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## Design & Efficient Use of Resources Issues Paper - February 2011

# 1 Design and Efficient Use of Resources

## 1.1 Summary

Quality of place matters in many ways. Good design and maintenance can discourage crime, contribute to good health, promote community cohesion, encourage investment and have a positive impact on the environment. The planning process requires a high standard of design to ensure that the wide range of issues associated with design are all considered.

The main spatial planning issues for design and efficient use of resources are:

**Issue D1** – The Core Strategy should explore ways to preserve and enhance local character, support the creation of sustainable communities through layout and provision of facilities, encourage a new modern vernacular for Cornwall and ensure careful use of resources.

**Issue D2** – The Core Strategy should explore how to promote sustainably located development and energy and resource efficiency in new development.

## 1.2 Purpose

This is one in a series of papers dealing with a specific theme. Each can be read in isolation or together with other papers to gain a wider understanding of issues facing Cornwall. This paper sets out the evidence base and the policy context for design and efficient use of resources and describes how the issues that need to be addressed in relation to design could be taken forward in the Core Strategy. These papers will form the first stage of the development of options for Core Strategy policy. Other issues papers available in this series include:

- *Housing*
- *Economy*
- *Tourism*
- *Retail & town centres*
- *Education & skills*
- *Social inclusion*
- *Crime & anti-social behaviour*
- *Sport recreation & open space*
- *Health*
- *Transport & accessibility*
- *Energy*
- *Climate change*
- *Soil, air & water quality*
- *Flooding, drought & water consumption*
- *Biodiversity & geodiversity*
- *Landscape & seascape*
- *Historic environment*

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- *Agriculture & food*
- *Coast & maritime*
- *Minerals*
- *Waste*

This series of papers is closely linked to the topics of the Sustainability Appraisal (SA) scoping report. The SA scoping report identifies the sustainability objectives, decision making criteria and indicators against which the LDF and other plans in Cornwall should be tested, to examine whether plans are sustainable. The SA scoping report also identifies key messages from national, regional and local plans for the Cornwall Local Development Framework (LDF), a baseline and sustainability issues for each topic. These Core Strategy issue papers largely build on the SA scoping report and start to examine in greater detail the messages from evidence and research, the opportunities and threats and planning issues that need to be considered in the Core Strategy (the SA scoping report can be found at <http://www.cornwall.gov.uk/default.aspx?page=17394>).

### 1.3 What is Design and Efficient use of Resources?

Design is a process which can ensure attractive, usable, durable and adaptable places and is a key element in achieving sustainable development. One of the requirements of sustainable development is the efficient use of resources, both in construction methods and materials and in creating energy and water efficient developments, located to reduce the need to travel.

Whilst all topics are interlinked, this Design and Efficient Use of Resources paper has particularly strong links to the Housing, Landscape and Seascape, Historic Environment, Energy and Flooding, Drought and Water Consumption issues papers.

### 1.4 Design and Efficient use of Resources 'portrait' of Cornwall

The existing settlement pattern in Cornwall is typically dispersed small settlements, with increasingly remote rural areas to the west and in the north of the county. This can make it difficult both to access services and to locate services where they can be accessed by sustainable means of transport such as walking, cycling and public transport.

Traditional design details, materials and local distinctiveness vary across the county. This distinctiveness has developed in response to local conditions and historic working practices. The influence of the landscape on settlement form is significant; equally the impact of the built environment on the landscape can be considerable. The built environment should reflect the inherent character and strengths of its setting.

The quality of development varies greatly. Many settlements have a historic core; Cornish town centres have not generally been subject to extensive redevelopment as a result of wartime damage or more recent modernisation. Nevertheless development over the last five decades has not always respected the traditional character or local distinctiveness of settlements, whether in urban or rural areas. Pressure to replace former mining, fishing and agricultural industries with new employment has sometimes led to an acceptance of inferior quality development.

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Much of the existing housing stock is not energy efficient. There is a prevalence of low density housing, much of which is not well connected to services. However new building techniques and technologies, including the use of micro-renewables<sup>(1)</sup>, give the opportunity to improve the energy efficiency of housing and commercial buildings.

