



Llywodraeth Cymru
Welsh Government



Technical Advice Note 12



Design

March 2016

Ty Pren © Feliden Fowles

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Senedd, Cardiff



1. Introduction

1.1 This Technical Advice Note (TAN) should be read in conjunction with Planning Policy Wales¹ (PPW) which sets out the land use planning policies of the Welsh Government. PPW, TANs and Circulars should be taken into account by local planning authorities in the preparation of development plans. They may be material to decisions on individual planning applications and will be taken into account by the Welsh Government and Planning Inspectors in the determination of called-in planning applications and appeals.

1.2 Useful reference documents (included as footnotes and in Appendix 3) provide additional information which may be read in conjunction with this TAN.

1.3 TAN 12: Design (2014) and Circular 16/94: Planning Out Crime are hereby cancelled.

Context

1.4 PPW sets out the Welsh Government's land use planning policy in respect of 'Promoting sustainability through good design' and 'Planning for sustainable buildings', which includes the role of local planning authorities in delivering good sustainable design.

1.5 Design and access statements are mandatory to accompany certain planning applications and listed building consent applications. Detailed guidance on design and access statements can be found in guidance produced by the Welsh Government and Design Commission for Wales².

Purpose

1.6 The purpose of this TAN is to equip all those involved in the design of development with advice on how 'Promoting sustainability through good design' and 'Planning for sustainable building' may be facilitated through the planning system.

1.7 This TAN does not provide exhaustive text on good design, other TANs³ and guidance such as the Manual for Streets⁴, may also cover design issues relevant to specific topics or types of development.

¹ Welsh Government (2016) Planning Policy Wales (Edition 8) (www.gov.wales/topics/planning/policy/ppw/?skip=1&lang=en)

² Welsh Government (2016) Development Management Manual (www.gov.wales/topics/planning/?lang=en)
Design Commission for Wales (2014) Design and Access Statements in Wales (<http://dcfw.org/design-and-access-statements-in-wales/>)
Welsh Government (2016) Technical Advice Note 12: Design – Guidance on Design and Access Statements (www.gov.wales/topics/planning/policy/tans/tan12/?lang=en)

³ Welsh Assembly Government (2005) Technical Advice Note 8: Planning for Renewable Energy (www.gov.wales/topics/planning/policy/tans/tan8/?lang=en)
Welsh Assembly Government (2004) Technical Advice Note 15: Development and Flood Risk (www.gov.wales/topics/planning/policy/tans/tan15/?lang=en)

⁴ Department for Transport/Communities and Local Government/Welsh Assembly Government (2007) Manual for Streets (www.gov.uk/government/publications/designing-residential-streets-manual%20)
The Chartered Institute of Highways and Transportation (2010) Manual for Streets 2 (www.gov.uk/government/publications/manual-for-streets-2)



1.8 Design issues, as influenced through the planning system, should not duplicate the role of Building Regulations. As a general rule, planning relates to the external appearance of a building and its relationship with its context. Building Regulations deal with the technical performance of a building's structure and services. However, the initial design of a building in the planning process needs to consider the ability of the building to meet Building Regulation requirements. Design should therefore be a fundamental consideration from the outset and should not be treated or developed in isolation.



2. Defining Design

2.1 The design of our villages, towns, cities and the urban and rural landscape is important in articulating our nation and our culture. Design is important to our quality of life, and the quality of Wales' varied landscape and townscapes – helping to sustain a positive image for Wales.

2.2 The Welsh Government is strongly committed to achieving the delivery of good design in the built and natural environment which is fit for purpose and delivers environmental sustainability, economic development and social inclusion, at every scale throughout Wales – from householder extensions to new mixed use communities.

2.3 To deliver this, all decision makers across Wales need to understand both the importance of good design and the ways in which it can be achieved.

2.4 Design is defined in PPW as:

“the relationship between all elements of the natural and built environment. To create sustainable development, design must go beyond aesthetics and include the social, environmental and economic aspects of the development, including its construction, operation and management, and its relationship to its surroundings.”

PPW emphasises that:

“Good design is also inclusive design. The principles of inclusive design are that it places people at the heart of the design process, acknowledges diversity and difference, offers choice where a single design solution cannot accommodate all users, provides for flexibility in use, and, provides buildings and environments that are convenient and enjoyable to use for everyone.”



01 Ruthin Arts Centre

Innovative design embracing sustainability, architecture and good public realm

2.5 Good design is not inevitable. It requires a collaborative, creative, inclusive, process of problem solving and innovation – embracing sustainability, architecture, place making, public realm, landscape, and infrastructure.

2.6 Design which is inappropriate in its context, or which fails to grasp opportunities to enhance the character, quality and function of an area, should not be accepted, as these have detrimental effects on existing communities.

2.7 A holistic approach to design requires a shift in emphasis away from total reliance on prescriptive standards, which can have the effect of stifling innovation and creativity. Instead, everyone involved in the design process should focus from the outset on meeting a series of objectives of good design (Figure 1). The design response will need to ensure that these are achieved, whilst responding to local context, through the lifetime of the development (from procurement to construction through to completion and eventual use). This analysis and the vision for a scheme can be presented in a design and access statement where one is required.

2.8 Figure 1 illustrates the role of designing in context in achieving the key objectives of good design. The following chapters will provide further guidance on these objectives.

Figure 1: Objectives of good design



Esplanade House, Porthcawl



3. The Design Process

3.1 The definition of design for planning purposes stresses its role in achieving a more holistic design response to sustainable development. The process which drives the design of a development should, from the outset, consider the full life of any development and should encompass the following elements. A route to good design is set out in Figure 2.

Early and continued design considerations

3.2 Early consideration of design, well in advance of any planning application is essential to achieving good design. At the outset, appreciation of the site's context, and the development of a vision and agreed design objectives must be established and remain central to the evolutionary process. Setting details too early in the process should be avoided and a clear understanding of the long-term implications of design decisions is also essential from the outset. A design and access statement is a valuable tool in such considerations.

Collaboration

3.3 A multi disciplined collaborative approach and a shared ambition for quality are important in delivering good design and should be evident at each stage of the design process. This is best achieved by ensuring the continuous involvement of professionals providing expert advice such as: planners; architects; urban designers; landscape architects; transport engineers; access officers; designing out crime officers; local civic societies and others. Engaging those who procure, promote and finance development early on in the process is essential to assist a shared commitment to design quality.

3.4 Particular attention should be focused on engaging end users and stakeholders in the design process from the outset, and throughout the entire process, as a means of fostering a sense of ownership and consensus, which will be important to the long-term success of a project.



02 Consultation in action

Involving the local community and experts to deliver good design



A pro-active planning system

3.5 The planning system should be pro-active in raising the standard of design and in raising awareness of design issues among the general public and the private sector. This is achievable in every area of planning activity, from national planning policies and guidance; development plans; supplementary planning guidance (SPG) to development management; landscape design and conservation; local partnerships and urban regeneration initiatives in publicly funded projects such as schools, libraries and hospitals. Design considerations should extend into every aspect of the development process from inception and detailed design, to construction, occupation, management and operation.

3.6 The local planning authority has a dual role to ensure effective stakeholder involvement in developing design policies and guidance and providing information on design issues. Local planning authorities should also help applicants and potential applicants to respond effectively to the planning and design process, through an advisory as well as regulatory role. Pre-application discussions and advice on preparing a design and access statement will create clarity for applicants.

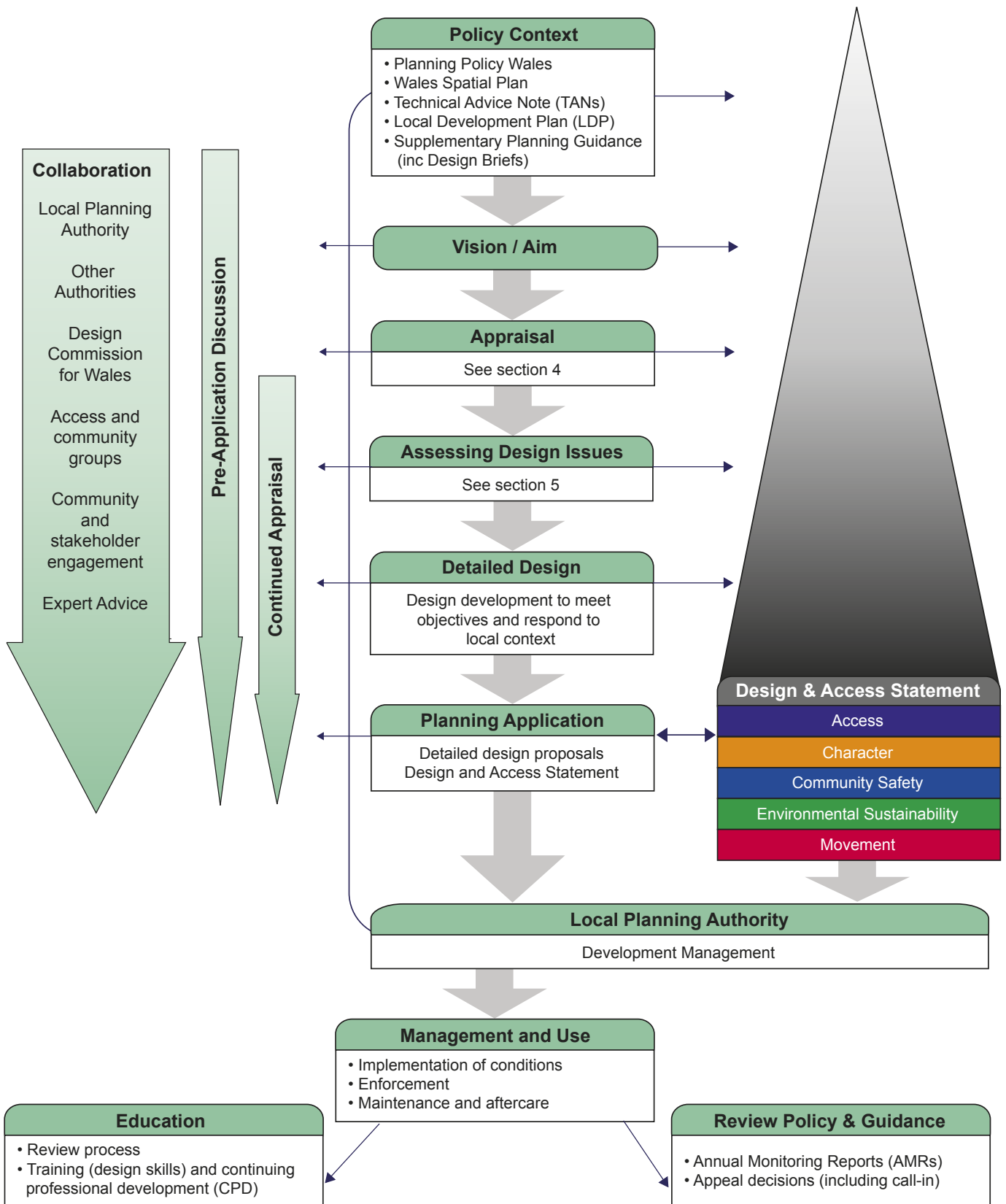
Design skills

3.7 The Welsh Government established the Design Commission for Wales in 2002 to promote good design. The Commission continues to influence, educate and disseminate design advice to all those involved in the design of the built environment. It also provides bespoke training for local planning authorities, consultants and the private sector. The Commission provides a free design review service, which allows early consultation with its independent expert panel⁵. Its comments on applications may be material considerations in the planning process. The Commission also publishes case studies and produces good practice guides on a number of design related issues including design and access statements.

3.8 A high level of design and construction skills is more important than ever in a society which needs to use resources efficiently. The need to adapt buildings and spaces for new uses to keep pace with technological innovation and their application in ways that enhance the environment as well as the need to find long-term maintenance solutions depends on good design and construction skills.

