set out objectives for different areas and routes and should consider long term management, in particular areas and features for public realm and householder/ community management.	The point has been included.
38	We suggest the text which discusses landscape (page 38) should make reference to the forthcoming Green Infrastructure SPG as a further source of guidance. We also recommend reference is made to the following documents: - Wildlife Trusts Wales Green Infrastructure Report; - Countryside Council for Wales (now NRW) Greenspace Toolkit Accessible Natural Greenspace Standards.	The first publication will been added. The second could not be readily found.
39	Experience suggests that requirements by Highway Authorities to adhere to strict engineering standards, and minimise maintenance liabilities for major streets can undermine place-making efforts. Ambitions for the types of streets and spaces envisioned by 'Manual for Streets' can only be realised with the clear support of the Highways Department....If place is to feature well in highway design, the Highways Department will need to be involved from the outset and at the different stages of the master planning process	Our highways team have provided detailed feedback on this document, and we are very mindful of the issue.
53	The minimum garden size for homes subject to Welsh Government's Design Quality Requirements (DQR) is 40sq m. In the absence of any firm justification, we question the proposed minimum standards set out in the draft SPG.	Minimum standards for private gardens to family housing reflect a consistent standard between various SPGs within the City, including the previous edition of this SPG, and historic versions on design guidance on infill development. The area is consistent with the application of other amenity standards in the guidance applied to the smallest houses developed in the city, including the need for at least a 10.5m distance to neighbouring rear gardens for reasons of privacy. The Council is committed to ensuring that all families of the smallest houses can enjoy a reasonable outdoor area, but is flexible in how other forms of amenity space are provided in other residential typologies. Scope always exists for designers to suggest innovative forms of, for example, communal amenity space provision which might reduce the areas. This is reflected elsewhere in the text on page 53.

For further information on any aspect of this guidance
please contact:

design@cardiff.gov.uk