

Residential Development Design Guide













25













prepared by LDADESIGN for PLANNING OFFICERS SOCIETY FOR WALES with the support of WELSH ASSEMBLY GOVERNMENT March 2005

Residential Development Design Guide

foreword



I welcome the launch of this model design guide produced by the Planning Officers Society (Wales) as another milestone in moving our country towards a more sustainable future. The funds being made available by the Assembly Government under the Planning: delivering for Wales programme are producing not only extra resources to improve services for each local planning authority but also valuable all Wales tools such as this guide for changing how planning is implemented on the ground. Thanks are due to the members of the steering group and consultees for their contribution to the production of such a useful model. I commend it to all local planning authorities, their communities and to those who wish to build new homes in Wales.



Carwyn Jones Minister for Environment, Planning and Countryside

contents



RAISDALE ROAD: LOYN & CO ARCHITECTS



- 1.1 All design and development contributes to a nation's image and says much about its culture, confidence and aspirations. It also directly affects the social, economic and environmental well being of cities, towns and villages.
- 1.2 The Welsh Assembly Government is committed to achieving good design in all development at every scale throughout Wales. Good design is a key aim of the planning system and Planning Policy Wales [WAG 2002] requires that Unitary Development Plans (UDPs) provide clear policies setting out planning authorities' design expectations. Technical Advice Note 12 (TAN 12) [WAG 2002A] gives advice to local planning authorities on how good design may be facilitated within the planning system.
- 1.3 This document has been designed as a practical tool to be used by local planning authorities as supplementary planning guidance to meet the requirements of PPW and convey the design implications of TAN 12 to anyone proposing new residential development in excess of 1 dwelling. It is a requirement of PPW and TAN 12 that applications for planning permission are accompanied by a 'design statement'. This document therefore also clarifies the issues a design statement for new residential development should address.
- 1.4 The document seeks to establish a common design language for residential development in Wales, clarifying the fundamental design issues and how to address them by:
 - describing the key objectives of residential design and providing guidance on how they may be achieved;
 - describing the design process which should be followed to adequately address each objective;
 - providing information on how to submit a planning application to demonstrate how the requirement of good design has been addressed;
 - clarifying how proposals will be appraised on design grounds; and,
 - providing case study examples which illustrate how many of the principles have been achieved in recent developments in Wales.
- 1.5 Local authorities are also 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 and consider the issue of accessibility for all including the needs of those with visual and hearing impairments and those with limited mobility, at an early stage in the design process. This document addresses these issues and aims to promote safe inclusive environments through good design.
- 1.6 Design is only one consideration when making a decision to approve or refuse an application for planning permission. In addition to addressing the requirements of this guide development proposals will need to demonstrate compliance with the UDP and other material considerations and in some cases be accompanied by a formal Environmental Impact Statement.

2.0 the objectives of good design



- 2.1 The general aim of TAN 12 with respect to housing design and layout is 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 with reduced road widths;
- promote energy efficiency in new housing;
- secure the most efficient use of land including appropriate densities; and,
- consider and balance potential conflicts between these criteria.
- 2.2 Tan 12 spells out the objectives of good design and encourages a design process which seeks to address these aims from the outset of a project. The objectives of good design are based on an understanding of what makes existing places attractive and sustainable places in which to live.
- 2.3 This guide restates the objectives of good design set out in TAN 12 and provides some simple guidance on how each objective can be addressed in a typical residential development to achieve high quality, safe and inclusive residential development.
- 2.4 Anyone proposing a residential development will be expected to work with the local planning authority and stakeholders to develop a design that addresses each relevant objective. They should describe how their design achieves each objective in a 'design statement' to be submitted with the planning application. Design appraisal by the local planning authority may involve assessing how well each objective has been met before making a decision whether to support a proposal on design grounds.
- 2.5 The best way to meet the requirements of this guide is to develop a clear vision for the site which addresses and integrates each objective.

objective 1 natural heritage



ABOVE: SIMPLIFIED PROCESS OF CONSIDERING NATURAL HERITAGE RESOURCE AND DEFINING DEVEL-OPABLE AREA Development should be designed to integrate with, protect and enhance the landscape and biodiversity values of the site.

The landscape is one of the most important resources of Wales and needs to be protected and enhanced. This does not mean that there should be no change but requires high quality design solutions that complement or contribute to landscape character. Biodiversity is one of the building blocks of all life and needs to be preserved and enhanced wherever possible.

design guidance

- use specialist input such as ecologists, landscape architects and landscape managers to advise on natural heritage issues;
- ensure a thorough understanding of natural processes (e.g. flooding) and natural heritage resources relevant to the site and design to positively incorporate areas with established importance;
- design in new features to promote biodiversity, for example by using native trees or developing the ecological value of sustainable urban drainage features;
- ensure that features with established ecological or landscape value are protected throughout the site clearance and construction process;
- compensate for any loss of biodiversity elsewhere on site or off site if necessary;
- put in place mechanisms for positive and sustainable management and aftercare of landscape and ecological resources.

Box 1 | incorporating natural heritage

Landscape and ecological resources are often seen as a constraint to development. Often the reverse could be true. The sensitive incorporation of natural heritage can in fact help to give a site a distinct identity and possibly even a marketing advantage. The value of trees and other elements of natural heritage cannot be overstated. As well as giving a development a sense of instant maturity, a growing body of evidence points to health and well-being benefits. The key to addressing natural heritage is to ensure that it forms a positive part of the vision for the site's development and is not simply a hindrance to a standard layout.



objective 2 compactness

FLATS DEVELOPMENT IN TENBY. THE DENSITY OF THE SCHEME FITS WITH THE TOWN SCAPE WHILST AT THE SAME TIME PROVIDING A DENSITY OF USE THAT SUPPORTS THE FUNCTIONS OF THE TOWN CENTRE

Development should use land efficiently and where appropriate provide a density of use/population that supports public transport and commercial/ community services.

Compact development forms minimise land take and encourages densities sufficient to support local services and amenities. This in turn enhances the sense of community and reduces the need to travel. This is not to suggest that compactness should be as high as possible everywhere. It will vary according to context and in some locations a low density solution may be most appropriate.



design guidance

- ensure density relates to the vision for the site and an understanding of its urban or landscape character context - for example is it 'tight and urban' or 'loose, leafy and suburban'?
- where ecological and landscape resources are to be protected design-in natural heritage as part of green space but discuss with the planning authority where it is appropriate to maintain overall site density by creating higher densities in certain areas;
- use higher densities positively to define spaces, frontages and main streets in accessible areas or around concentrations of services/facilities;
- design open space as an integral part of built form and locate provision so that it does not detract from density of use/population around concentrations of services/facilities;
- integrate parking at planning authority standards efficiently but design in some flexibility for parking growth without encouraging greater numbers and loss of compactness;
- ensure that the compact development form still allows for adequate green space and room for tree roots and canopies to spread.



objective 3 accessibility & ease of movement

Create development layouts that are accessible to all in society, make links into surrounding areas, create new links where necessary and ensure that it is easy to get from A-B within a development.

Accessibility and ease of movement considerations effectively form the urban structure of a place. They determine how effectively it connects with the existing urban and rural fabric and influence key issues such as the 'walkability' of places, reducing car use and enhancing the life and vitality of streets and spaces. It is vital that the pattern of accessibility and ease of movement is designed hand in hand with

measures to reduce crime and create safe and secure streets, spaces and buildings.

design guidance

- ensure a collaborative design approach in which vehicular, pedestrian and cycle linkages are designed in conjunction with the 'urban design' for the site. In practice this means ensuring that the people responsible for the highways and urban design work closely together;
- design 'access for all' including the needs of those with visual and hearing impairments and those with limited mobility;
- design to connect with adjacent places and communities;
- ensure safe and efficient access for all modes of transport, emergency services and other service vehicles but wherever possible give priority to pedestrian and cyclist movement;
- ensure good access for/to public transport where available;
- ensure that routes within the site also allow for future stages of development;
- distinguish between primary routes, secondary routes and tertiary routes by varying street cross-section and design. This can help to reinforce a hierarchy of streets and spaces that makes the development easier to understand (see legibility below). It can also be important in defining areas that are public and those that are solely for residents, helping to discourage crime (see Box 2 on page 11);
- establish a layout that is permeable and interconnected within the site but avoid any 'short-cuts' or routes that will be underused or not overlooked;
- design for low vehicle speeds to ensure that streets and spaces are comfortable for pedestrians and cyclists to use. This can be done by minimising straight stretches of road with extended forward visibility and through the use of right angle junctions and minimum (2.4m) visibility splays where appropriate.



objective 4.0 legibility

Create development layouts that are easy to understand and find your way around.

The structure of key streets and spaces forms the main image of a place and makes it easy for people to orientate them selves and find their way around. It helps to create the identity of a place and the perception of it by others.

design guidance

- ensure that the movement function of each street is reinforced by the width of the carriageway, the design of the public realm and the scale, form and design of adjacent buildings. In this way it is possible to create a hierarchy of streets, each with a clear movement role and identity which helps people to find their way around a development;
- design to create a positive image and sense of place for the development - avoid a negative identity such as, for example' the estate off the 'ring road';
- tie the development into the existing pattern of landscape, streets and roads so that it is contiguous with the existing urban or rural fabric. In particular integrate with the main uninterrupted linear features, such as existing landscape elements, streets, footpaths and cycleways. This helps to reinforce the pattern and legibility of the site context;
- carefully consider the placement and design of landscape and buildings to create memorable spaces, landmarks, vistas and focal points;
- link to existing landmarks and views as orientating features;
- ensure that it would be easy for a resident of the proposed development to direct someone to where they live with reference to the key streets, spaces and landmarks.