⁵ Design Commission for Wales (<http://dcfw.org/>)

Figure 2: A route to good design



Ceiriog Valley



4. Delivering Good Design

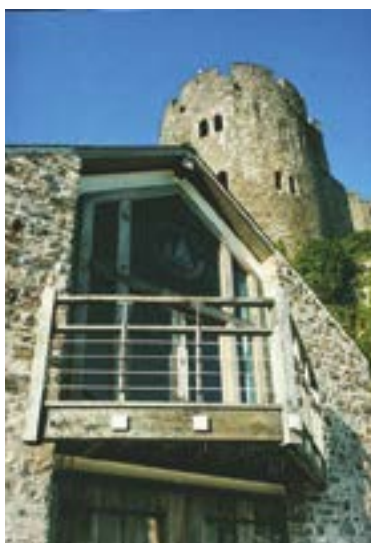
Approach

4.1 Design is a process of analysis and synthesis: analysing, identifying and diagnosing problems and barriers, then solving them through critique, research, development and testing. Design is a creative means by which to realise innovation and add value. Design for the built environment plays a key role in economic growth and in raising the quality of the places where we live and work.

4.2 Great buildings, public places and spaces provide for a rich heritage and it is vital that we deliver well designed, flexible, adaptable buildings and neighbourhoods. What we build now will be the heritage of the future. At all times it is important to consider the kind of places we want to make, and to be mindful of the vision for a high quality public realm, vibrant streets and active neighbourhoods.

Appraising Context

4.3 The local context comprises the characteristics and setting of an area in which a development is located. This includes the area's natural and human history, the forms of settlements, buildings and spaces; its ecology and archaeology; its location and the routes and waterways that pass through it. 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 and those formulating and implementing design policy and guidance. Further guidance on appraising context can be found in Site & Context Analysis Guide: Capturing the value of a site⁶.



03

New boat store,
Pembroke

*Contemporary design
within the historic context*

4.4 PPW provides national policy on good design, and development plans and SPG should provide a clear context for design requirements in the local area. In appraising context for a plan or a project, it will be important to refer to the objectives of good design and test how proposals reflect local policy requirements. In a design and access statement, applicants can demonstrate how they have appraised the physical, social, economic and policy context of the development, and how their choice of design principles and concepts takes that context into account.

4.5 In many cases an appraisal of the local context will highlight distinctive patterns of development or landscape where the intention will be to sustain character. Appraisal is equally important in areas where patterns of development have failed to respond to context in the past. In these areas appraisal should point towards solutions which reverse the trend.

⁶ Welsh Government (2016) Site & Context Analysis Guide: Capturing the value of a site (www.gov.wales/topics/planning/policy/guidanceandleaflets/?lang=en)





04 | Cathays Park, Cardiff

Formality in relationship between buildings and spaces

4.6 A range of **techniques** may be used to carry out context appraisal, including observation and site surveys, review of historic records, interviews, access auditing, analysis of crime statistics and information held by statutory undertakers and agencies, such as passenger transport operators and retail research organisations. Context appraisal can usefully inform development plans.

4.7 An appraisal of an area's natural resources is a prerequisite to providing **environmentally sustainable** design solutions. An appraisal should identify the opportunities offered by a particular site (e.g. decentralised energy) and recognise the site's constraints (e.g. flooding, limitations of public transport links). It should focus

on site assets and resources such as the development form, soils and geology, slope/topography, drainage, landscape, solar and wind energy as well as wildlife, biodiversity and natural habitats. New development should harness the intrinsic resources or "natural capital" of the site or area to help create the conditions for more environmentally sustainable development and in particular to consider measures to help reduce effects related to climate change and to build in resilience to the measures (mitigation and adaptation). An appraisal of the effects of **climate change** (such as increased temperatures, risk of flooding and extreme weather events⁷) can highlight where a design response is needed to minimise vulnerability to the effects of climate change.



05 | Converted Chapel, Rhodiad y Brenin, St David's

Traditional boundary treatments define public and private areas and reinforce local distinctiveness

4.8 Appraising "**character**" involves attention to topography; historic street patterns, archaeological features, waterways, hierarchy of development and spaces, prevalent materials in buildings or floorscape, architecture and historic quality, landscape character, field patterns and land use patterns, distinctive views (in and out of the site), skylines and vistas, prevailing uses and plan forms, boundary treatments, local biodiversity, natural and cultural resources and locally distinctive features and traditions (also known as vernacular elements).

4.9 Opportunities for **innovative design** will depend on the existing context of development and the degree to which the historic, architectural, social or environmental characteristics of an area may demand or inhibit a particular design solution. Thorough appraisal of context can provide design pointers, which help to inspire an innovative design response, which meets present and future needs. A contextual approach should not necessarily prohibit contemporary design.

4.10 Appraisal of the **relationship between private and public space** could focus on gap sites which interrupt the common building line, exposure of rear elevations, the proportion of "active" frontages (such as entrances and shopfronts) to "dead" frontages (such as high walls and blank facades and at upper floor level); means of boundary definition such as walls, fences and

⁷ United Kingdom Climate Change Impacts Programme (UKCIP) (www.ukcip.org.uk/)

gardens, the relationship between the height of buildings and the spaces they enclose, planting or other natural features such as land form which enclose space.

4.11 Appraisal of the **landscape** should focus on its quality in terms of geology and geomorphology, vegetation and habitats, visual and sensory quality and historic and cultural quality. "LANDMAP" is one method of assessment which has the potential to provide a framework and information base from which good design and management can be developed. Similar



06 | St Donats Arts Centre, Llantwit Major

Sustainable innovative design for an extension

assessments are available to measure the quality of the '**seascape**'. These identify what areas, characteristics and qualities are important to conserve at a time when our coastal areas face many pressures from new developments. Historic Landscape Characterisation provides a more detailed level of assessment for the historic environment, and studies have been carried out for all of the areas included in the Register of Landscapes of Historic Interest in Wales. Further detailed site appraisals may also provide information on local hydrology, microclimate, soils, plant communities and features, and all visual qualities including views and vistas.

4.12 Appraisal of the **public realm** should focus on condition, fitness for purpose in changing climates, ease of use for everyone, safety, convenience, enjoyment, contribution to local identity and potential for reducing street clutter. An audit of hard and soft landscaping, street and recreational furniture, signage, highways, lighting, ease of access, nature of use and management can assist in pinpointing priorities.

4.13 **Movement and ease of access for all** to and from development should be appraised at the strategic and local level, with a view to supporting a shift from car use to walking, cycling and public transport and recognising the need for better connectivity within areas and with the surrounding areas. Consideration should be given to the volume and relative ease of pedestrian movements, including people with mobility or sensory impairments. Similar consideration of volume and ease of movement should be given to cycle, public transport and car movements, while areas of conflict, congestion and connections should be identified throughout the area surrounding the site.





07 | Brewery Quarter, Cardiff

Use of public realm to create a sense of place

4.14 Appraisal of the **legibility** of an area should concentrate on landmarks such as key buildings or landscape features, junctions, views and vistas, barriers and boundaries. Barriers may be physical, such as rivers, or perceived as in heavy traffic. The coherence and connectivity of the local street and footpath network will also be important.



08 | Clock Tower and the Ruthin townscape

Local landmarks contribute to legibility

4.15 Appraisal of **adaptability and diversity** should focus on the use of both buildings and spaces and factors which determine use, such as building plan, form, construction method, condition, circulation and suitability for modernisation and new use. In relation to spaces, focus should be on layout, microclimate, patterns of sub division and mix of uses and tenure. It should also take into account the climate that the building is likely to experience over its lifetime and its impact on the operation of the development. Assessment of value for money should be based on the “whole life” costs of development and it is important that the long-term management and maintenance implications of design decisions are fully explored as well as assessing more immediate capital costs.

Achieving Design Solutions

4.16 Achieving good design is the responsibility of all those involved in the design process. It is the physical expression of the design objectives (development on the ground) that impacts on the quality of our lives and is the focus of judgment of whether the design objectives have been successfully achieved. Some issues which will be relevant in meeting the objectives when devising proposals are set out below.

4.17 Those involved in the design process should consider how the following aspects of their development (from procurement to construction through to completion and beyond, i.e. the lifetime of the development) meet the objectives of good design and respond to local context. This analysis and the vision for the scheme can be presented in a design and access statement.

4.18 The following pages provide further detail on the key objectives of good design, reflecting the five aspects of good design. This includes how to respond to these objectives following an appraisal of the context.

4.19 These are not mutually exclusive and are often complementary. Where contention arises this will need to be considered by the applicant at the outset, and by the local planning authority when coming to a decision. The particular relevance and weight attached to each of the following objectives may depend on local policy, circumstances and the nature of the proposed development. This is to be used as guidance at the outset of the project. The design issues, included in Section 5, expand on the issues that may need to be considered in the design process.



09 Environment Centre, Swansea

Innovative design at the extension to the Environment Centre



Access

Accessibility – ease of access for all into the development and to all elements within the site

Objective – Ensuring ease of access for all

Design Response Following Appraisal of Context

- By adopting inclusive design principles that deliver adequate provision for all people including those with mobility impairments, sensory impairments and learning difficulties.

Design Solutions

- The way in which the development addresses the accessibility needs of all people who may use it
- How it can adapt to varying contexts and requirements of inclusiveness over time; and
- The way in which the layout meets practical requirements such as access for emergency vehicles whilst including clear connections and ease of access for all, particularly pedestrians and cyclists.

Relevant Design Issues

(see section 5)

Inclusive Design

Public Realm

Safety



10 | Caernarfon Castle Walkway

Aesthetic improvement to the access to increase accessibility to Caernarfon castle



11 | Llanfyllin Medical Centre

Providing street level access

Character

Objectives

- Sustaining or enhancing local character
- Promoting legible development
- Promoting a successful relationship between public and private space
- Promoting quality, choice and variety
- Promoting innovative design

Design Response Following Appraisal of Context

By responding to:

- landscapes and townscapes, culture and biodiversity
- locally distinctive patterns and forms of development
- existing buildings, infrastructure, urban/rural landscape and public art
- clear boundaries and established building lines
- appropriateness of uses and the mix of uses and densities
- easily recognisable and understood features and landmarks.

Design Solutions

- **Landscape design** – the way in which the land will be treated (other than buildings) for the purpose of enhancing or protecting amenities of the site and the area in which it is situated.
- **Scale** – of development in relation to surroundings, including height, width and length of each building proposed within the development; how the massing of the proposal contributes to the existing hierarchy of development to reinforce character; how the mass and height impacts on privacy, sunlight and microclimate; and how height impacts on the attractiveness and safety of neighbouring public space.
- **Amount** – the number of proposed residential units or the floor space for each proposed use forming part of the development: how the proposed density and mix will encourage different uses by various sectors of the community. Anticipate potential change in the make up and needs of occupiers and how the proposal anticipates, in the short and longer term, efficient use of land whilst safeguarding the quality of life. Where applicable, consider how the development provides innovative solutions to accommodate higher density whilst considering the outcome of higher density on its surroundings.
- **Layout of development** – how the layout makes the development integrate with its surroundings whilst taking into consideration the orientation of the building to maximise energy efficiency and connectivity (the ways in which routes and open spaces within the development are provided, situated and orientated in relation to each other and to buildings and spaces outside the development); how the external area contributes towards the development and is used to make the development a more sustainable development; how is the chosen site the best location and how it links into adjacent uses.



- **Appearance** – (exterior design, including materials) means the aspects of a building or place within the development which determine the visual impression of the building or place makes, including external built form of the development, its architecture, materials, decoration, lighting, colour and texture.

Relevant Design Issues

(see section 5)

Inclusive Design	The Historic Environment
Landscape and Townscape	Urban Regeneration
Rural Areas	Public Buildings
Housing Design and Layout	Employment and Commercial Areas
Public Realm	Public Art
Signs and Advertisements	Safety



12 | The Nook, Oxwich

Use of sensitive materials to enhance the local character



13 | Ty Gwala, Rudry

Use of various local materials can enhance local character



14 | The Hand, Lancaster Square, Llanrwst

Sensitive renovation to enhance the surrounding character of the street and adjacent buildings

Community Safety

Objectives

- Ensuring attractive, safe public spaces
- Security through natural surveillance

Design Response Following Appraisal of Context

By promoting:

- high quality in the public realm
- routes which are fit for purpose and will provide opportunities for safe physical activity and recreation to meet the needs of all members of society
- a sense of ownership and responsibility for every part of the development.

Design Solutions

- **Crime prevention** – the way in which development is designed to protect property by allowing for natural surveillance; improving the community's and individual's safety by reducing conflicts in uses; and promoting a sense of ownership and responsibility.

Relevant Design Issues

(see section 5)

Safety	Urban Regeneration
Housing Design and Layout	Employment and Commercial Areas



15 | Drybridge, Monmouthshire

Promoting a sense of ownership



Environmental Sustainability

Objectives

- Achieving efficient use and protection of natural resources
- Enhancing biodiversity
- Designing for change

Design Response Following Appraisal of Context

By incorporating:

- sustainability measures to reduce the environmental impact associated with buildings and minimising the demand for energy (low and zero carbon sources), water, and materials and creation of waste
- approaches to development which create new opportunities to enhance biodiversity
- adaptable and flexible development that can respond to social, technological, economic and environmental conditions/changes (e.g. the current and future effects of climate change) over time to minimise the need to demolish and rebuild.

Design Solutions

- **Landscape/townscape setting** – the way in which a new development will work with the site and its landscape context. Including key features and qualities such as pattern, form, grain, appearance, colours and elements to also meet the objective of sustaining character and reinforcing legibility.
- **Biodiversity and local environment** – includes aspect of layout/planting) the way in which the development will maintain/enhance opportunities for species to inhabit the area and building fabric and how will the development maintain and improve habitat connectivity and illustrate how the development will integrate with open spaces⁸, including management and aftercare.
- **Energy efficiency/carbon reduction** – the way in which new development seeks to minimise the energy demand and carbon emissions associated with the development through implementation of the energy hierarchy, or deliver zero carbon standards.
- **Sustainable materials** – use of materials with a low environmental impact (embodied energy), reduced energy inputs, sourced sustainably (i.e. Forestry Stewardship Council timber), locally sourced (to reduce transport emissions), and the use of used, reclaimed and recycled materials.
- **Water** – sustainable approach to water supply (rainwater harvesting), demand management (water efficiency) and drainage (e.g. permeable surfaces for pavements/traffic) and its effect on the local water table.

⁸ Welsh Assembly Government (2009) Technical Advice Note 5: Nature Conservation and Planning (www.gov.wales/topics/planning/policy/tans/tan5/?lang=en)

- **Waste management** – the way in which waste will be dealt with during and after construction (re-use and disposal), including the provision of appropriate facilities for sorting, storing and recycling of waste in buildings and across the site.
- **Climate resilience** – the way in which the development is climate proofed to take into account the climate the development is likely to experience over its expected lifetime by managing and minimising climate change effects (e.g. extreme temperatures).
- **Sustainable building standards** – the use of nationally recognised and quality assured standards to demonstrate that environmentally sustainability design solutions (as set out above) have been incorporated into new developments.

Relevant Design Issues

(see section 5)

Climate Responsive Development	Sustainable Buildings
Landscape and Townscape	Housing Design and Layout
Public Realm	Biodiversity
Urban Regeneration	Public Buildings
Employment and Commercial Areas	



16 | Solar shading in SA1, Swansea

Passive design elements such as solar shading can be used to minimise the need for artificial cooling in the summer



Movement

Objective

– Promoting sustainable means of travel

Design Response Following Appraisal of Context

By maximising:

- safe and clear connections
- the potential to cycle, walk and use public transport safely, and reducing the reliance on the car
- the connection to the existing transport infrastructure by integrating development with existing footpaths, cycle ways and public and private transport infrastructure
- the integration of different transport types whilst minimising the adverse effects on the network
- the ease of movement to, from and within the development for sustainable forms of transport by creating a safe and attractive environment
- the provision of on site facilities for sustainable forms of transport.



17 Cyclepaths and walking

Connecting new development to existing routes can improve opportunities for sustainable modes of travel

Design Solutions

- **Connections** – The way in which the proposed layout contributes to or improves the existing framework of connecting routes and spaces and waterways to achieve a successful relationship between private and public space.
- **Modes** – The way in which the development accommodates for different transport modes.
- **Servicing** – The suitability of the servicing arrangements exist to transport freight required by the development.
- **Parking** – The way in which the development has considered the requirements for parking and whether this will be managed appropriately.

Relevant Design Issues

(see section 5)

Transport	Inclusive Design
Urban Regeneration	Rural Areas
Housing Design and Layout	Employment and Commercial Areas



18 | Holyhead Harbour

Connecting routes and improving townscape through public art



Galeri Caernarfon



5. Assessing Design Issues

5.1 This section deals with specific design issues where the implications of design choices may be particularly significant in influencing whether the objectives of good design are achieved. The emphasis for each issue is on finding sustainable design solutions, as the concept of sustainability must inform all aspects of design. As with all forms of development, these issues should be considered in the context of the broader advice on the design solutions. In some cases, choices will need to be made if solutions which are optimal for some design objectives conflict with other design objectives. These choices should be informed by local and national policy.

5.2 A design and access statement provides an opportunity for developers to demonstrate how they have considered the design issues discussed in this section. Further guidance on design and access statements can be found in guidance produced by the Welsh Government and Design Commission for Wales⁹.

Overarching issues

5.3 Inclusive Design

5.3.1 The Welsh Government expects all those involved in the design process to foster a culture of inclusion, whereby design solutions provide access to the widest possible range of people. Inclusive design is a specific approach to barrier free environments, implicit in which is a departure from a “special needs” approach to impairment which relies on adaptations (principles included in PPW and referred to in section 2 of this TAN). For a design and access statement, the issues and principles set out here will be particularly important in explaining how issues relating to access to the development have been dealt with, but they should also act to deliver as a driver to the statement as a whole.

5.3.2 In every area of development earlier and greater attention should be given to the needs of all sectors of society, including older people, children and disabled people. This principle applies to the design of the public realm, to public transport infrastructure and to the location, design and layout of public leisure facilities as well as the design of individual buildings¹⁰. It is a common misconception that inclusive design is primarily a matter for those with mobility impairments. On the contrary, designing for all means that consideration should include the needs of all, including people with mobility impairments, people with sensory impairments and people with learning difficulties.

5.3.3 The Equality Act 2010 makes it unlawful to discriminate against disabled people in the areas of the provision of goods, facilities and services; the exercise of public functions; premises, work and associations. More specifically, service providers are required to take such steps as are reasonable to have to take to avoid a physical feature of their premises putting a disabled person at a substantial disadvantage.

⁹ Welsh Government (2016) *Development Management Manual* (www.gov.wales/topics/planning/?lang=en)
Design Commission for Wales (2014) *Design and Access Statements in Wales* (<http://dcfw.org/design-and-access-statements-in-wales/>)

Welsh Government (2016) *Technical Advice Note 12: Design – Guidance on Design and Access Statements* (www.gov.wales/topics/planning/policy/tans/tan12/?lang=en)

¹⁰ ODPM (2003) *Planning and Access for Disabled People* (www.gov.uk/government/publications/planning-and-access-for-disabled-people-a-good-practice-guide)



5.3.4 Those public authorities deemed to have a significant impact on the lives of disabled people (this includes local planning authorities in Wales) are required to publish objectives setting out the actions they will take to better perform the general duty to eliminate discrimination and advance equality of opportunity^{11 12 13}.

5.3.5 Good practice for all involved in the design process involves:

- increasing awareness of inclusivity by all;
- consulting disabled people and groups representing them;
- identifying physical and non-physical barriers to access;
- making adjustments to deal with identified barriers;
- drawing adjustments to the attention of disabled people;
- regular reviews of effectiveness.

5.3.6 Building Regulations, British Standards and guidance lay down minimum standards for access to all classes of building. Adopting an inclusive approach from the outset minimises the need for new buildings to require subsequent modifications to ensure compliance with the requirements of the Equality Act 2010. Initiatives which are designed to meet the existing and future needs of occupants such as “lifetime homes” illustrate the importance of foresight and flexibility as well as sensitivity in design as a means of allowing everyone to use the environment and/or access services/facilities in an equal and independent way. This type of initiative focuses on the positive impacts of inclusive design, such as access for the whole population, flexibility and adaptability in use and the approach is entirely compatible with sustainable objectives.

5.3.7 Those seeking permission to build new and public commercial buildings are encouraged to include in their plans accessible ‘Changing Places’ toilet facilities in addition to standard accessible toilets. Changing Places toilets are facilities specifically designed to accommodate adults whose needs are not met by standard disabled toilets. They incorporate adult-length padded and height-adjustable changing tables, hoists, peninsular WCs and shower facilities¹⁴.



19 | Ruthin Art Centre

Sensitive inclusive design to a public area

¹¹ Equality Act 2010 (www.legislation.gov.uk/ukpga/2010/15/contents)

¹² Equality Act 2010 (Statutory Duties) (Wales) Regulations 2011 (www.legislation.gov.uk/wsi/2011/1064/contents/made)

¹³ Equality Act 2010 (Specification of Relevant Welsh Authorities) Order 2011 (www.legislation.gov.uk/wsi/2011/1063/contents/made)

¹⁴ Changing Places Consortium (2013) *Changing Places: the practical guide* (www.changing-places.org/)

5.4 Climate Responsive Development and Sustainable Buildings

5.4.1 Planning authorities, developers and other partners in the provision of new development should engage constructively and imaginatively to deliver climate responsive developments and sustainable buildings, particularly where these are contained in policy. These will be delivered through the consideration of a range of environmentally sustainable design solutions appropriate to the development. The implications arising from them must be considered at the earliest opportunity in the design process. Practice Guidance – Planning for Sustainable Buildings¹⁵ provides guidance for local planning authorities and developers on how sustainable building design can be incorporated into development proposals.

5.4.2 Achieving climate responsive development requires an understanding of the ways in which a development can tackle the causes of climate change (mitigation) and be resilient to its effects (adaptation).

5.4.3 To effectively **mitigate** the causes of climate change in the design of a development a clear approach to reducing carbon and other greenhouse gas emissions associated with the development should be taken. Good practice in mitigating the causes of climate change is to apply the energy hierarchy (see Figure 3), which details a series of steps that should be taken to minimise the carbon emissions associated with a new development in the most efficient and cost effective way.

5.4.4 It is the Welsh Government's aspiration that in the future all new buildings achieve a zero carbon and nearly zero energy standard for regulated emissions (ie. heating, cooling, lighting and ventilation). A broad hierarchy is used to prioritise design solutions, based on the need to reduce demand first. In taking forward an energy hierarchy, an approach to 'carbon reduction' can be prepared for developments, where appropriate, and included or summarised in a design and access statement to illustrate how the design of the development has sought to reduce the carbon emissions associated with the development - including opportunities to move towards zero carbon.



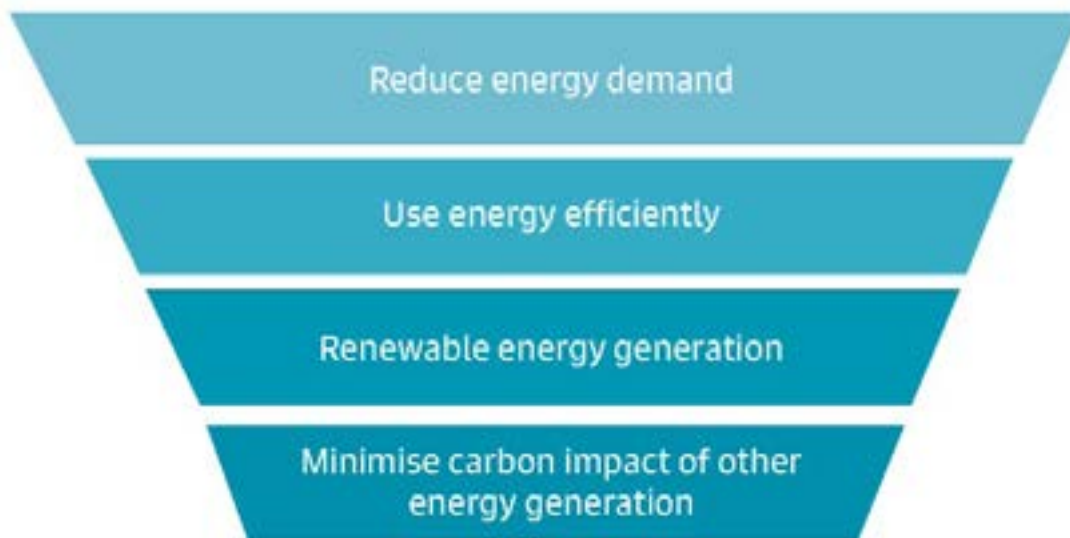
20 Centre for Alternative Technology, Machynlleth

Reducing the energy demand through efficient fenestration, use of materials and solar panels

¹⁵ Welsh Government (2014) Practice Guidance – Planning for Sustainable Buildings (www.gov.wales/topics/planning/policy/guidanceandleaflets/practice-guidance-planning-for-sustainable-buildings/?lang=en)



Figure 3 The Energy Hierarchy¹⁶



5.4.5 In satisfying the hierarchical approach there are a range of **low and zero carbon design solutions** that can be employed. These should follow a sequential approach against their ability to reduce carbon and deliver cost effectiveness in reducing carbon emissions.