LEGIBILITY: THE MAIN STREET CREATES THE SPINE OF THE DEVELOPMENT. LANDMARK BUILDINGS DEFINE THE ENTRANCE TO THE DEVELOPMENT



Box 2 | hierarchy of streets and spaces

The development of a street and space hierarchy is the opportunity to bring together accessibility and urban form considerations into a cohesive plan. It requires collaborative working between the designer and the highways engineer. The pattern of streets and spaces should provide for the required vehicular, pedestrian and cyclist access whilst at the same time sub-dividing the site into blocks that create an attractive urban form. The development of a hierarchy implies making some streets more significant in both movement and urban design terms than others so that they 'stand out' helping people orientate themselves within a development, for example by being able to recognise that they are on the 'main street'. The most legible streets are often simple and uncluttered with an overall consistency of materials and architectural treatment. The hierarchy of streets and spaces is also important to crime prevention through design - secondary and tertiary streets on the hierarchy which may give access to the main areas of housing can be designed to discourage intruders by providing high levels of over looking and creating the feeling of a semi-private environment.

Development of the hierarchy should involve:

- Inking the principal streets within the urban structure (for example the 'High Street') with the principle accessibility function where traffic flows allow;
- differentiating streets through variations in cross section, building enclosure and detailed design in order to emphasise the relative importance of the street. For example the 'High Street' may have a wide carriageway, generous footpaths including tree planting and three storey houses. The secondary street may have a narrower carriageway, standard width footpaths and 2 storey buildings located to the edge of footpath. These simple devices serve to differentiate streets and spaces from each other.

Within an overall well connected and permeable urban structure there should be opportunities for the full range of streets including cul-de-sacs. However a monoculture of street types should normally be avoided.

For each street and space in the hierarchy within a development the developer / designer should be able to describe:

- firstly, its desired character and role within the structure of the development
- secondly, its accessibility and traffic function;
- thirdly, its design characteristics.







CULDE SAC - CIRCUITOUS ROUTES BETWEEN A AND B - POOR PEMEABILITY

BELOW: SUB DIVISION PATTERN CARDIFF - WITHIN THE GRID LAYOUT THERE IS A CLEAR HIERARCHY OF MOVEMENT WHICH IS SUPPORTED BY THE SCALE OF THE BUILT FORM. THE MAIN STREETS INTEGRATE WITH THE REST OF THE CITY, A PRINCIPLE WHICH CAN BE APPLIED TO A SITE OF ANY SIZE. HOWEVER ACCESSIBILITY AND LEGIBILITY IS JUST ONE ELEMENT OF URBAN FORM. USE, TENURE AND MANAGEMENT WILL ALSO INFLUENCE THE SUCCESS OF A PLACE







ABOVE: STREETS CAN BE GIVEN DIFFERENT CROSS SECTIONS TO EXPRESS THEIR RELATIVE IMPORTANCE IN TERMS OF BOTH MOVEMENT AND URBAN STRUCTURE STRENGTHENING LEGIBILITY

a model design guide 12 for Wales residential development

objective 5 character and context

Development should respond to the character and local distinctiveness of site context.

The character and context of any development is created by the locally distinctive patterns and form of development, landscape, culture and biodiversity. These elements have often built up over a considerable time and tell a story of the site's history and evolution. The create its 'sense of place'.

The character and context of a site should influence design positively so that development does not simply replace what was there but reflects and responds to it. If the context to a development has been compromised by an earlier stage of development it should not be seen as a reason to perpetuate what has been done before.

Opportunities should be sought to deliver high quality sustainable development that reflects the technologies and aesthetics of the 21st century and creates a strong sense of place.

design guidance

- respond to not just the physical appearance of the site and context but also it's history and cultural importance. Old maps can be a great source of information and inspiration and often show how traditional forms of development addressed local conditions;
- ensure that the vision for the site responds to an appraisal of character and context - be able to describe what sort of place the development will become and how it will relate to the surrounding physical, historical and cultural context;
- decide whether to directly reference existing character or design to create a new identity that complements it;
- follow through the vision for the site to detailed design issues such as public realm, plot characteristics, building thresholds etc.;
- protect or enhance site elements contributing to site and context character where they have a long term sustainable future as part of the development;
- identify the pattern of streets and spaces in the best and most successful parts of nearby settlements and where possible design the proposed development to echo some of these characteristics;
- investigate plot width, depth and building height in good examples of locally distinctive development and see whether it is appropriate to adopt a similar pattern of built form;
- where possible adopt any locally distinctive, consistent and positive treatment of the area between the back of footpath and front of house (such as small front gardens);
- design to encourage the development of character and visual richness (see box 3 and 4, page 14);
- use plant material that contributes to biodiversity and grows and thrives locally;
- use local skills and expertise wherever possible skilled local workmanship can result in development that is in keeping with local character.

LEFT TO RIGHT: BURRY PORT: GWALIA/PCKO ARCHITECTS | RAISADALE ROAD: LOYN & CO PRIVATE HOUSE: DAVID THOMAS



Box 3 | character and context: innovative design

Often there is a perception that innovative 'contemporary' design conflicts with established patterns of settlement and traditional styles of architecture. In reality architectural styles and traditions have evolved numerous times in the past in response to changing social and economic conditions. There is no reason why design which uses modern materials and responds to contemporary aesthetics should not fit in with context as well as more traditional forms of development.

When the merits of 'contemporary' versus 'traditional' architecture are considered the debate often revolves around the style of the building itself. Often some of the most important design issues related to character and context are totally overlooked. These can be simple issues like building setback, plot width, building height or verticality. If these are responded to appropriately then architecture using modern materials and construction methods, with styling that reflects aesthetics of the 21st century, can be entirely in-keeping with character and context.

Box 4 | character and context: visual richness

Visual richness does not imply fussy, complicated or expensive design. In fact many of our best settlements and built form models such as the Victorian terrace are very simple The richness comes from the simple elegance of some of the basic architectural details (such as sash windows), scale and proportion and also from the tone and quality of materials. Public realm is also important with the natural weathering of good quality natural materials adding to richness over time. However richness also comes from knowing where to do something special. Added building height on corners, well thought out articulation where buildings turn corners and well-detailed facades at the ends of vistas are just a few simple examples where the richness of a scheme can be enhanced. This guide encourages richness of detail in all residential schemes.



LEFT TO RIGHT:

1. VISUAL RICHNESS IN A MODEST TERRACE WITH PERSONALISED FRONT GARDENS. 2. SUBTLE USE OF COLOUR AND JUXTAPOSITION WITH MODERN MATERIALS IN CARDIFE 3. TIMBER SLATE AND STEEL IN A NEW DEVELOPMENT, BURRYPORT.

character and context



ABOVE:

A TRADITIONAL APPROACH TO CHARACTER AND CONTEXT: AT THE CRICKHOWELL TELEVILLAGE THE DESIGNERS HAVE RESPONDED STRONGLY TO THE FEEL OF THE EXISTING SETTLEMENT ABOVE. LEFT: TRADITIONAL MATERIALS AND, IN PLACES, FRONTAGE TREATMENTS HAVE BEEN REPLICATED.



PLAS GWENFREWI: A SUCCESSFUL AND SENSITIVE CONTEMPORARY RESPONSE TO AN HISTORIC BUILDING



objective 6 continuity and enclosure

Streets and spaces should be overlooked with continuous street frontage:

Enclosure and continuity of street frontage creates spaces that are overlooked and are therefore safer and more pleasant to use. They maximise opportunities for social interaction and create a stronger sense of place and a more recognisable identity. Continuity and enclosure can also be created by tree and hedge planting, walls and fences. Over the centuries most of our best settlements have been based around the concept of clearly defined streets and spaces.

design guidance

- ensure the block structure / layout allows for overlooking, enclosure of streets and spaces and a clear distinction between public and private areas. In practice perimeter blocks are the best way to achieve this;
- in the absence of building frontages use hard and soft landscape elements where necessary to provide continuity and enclosure of streets and spaces;
- Iocate parking to avoid disruption to continuity of street frontage. This will mean avoiding on-plot parking to the front of house and considering on-street parking, courtyard parking or provision of parking at the side of house. However always ensure good overlooking and surveillance of parking areas by the car owners;
- ensure adequate building height in relation to street width to create a sense of enclosure;
- correlate the main pedestrian/cycle routes with the most overlooked areas to create a safe public realm;
- locate active frontages and entrances that contribute to the vitality of streets/spaces;
- clearly demarcate public and private space and avoid left over space;

CONTINUITY OF STREET FRONTAGE CREATED THROUGH TERRACED FORMS ALONG MAIN STREET. ELSEWHERE BUILDINGS TO FRONT PLOT MAINTAIN CONTINUITY



continuity and enclosure



EXAMPLES ABOVE: SIMPLE APPROACHES TO CONTINUITY OF FRONTAGE AND ENCLOSURE OF STREETS AND SPACES. BUILDINGS ADDRESS THE STREET CREATING A SAFE AND OVERLOOKED PUBLIC REALM.