5.4.6 At the outset a full appraisal of context (see paragraph 4.3 and Site & Context Analysis Guide: Capturing the value of a site¹⁷) can help to identify any constraints and opportunities to incorporating these low and zero carbon design solutions into a proposal. This should include an indication of the likely heating, cooling and energy demand (and subsequent carbon emissions) of the proposed building as this will inform how the energy/carbon hierarchy is implemented. Depending on the size and scale some sites may benefit from a development wide energy/carbon strategy which takes into account the energy/heat demand of the whole site to find the optimum carbon reduction solution (including opportunities from adjacent buildings).

5.4.7 The level of carbon reduction expected will be determined by the minimum required by Building Regulations (Part L). The contribution and mix that each of these low and zero carbon design solutions provides will be dependent on the design approach taken¹⁸.

¹⁶ Welsh Government (2016) Energy Efficiency Strategy for Wales (<http://gov.wales/topics/environmentcountryside/energy/efficiency/energy-efficiency-strategy-for-wales/?lang=en>)

¹⁷ Welsh Government (2016) Site & Context Analysis Guide: Capturing the value of a site (www.gov.wales/topics/planning/policy/guidanceandleaflets/?lang=en)

¹⁸ Building Regulations Part L (Conservation of fuel and power) (www.gov.wales/topics/planning/buildingregs/publications/part-l-energy/?lang=en)

5.4.8 The mix, density and land use of a development determines its energy, heat and cooling needs. Larger sites or those adjacent to existing development are likely to provide the greatest opportunity for development of combined heat and power and district heat systems (including demands for cooling), a combination of smaller sites can offer opportunities for decentralised energy solutions.

5.4.9 Opportunities for local and low or zero carbon energy supply such as CHPs and district heating systems can be maximised when higher densities and a mix of uses are proposed which balance energy demand over different time periods. Such as between industrial and residential or with a major institutional use such as a hospital or a leisure centre.



21 | Solar panels, Coach House, Cardiff

Incorporation of solar panels into roof line



5.4.10 To effectively **adapt** to the effects of climate change attention should be given to the ways in which the design can both minimise and manage the impacts arising from climate change. Good practice for all involved in the design process includes:

- an awareness and appreciation of the current and future effects of climate change;
- awareness of how climate adaptation measures can offer multiple benefits and support other objectives of good design (such as promoting biodiversity through the incorporation of green roofs);
- responding to effects of climate change through the structure, physical envelope and choice of materials to enable them to withstand extreme temperatures;
- ensuring that design solutions do not constrain current and future opportunities to adapt or a development's vulnerability to climate change;
- recognise the relationship to more strategic responses to climate change such as flood risk and drainage¹⁹.

5.4.11 Criteria for development layout and approaches that can be included within a design could include:

- to avoid poor micro-climate (hill crests or frost pockets) and make the most of south facing slopes;
- passive measures that balance the benefits of minimising heat loss in winter with the risk of excessive solar gain during the summer (avoiding the need to install artificial cooling systems);
- shelter from the elements to minimise heat losses in winter and provide adequate shade in summer provided from land form, landscape and other buildings;
- orientation to enable the buildings to face within at least 45 degrees of south to maximise solar gain (dependent on type of use);
- provision of natural shade in outdoor spaces;
- sustainable drainage measures through layout and design features which enable the consequences of flooding to be acceptably managed;
- maximising of opportunities to maintain and/or enhance habitat connectivity and create space for future adaptation.



22 | Adnams Warehouse

Use of grass roof on a commercial development

5.4.12 Many aspects of design such as **built form** and **fenestration** affect the environmental sustainability of buildings. The following factors may be relevant:

- internal layout to include consideration of the placing of rooms e.g. needing higher temperatures (such as living rooms) to the south;
- use of design features such as atria, conservatories and porches to enable natural ventilation and conservation of heat;

¹⁹ *Welsh Assembly Government (2004) Technical Advice Note 15: Development and Flood Risk (www.gov.wales/topics/planning/policy/tans/tan15/?lang=en)*

- layout of windows, doors and roof lights e.g. to provide larger windows to areas to the south and smaller to the north in residential developments and to provide natural lighting for employment use whilst considering the possibility of overheating in the summer months;
- plan depth compatible with natural daylight and ventilation;
- compact form to reduce external surface area, and avoid infiltration from increased wind and temperatures;
- facilities for good at source segregation of wastes need to be integrated sensitively – separating those wastes for reuse and recycling on site from those wastes to be removed from the site and provisions for the reuse and recycling of wastes remaining on site for the lifetime of the development;
- provision for low and zero carbon energy technologies to be included or made feasible;
- use of green roofs to insulate against heat gains, reduce surface water run-off and facilitate biodiversity;
- use to be made of material with reduced energy inputs [sustainably produced timber (FSC certified), locally manufactured or recycled materials, e.g. bricks, slate];
- sustainable construction processes which avoid or reduce waste and other environmental, health, or social effects during construction;
- provision for the collection and use of rainwater and also for the appropriate reuse of rainwater;
- choice of materials that will reduce the impact from higher wind speeds and extreme temperatures on their performance;
- designs that provide summertime cooling through solar shading, thermal mass and ventilation.

Context

5.5 Landscape and Townscape

5.5.1 The distinctive settlement patterns which characterise much of Wales have evolved in part in response to the country's diverse landscape and topography. The way in which development relates to its urban or rural landscape or seascape context is critical to its success. Because of this, an understanding of landscape quality, including its historic character, is fundamental to the design process.



23 | Tenby

Successful relationship between coastline and townscape



5.5.2 In general terms, good design will almost always be dependent on working within the natural constraints and the historic character of the landscape and this should be the starting point from which the design of development evolves. The aim should be to achieve good design solutions which maximise the natural landscape assets and minimise environmental impact on the landscape. It is particularly important that proposals to amend or create new landscape are not considered as an afterthought and that the long-term impact of development on the landscape is fully understood. The quality of implementation and the long-term management of changes implicit in planting schemes are fundamental to a scheme's success.

5.5.3 Local planning authorities are responsible for assessing adequately the relative qualities of their local landscape. The development plan may specify the local authority's landscape design expectations or it could also have a role in the preparation of design guidance and SPG for specific developments or in specific areas.

5.5.4 For larger developments, undertaking strategic landscape assessment at the outset of the design process should help to define the capacity of the natural and historic environment to absorb development. It should also provide a broad context for decisions on appropriate scale, form and layout and determine which landscape features need to be protected or enhanced. This should include the desire to provide for habitat connectivity as well as the intrinsic role of landscape in the sustainable management of resources such as water and soil on a catchment scale. In areas included on the Register of Landscapes of Historic Interest in Wales, a methodology exists for assessing the significance of the impacts of proposed developments (ASIDHOL, Assessment of the Significance of the Importance of Development on Historic Landscape). Design solutions should demonstrate clearly how the strategic landscape assessment, including any role it may have in facilitating adaptation to climate change, in combination with the site appraisal have informed the detailed design of development and planting proposals.

5.5.5 It is important that the qualities of the urban landscape (townscape) are appreciated and considered in the design of development. Townscapes are closely related to topography, natural features such as rivers, existing patterns of vegetation, parks, green corridors and planting in streets and public spaces. They are often an integral part of the historic character of the town. The landscape qualities of the settlement including its contribution to views and links to the open countryside, its functions in water management, soil protection, natural cooling, habitat connectivity and its historic character need to be taken into consideration early in the design process.



24 | Mid Wales

The wider landscape can be used to inform how the design responds to its local context

5.6 The Historic Environment

5.6.1 The general advice on the objectives of good design, the value of context appraisal and achievement of design solutions, is equally applicable to design in the historic environment²⁰. Achieving good design in development also involves making appropriate use of the legislative controls available to raise quality. In areas of special character such as conservation areas or areas recognised for their landscape value, the way in which new development is accommodated and change is managed may need a greater level of direction from the local planning authority. Whilst meeting the objectives of good design should be the starting point, more detailed advice may be required to ensure preservation or enhancement of specific qualities and these should form part of the pre-application discussions. In conservation areas there should be regard to the desirability of preserving or enhancing their character and appearance. Where a design and access statement is required to be submitted with a listed building consent application, the statement must address the specific statutory aspects of the works as a minimum; these differ from those specified for planning applications.

5.6.2 In areas recognised for their landscape, townscape, architectural, archaeological and/or historic value, such as National Parks, Areas of Outstanding Natural Beauty, World Heritage Sites and conservation areas, the objective of sustaining character is particularly important and context appraisals should reflect this²¹. The general aspects of the “character” objective of good design should be pursued but more detailed information may be needed in relation to key issues such as:

- **the setting and views** of key buildings, landscape, parks and gardens, archaeology and skylines within, to and from the area;
- **the degree of architectural unity or informality** in building groups and settlements and in landscape;
- **locally distinctive building elements** and construction techniques, such as roof pitches, window proportions, parapets, or paving details;
- **locally distinctive facing materials** such as natural slate, brick quoins or natural stone in both buildings and the public realm;
- **boundary details** including means of enclosure of landscape features, open spaces and gardens;
- **street furniture** including signage, street nameplates, street lighting;
- **in retail areas** distinctive design and proportions of shopfronts, signs, and lettering.



25

Listed Buildings at
Bethel Square, Brecon

*Accommodating change in
the historic environment and
maximising the potential of
listed buildings*

²⁰ Welsh Office (1996) Circular 61/96: Planning and the Historic Environment: Historic Buildings and Conservation Areas (www.gov.wales/topics/planning/policy/circulars/welshofficecirculars/circular6196/?lang=en)

²¹ Cadw (2004) Converting Historic Farm Buildings in Wales: A Guide to Good Practice (www.cadw.wales.gov.uk/historicenvironment/help-advice-and-grants/lookingafteryourproperty/bestpractice/%3Flang%3Den)



5.6.3 Specialist skills are needed to achieve accurate assessment of areas of architectural or historic character. In the design of alterations or extensions to listed buildings, professional expertise is essential to assess the elements which make up the special interest of the building and to achieve a balance between sensitive change and maintenance of integrity.

5.6.4 In the alteration of listed buildings and in the wider historic environment efforts should be made to use local materials or materials from other sources which have equivalent appearance, colour and weathering characteristics. It may be appropriate to abandon conventional design solutions in favour of a more imaginative and contemporary approach. This may involve flexibility in the application of policies, and on the part of applicants the use of spaces within historic buildings in a less orthodox way and high quality specifications. Cadw and Conservation Officers within local authorities provide detailed guidance on issues relating to listed buildings.

5.6.5 The impact of traffic in historic areas is a key concern. The design of traffic management and transport infrastructure schemes should consider:

- simplicity and respect for local materials and detailing;
- use of existing building form to effect traffic calming, such as existing pinch points;
- narrow streets or strategically located buildings;
- use of natural features, such as the use of hedges as a traffic calming aid; and
- scope for rationalisation of traffic signs and reduction of clutter.

5.6.6 Conservation is often dependent on accommodating change, and successful design in the historic environment is reliant on a programme of management which links conservation policies to wider urban design and regeneration strategies. Local planning authorities should make full use of SPG in the form of design guidelines and development briefs to help to bind policy to practical opportunities for enhancement.

5.6.7 The degree of access to the historic environment which is afforded to all sectors of society is a matter of concern to all those involved in the process of design. Creative design solutions may be required to achieve acceptable levels of access not only to buildings but throughout the public realm in historic areas. More specific guidance on making historic buildings more accessible is available from Cadw and from local planning authority Conservation Officers.



26 | St Clare's Conversion

Sensitive conversion of an old building

5.6.8 Works to historic buildings may often successfully achieve higher energy and other environmental standards without compromising the special architectural qualities or historic interests of the building. Whilst flexibility of the application may be required, such opportunities should not be overlooked.

5.7 Urban Regeneration

5.7.1 Realising the potential of existing urban areas will help reduce the need to travel, help revitalise and regenerate urban centres and reduce pressure for development on the countryside. The historic environment is a significant aspect of local distinctiveness, which is a valuable asset in regeneration. There is a complex relationship between density of development, provision of services and quality of the environment, and good design is fundamental to the success of this relationship. In areas where there is a need to promote growth and change, such as town centres and older housing and employment areas, local planning authorities should clarify their vision of how the area might develop over time. An urban design framework or masterplan can help to develop this vision three dimensionally and can usefully form the basis of SPG or other design advice to guide development.



27 | Drift Park, Rhyl, Denbighshire

Urban regeneration through partnership creating a new interest to an area

5.7.2 Those involved in the design process need to recognise existing urban qualities and find ways of ensuring that new development strengthen or complement these. Examples include integration of established landscape elements into the urban environment; making best use of natural features such as river frontages or varied topography; and reusing redundant man-made features such as docksides or former railway lines for pedestrian and cycle routes. There are multiple benefits in this approach, in terms of enhancing local distinctiveness linking component parts of urban areas, creating green corridors and areas for both nature conservation and leisure use and reducing car dependency.



5.7.3 Evidence shows that careful integration of compatible mixed uses can help urban areas become more competitive, viable and sustainable. In design terms, a mix of uses adds diversity to the townscape and the activity generated adds vitality. Good design and construction techniques are essential to ensure that practical issues such as noise abatement and privacy are addressed but also to ensure that mixed uses relate well to one another physically and offer opportunities for visual interest and originality.



28 | The Works, Ebbw Vale

Large scale urban regeneration through collaboration with stakeholders

5.7.4 Building at higher densities is not synonymous with high rise development and innovative good design is a prerequisite to the success of higher densities. The perception of lower density can be influenced by skilful design. Clearly defining public and private space and ensuring suitability for purpose will be particularly important where densities are high.

5.8 Rural Areas

5.8.1 The special qualities of the rural landscape and coastline of Wales should be recognised. The qualities should be enhanced through conservation of the character of the countryside and by achieving quality in new development.



29 | Beddgelert,
Snowdonia
National Park

Bus shelter designed with regard for context

5.8.2 Design is relevant to rural settlements, urban fringe, steep sided valleys, mountain top plateaus and broad agricultural areas vary significantly. Policies and guidance should take account of the need to steer activity to avoid negative impact on distinctive rural landscapes and the best agricultural land and to conserve and enhance diversity of species and habitats. Managing change by means of a landscape strategy based on a thorough landscape assessment is one means of safeguarding a rural sense of place. This should analyse key issues and put forward guidelines for design themes, palettes of materials, and briefs for specific sites.

5.8.3 Reconciling the maintenance of local identity with efforts to support economic viability in rural areas will often point to conversion of existing buildings. Conversion requires skilful and sensitive design, an understanding of traditional construction methods and the imagination to make the fullest and most exciting use of the space available. Many buildings in rural Wales occupy visibly prominent locations and the scope for damaging local distinctiveness through inappropriate development may be even greater than in densely developed areas. Conversely, parts of the countryside may offer unique opportunities for innovative design which maintains aesthetic quality and also improves access for everyone and these should be fully explored.

5.8.4 In relation to conversion or adaptation of agricultural buildings, character retention will often involve the least amount of change possible to external appearance. Solidity and simplicity in design and relationship of built form with landscape provide the distinctive character of many Welsh rural areas. The fragility of these qualities and the important contribution which local distinctiveness makes to a sustainable future for rural areas should be reflected in development plan policies and guidance.



30 | Ystradfellte

Conversion of disused farm buildings to water treatment works

5.8.5 The scale, form and siting of new agricultural buildings or buildings for on-farm diversification, is usually influenced by the operational needs of the enterprise. Where possible, new buildings should be integrated within the farmstead. Elsewhere, particular care should be taken with siting, massing and detailed design to enable them to fit well into the landscape. The use of materials appropriate to the setting, attention to colours of materials and detailing can all facilitate integration into the landscape. The standard pattern book approach needs to evolve to accommodate vernacular elements and relate to the local context.

5.9 Transport

5.9.1 The siting, layout and detailed design of development will often be critically important to the success of efforts to provide genuine alternatives to car travel and to achieving quality in the environment as a whole. Environmental quality has been identified as a key factor in influencing whether or not people choose to walk or cycle within urban areas. Good site location, building and street design can play an important role in achieving a reduction in car traffic and speed and short distance motorised journeys, as well as encouraging a wider choice of more sustainable modes of travel. The design and layout of new development is important in promoting active travel journeys and in the creation of new and improved active travel routes and related facilities, in accordance with the provisions of the Active Travel (Wales) Act 2013²².

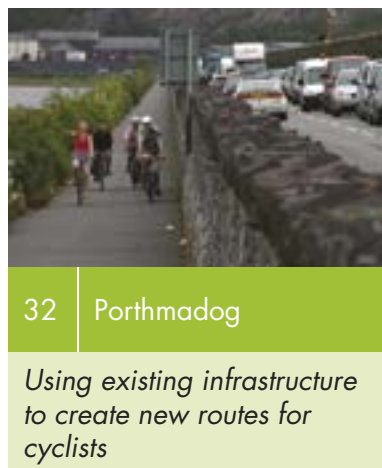
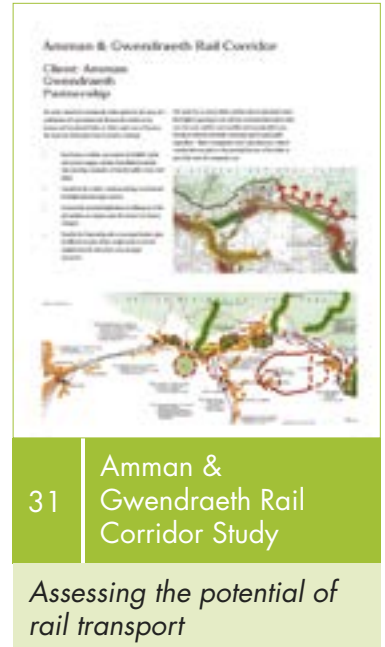
²² *Active Travel (Wales) Act 2013* (www.gov.wales/topics/transport/walking-cycling/activetravelact/?lang=en)
Welsh Government (2014) Design Guidance: Active Travel (Wales) Act 2013 (www.gov.wales/docs/det/publications/141209-active-travel-design-guidance-en.pdf)



5.9.2 The planning of movement should always be based on an understanding of local context and analysis of the area's needs and potential. TAN18: Transport²³ sets out how the Transport Assessment process can assist in analysing travel demand and impact. This process should contribute to the design of transport infrastructure for the development and result in the production of a Transport Implementation Strategy to manage movement to, from and within (for large developments) the site. When providing a design and access statement such assessments can be cross-referenced.

5.9.3 In large developments, strategic opportunities such as the potential for public transport interchanges should be considered and accommodated, as well as the benefits of locally based traffic management measures. The highest standards should be applied to the design of transport infrastructure and the potential for "landmark" design, which reinforces local identity, should be explored. Fitness for purpose and the comfort and safety of users are essential, in the design of public transport infrastructure. In particular, the potential for raising the profile of bus and rail travel through innovative design which meets present and future needs should be realised.

5.9.4 Particular care should be taken to ensure that the design of infrastructure avoids severance and fragmentation of communities. Permeable access for all is vital. Issues such as gradient, lighting, and security should be addressed in the design of pedestrian and cycle routes in particular to ensure that routes are coherent, legible, direct, attractive, safe, and unobstructed. The different needs of cyclists and pedestrians, including those with mobility impairments and/or sensory impairments, and potential for conflict should also be recognised and addressed. Safety and perception of safety are vitally important in efforts to encourage walking and cycling. Designs should take account of the need to protect the interests of all vulnerable road users.



32 Porthmadog

Using existing infrastructure to create new routes for cyclists

5.9.5 Early stakeholder involvement in transport and movement issues should be sought so that the needs of users and operators are understood and reflected in design solutions. The Manual for Streets and local highway standards can provide developers with guidance on standards of design, layout and construction which local authorities would expect new developments to follow, however the blanket application of prescriptive standards should be avoided. A better balance between the five principle functions of streets, should be achieved, particularly the movement and place functions, as set out in Manual for Streets. A close working relationship between the design team, planners and highway engineers is essential to achieve this. Local standards should be reviewed in light of Manual for Streets and its key principles may be used more widely than just residential streets.

²³ Welsh Assembly Government (2007) Technical Advice Note 18: Transport (www.gov.wales/topics/planning/policy/tans/tan18/?lang=en)

5.9.6 When taking account of transport infrastructure needs in the design process, the emphasis should be on the safe accessible movement of people and goods along attractive routes which relate well to urban and rural environments. The layout of infrastructure should contribute to the promotion of walking, cycling and public transport. To achieve this, consideration should be given to all forms of modes at the start of the design process ensuring that direct and attractive routes for different modes such as pedestrians and cyclists, can be safeguarded or, where possible, enhanced.

5.9.7 The needs of disabled people, children and older people should be given particular attention and in the interests of inclusive design should be considered at the outset.

Type of Development

5.10 Public Buildings

5.10.1 The public sector has a responsibility and an opportunity to set high standards in achieving good design in its own buildings and achieving low carbon targets or zero carbon where possible. In the design of schools, hospitals and other buildings and infrastructure intended for use by the local community the aim should be to achieve fitness for purpose, value for money over the whole life of the building, and a positive impact on the lives of those who use it and on its surroundings.



33 | Cardiff Library

Leading by example - Incorporation of sustainable design in public buildings

5.10.2 Through their location and design, public buildings can provide a strong community focus and reinforce local identity. Integration with the community they serve is essential. Most public buildings will be best placed at central points in highly visible locations. Where there is scope to



emphasise civic status by development of adjoining public spaces this should be pursued. The objectives of access for all and achieving legibility are particularly important in the design of buildings into which the public are invited.

5.10.3 Innovative design of public buildings can act as a powerful regenerative tool and the potential for social and economic benefits associated with the design of “flagship” public buildings should not be underestimated. Similarly high aspirations should apply to local buildings which have a more direct impact on people’s everyday lives.

5.10.4 Best value for money in terms of whole life costs is best achieved by integrated project teams which mobilise all the design and construction skills in the team to achieve high quality and minimum waste.



34 | Millennium Centre, Cardiff

Innovative design using materials from Wales to add character and create a distinctive public place

5.11 Housing Design and Layout

5.11.1 Achieving more sustainable residential environments is dependent on linking development to public transport and other uses and services (e.g. district heating), providing access to local services, and securing the most efficient use of land²⁴. For a successful residential area, the design of housing should be to establish a sense of place and community, with the movement network used to enhance these qualities, and to incorporate features of environmental sustainability. Further advice is available on how the needs of pedestrians and children in particular, are given as much consideration as vehicle movement in residential street design²⁵. In addition, the Welsh Government and Design Commission for Wales have endorsed Building for Life 12 Wales²⁶ as an industry standard that can be a useful tool in achieving better urban design quality in residential development and in complementing the requirements of national planning policy.

5.11.2 Development proposals, in relation to housing design should aim to:

- create places with the needs of people in mind, which are distinctive and respect local character;
- promote layouts and design features which encourage community safety and accessibility;
- focus on the quality of the places and living environments for pedestrians rather than the movement and parking of vehicles;
- avoid inflexible planning standards and encourage layouts which manage vehicle speeds through the geometry of the road and building;

²⁴ *Planning Officers Society for Wales (2005) A Model Design Guide for Wales – Residential Development* (<http://dcfw.org/a-model-design-guide-for-wales-residential-development/>)

²⁵ *Welsh Assembly Government (2007) Technical Advice Note 18: Transport* (www.gov.wales/topics/planning/policy/tans/tan18/?lang=en)
Department for Transport/Communities and Local Government/Welsh Assembly Government (2007) Manual for Streets (www.gov.uk/government/publications/manual-for-streets)
The Chartered Institute of Highways and Transportation (2010) Manual for Streets 2 (www.gov.uk/government/publications/manual-for-streets-2)

²⁶ *Building for Life 12 Wales* (<http://dcfw.org/building-for-life-12-wales/>)

- promote environmental sustainability features, such as energy efficiency, in new housing and make clear specific commitments to carbon reductions and/or sustainable building standards;
- secure the most efficient use of land including appropriate densities;
- consider and balance potential conflicts between these criteria.