CONTEMPORARY URBAN INFILL MAINTAINS THE CONTINUITY OF BUILDING LINE AND ENCLOSURE OF THE STREET. ALTHOUGH ARCHITECTURALLY DISTINCTIVE IT FITS INTO THE HISTORIC STREET: PHOTO BY MIKE BIDDULPH

GOOD OVER LOOKING OF GREENSPACE - ESSENTIAL TO ENSURE SAFE AND CARED FOR PUBLIC REALM



objective 7 public realm

Ensure high quality, attractive and safe streets and spaces for all members of society

Public realm is the space that is accessible physically, visually and culturally to the public. In residential developments it includes the streets, green spaces, squares and playgrounds. The public realm is where chance meetings between neighbours happen, or community events occur. It is vital not just to the quality of a development but how pleasant and sociable it is to live in.

design guidance

- plan the public realm as an integral part of the development and not as an add-on. This means agreeing how much public open space is required with the planning authority and designing it in as a positive part of the urban form, often in conjunction with measures to protect and manage natural heritage on the site;
- avoid shared private drives in which the responsibility to care for and maintain public realm is not absolutely clear;
- ensure that public realm is clearly separate from private space; integrate the public realm design with that of the built form - for example create higher density areas with taller houses around a focal square or centre which could serve as a community focus;
- use a limited palette of simple, robust hard wearing and preferably natural materials for hard landscape areas, ensuring that they have been agreed with the planning authority;
- create simple, well enclosed spaces with simple, well designed and robust street furniture located to minimise visual clutter, physical obstruction and avoid anti-social behaviour;
- carefully consider the scale and form of key streets and spaces visit other spaces of a similar size to ensure that it is appropriate to the type of use planned;
- minimise 'landscape' areas that serve no useful function as part of the public realm. Instead optimise the impact of street trees and private realm landscape as a means to green the development.



objective 8 variety and diversity

Wherever possible there should be a mix of uses, and variety and choice in types of properties and places.

Although this guide is intended principally for applicants for residential development, there is increasingly a need to mix uses in order to build sustainable communities. Whilst this is particularly the case for larger developments, even small developments may be able to offer opportunities to contribute to local sustainability through the provision of facilities such as shops, offices or workspaces.

BELOW: BRAINS BREWERY CARDIFF. A SUCCESSFUL INNER CITY MIXED USE DEVELOPMENT WITH RESIDENTIAL, LEISURE AND RETAIL USES



design guidance

- consider whether there are opportunities to provide other uses, in addition to residential, that will make the development more selfcontained, reducing the need for car use; and/or provide facilities and services that will make the local area more sustainable;
- where other uses are appropriate, consider greater numbers of smaller uses in preference to one larger site user. For example, a range of businesses and smaller shops will help to animate public streets and spaces more successfully than a single large supermarket;
- mix uses vertically as well as horizontally. For example consider residential or above ground floor office use or the provision of livework units;
- allow for future changes in the use of ground floor units in key locations such as next to public spaces and on street corners. This may involve allowing greater floor to ceiling heights and flexible spaces within the ground floor of such buildings;
- avoid any ground floor uses that do not provide an active frontage such as large buildings without door or window openings at ground floor level;
- provide a mix of tenures and property types within sufficiently large development to encourage the development of a diverse community with living opportunities for all members of society. Pepper-pot the 'affordable' housing to meet the requirements of the registered social landlord. Normally this means in clusters;
- old buildings can be retained to add interest and diversity to the development;

NON RESIDENTIAL USES INTEGRATED AT CORE OF DEVELOPMENT. AFFORDABLE HOUSING PEPPER-POTTED

objective 9 adaptability

Buildings and spaces should be designed so that they are flexible and adaptable and can be used for a variety of uses over time.

Successful buildings change use several times over their lifetime and flexibility is vital to longterm sustainability and longevity.

PLAS GWENFREWI:

BUILDINGS CAN CHANGE USE SEVERAL TIMES OVER THEIR LIFETIME AND SHOULD BE DESIGNED TO BE FLEXIBLE AND ADAPTABLE AS THIS OLD CHAPEL HAS PROVED TO BE.



design guidance

- create a street layout or block structure that integrates with the surrounding urban or rural fabric and which allows maximum flexibility for redevelopment in the future. On sites where the topography allows, a well-connected and permeable grid may be the best way of achieving this. Look at the best parts of existing settlements in the area and consider how and why they have stood the test of time;
- design streets and spaces to be robust, simple and clutter free, allowing for a variety of possible uses;
- design buildings to be flexible and adaptable. In practice this means providing the room for expansion together with building forms that are capable of conversion and expansion such as framed construction. Residential units designed with higher ceilings at ground floor level would allow conversion to retail at a later date, for example. This concept can also be applied to internal spaces which should be capable of being adapted to meet the requirements of different users in the future;
 - planned open space should be designed to be flexible and capable of being used for a variety of uses over its lifetime;
- wherever possible design for longevity.

AN ADAPTABLE BLOCK STRUCTURE CAPABLE OF ACCOMMODATING A RANGE OF DEVELOPMENT SCENARIOS



objective 10 resource efficiency

Buildings and landscape should minimise resource use in their construction, operation and maintenance.

The energy consumed in the construction and operation of a building results in at least 50% of UK CO² emissions. The initial design of a building can have a huge impact on energy usage over its lifetime. However, energy use can also be minimised by making the best use of buildings and materials already on site, working with the topography to create suitable microclimates, and using tree planting and shelterbelts to improve microclimate.

BELOW: SUSTAINABLE FEATURES WERE BUILT INTO THE SWANSEA FOYER BY GWALIA / PCKO ARCHITECTS FROM THE OUTSET



design guidance

- always consider the re-use of existing buildings on the site where feasible and recycle existing materials gained from demolition and site clearance;
- 'passive design' can be an effective way to deliver energy efficiency. This involves considering the orientation of buildings to create the correct balance of shade and solar gain, optimal levels of insulation, compact building forms, use of natural ventilation and window size etc. to achieve appropriate thermal mass and air tightness;
- consider the use of materials that are durable, sustainably produced and have low embodied energy both in terms of their production and transportation to site. This would favour the use of locally sourced materials. However it may equally mean using extremely 'low energy' materials made elsewhere or provided to the site as pre-fabricated elements. Encourage the use of reused/recycled materials and components;
- design in sustainable urban drainage systems (SUDS) from the outset of the project and not as an afterthought. Soak-aways, balancing ponds, reed beds and other sustainable urban drainage elements should always be integrated as a positive part of the layout where possible;
- on large sites or development areas consider low-carbon heating systems and renewable energy installations (TAN 8) such as solar water heating and use of biofuels. Also on large sites consider the use of combined heat power (CHP) as a possible source of heating and power. These need to be designed-in as part of the infrastructure right from the outset of projects;
- design buildings and external spaces to provide space for effective recycling and composting facilities;
- conserve and protect existing site topsoil where possible and reuse in landscape schemes to minimise the need to import additional topsoil or soil ameliorants;
- design landscape to thrive in local microclimatic and soil conditions. This normally requires some use of native locally occurring species or species well adapted to local conditions;
 - reference technical sources on how resource efficiency can be delivered, for example the WWF guide to sustainable housing.

3.0 the design process

3.0.1 Without a logical, comprehensive and inclusive design process it will be virtually impossible to achieve good design. An effective design process consists of:

- effective consultation and engagement throughout the project
- an inception phase
- policy review
- context and site appraisal
- visioning
- design development and refinement

Planning authorities will expect anyone proposing residential development to describe the design process followed in a design statement which should accompany every application. It is therefore advisable to agree the design process with the planning authority before developing plans for any site.

3.1 consultation and engagement

- 3.1.1 Designs should be developed in consultation and engagement with the planning authority, local stakeholders and the community. Consultation is essential to address key planning and design concerns before taking a design too far. The first consultee should be the planning authority to fully understand the issues that will need to be addressed in developing the design. This initial meeting may help to clarify which skills will be needed on the design team, other stakeholders to consult as well as confirming contacts and a programme for submitting the application. Key issues to consider in carrying out a programme of consultation and engagement are:
- develop the consultation/engagement programme in agreement with the planning authority to reflect the local importance or scale of the project. In the simplest of cases this may involve little more than informing the neighbours and discussing concerns with them. For larger projects it may involve a more extensive series of events and meetings such as visioning events, enquiry by design or focus group meetings;
- consider the use of experts who are experienced in the management and facilitation of consultation and engagement;
- clearly set out the parameters of the consultation and engagement process to participants at the outset and spell out the fixes such as the number and density of houses allocated for the site. Avoid revisiting first principles such as whether the site should have been identified for development in the first place;



IMAGES: THE LEVEL OF CONSULTATION WILL VARY FROM PROJECT TO PROJECT. FOR LARGE OR SENSITIVE PROJECTS VISIONING AND DESIGN DEVELOPMENT CAN INCLUDE 'ENQUIRY BY DESIGN' IN WHICH STAKEHOLDERS ARE INVOLVED IN THE DESIGN PROCESS. CONSULTEES CAN BE ENCOURAGED TO PROVIDE CREATIVE INPUT IN A VARIETY OF WAYS.