5.11.3 The design of housing layouts and built form should reflect local context and distinctiveness, including topography and building fabric. Response to context should not be confined to architectural finishes. The important contribution that can be made to local character by contemporary design, appropriate to context, should be acknowledged. To help integrate old and new development and reinforce hierarchy between spaces, consideration should be given to retaining existing landmarks, established routes, mature trees and hedgerows within housing areas as well as introducing new planting appropriate to the area. All residential proposals should seek to minimise energy demand, larger schemes should investigate the feasibility of a district heating scheme especially when mixed uses are proposed for the site.



35 Crickhowell

Grouping buildings and mixing density to create variation and sense of local identity

5.11.4 The location and definition of public and private space and the design of boundary treatment are particularly important for housing. New development should take account of the existing relationship of buildings to landscape and the local means of boundary definition such as hedges, walls and fences. In general, every effort should be made to orientate dwellings so that they front existing roads and spaces, ensuring a balance with the need to promote features of environmental sustainability. The relationship of the perimeter of a development to its setting is important and developments which turn their back on existing roads do not integrate well with their context. An exception should be made where the characteristic layout is more organic, such as in many rural villages and smaller settlements throughout Wales where gables of dwellings are typically sited on the road frontage.



36 Felindre Farchos, Newport, Pembrokeshire

New housing designed to reinforce existing sense of place and community

5.11.5 The regular application of rigid highway standards with no consideration of Manual for Streets; over reliance on standard house types and a failure to relate to local context have all been identified as obstacles to good housing design and factors which mitigate against achieving a distinctive sense of place in housing development. Including the following elements in the design may help to create a sense of place:

- **varying density** to create differences in the built form to which residents and visitors can relate and make it an interesting place;
- **locating key buildings at corners or junctions** to establish a clear hierarchy of development;
- **exploiting existing natural features** or taking advantage of views and natural shelter;
- **varying elevational** treatment, materials and building form so that smaller groups of buildings are developed to which people can relate.



5.11.6 The street should be regarded as public space where people can meet. Street networks within housing developments should generally be interconnected or 'permeable' to facilitate safe walking and cycling. They should also connect with adjacent street networks and make provision for future connections with subsequent developments. This does not preclude the use of cul de sacs but they should be used with caution to avoid restricting permeability. Routes which increase crime risks, such as isolated routes to the rear of premises or routes which are not easily overlooked should be avoided.

5.11.7 Reference should be made to *Manual for Streets*, for information on the design options for car parking. The emphasis in the design of parking provision should be on integration with the overall setting and recognition that car ownership and car size can vary with income, age, household composition, the type of housing and its location. Where and how cars are parked can be a major factor in the quality of a development. Vehicles should not be allowed to dominate the space or inconvenience pedestrians and cyclists. At the same time, the needs of disabled people to park near their dwellings should be acknowledged. A balance needs to be struck between the expectations of car owners, in particular the desire to park as near to houses as possible, to be secure and overlooked and the need to maintain the character of the development.

5.12 Employment and Commercial Areas

5.12.1 The design of employment areas is important, as high quality of design can add value to commercial property, support the image of modern businesses and encourage further investment. Early consideration of the need to embrace high environmental standards, low carbon aspirations and minimise the need for artificially cooled buildings, provide opportunities to develop shared low carbon and renewable energy options.

5.12.2 Large new employment buildings can often make a bold statement of their purpose. Recognising the functionality of business premises is important to ensure they contribute to the economic success of the occupier. However, robust design, high quality materials, flexibility of exterior and interior layout and appropriate landscape treatment such as earth form or planting, can help to integrate new business premises into their surroundings, minimise the need to artificially cool buildings and allow for easier conversion by successive occupiers. Service and utility features, exposed and imaginatively detailed, may in many cases provide elements of interest in otherwise plain facades. The need to consider the building and landscape maintenance processes once the development is completed is also essential to ensure that the development remains integrated.

5.12.3 Where employment premises are grouped together, a sufficient scale of planting and earth forms is essential, to absorb the bulk of the building, ancillary circulation, and parking areas. Opportunities to minimise energy demand through the adoption of renewable energy or low carbon technology such as district heating schemes including CHP running on low carbon fuel, should be realised. Mixed employment uses would improve the feasibility and viability of such schemes and care should be taken to avoid the creation of insular estates. Efforts should be made to present a positive, outward looking image by ensuring key buildings within the development front onto roads and help improve connectivity. Accommodating parking within courtyard layouts can help to reduce the overall visual impact of parking areas. Separate, safe and attractive routes for pedestrians and cyclists, and high quality facilities for public transport should be incorporated. Low maintenance regimes will be particularly important in mixed occupancy areas.



37 | Technium OpTIC

Innovative design in commercial buildings

5.12.4 Where situated in proximity to other uses, smaller employment premises especially, will need to be more closely related in terms of scale and appearance to their context. This should not mean concealing their purpose but expressing it in a way which reflects or complements the setting. In some circumstances, especially in regeneration and rural areas, the conversion of existing buildings for employment purposes will be appropriate. However even in these areas there can also be a place for new buildings of an appropriate appearance.



38 | Penderyn Offices

Use of local materials to add character to a commercial building



Detailed Matters

5.13 Biodiversity

5.13.1 Local planning authorities have a duty to consider the conservation and enhancement of biodiversity in their planning policy and development management decision-making processes and to test their development plans with regard to significant effect on “European sites” through Habitats Regulations Appraisal²⁷. Good design can contribute to conserving or enhancing the wildlife interests of an area or site.

5.13.2 Designers should be aware that stakeholders can perceive features of wildlife interest as a characteristic of an area, in addition to the value of that feature for wildlife (such as an area of unmanaged open land within a housing estate, or a hedgerow that is rich in a variety of wildlife). Identifying and maximising opportunities to maintain and enhance biodiversity as part of the design process can be complementary to the inclusion of other features of environmental sustainability through design.

5.13.3 Creating space for biodiversity can enhance the ability of developments to adapt to changes in local environmental conditions over the life time of the built development which may result from climate change. The design and related long-term maintenance should be based on sufficient understanding of natural processes which are present to ensure that features of biodiversity interest can be sustained in the long term. In situations where protected habitats and species are involved appropriate specialist advice must be sought. Approaches that can be adopted within a design include:

- conservation, enhancement and creation of an existing feature
- measures to protect and/or encourage species and habitats.



39 | Sustainable drainage systems at Pontyclun

Use of sustainable drainage system as a regional control in a housing development

²⁷ Welsh Assembly Government (2009) Technical Advice Note 5: Nature Conservation and Planning (www.gov.wales/topics/planning/policy/tans/tan5/?lang=en)

5.14 The Public Realm

5.14.1 A high quality public realm can make a unique contribution to a stimulating environment and can provide a focus for community activity. The form and design of spaces and routes which comprise the public realm are critical to its success. Carefully designed and imaginative use of surfacing, changes in level, enclosure, lighting, street furniture and planting will enhance the overall environment and define its “sense of place”. Further guidance on integrated street design is available²⁸.

5.14.2 Particular attention is needed to reflect the needs of all sectors of the community in the design of public spaces and streets, and inclusive design principles should be applied to achieve this. A range of facilities may be needed to serve those such as carers or older people who may value locally based facilities; children, for whom segregation from traffic may be a particular concern; those with restricted mobility; and those with limited or no vision. The intention should be to encourage a hierarchy of connected public spaces so that there is a network of provision that reflects local needs.



40 | The 'Kite Tail' Aberafan Seafront, Port Talbot

Adding a visual interest to an area through use of street furniture and public art

²⁸ Welsh Assembly Government (2007) *Technical Advice Note 18: Transport* (www.gov.wales/topics/planning/policy/tans/tan18/?lang=en)
Department for Transport/Communities and Local Government/Welsh Assembly Government (2007) *Manual for Streets* (www.gov.uk/government/publications/manual-for-streets)
The Chartered Institute of Highways and Transportation (2010) *Manual for Streets 2* (www.gov.uk/government/publications/manual-for-streets-2)



5.14.3 To compete economically, communities need to identify and exploit their unique “personality” so that they offer different reasons for visits. A well designed public realm of high quality can help to create a “sense of place” in communities which add to their attraction beyond the immediate area. In the design and improvement of the public realm key considerations will be:

- the relationship of the space to buildings which enclose it;
- the fitness of the space for its intended purpose;
- the communal services required and their relationship with the type of development;
- the extent to which it is safe and perceived to be so.

5.14.4 The opportunity should be taken when improving the public realm to protect and enhance biodiversity and assist pollution abatement through careful design, implementation and maintenance of planting. Planting, particularly large tree species can also be used to improve microclimate and reduce dust and the perception of noise through, shade, shelter and screening. The use of Sustainable Drainage Systems (SUDS)²⁹ within the public realm can help reduce the localised impact of flooding.

5.14.5 The development should take positive steps to provide adequate public lighting, but also to minimise unnecessary light pollution in their schemes for enhancement of the public realm. Lighting should be considered as an integral and creative part of the design of the public realm. Consideration should be given to methods of:

- directing light more accurately;
- reducing carbon emission from the energy use of street lighting;
- reducing glare by use of low profile reflectors and ensuring appropriate rather than excessive levels of illumination.

5.14.6 Those involved in the design and management of the public realm should be aware of the potential for noise generation in their proposals and the impact this may have on neighbouring amenity. Opportunities to minimise ambient noise, such as traffic, should be explored and reflected in the layout and detailed design of the public realm and by use of low-noise surfacing materials and natural or man made barriers to noise.

5.14.7 The absence of appropriate long-term maintenance is a major factor in the deterioration of environmental and aesthetic standards in the public realm. Good maintenance is also vital to ensure an accessible environment for all. Proposals which focus on improvements to the public realm must incorporate management strategies and funding for the continued maintenance of these areas. The design should reflect the need to minimise the maintenance liability without compromising on design quality. The use of simple, but robust materials, adequate litter bins and avoidance of litter traps or design features which may act as crime and disorder generators can all help to reduce maintenance costs, safeguard appearance and maximise public enjoyment.



41

Seating at
Conwy

*Seating providing
visual interest as
well as being
practical*

²⁹ *Welsh Assembly Government (2004) Technical Advice Note 15: Development and Flood Risk (www.gov.wales/topics/planning/policy/tans/tan15/?lang=en)*

5.15 Public Art

5.15.1 Public art plays an important part in creating or enhancing individuality and distinctiveness, and in raising the profile of our towns, villages, cities and urban and rural landscape. The integration of the skills or work of a professional artist can add value and can also be employed at key locations to enhance legibility and public realm. There is considerable scope for integrating public art into the townscape, ranging from the dramatic to the subtle, from traditional landmark sculpture, commemorative works and smaller incidental interventions, to integrated works using contemporary and interactive media such as sound or lighting. The innovative design of street furniture or other functional objects can also be considered and increasingly, imaginative design of floorscape, railings, lighting and signage is being used to give everyday objects a unique appearance and identity. Through a considered choice of location and use of tactile materials, public art can and should be made accessible to all, whilst not itself compromising general accessibility.

5.15.2 Public art adds a social and cultural dimension to a town centre visit and may also enhance the cultural economy and support cultural tourism, as well as providing a stimulating environment where shoppers and visitors can linger, with obvious benefits to local traders. Implicit in achieving this is a commitment to quality in concept, design, craftsmanship and materials in all artwork commissions.



42 | Public Art in Wrexham

Adding interest to the town centre

5.15.3 The unique role of public art as a regenerative tool has long been recognised in Wales and internationally and the production and adoption of Public Art Strategies by a number of local planning authorities is helpful. There is considerable precedent and potential for private sector sponsorship of public art projects, particularly where large developments are proposed. Innovative, well considered and contemporary approaches can also attract contributions from dedicated trusts and foundations, as well as adding substantial publicity and marketing value.