- always hold pre-application discussions with the planning authority to confirm the vision (3.5) for the site before plans have been resolved;
- consult with relevant authorities including the police (through the local architectural liaison officer), Environment Agency, Countryside Council for Wales etc.;
- provide opportunities for the community and stakeholders to provide input into the design process before plans have been prepared so that there is a genuine opportunity for ideas and suggestions to be responded to;
- always let people know how their comments / input will be used at the outset and give them feedback on how/if comments have been taken into account;
- consultation and engagement should be seen as part of a collaborative approach in which the design team, planning authority and stakeholders influence the final design solution.

3.2 inception phase

- 3.2.1 The easiest way to deliver well-designed, sustainable development is to employ a good design team. On the whole, good designers produce good design and quicker planning permission. In considering what consultants to appoint always:
- use consultants with a proven track record and skills in the delivery of well designed sustainable development; and,
- select consultants on the basis of quality as well as price in the long run a good designer will be cost effective and should be able to secure a planning permission efficiently.

3.3 policy review

- 3.3.1 Developers and designers must understand the planning policy context within which they are working.
- 3.3.2 In particular the following should be considered:
 - National policy and guidance;
 - Development Plan Policies in the Development Plan;
 - Other Supplementary Planning Guidance;
 - Standards and regulations applying within the LPA area;



TAN 12

- Advice from statutory consultees.
- Legal/planning constraints (eg Public Rights of Way, Listed Buildings, Tree Preservation Orders, easements etc.).
- Local initiatives such as design advisory panels, Conservation Area advisory groups etc. who may be a source of assistance and information.
- Planning history including previous planning and appeal decisions and results of public consultations, particularly with respect to design issues.
- Non-statutory design guidance.

3.4 context and site appraisal

- 3.4.1 To adequately address each design objective, certain characteristics of the context and site need to be identified, recorded and responded to by the designer. The attributes of context and site essential to an understanding of any place and to enable development are:
 - its history and pattern of growth;
 - its landscape and biodiversity;
 - the social and economic profile;
 - patterns of movement and the location of local facilities and services;
 - site constraints and opportunities, (including topography and existing buildings)
- 3.4.2 Not all of these will be relevant to all projects. The local authority can advise on the main site and context issues to concentrate on.
- 3.4.3 Site and context appraisal should always be carried out by qualified professionals. These may include:
 - landscape architect
 - urban designer
 - architect



- town planner arboriculturist
- 3.4.4 Where they have been completed Biodiversity Action Plans, Conservation Strategies, LANDMAP studies and others carried out by the LPA should be referred to as these may be useful sources of data relating to the site and context. LANDMAP studies normally include information on scenic, sensory, ecological, archaeological and cultural aspects of an area.





LEFT: AN ECOLOGICAL SURVEY SHOULD ALWAYS BE A PRECURSOR TO THE DEVELOPMENT OF ANY SITE. MANY SPECIES ARE PROTECT BY LAW AND DISTURBING THEM IS AN OFFENCE.

History and pattern of growth

- 3.4.5 The way in which a place has developed and evolved in the past can give clues as to how change should occur in the future. For example does the form of a place reflect a pattern of incremental linear growth? This may place special importance on street frontages and building setbacks along main roads. Analysis of growth patterns can give important clues as to how to deal with site characteristics such as steep slopes or poor microclimate; how did they deal with these factors in the past? How should we deal with them using modern techniques?
- 3.4.6 The best way to appraise history and patterns of growth is by looking at historic and present day plans, together with topographic and geological plans.

Factors to consider in the appraisal of history and pattern of growth include:

- the origins and historical development of the settlement within its natural setting;
- settlement form and surviving elements of historic street pattern or plot subdivisions;
- areas of distinctive townscape character;
- distinctive layout, form, scale and uses of buildings and spaces;
- typical building plot characteristics (density, size, shape, ratio of building to space etc.);
- typical treatment of building setbacks, frontages and boundaries;
- local/regional building traditions (form and architectural style), materials and design details;
- prevalent colours and textures or other special or distinctive features;
- important buildings, landmarks, gateways and important views and vistas;

Natural Heritage

- 3.4.7 The character of an area can be reflected in new development through the pattern of built form and its relationship to topography; the form and materials used for building; and the approach to land-scape design. What is important in terms of landscape character and how should the proposed development respond to it?
- 3.4.8 The biodiversity of a site for development must always be understood in detail and will require onsite survey. Biodiversity of site context can be ascertained by sourcing existing information such as the CCW Phase 1 Ecological Survey, by talking to local ecological and wildlife groups or through new ecological survey.







LEFT: LLANTRISANT HISTORIC MAP, BLOCK PATTERN 1885 AND PRESENT DAY - CONSIDERATION OF HOW A SETTLEMENT HAS GROWN CAN HELP TO IDENTIFY THE MOST APPROPRIATE PATTERN FOR NEW GROWTH AND THE MOST IMPORTANT SPATIAL QUALI-TIES TO RETAIN.

Factors to consider in the appraisal of natural heritage include:

- visibility of site;
- role/prominence of the site in important views within the area from which the site is visible;
- the character of the landscape surrounding the site and important features that contribute to it;
- the role of the site, if any, in contributing to the character of the surrounding landscape;
- how the site relates to the surrounding landscape (e.g. position in relation to topography, aspect, character of edges, visual prominence etc.);
- the features that define its natural setting and natural edges (e.g. ridge-lines, valleys, blocks of vegetation);
- the role, if any, of the site in relation to the setting of any adjacent settlement;
- important landmarks, views and skylines to be respected;
- green spaces, corridors, trees, hedges, other cultivated elements and natural features (e.g. seminatural vegetation, watercourses and wetlands etc.);
- the character and condition of the site boundaries and the relationship between the site and contiguous areas of landscape and townscape;
- positive characteristics of the local landscape and vegetation immediately adjacent to the site, including its quality, condition, scale, enclosure, and important links to be maintained (e.g. green corridors);
- features or intrusive influences that detract from the character and quality of the site and need to be mitigated as part of the development proposals;
- ecological survey of site;
 review of ecological data related to site context, for example Phase 1 ecological survey.

Social and economic profile

3.4.9 An understanding of the social and economic profile of an area can be useful for large or complex sites but may not be necessary for smaller allocated sites. It can help a developer deliver a mix and tenure of properties that meet the identified needs of the local area. It is particularly important for mixed use development in which a good understanding of the local market is essential to be able to plan effectively for employment and retail uses. An understanding of issues related to crime and disorder can also be very important at the outset of the project and can help the designer to ensure that the development contributes to a safe and secure community.

RIGHT: IT IS VITIAL TO UNDER-STAND HOW VISIBLE A SITE IS AND WHAT IMPACT THE VIEWS WILL HAVE. THERE IS NO REASON FOR DEVELOPMENT TO HAVE A NEGATIVE VISUAL IMPACT BUT IF NOT DESIGNED CAREFULLY IT CAN SERIOUSLY DETRACT FROM LANDSCAPE CHARACTER.



Factors to consider in the appraisal of social and economic profile include:

- population of area;
- social and economic needs how can the proposed development contribute;
- issues related to crime and disorder;
- market demands and deficiencies;

Patterns of Movement and Use

3.4.10 Development proposals need to be taken forward from a position of having a clear understanding of the surrounding movement network so that they can be positively designed to complement it.

Factors to consider in the appraisal of patterns of use and movement include:

- existing patterns of movement and opportunities for linkage;
- pattern and distribution of uses including parks, schools, shops and other facilities including public transport;
- barriers to movement (roads, watercourses etc.);
- rights of way and other paths and evidence of recreational or other use of the site;
- potential main access points and other potential access links (e.g. footpath and bridleway) from adjacent areas into the site;
- potential linkages to subsequent stages of development.

Site constraints and opportunities

3.4.11 The physical characteristics of a site need to be identified and recorded to allow a development to proceed in the full knowledge of all site features, archaeology, infrastructure, services and ground conditions.

Factors to consider in the appraisal of site constraints and opportunities include:

the physical characteristics of the site (e.g. slope, aspect, soils, ground conditions, drainage, microclimate etc.) which may influence development capacity;

archaeology;

the location and condition of features to be retained (e.g. trees, shrubs, hedges, ponds, watercourses, buildings, structures, walls etc.);



- the presence and location of services (e.g. drains, sewers, ducts, utilities, wayleaves, power cables etc.);
- the siting of neighbouring buildings, especially housing, in order to ensure development protects existing amenities.

3.5 visioning

- 3.5.1 All projects should be supported by a design statement including a 'vision' describing clearly the special role and distinctive character that the development is seeking to achieve.
- 3.5.2 A vision is not the same as a design; it is the idea behind the design, for example whether a site will be developed as a 'loose leafy suburb' or a 'tight urban village'. Vision does not necessarily mean something exciting or out of the ordinary. In fact a vision could be simply 'to create an attractive bit of town in keeping with the local area'. The vision for the site will inform all elements of the design. For example if a development is 'tight and urban' it is likely to be high density with well enclosed streets and spaces. If 'loose, leafy and suburban' it may be spacious, with a lot of trees and low density.
- 3.5.3 The development of the vision should precede design development. The process of vision development is an excellent time to engage the planning authority, community and other stakeholders in the design process. Anyone proposing new residential development should have a vision for the site which answers the following questions:

- what sort of place should this site become taking into account its natural heritage characteristics and context?
- what key words or phrases describe the qualities that it is hoped development will achieve?
- what character and uses would achieve these qualities?
- 3.5.4 Sometimes it is necessary to think big and be bold. Strong and simple ideas are usually the best.

3.6 design development and refinement

- 3.6.1 Design development will involve considering how each design and sustainability objective can be achieved on a particular site.
- 3.6.2 Developers and designers should always talk to the local authority before detailed proposals have been developed. A pre-application discussion can help the authority give an opinion on a development proposal at an early stage. At a pre-application discussion the designer or developer should be able to convey:
 - the policy background;
 - the results of the site and context appraisal;
 - reports of any relevant consultations;
 - the initial 'vision' for the site's development in response to the policy background, the site and its settings, the purpose of development and the desire to create a high quality of life for residents; and,
 - an initial indication of how each of the design and sustainability objectives will be achieved.
- 3.6.3 This information can be set out in a pre-application statement.
- 3.6.4 Ideally the developer and the local authority should work together to produce an agreed vision statement and approach to the design principles before detailed design development proceeds. This will ensure that all parties are clear about the aims and objectives of the project at the outset.

Simplified Design Process			Design Objective
	01. 02.	Develop and commence consultation process Set up integrated design team - commence visioning	
	03.	Consider the basic zoning of the various elements of the development. For example, for large sites, are there areas which should be higher density due to proximity to services, public transport or other good linkages. Exclude areas of high environmental capital and other sensitive areas.	Natural heritage Compactness
	04.	Consider where access points into the site should be. Identify potential linkages into and through the site including those to subsequent phases of development. Establish a framework which allows for ease of move- ment within the development whilst at the same time creating a positive urban structure with attractive, pedestrian friendly streets and spaces that provide a high quality of life Consider the hierarchy of streets and spaces that define primary, secondary and tertiary routes within the development.	Accessibility and ease of movement Character and Context (See also Resource Efficiency) Legibility
	05.	Develop a strategy for sustainability, a built form and architectural concept to create safe and attractive well defined streets and spaces and buildings which are appropriate and sustainable.	Continuity and Enclosure Public Realm Variety and Diversity Adaptability Resource Efficiency

4.0 submitting the planning application

4.1 The requirements for submitting a planning application will vary from council to council. The supporting information outlined in this section gives an indication of minimum requirements.

4.2 design statement

- 4.2.1 PPW and TAN 12 require that applications for planning permission are accompanied by a design statement. A design statement is an opportunity for developers and designers to describe their vision for a site and demonstrate how they have responded to each of the key design and sustainability principles.
- 4.2.2 TAN 12 spells out the required content for a design statement as:
 - the design principles and design concept;
 - how these are reflected in the development 's location, layout, density, scale, detailed design and landscape;
 - how the design relates to its site and its wider context;and
 - how the development will meet UDP design policies and SPG requirements.
- 4.2.3 In preparing a design statement to meet these requirements the following are of particular importance to demonstrate compliance with this guide:
 - the design concept should meet the requirements of section 3.5 of this guide setting out a holistic vision for the site's development;
 - the 'design principles' should specifically set out how each of the relevant design objectives included in this guide have been addressed;
- 4.2.4 A written design statement should be illustrated, as appropriate by:
 - plans and elevations;
 - photographs of the site and its surroundings;and
 - other illustrations such as perspectives.
- 4.2.5 The appendix contains a checklist of information requirements for a planning application which local planning authorities are encouraged to use as a model and adapt to individual circumstances.

Design Statement Checklist		
Boolgh Statement Chookiet	\checkmark	×
UDP design policies and SPG		
Site and context appraisal		
Vision describing the 'place' and how it relates to site and context		
Design principles and how they respond to site and context appraisal		
Natural Heritage		
Compactness		
Accessibility and ease of movement		
Legibility		
Character and context		
Continuity and enclosure		
Public realm		
Variety and diversity		
Adaptability		
Resource efficiency		
Supporting information (see appendix 1)		



5.0 design appraisal

- 5.1 This guide spells out the design objectives which should be taken into account by anyone proposing a new residential development in excess of one dwelling. It requires a design statement describing a vision for the site and how the proposal meets each objective.
- 5.2 Design appraisal will be carried out by the planning authority and may involve:
 - asking whether the proposal/design statement includes a clear and appropriate vision / design concept which relates to the policy review and site appraisal process; and,
 - appraising how well the development proposal addresses each of the relevant design objectives.
- 5.3 The design appraisal process should be carried out to allow sufficient time before determination of the application to allow design improvements to be made. The appraisal may be carried out collaboratively between the planning authority and the person or team proposing the development. It should be a positive and creative process to identify specific areas in which improvements can be made.
- 5.4 It will not be possible to make a fundamentally poor development proposal acceptable through compliance with this guide. However proposals for sites supported by the UDP and which have a strong vision and which respond to each relevant design objective should be supported by the planning authority on design grounds.
- 5.5 For major applications, those important to the local community or likely to set a precedent any one proposing development may wish the Design Commission for Wales (DCfW) to review the proposals. The Design Commission for Wales is a national organisation established and core funded by the National Assembly for Wales. DCFW's mission is to champion high standards of architecture, landscape and urban design in Wales, promoting wider understanding of the importance of good quality in the built environment, supporting skill building, encouraging social inclusion and sustainable development.DcFW has its own design review process which can be found on its website at www.dcfw.org. Contact details are: DCfW, 4th Floor Building, Two Caspian Point, Caspian Way, Cardiff Bay CF10 4DQ.



6.0 case studies

- 6.1 The Building for Life website http://www.buildingforlifewales.org includes a number of case studies of residential schemes that exhibit some positive qualities of design. The case studies have been researched and reviewed by Mike Biddulph and Alan Hooper on behalf of DCfW in partnership with the House Builders Federation and the Civic Trust. This chapter reviews these case studies and shows how they achieve many of the objectives of good design described in this document. Users of this document are encouraged to visit the Building for Life Wales website to see the full review of each scheme and links to related sites.
- The inclusion of these case studies in this document is intended to demonstrate the relevance of 6.2 each of the objectives to the design process and does not indicate any particular endorsement of the projects by POSW.
Brewery Quarter cardiff



Key Information

Date Completed: Autumn 2003

Client: Mansford Holdings PLC & S A **Brains**

Architect/designer: **Powell Dobson Architects**

Planning Authority: Cardiff County Council

Number and type of dwellings 42, 1,2 and 3 bed apartments

Key Success Factors

Strong vision creating a clear image of the desired design, carried through into the built scheme

Mixed use development using the qualities of each different use to maximise the vibrancy of the overall scheme

High quality central public space integrated with built form and the activity of uses on the ground floor of surrounding units

Overview

The relocation of the S.A. Brains brewery left a vacant industrial site in Cardiff City Centre. The scheme is arranged around courtyard space enclosed by high quality architecture giving a distinct character and identity to the development. The scheme has a vibrant mix of uses and includes restaurants, bars, commercial space and residential units. The complex retains 2 listed buildings and renovates several other structures.

Principles

The site represented an opportunity to create a catalyst for future investment in this part of Cardiff. The resulting scheme combines a complex industrial site with a vibrant mix of uses to deliver a development which is not only successful in its own right but is also generating renewed interest in the surrounding area.

Vision

- The vision called for a unique solution, with a European flavour, a scheme that would become a destination within the city of Cardiff
- The scheme utilised imagery from Covent Garden and Temple Bar in Dublin to generate a picture of the desired scheme

Compactness

- Compactness relates directly to the vision through the creation of a dense European style and a city destination
- Externally, units continue street frontages
- Internal spaces are defined by built form to create routes and courtyards

Accessibility and Ease of Movement

- Related to the vision through the creation of permeable internal spaces, linked to external streets
- Internal routes are overlooked, maximising safety

Character and Context

- Strong vision for a contemporary and unique scheme
- A new identity based around high quality architecture, a mix of uses and restored heritage from the previous brewery use

SITE PLAN: BREWERY QUARTER: POWELL DOBSON ARCHITECTS



MIX OF USES: BREWERY QUARTER: POWELLDOBSON ARCHITECTS



THE COURTYARD: BREWERY QUARTER: POWELL DOBSON ARCHITECTS



Responds to context in terms of height and street frontages
 Visual richness of surrounding streets increased through landmark buildings with feature lighting around entrances

Legibility

- Use of variation in frontage to mark entrances to development
- Identity of the development strongly influenced by mix of uses and character of development; an exciting, vibrant, dynamic place
- The scheme is integrated into the existing urban fabric through the retention of existing features and its location within the block
- The internal courtyard is a distinct place and combined with legible gateways creates a memorable and identifiable development

Continuity and Enclosure

- Internally spaces are entirely enclosed by development giving a continous edge to spaces and routes
- Externally new development continues the building line and retains enclosure of streets
- Tall buildings and tight public space creates a feeling of enclosure in line with that of urban courtyards and adds to the atmosphere of the spaces
- Active frontages are presented to public space wherever possible

Public Realm

- Courtyard is integral to the development
- High quality finish, integrated with building form and use
- Surface treatments and design relate to vision and a clear understanding of requirements and patterns of use

Variety and Diversity

- Maximum mix of uses on site creating a more self contained development ensuring greater activity
- Active frontages are provided at ground floor through location of uses such as bars and restaurants which breakout into public space
- Historic sections of buildings and structures are retained and work alongside contemporary architecture to add variety and diversity to the scheme

Coronation Terrace penarth



Key Information

Date Completed: 2003

Client: Andton Properties Ltd

Architect/designer: Atkins DE2

Planning Authority: Vale of Glamorgan

Number and type of dwellings 3, 1 bed 3 storey houses

Key Success Factors

A strong vision for a contemporary scheme within a conservation area has produced a controversial yet successful design which creates a new identity within an established residential area

Massing increases enclosure of Coronation Terrace and creates a continuous active facade

Architectural detailing has allowed views across to Cardiff and Cardiff Bay to be enjoyed by the maximium quantity of rooms

Overview

Penarth is a Victorian town in close proximity to Cardiff. Coronation Terrace and the site fall within the Penarth conservation area. The site faces east and has good views across Cardiff and Cardiff Bay. Previously housing garages, the site represented an opportunity to develop a contemporary scheme within the conservation area.