5.15.4 Public art should be considered early in the design process and be integral to the overall design of a building, public space or place. The choice of artists and the nature of subsequent work should be the subject of full collaboration from the outset between the artist, the local community and professionals involved in the design process. Engendering a sense of local ownership and public responsibility for artwork is critical to the long-term success of public art projects. Public art professionals should be consulted at the earliest possible stage to identify opportunities and provide professional advice to local planning authorities and developers. In Wales the Arts Council of Wales promotes best practice through a range of schemes and partnerships and provides advice through their website³⁰.

³⁰ Arts Council of Wales (www.arts.wales/)



5.16 Signs and Advertisements

5.16.1 A key area in which individuality can be expressed is in the design of signs and advertisements. The degree to which signs are appropriate to their context is a critical consideration. Through skilful design it is possible to modify standard company signs to respect sensitive context without loss of corporate image and this practice should be encouraged. Whereas a sensitive or traditional approach to the design of signs may be needed in historic areas, elsewhere, imaginative signs, appropriately illuminated, can contribute to the vibrancy and visual interest of town centres. The use of neon lighting can be a sensitive issue but is likely to be most appropriate in busy shopping and commercial leisure areas. In larger urban centres bright illuminated signs can encourage a lively and successful evening economy. Care should always be taken however, to avoid a proliferation of signs that could lead to clutter and confusion in the street scene. Bilingual signs in English and Welsh provide an opportunity for innovative design.



43

Fitzhammon Embankment Public Art Scheme

Use of public art to create interest at night



44 | Signs for cyclists and pedestrians

Use of clear appropriate signage can enhance a user's experience of a place

5.16.2 It is important to ensure that signage is designed with the needs of visually and cognitively impaired people in mind and floor level advertising such as 'A' boards should be avoided where they would hamper movement.

5.17 Safety

5.17.1 Local authorities (including National Park Authorities) are required to have due regard to crime and disorder prevention in the exercise of their functions under Section 17 of the Crime and Disorder Act 1998. Consideration should be given to practical ways in which the design of development can reduce opportunities for crime, disorder and anti-social behaviour.

5.17.2 Local authorities are advised to consult Designing out Crime Officers on pre-applications and planning applications for those developments where there is potential to eliminate or reduce crime through the adoption of suitable measures at the design stage. This is especially important for major developments such as new housing estates, industrial estates, shopping centres, leisure complexes, schools and car parks. It is important to consult Designing out Crime Officers at as early stage as possible – by the time a formal application is submitted, the opportunity to take account of advice may already be limited.

5.17.3 The Safer Places³¹ and Secured by Design Initiative³² provide recognised standards that have been shown to reduce crime (particularly residential burglary) and the impact of crime upon neighbourhoods. It is desirable for the security of all housing developments, public buildings, and all buildings funded by public bodies, to achieve similar measurable standards. It is recognised, however, that security needs must be considered in conjunction with other objectives of good design and a balance will need to be struck between often competing desires for privacy, access for all and achieving security in the design of development.

5.17.4 Community Safety Partnerships in Wales³³ are required to undertake regular strategic assessments of crime and disorder and substance misuse issues in their areas and produce annual three year rolling Community Safety Plans. The design and security of all developments should reflect the strategic aims of the local safety plan. Design measures should be commensurate with identified risks and good practice, with the appropriate Wales Programme for Improvement Indicators and with development plan policies.

5.17.5 Both social and physical arrangements impact on incidence of crime, disorder and anti-social behaviour. All those engaged in the design process should be aware of the importance of social factors in determining how members of the community interact with the environment and each other. For example, when sites are selected, adequate provision of shops, leisure facilities and other services should be sought to support new development, and integration with existing transport systems should be achieved. Similarly, a mix of dwelling type should encourage occupation during the day and increase opportunity for natural surveillance, community interaction and environmental control.

5.17.6 The concept of 'designing out crime' requires full consideration by everyone involved in the design of development.



45 | Tenby

A positive relationship between private and public space, natural surveillance incorporated into the design of new flats



46 | Wrexham Town Centre

Artist designed seating in a communal space. The attention to detail and a sense of security created by natural surveillance help to make successful places

³¹ DCLG (2004) *Safer Places: The Planning System and Crime Prevention* (www.gov.uk/government/publications/safer-places-the-planning-system-and-crime-prevention)

³² *Secured by Design* (www.securedbydesign.com/)

³³ Home Office (2013) *Community Safety Partnerships* (www.gov.uk/government/policies/reducing-and-preventing-crime-2/supporting-pages/community-safety-partnerships)



The design of physical features such as the arrangement of infrastructure and buildings also impact on incidence of crime.

5.17.7 Attention should be given to the following at the outset of the design process:

- a layout which incorporates clear, direct routes which are desirable and hence likely to be well used;
- orientation of buildings, particularly housing, to allow natural surveillance. Careful design solutions will be needed to allow unobstructed views of neighbouring properties without compromising the need for privacy. Natural surveillance is particularly important in vulnerable areas such as communal space, play areas and parking spaces;
- design features which help to define clearly public and private areas. Design solutions are needed which avoid creating a “fortress mentality”. For instance through the use of symbolic barriers such as a change of surface treatment or narrowing which help to define defensible space;
- use of plant species to deter access, where appropriate, and careful selection and location of plant species in order to minimise opportunity for unobserved crime;
- provision of adequate street lighting.



6. Local Planning Authority

Design Policy and Advice

6.1 Local planning authorities are responsible for preparing design advice for their areas which takes account of national policy guidance and also reflects local context and issues. Advice should be disseminated through development plans and through a wide range of SPG. In the preparation of advice, local planning authorities should identify the user group or individuals at whom the advice is aimed and work collaboratively to ensure that the content, format and type of advice is most appropriate to meet users needs. Local planning authorities should examine how in the exercise of their statutory functions they can ensure they are responsive to local concerns. This may mean exploring new ways of achieving meaningful participation in policy formulation and in SPG preparation. The level of community involvement should be sufficient to allow adequate evaluation of the needs and concerns of end users, community and business interests at each stage of the design process.

Development Plans

6.2 Local planning authorities should not repeat national policy but include clear robust policies on design in their development plans which address local issues and should be based on relevant evidence. These should set out the planning authority's design expectations. They should not impose architectural styles or particular tastes but should secure good quality design as applied to the local context (local distinctiveness). Such local policies should reflect the objectives of good design set out in Section 2.

6.3 For development plans, achieving the preferred strategy and plan objectives may require strategic, generic and cross cutting design policy. Plans may incorporate targeted design policies for major areas of change or protection, strategic sites or for certain types of development. If there are specific issues in a local planning authority's area which are likely to be relevant to the content of design and access statements and/or intends to produce SPG, these should be signposted in the development plan.

6.4 The development plan can identify the need for a more rigorous approach by applicants to the statutory design and access requirements than is advised by national policy, provided there is evidence to justify such an approach. Design and access statements must always include an appraisal of the development's context, and include relevant policies set out in the development plan, national planning policy and any other material policy considerations.



47 Ceredigion County Council
Offices, Aberystwyth

*Achieving high sustainable
building standards*

Developing Local Sustainable Building Policies

6.5 Local circumstances may provide opportunities for local planning authorities to set local requirements on strategic sites identified in LDPs that exceed the minimum required by Building Regulations.



48 | Neath Port Talbot County Borough Council Offices, Baglan Energy Park

Local authorities can provide leadership in sustainable design through their own buildings

6.6 Planning authorities should apply the national planning policy to their local circumstances and explore opportunities to promote the underlying objectives of the policy in moving towards more sustainable and zero carbon buildings in Wales. Further advice is contained in Practice Guidance – Planning for Sustainable Buildings³⁴.

6.7 PPW sets out guidance on the selection of sites in order to deliver sustainability. The potential for strategic sites to contribute to the delivery of sustainable buildings (including zero carbon) should form part of this assessment. New development can be located so as to maximise opportunities for delivering higher sustainable building standards. This may, for example, include locating sites of specific uses together so as to make community heating schemes more viable by providing a sufficient heat load.

Strategic Sites

Site opportunities and constraints

6.8 The ability of a site to meet a minimum sustainable buildings standard will be dependent on the technical opportunities and constraints present. The location, layout, type, scale and mix of a development can provide opportunities and constraints to deliver the range of environmentally sustainable design solutions needed to meet a sustainable building standard.

6.9 For example higher densities and mixed use developments may make community heating, cooling and power (and reducing energy use from transport) supplied by low/zero carbon technologies both technically feasible and financially viable. On the other hand, tall buildings may reduce the potential for solar panels to be incorporated on adjacent buildings due to overshadowing. Below is a list of some of these factors but it will be the site specific circumstances that determine the potential for higher standards.

³⁴ Welsh Government (2014) Practice Guidance - Planning for Sustainable Buildings (www.gov.wales/topics/planning/policy/guidanceandleaflets/practice-guidance-planning-for-sustainable-buildings/?lang=en)



- Existing landscape and topography features
- The availability of a local district heat network
- An energy/heat load within or adjacent to the site that improves the viability of a local energy system
- An existing or proposed Energy Services Company
- Site provides advantageous conditions for a low and zero carbon energy technology (i.e. wind speed)
- Higher densities and mixed use developments
- The soil type of a site
- Sites at risk of flooding
- The provision of site wide recycling facilities
- A local authority collection system
- Current ecological value of the site
- Accessibility of the site to a public transport network
- Proximity to accessible local amenities
- Other factors which would enable a sustainable building standards to be met on a strategic site.

6.10 Planning authorities should engage with developers, landowners and the community to identify and discuss the opportunities for achieving higher sustainable building standards on a strategic site. An important part of this will be to consider whether local requirements are viable and will not act as an unreasonable barrier to development or planned growth, including the delivery of affordable housing.

Local requirements for sustainable buildings

6.11 When proposing any local requirements for sustainable building standards on strategic sites, planning authorities must be able to provide sufficient justification through an evidence base.

6.12 Local requirements for sustainable building standards on strategic sites should;

- be set out in the LDP, so as to ensure examination by an independent inspector. This is so that standards and requirements are properly consulted on and tested to ensure their ambition reflects local potential and are deliverable;
- relate to a strategic site as identified by the local planning authority in the LDP;
- be specified in terms of achievement of a nationally described sustainable buildings standard;
- be specified only in terms of a specific level against a sustainable building standard and should not seek to identify individual categories or credits that should be met (i.e. energy/CO₂);
- ensure the requirement is consistent with current and future changes to the Building Regulations, and take these timescales into account when setting higher sustainable building standards;

- be consistent with the key objectives of good design;
- not set out area-wide policies that include requirements for sustainable building standards, unless sufficient justification can be established.

Evidence base

6.13 In preparing policies in an LDP which seek higher sustainable building standards, local authorities will need to establish:-

- what is proposed is evidence-based and viable, having regard to the overall costs of bringing sites to the market (including the costs of any necessary supporting infrastructure) and the need to avoid any adverse impact on the development needs of communities;
- the need for higher sustainable building standards on that site above the minimum required by Building Regulations;
- what site specific opportunities are provided by the site to allow a building/development to achieve a higher sustainable building standard;
- the costs and benefits of delivering higher sustainable building standards.

Supplementary Planning Guidance (SPG)

6.14 Detailed design guidance, whether topic based, area based or site specific can often be more usefully addressed through SPG. Local planning authorities may wish to prepare an overall design guide which states the authority's vision, local context for a design and access statement, design process, design quality expectation and describes the characteristics of the area and any relevant sustainable building standards. Otherwise, types of SPG relating to design issues will fall into the following categories:



Area specific

Appropriate to guide development in key areas such as town centres, special landscape or conservation areas, or a distinct neighbourhood or urban quarter.

Types of area specific SPG include:

Urban design frameworks or strategies

Where there is a need to guide and promote change. These should explain how national and development plan policies apply to the area, including infrastructure provision, and set out comprehensive design principles, linking strategy to practical proposals and providing guidance for deciding planning applications. They should deal with an area “three dimensionally” so that guidance is not simply restricted to issues such as use, density standards and access. These should also illustrate how streets, squares and open spaces are to be connected; how movement patterns for all people whether travelling on foot, cycle, car or public transport will be managed; and, define heights, massing and bulk of buildings in relation to the spaces around them; and

Neighbourhood or district guides, countryside design summaries, landscape design guides, village design statements and town or village action plans may also fall within this category.