Principles

Responses to character and context are among the most emotive design decisions that have to be made when developing small infill schemes. Whilst contrasting to the existing character of the area, the scheme succeeds on a number of levels through careful consideration of the principles set out within this document.

Vision

A clear vision to create a contemporary infill development creating a new identity in an established residential area on a small site

Compactness

The scheme makes efficient use of a tight site

Character and Context

- Strong vision for a contemporary scheme
- Producing a bold distinct new identity
- Responds to context in terms of height and orientation but uses set back, boundary treatments, materials and architectural form and detail to contrast with existing
- Visual richness is increased by the scheme which creates a strong addition to Coronation Terrace through form and fenestration

Legibility

- The project, although controversial, should deliver a very strong positive image based upon its high quality distinctive architecture
- The massing of the unit enables the scheme to have a greater influence over the character of the street and introduces a distinct landmark, creating a memorable place





Continuity and Enclosure

- Massing and terraced form dramatically increases enclosure of the street
- Continuity of the facade is improved
- Increased level of overlooking on street
- Partially internalised parking providing security
- Height of buildings respond to existing

Variety and diversity

- Bold new identity increases architectural diversity of the area
- scheme introduces an unusual size of unit which will increase the diversity in housing stock of the area

Adaptability

- Orientation of units allows integration into the existing street form
 Ground floor and parking areas could be adapted to liveable rooms
 - in the future with parking moving on street

AXONOMETRIC: CORONATION TERRACE: ATKINS DE²



Dry Bridge Gardens



Date Completed: December 2003

Client: Charter Housing Association Ltd and Monmouthshire County Council Social Services Dept.

Architect/designer: Ainsley Gommon Architects

Planning Authority: Monmouthshire County Council

Number and type of dwellings 6 dwellings, residential care home

Key Success Factors

Clear vision related to the specific needs of end users

An excellent approach to energy efficiency resulting in an energy efficient scheme over and above guidance

Flexibility within use for changing needs of end users

Overview

The planned closure of existing long term care facilities for people with severe disabilities required re-provision for 6 permanent residents. This brought forward a site adjacent to the existing facility for development. The site is within a grade II listed walled garden.

Each resident requires 24hr care and accommodation that responds to changing physical needs of each person whilst promoting independence. In addition the scheme would also have to consider the specific requirements of individuals who have been in long term institutional care.

Principles Achieved in the Scheme

The bespoke scheme is a specific response to a specific problem. To this end it does not demonstrate an approach consistent with all the principles set out in the design guide. However, in terms of many factors it is a highly successful piece of design, demonstrating that all schemes need a vision and that the level of success is linked directly to the clarity of the vision. In addition the scheme takes an approach to energy efficiency that has produced an excellent example of energy efficient design in excess of the requirements of current guidance.

Vision

- Create a scheme with an environment for end users which is supportive, yet allows independence, is designed for longevity and incorporates both contemporary and existing historic structures
- The design is a bespoke response to this vision

Compactness

- The combination of 6 single storey residential units and a communal central garden makes efficient use of the site
- 2 parking spaces are provided for each unit

Accessibility and Ease of Movement

Linked to the overall vision, accessibility is one of the key requirements enabling easy access by end users and a higher level of independence through the use of motorised doors and attention to threshold details





Character and Context

The scheme retains the grade II listed wall and adjusts architectural elements to work with the wall and avoid any detrimental impacts on its structure

NTS

Legibility

- The framing of entrances and clear routes gives an easily understood scheme
- Internally the garden gives the development a positive identity and combined with single storey, light coloured structures creates an open and spacious development

Adaptability

- Scheme is designed for longevity with robust and sustainable materials
- Buildings are flexible and can be adapted to meet the changing needs of the individual residents

Resource Efficiency

- The scheme reuses existing structures on site
- Materials have a low environmental impact considering life cycle costs, recycling, embodied energy, transportation and environmental impact
- Insulation levels are over and above that suggested in guidelines and insulation materials are made from recycled newspaper
- Solar energy provides 30% of hot water requirements
- Green water harvesting recycles water for toilets and washing machines

Pebble Beach barry



Key Information

Date Completed July 2004

Client: Barratt South Wales

Architect/designer: Capita Symonds Ltd

Planning Authority: Vale of Glamorgan Council

Number and type of dwellings: 20, 2 and 3 bed apartments

Key Success Factors

Community engagement

Consideration of sensitive landscape setting

Compact development

Overview

The site falls within a Marine Conservation Area (subject to an adopted appraisal) and is located in close proximiety to the promenade and Marine Lake at Knap on the western waterfront at Barry. The scheme had to carefully consider the sensitivities of the adjacent promenade, gardens and marine lake.

The scheme involved the demolition of a former public house and leisure facility to make way for 20 luxury apartments.

Principles Achieved in the Scheme

Development in sensitive landscapes is envitably a delicate balance between the environment, economic factors and the community. In some ways this scheme is both an example of how and how not to approach potentially sensitive development. Initial schemes were vehemently opposed by local groups and subsequently refused planning permission on design grounds. Following consideration of the views of local residents and the planning authority the constructed scheme takes a balanced approach considering all the initial concerns. The scheme is an exciting contemporary development widley supported by both the local community and the planning authority and one which takes account of a sensitive context and achieves a high quality scheme as a result.

Vision

 A high quality, contemporary development responding to the sensitive environmental context

Community Engagement

Community engagement has driven the later stages of the design proposals to the extent that the scheme is now widely supported in the community

Compactness

relates to vision through the schemes response to the sensitive setting, the scale of the development and the provision of apartments, making efficient use of land





Character and Context

- Strong vision for luxury development works with the landscape setting through a sensitive approach to design in roof lines and detailed material choices
- The development expresses a distinct identity responding to coastal location

Legibility

- The scheme has a clear identity related to the vision- high quality well designed luxury
- Height and massing has been varied to create variation in importance and help to demarcate gateways
- The high quality of the architecture and landscape setting will make this scheme and the places it enhances memorable

Continuity and Enclosure

- Both internal and external routes are overlooked
- The development forms continuous building lines enclosing spaces and routes
- Parking courts are over looked

Resource Efficiency

Materials were chosen for their durability and robustness





Plas Gwenfrewi holywell



Key Information

Date Completed: March 2004

Client: Wales and West Housing Association

Architect/designer: Ainsley Gommon Architects

Planning Authority: Flintshire

Number and type of dwellings 15, 1 and 2 bed apartments and 1 1 bed bungalow

Key Success Factors

Retention of historic features relating to character

High level of energy efficiency

Overview

The site is located near Holywell and is within the Holywell Conservation Area. The scheme involved the rennovation of a derelict school and school house, sympathetic extension and the restoration of a Grade II listed monument of Jesus. The scheme involved the demolition of all but the main facade to the street and the reconstruction and extension of the building allowing the interior to be adapted to 8 apartments. Sympathetic extension to the building allowed the further 7 aprtments to be built. All units are affordable and built to Lifetimes Homes Standard.

Principles

Conversion, restoration and conservation projects can often become expensive and complex; as a result a number of developers backed out of this project. It is a testament to the project team and planning authority that the scheme has been such as success, both in terms of budget and finished product.

Vision

a high density conversion and extension scheme to provide a number of affordable housing units

Compactness

- Relates directly to the vision to achieve a high density development around the compact form of the existing school buildings
- Scheme maintains the enclosure given to the street by the existing facades
- 1.5 parking spaces per dwelling have been provided

Accessibility and Ease of Movement

- The central courtyard is overlooked by a number of apartments
- Conversion from disused school house to residential use will have increased overlooking of the street from habitable rooms

Character and Context

- The character of the development relates directly to the vision through the retention of elements which gave the site its character
- Extensions respond to height and position of original units
- Extensions give additional interest by referencing but not copying the details of the existing units



STATUE OF JESUS: PLAS GWENFREWI:



Legibility

The scheme will carry some of the existing identity of the previous use and buildings but the high quality finish and new use will begin to form a positive identity of its own; a composite of new and old

Continuity and Enclosure

- Overlooking of the street has been improved by the positive change of use
- Public and private space is demarcated by the original boundary wall and gate

Variety and Diversity

- The scheme has a mixture of unit sizes
- Historic buildings have been retained and along with new additions add interest and diversity to the street scene

Resource Efficiency

- Recycling of buildings materials
- Use of local skilled tradesmen, with traditional skills
- Highly insulated buildings
- Provision of low cost- low maintenance housing for the local community

Sovereign Quay cardiff

SOVEREIGN QUAY, CARDIFF BAY BY BARRATT SOUTH WALES. DESIGNED FOR BARRATT BY GODDARD MANTON ARCHITECTS.



Key Information

Date Completed 2003

Client: Barratt South Wales

Architect/designer: Goddard Manton Architects

Planning Authority: Cardiff County Council

Number and type of dwellings: 60, 1 and 2 bed apartments

Key Success Factors

Through the extensive use of glazing and an intellegent approach to structure, a dense and large building has achieved an attractive massing

A clear vision, brought through into a strong architectural statement, creating a distinct identity within the Bay area

A mix of use generating an attractive, diverse and active frontage onto surrounding streets and routes

Overview

Located within the Cardiff Bay Regeneration Area the site orginally housed a temporary car park positioned between the existing Techniquest scientific museum and a sports bar. The site is also in close proximity to St David's Hotel, a white modernist tower functioning as a landmark building.

Principles Achieved in the Scheme

The success of this development lies not only in the architectural detail but also in the mix of uses and attention to urban design principles. This includes the integration of the development into the improved waterside access forming a route along the dock edge connecting the commercial centre of Cardiff Bay to St David's Hotel.

Vision

Through a competition process the site demanded a high quality mixed use scheme that maximised density whilst maintaining a height limit of 7 storeys

Compactness

- Density is 200 dwellings per hectare and reflects a city location and the vision
- Parking is provided at 100% and has little effect on compactness, being positioned at basement level

Accessibility and Ease of Movement

The scheme connects the commercial centre to St David's Hotel, providing overlooked and active routes between the two

Character and Context

- The vision relates to the potential development of the Bay area rather than lower existing units nearby
- The scheme responds to context by a stepped approach to height reducing towards the lower Techniquest building
- The architectural style of the development owes some features to the St Davids Hotel
- The scheme provides a visually rich elevation with simple lines and divisions adding interest to the frontage, forming a distinct and identifiable character



SOVEREIGN QUAY, CARDIFF BAY BY BARRATT SOUTH WALES. DESIGNED FOR BARRATT BY GODDARD MANTON ARCHITECTS.



SOVEREIGN QUAY, CARDIFF BAY BY BARRATT SOUTH WALES. DESIGNED FOR BARRATT BY GODDARD MANTON ARCHITECTS.

Legibility

- As future development occurs the building will integrate into the urban fabric, but the tall tower should remain a landmark building
 - In addition, the architecture clearly belongs to city scale waterfront development but establishes an identity of its own with distinctive architectural details and a high quality finish
- Reinforces urban structure created by the dock

Continuity and Enclosure

- The long and narrow nature of the site combined with high density requirements and height limitations means an efficient scheme is essential. This naturally results in enclosure of the street, with continuous frontages
- Active frontages at street level give a continuous facade and vitality to routes
- Residential units on upper floors give surveillance to streets and spaces below

Variety and Diversity

- Opportunities to introduce other uses have been explored, resulting in a vertical mix of uses with retail at ground floor and residential above
- A mix of unit sizes has been provided

Steffani Court cardiff



Date Completed Construction started in March, 2001 and completed October 2003

Client: Cardiff Community Housing Association

Architect/designer: PCKO (pre contract), Pentan (post contract)

Planning Authority: Cardiff County Council

Number and type of dwellings Total 28 units; 7 three-storey houses; 19 one and two-bedroom apartments; 2 mobility access two-bedroom apartments

Key Success Factors

Community engagement is at the heart of all stages of design resulting in a scheme which reflects the requirements and diversity of the community.

Mixture of types and sizes of Units

Layout enables the delivery of a compact scheme with a central focus and an active façade onto Hannah Street

Overview

The site is located in a residential area but was in commercial use prior to development. Contextually the immediate area consists of a number of council built buildings in the form of maisonnettes and flatted blocks. The redevelopment was approached as a key deliverable regeneration project and was supported by both Cardiff County Council and Welsh Assembly Government. With a strong community involvement, the design reflects the identity and nature of the local community. In addition, the scheme achieves a number of essential urban design criteria.

Principles Achieved in the Scheme

The scheme succeeds on a number of levels through careful consideration of the principles set out within this document. Below and overleaf is an explanation of what has been considered and why it led to the high quality scheme that was developed.

Vision

- A strong vision based on the requirements of local Yemeni community and potential end users
- Vision is related to both layout and architecture as well as internal arrangement and materials
- Scheme design allows the vision to be translated into form and layout achieving a connection to Yemani community both in terms of identity and density

Community Engagement

The project is based upon a high and continued level of community engagement

Compactness

- Layout and resulting density relates directly to vision through thecreation of a compact form arranged around a central courtyard
- Open space provision is offsite
- Courtyard open space is integral to the scheme

Accessibility and Ease of Movement

- Design of central courtyard space closely related to that of a home zone creating a safe community area
- Vehicle speed has been designed out of the space through the use of shared surfacing and the pedestrian orientated design





 Accessibility for all has been considered both in terms of access to dwellings and external areas

Character and Context

- Strong vision based on the creation of community space rather than architectural style
- Creates a new positive identity which references characteristics of context- massing, height etc
- Vertical division of buildings gives an impression of plot width and achieves a level of variety and architectural interest in the façade

Legibility

- Courtyard space has been carefully considered to create a memorable space and focal point
- Continuous frontage with gaps clearly demarcating entrances

Continuity and Enclosure

- Block structure and layout allow both overlooking of the street and internal courtyard
- Location of buildings give enclosure to the street
- Parking is located to avoid disruption to the continuity of the façade
- Entrances and windows provide active frontages to Hannah Street
- The development contributes to the vitality of the street as well as internal spaces
- Low boundary wall adds to the enclosure of the street and continuity of the facade

Variety and diversity

Mixture of types and sizes of units

Adaptability

- Block integrates with surrounding urban fabric by repairing potentially exposed backs and sides of existing units whilst presenting active frontages to Hannah Street
- Courtyard has a simple and robust layout and detailed design
- Lifts allow elderly people to gain access to upper floors

appendix List of requirements for submitting a planning application from TAN 12.

Location plan

- Scale 1:1250 preferably and no smaller than 1:2500
- North point, date and drawing number
- Outline the application property, and indicate any adjoining property owned or controlled by the applicant
- Show the application property in relation to all adjoining properties and the immediate surrounding area, including roads
- Show vehicular access to a highway if the site does not adjoin a highway

Details of existing site layout

- Scale, typically 1:200 or appropriate scale to ascertain required level of detail
- North point, date and number on plans
- Show the whole property, including all buildings, gardens, open spaces and car parking
- Where appropriate: Tree survey. Nature conservation, biodiversity, drainage and other natural features. - Existing services

Details of proposed site layout

- Scale, typically 1:200
- North point, date and number on plans
- Show the siting of any new building or extension, vehicular/pedestrian access, changes in levels, landscape proposals, including trees to be removed, new planting, new or altered boundary walls and fences, and new hard-surfaced open spaces
- Show proposals in the context of adjacent buildings

Floor plans

- Scale 1:50 or 1:100
- In the case of an extension, show the floor layout of the existing building to indicate the relationship between the two, clearly indicating new work
- Show floor plans in the context of adjacent buildings, where appropriate
- In the case of minor applications it may be appropriate to combine the layout and floor plan (unless any demolition is involved)
- Include a roof plan where necessary to show a complex roof or alteration to one

Elevations

- Scale 1:50 or 1:100 (consistent with floor plans)
- Show every elevation of a new building or extension
- For an extension or alteration, clearly distinguish existing and proposed elevations
- Include details of material and external appearance
- Show elevations in the context of adjacent buildings, where appropriate

Cross Sections

Scale 1:50 / 1:100 (consistent with floor plans), where appropriate.

Supporting Information

- Use of photomontages, artist's impressions and / or CAD visualisations to illustrate schemes.
- 3D built models are valuable on major schemes to help show massing and relationship between buildings.

Other matters which may be included where appropriate are:

- Energy use and efficiency aspects
- On site waste management
- Future maintenance implications and commitment

further reading

This document is not a comprehensive design guide. Further detailed information on how to address each design objective can be found in numerous other documents including those listed below:

Audit Commission 1999, Listen Up! Effective Community Consultation, BRE 2000, The Green Guide to Housing Specification BRE 2004 Thinking Business Space, BREEAM (BRE Environmental Assessment Method), www.breeam.org British Standards Institute BS8300, 'Access for Disabled People' CABE 2002, The Value of Good Design, CABE/DCfW 2004, Creating Excellent Buildings CABE/DCfW 2004, Creating Successful Masterplans Cardiff University/WWF 2004, Sustainable Construction - Practical Guidance for Crime and Disorder Act 1998, Section 17 Planners and Developers, Sustainable Housing Design Strategy for Wales CIRIA 2004, Code of Practice: Rights of Access - Goods facilities, services and premises, Considerate Constructors Scheme, www.ccscheme.org.uk DETR 1998, Places Streets and Movement DETR 2000, By Design DETR GPG274, Environmentally Smart Buildings - a Quantity Surveyors Guide to the cost effectiveness of energy efficient offices DETR GPG287, The Design Team's Guide to Environmentally Smart Buildings Disability Rights Commission www.drc.org.uk, Designing for Accessibility, Centre for Accessible Environments www.cae.org.uk DTLR/CABE, 2001, Better Places to Live English Partnerships, 2000, Urban Design Compendium Evans et al November 1998 - The Long Term Costs of Owning and Using Buildings, The Royal Academy of Engineering Faber Maunsell/DTI 2004, Engage - how to deliver socially responsible construction - a client's guide Housing Forum February 2002, Rethinking Construction, 20 steps to encourage the use of whole life costina IDeA Knowledge and WWF (website), Mainstreaming Sustainable Development through Modernisation King Sturge 2004, Property Sustainability Matters - Caveat Emptor Local Planning Authorities, Local Biodiversity Action Plans National Assembly for Wales 2004, Starting to Live Differently ODPM 2004, Safer Places - The Planning System and Crime Prevention Sustainable Buildings: Benefits for occupiers, BRE Information paper TCPA 2004, Biodiversity by Design - A Guide for Sustainable Communities UWE 2003, Shaping Neighbourhoods UWE/LGMB, 1995, Sustainable Settlements WDA 1995, Landscapes Working for Wales WDA 2003, Biodiversity Guidelines WDA 2005, 'The Welsh Development Agency Design Strategy' Welsh Assembly Government 2002, Planning Policy Wales Welsh Assembly Government 2002a, TAN 12 Design Welsh Assembly Government 2004, Sustainable Development Action Plan Welsh Office Circular 16/94, 'Planning Out Crime'

glossary: a language for design

From: DETR and CABE (2000) By Design: Urban design in the Planning System - Towards Better Practice, London, Thomas Telford Publishing

Accessibility The ability of people to move round an area and to reach places and facilities, including elderly and disabled people, those with young children and those encumbered with luggage or shopping.