Design codes

This may include detailed drawing or diagrams, setting out in precise detail the design and planning principles that will apply to development in a particular place.

Site specific

Where guidance is needed on the way in which a particular site should be developed or to inform on characteristics of a specific site in accordance with local/national policy.

Guidance can be illustrated by concept diagrams, building envelope guidelines and three dimensional sketches of building forms and spaces. Prescriptive design and any suggestion of a particular style should be avoided.

These may include:

Development or planning briefs to explain how development plan policies should be applied to a specific site. The guidance should:

- set out the vision for a development;
- be informed by the site and context appraisal;
- state its objective(s) and show how the development plan's design/inclusiveness policies could be applied to the site;
- provide basic area and site appraisal including site constraints and opportunities, soil conditions, infrastructure, existing transport and access;
- set out the proposed movement patterns, uses, areas, mix of tenures, development densities and other relevant design objectives;
- inspire a high quality of design and take account of consultation undertaken.



Topic based

Where guidance is needed in relation to particular issues or uses.

Examples include:

Design guides

To provide detailed advice on how specific types of development can be carried out in accordance with national and development plan policies. Design guides may cover a wide range of design and development management topics including outlining what is required locally for design and access statements for particular land uses, shopfront design, public art, and/or landscape design. Special care should be taken in relation to guides on specific uses (such as housing) to ensure that diversity and integration with other land uses is encouraged. Design guidance should be used to guide the variety and juxtaposition of different uses.

Guidance on areas subject to regeneration

These would typically include a thorough assessment of existing characteristics, highlighting constraints and opportunities. Then relating opportunities for increased density to the transport and movement network, focussing major commercial and community buildings alongside major public transport routes and interchanges. Integrated public spaces to maximise their visual and accessible contribution to this movement network would also need to be considered. In terms of built form, guidance should normally encourage development which reflects the pattern of local streets and blocks, where the pattern makes a positive contribution to local identity and aids accessibility. It may also contain advice on issues such as scale or public realm. The objective should be to ensure that whole or parts of an urban area are developed in a comprehensive and connected way, respecting local distinctiveness.

Advice on climate change and sustainable building design

To provide more detail on issues related to siting with respect to micro-climate, design for passive and active solar heating, orientation with respect to sunlight and shelter from prevailing winds, sustainable water management, use of landform and planting, and optimising opportunities for maintaining and/or enhancing biodiversity.

Signs and advertisements

These may be particularly useful to clarify the local planning authority's expectations in different circumstances. In the processing of applications for advertisement consent and through their own functions in relation to street signing and in communicating information within the public realm local planning authorities also have a responsibility to set high design standards.

6.15 Although SPGs will be produced by local planning authorities it is important to develop design related guidance in consultation with the general public and with the private sector as well as other interested organisations. Care should be taken to ensure that participation is fully inclusive by appropriate choice of venue, timing of events and in the clarity of the material produced. Initiatives that enable stakeholder involvement in decision making help to contribute to the development of more sustainable communities and achieve development that better responds to local context³⁵.

Development Management

6.16 The appearance and function of proposed development, its scale and its relationship to its surroundings are material considerations in determining planning applications and appeals. Developments that do not address the objectives of good design should not be accepted.

Design and Access Statements

6.17 It is a statutory requirement that certain applications for planning permission and listed building consent are accompanied by a design and access statement (DAS)³⁶. Further guidance relating to the requirement for a DAS can be found in guidance produced by the Welsh Government and Design Commission for Wales³⁷.

6.18 The DAS is a communication tool which outlines how the design of the proposal has been considered from the outset of the development process and how the objectives of good design have been used to inform this. The benefit of the DAS to developers, applicants, local communities and local planning authorities is outlined in the above mentioned guidance.

Pre-application discussions³⁸

6.19 One aim of pre-application discussions should be to identify the key design and access issues arising from a development proposal at the outset. The basis for discussions on design will have been set by relevant national and development plan policies and SPG. Discussions should focus on meeting objectives of good design and covering the topics to be addressed in the design and access statement. Planning officers should give a clear opinion as to whether the proposed design and access statement, vision and objectives are in accordance with policy and SPG. Issues of detailed design would not normally be addressed until later in this evolving process. Discussions

³⁵ For useful guidance see *Planning Officers' Society Wales (2005) A Model Design Guide for Wales – Residential Development* (<http://dcfw.org/a-model-design-guide-for-wales-residential-development/>) and *WLGA (2007) Shaping the Way we Work, Live and Play* (www.wlga.gov.uk/sustainable-development/shaping-the-way-we-work-live-and-play)

³⁶ *The Town and Country Planning (Development Management Procedure) (Wales) Order 2012 (as amended)* (www.senedd.assembly.wales/mglssueHistoryHome.aspx?lId=6965)
The Planning (Listed Buildings and Conservation Areas) (Wales) Regulations 2012 (www.legislation.gov.uk/wsi/2012/793/contents/made)

³⁷ *Welsh Government (2016) Development Management Manual* (www.gov.wales/topics/planning/?lang=en)
Design Commission for Wales (2014) Design and Access Statements in Wales (<http://dcfw.org/design-and-access-statements-in-wales/>)
Welsh Government (2016) Technical Advice Note 12: Design – Guidance on Design and Access Statements (www.gov.wales/topics/planning/policy/tans/tan12/?lang=en)

³⁸ *Welsh Government (2012) Practice Guide: Realising the Potential of Pre-application Discussions* (www.gov.wales/topics/planning/policy/guidanceandleaflets/preappguide/?lang=en)
Welsh Government (2016) Development Management Manual (www.gov.wales/topics/planning/?lang=en)



should also highlight what information the local planning authority would require for outline planning applications.

6.20 Site & Context Analysis Guide: Capturing the value of a site³⁹ includes a series of questions on site and context analysis that can inform a development proposal and serve as prompts for planning officers in pre-application discussions. The questions can identify what analysis has been undertaken and how the emerging proposals respond to the unique features of the site. The guide can aid a constructive and informed dialogue at the pre-application stage and sets out a clear expectation of meaningful analysis at an early stage.

6.21 For large complex proposals, a pre-application draft design and access statement could be presented to the local planning authority and stakeholders for consideration. Local planning authorities may wish to make specific reference to this practice within their “notes for guidance” accompanying planning application forms.

Skills

6.22 It is important that local planning authorities have access to professional design skills. This could be through employing staff with those skills, sharing skills with other local planning authorities, or through the use of consultants. In addition, local authorities may wish to establish ‘in house’ design teams where relevant expertise exists. Local planning authorities could also use independent design advisory panels (such as the Design Commission for Wales’ Design Review Panel) which may include architects, urban designers, ecologists, engineers, building control, energy specialists, sustainability specialists and access officers whose skills could be utilised as the need arises: membership, however must not give rise to conflict of interest. Design panels could prove valuable not only in assessing contentious planning applications but in the preparation of design policies and guidance. The objective should be to raise skills and design capacity among officers and also to raise the design awareness of elected members.

³⁹ *Welsh Government (2016) Site & Context Analysis: Capturing the value of a site (www.gov.wales/topics/planning/policy/guidanceandleaflets/?lang=en)*



Appendix 1

Sources and Further Information

The Architecture Foundation (2000) Creative Spaces: A Toolkit for Participatory Urban Design

Biddulph, M (2001) Home Zones – A Planning and Design Handbook

Biddulph, M (2006) Introduction to Residential Layout

Cadw – Technical Guidance (<http://cadw.gov.wales/historicenvironment/conservation/technicalguidance/?lang=en>)

DCLG (2004) Safer Places: The Planning System and Crime Prevention (www.gov.uk/government/publications/safer-places-the-planning-system-and-crime-prevention)

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Appendix 2

Contacts

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Building Research Establishment (BRE) www.bre.co.uk

Canal & River Trust www.canalrivertrust.org.uk/

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Welsh Government www.gov.wales



Appendix 3

Credits

Page 2	Senedd, Cardiff	© Crown Copyright (2009) Visit Wales
Page 4	Coach House, Cardiff	Touchbase Design Ltd
Page 7	Esplanade House, Porthcawl	Stride Treglown Davies
Page 11	Ceiriog Valley	© Crown Copyright (2009) Visit Wales
Page 25	Galeri Caernarfon	Daniel Hopkinson Photography
Page 52	The Drift, Rhyl, Denbighshire	Denbighshire County Council
Page 62	Machynlleth Town Centre	© Crown Copyright (2009) Visit Wales
01	Ruthin Arts Centre	Sergison Bates Architects, Photographer: Dewi Tannant
02	Consultation in action	Blaenau Gwent County Borough Council
03	New boat store, Pembroke	Davies Sutton Architects
04	Cathays Park, Cardiff	Royal Commission on the Ancient Historic Monuments of Wales
05	Converted Chapel,	Pembrokeshire Coast National Park Authority Rhodiad y Brenin
06	St Donat's Arts Centre,	Loyn & Co Architects Llantwit Major
07	Brewery Quarter, Cardiff	Powell Dobson Architects
08	Clock Tower and the Ruthin townscape	Welsh Government, Photo Library Wales: Steve Benbow (left)
09	Environment Centre, Swansea	City and County of Swansea
10	Caernarfon Castle Walkway	Cadw
11	Llanfyllin Medical Centre	Martin Rogers, Archial Architects Ltd
12	The Nook, Oxwich	Dewi Evans Architects Ltd
13	Ty Gwala, Rudry	Loyn & Co Architects Ltd
14	The Hand, Lancaster Square, Llanrwst	Conwy County Borough Council
15	Drybridge, Monmouthshire and Monmouth County Council	Ainsley Gommon Architects for Charter Housing Association
16	Solar Shading in SA1, Swansea	Loyn & Co Architects

17	Cyclepaths and walking	Sustrans
18	Holyhead Harbour	Safle
19	Ruthin Art Centre	Royal Society of Architects in Wales
20	Centre for Alternative Technology, Machynlleth	Centre for Alternative Technology
21	Solar Panels, Coach House	Touchbase Design Ltd
22	Adnams Warehouse	AukettFitzroyRobinson: Photographer Alex Hill
23	Tenby	Pembrokeshire Coast National Park
24	Mid Wales	© Crown Copyright (2009) Visit Wales
25	Listed Buildings at Bethel Square, Brecon	Brecon Beacons National Park Authority: Architect, James Brotherhood, Associated for Boots Properties Plc
26	St Clare's Conversion	Flintshire County Council
27	Drift Park, Rhyl, Denbighshire	Denbighshire County Council
28	The Works, Ebbw Vale	Welsh Government
29	Beddgelert, Snowdonia National Park	Snowdonia National Park Authority
30	Ystradfellte	Brecon Beacons National Park Authority, Architects Bailey Roberts Jones Ltd, for Welsh Water
31	Amman & Gwendraeth Rail Corridor Study	RPS Chapman Warren for Amman Gwendraeth Partnership
32	Porthmadog	Sustrans, Photographer: Julian Cram
33	Cardiff Library	Cardiff Council
34	Millenium Centre, Cardiff	Jon Page Jenkins
35	Crickhowell	Brecon Beacons National Park Authority: Woodeson Drury, Countryside Properties Ltd for Acorn Televillages Ltd
36	Felindre Farchos, Newport, Pembrokeshire	Pembrokeshire Coast National Park Authority
37	Technium OpTIC	Welsh Government
38	Penderyn Offices	David Archer Architects, Photographer Keith Collie
39	Sustainable drainage systems at Pontyclun	MWH



40	The 'Kite Tail' Aberafan Seafront, Port Talbot	Neath Port Talbot County Borough Council
41	Seating at Conwy	Safle
42	Public Art in Wrexham	Safle
43	Fitzhammon Embankment Public Art Scheme	Cardiff Council
44	Signs for cyclists and pedestrians	Sustrans
45	Tenby	Pembrokeshire Coast National Park Authority
46	Wrexham Town Centre	Safle
47	Ceredigion County Council Offices, Aberystwyth	Ceredigion County Council
48	Neath Port Talbot County Borough Council Offices, Baglan Energy Park	Neath Port Talbot County Borough Council