Adaptability The capacity of a building or space to be changed so as to respond to changing social, technological and economic conditions.

Area appraisal An assessment of an area's land uses, built and natural environment, and social and physical characteristics.

Brief This guide refers to site-specific briefs as development briefs. Site-specific briefs are also called a variety of other names, including design briefs, planning briefs and development frameworks.

Building line The line formed by the frontages of buildings along a street. The building line can be shown on a plan or section.

Bulk The combined effect of the arrangement, volume and shape of a building or group of buildings. Also called massing.

Character assessment An area appraisal identifying distinguishing physical features and emphasizing historical and cultural associations.

Charrette An event (ranging from a couple of hours to several days) which brings together a range of people to discuss design issues. A charrette may or may not use techniques of collaborative design. Also known as a design workshop.

Conservation area character appraisal A published document defining the special architectural or historic interest which warranted the area being designated.

Context The setting of a site or area, including factors such as traffic, activities and land uses as well as landscape and built form.

Context (or site and area) appraisal A detailed analysis of the features of a site or area (including land uses, built and natural environment, and social and physical characteristics) which serves as the basis for an urban design framework, development brief, design guide or other policy or guidance.

Density The floorspace of a building or buildings or some other unit measure in relation to a given area of land.

Built density can be expressed in terms of plot ratio (for commercial development); number of units or habitable rooms per hectare (for residential development); site coverage plus the number of floors or a maximum building height; or a combination of these.

Design advisory panel A group of people (often architects) with specialist knowledge, which advises a local authority on the design merits of planning applications or other design issues. Also known as an architects panel.

Design assessment An independent assessment of a design usually carried out for a local authority by consultants, another local authority or some other agency.

Design guide A document providing guidance on how development can be carried out in accordance with the design policies of a local authority or other organisation often with a view to retaining local distinctiveness.

Design principle An expression of one of the basic design ideas at the heart of an urban design framework, design guide, development brief or a development.

Design standards Specific, usually quantifiable measures of amenity and safety in residential areas.

Design statement (a) A pre-application design statement is made by a developer to indicate the design principles on which a development proposal in progress is based. It enables the local authority to give an initial response to the main issues raised by the proposal. (b) A planning application design statement sets out the design principles that the planning applicant has adopted in relation to the site and its wider context, as required by PPG1.

Design workshop see 'charrette'.

Desire line An imaginary line linking facilities or places which people would find it convenient to travel between easily.

Development brief A document, prepared by a local planning authority, a developer, or jointly, providing guidance on how a site of significant size or sensitivity should be developed. Site-specific briefs are sometimes known as planning briefs, design briefs and development frameworks.

Elevation The facade of a building, or the drawing of a facade. Enclosure The use of buildings to create a sense of defined space.

Energy efficiency The extent to which the use of energy is reduced through the way in which buildings are constructed and arranged on site.

Feasibility The viability of development in relation to economic and market conditions.

Fenestration The arrangement of windows on a facade.

Figure and ground (or figure/ground, or Nolli) diagram A plan showing the relationship between built form and publicly accessible space (including streets) by presenting the former in black and the latter as a white background (or the other way round). Form The layout (structure and urban grain), density, scale (height and massing), appearance (materials and details) and landscape of development.

Height The height of a building can be expressed in terms of a maximum number of floors; a maximum height of parapet or ridge; a maximum overall height; any of these maximum heights in combination with a maximum number of floors; a ratio of building height to street or space width; height relative to particular landmarks or background buildings; or strategic views.

Human scale The use within development of elements which relate well in size to an individual human being and their assembly in a way which makes people feel comfortable rather than overwhelmed.

Indicative sketch A drawing of building forms and spaces which is intended to convey the basic elements of a possible design.

Landmark A building or structure that stands out from its background by virtue of height, size or some other aspect of design.

Landscape The character and appearance of land, including its shape, form, ecology, natural features, colours and elements and the way these components combine. Landscape character can be expressed through landscape appraisal, and maps or plans. In towns 'townscape' describes the same concept.

Layout The way buildings, routes and open spaces are placed in relation to each other.

Layout structure The framework or hierarchy of routes that connect in the local area and at wider scales.

Legibility The degree to which a place can be easily understood and traversed.

Local distinctiveness The positive features of a place and its communities which contribute to its special character and sense of place.

Massing The combined effect of the height, bulk and silhouette of a building or group of buildings.

Mixed uses A mix of uses within a building, on a site or within a particular area. 'Horizontal' mixed uses are side by side, usually in different buildings. 'Vertical' mixed uses are on different floors of the same building.

Movement People and vehicles going to and passing through buildings, places and spaces. The movement network can be shown on plans, by space syntax analysis, by highway designations, by figure and ground diagrams, through data on origins and destinations or pedestrian flows, by desire lines, by details of public transport services, by walk bands or by details of cycle routes.

Natural surveillance (or supervision) The discouragement to wrong-doing by the presence of passers-by or the ability of people to be seen out of surrounding windows. Also known as passive surveillance (or supervision).

Node A place where activity and routes are concentrated often used as a synonym for junction.

Passive surveillance See 'natural surveillance'.

Permeability The degree to which an area has a variety of pleasant, convenient and safe routes through it.

Planning brief This guide refers to site-specific briefs as development briefs. Other names, including planning briefs, design briefs and development frameworks are also used.

Technical Advice Notes (TANs) Documents embodying Welsh Assembly Government guidance on general and specific aspects of planning policy to be taken into account in formulating development plan policies and in making planning decisions.

Plot ratio A measurement of density generally expressed as gross floor area divided by the net site area. Proactive development control Any process by which a local authority works with potential planning applicants to improve the quality of development proposals as early as possible before a planning application is submitted.

Public art Permanent or temporary physical works of art visible to the general public, whether part of the building or free-standing: can include sculpture, lighting effects, street furniture, paving, railings and signs.

Public domain The parts of a village, town or city (whether publicly or privately owned) that are available, without charge, for everyone to use or see, including streets, squares and parks. Also called public realm.

Public realm See 'public domain'.

Scale The impression of a building when seen in relation to its surroundings, or the size of parts of a building or its details, particularly as experienced in relation to the size of a person. Sometimes it is the total dimensions of a building which give it its sense of scale: at other times it is the size of the elements and the way they are combined. The concept is a difficult and ambiguous one: often the word is used simply as a synonym for 'size'. See 'Human scale'.

Section Drawing showing a slice through a building or site.

Settlement pattern The distinctive way that the roads, paths and buildings are laid out in a particular place.

Sight line The line of sight from a travelling vehicle or person. Sight lines will help to determine how fast vehicles are likely to move and how safe other road users are likely to be.

Street furniture Structures in and adjacent to the highway which contribute to the street scene, such as bus shelters, litter bins, seating, lighting, railings and signs.

Surveillance The discouragement to wrong-doing by the presence of passers-by or the ability of people to be seen from surrounding windows. Tissue study Comparison of scale and layout of different settlements. This technique makes use of overprinting or tracing maps of successful places over the proposed development site or area, at the same scale. Its gives the designer a clue to the capacity of a place and how it may be structured.

Topography A description or representation of artificial or natural features on or of the ground.

Urban design The art of making places. Urban design involves the design of buildings, groups of buildings, spaces and landscapes, in villages, towns and cities, and the establishment of frameworks and processes which facilitate successful development.

Urban design framework A document which informs the preparation of development plan policies, or sets out in detail how they are to be implemented in a particular area where there is a need to control, guide and promote change. Area development frameworks are also called a variety of other names, including urban design strategies, area development frameworks, spatial masterplans, and planning and urban design frameworks.

Urban grain The pattern of the arrangement and size of buildings and their plots in a settlement; and the degree to which an area's pattern of street-blocks and street junctions is respectively small and frequent, or large and infrequent.

Vernacular The way in which ordinary buildings were built in a particular place, making use of local styles, techniques and materials and responding to local economic and social conditions.

View What is visible from a particular point. Compare 'Vista'.

Vista An enclosed view, usually a long and narrow one.