### 1.5 What is the role of the Core Strategy?

The Core Strategy can provide planning policies that set standards for design and sustainability targets for the benefit of local communities. In developing these policies, the Core Strategy needs to take into account all other relevant plans, strategies, policies and programmes as well as involve key stakeholders and the community. It will consider the policy directives from higher level policy documents and interpret how they should be applied specifically in Cornwall. In terms of design and use of resources the role of the Core Strategy is to:

- Provide guidance on location and layout of development
- Set standards for energy efficiency in development
- Require the design process to be properly considered in development proposals - including for the spaces between buildings
- Consider the use of design policies for development management which relate to specific local conditions and objectives

### 1.6 Relevant policy context

When preparing the Core Strategy, the Council does not start with a blank sheet of paper. There is a whole series of policies at national and regional level which have to be followed and the Core Strategy needs to be prepared within the framework set by national and European legislation and national & regional guidance. This section focuses on the most relevant published legislation, plans & strategies and draws out their key messages for the Core Strategy. The key directives, acts, plans and strategies identified and used are:

#### National

- DETR/ CABE (2000) By Design: Urban Design in the Planning System – towards better practice
- CABE Building for Life (November 2008)<sup>(2)</sup>
- Planning Policy Statement 1: Delivering Sustainable Development (2005)
- Planning Policy Statement 3: Housing (2006)
- Planning Policy Guidance 4: Planning for Sustainable Economic Growth (2009)
- Planning Policy Statement 7: Sustainable Development in Rural Areas (2004)
- Planning Policy Statement 15: Planning for the Historic Environment (2010)
- Planning Policy Guidance 17: Planning for Open Space (2002)
- Planning Policy Statement 22: Renewable Energy (2004)
- Code for Sustainable Homes (DCLG 2006)
- Urban Design Compendium (English Partnerships, 2000)

1 Micro-renewable technologies include wind, solar thermal, photovoltaic, hydro/ hydro-electric, heat pumps and biomass technologies. They are energy capture systems which can be used on individual properties.

2 The CABE website is a good source of design advice which is frequently updated - [www.cabe.org.uk](http://www.cabe.org.uk)

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- Urban Design Compendium 2: Delivering Quality Places (English Partnerships, 2007)
- Manual for Streets (DfT/DCLG, 2007)

### Regional

- South West Strategy for Architecture and the Built Environment (SWRDA 2002)

### Local

- A Design Statement for Cornwall: Achieving Quality in the Built Environment (Cornwall County Council, 2002)
- The Cornish Building Stone and Slate Guide (Cornwall County Council, 2007)
- Caradon District – The Design Guide (July 2000)
- Carrick District Design Guide (March 2005)
- North Cornwall District Council Design Guide (1997)

## 1.7 Relevant evidence and research

Recent award winning schemes in Cornwall are Broadclose (Phase1) (Bude), Newlyn Art Gallery (National Civic Trust Awards 2008) and The Exchange, Penzance (Town and Country Design Award 2007) National Maritime Museum (Falmouth) Halgavor Footbridge (A30 near Bodmin) Eden Project Foundation Building (Bodelva) (National Civic Trust Awards 2008).

RuralZed, architects designing affordable sustainable housing for rural areas, produced a report in 2005 illustrating how high density carbon neutral developments can be achieved in rural locations. The ZED principles include energy efficient building fabric and construction, use of local, low impact, reclaimed and recycled materials, promoting on site renewable energy capture, green transport solutions and food growing and composting at home. Jubilee Wharf at Penryn is an example of a ZED development. ([www.ruralzed.com](http://www.ruralzed.com))

There is an increasing number of 'eco-homes' being designed and built in Cornwall. e.g. St Agnes (Ecohouse), Fairglen, Hayle (Percy Williams), Rosehill Lodges, Porthtowan (Pioneer Environmental Buildings), 42 sustainable units, Falmouth live/work ecopark (ARCO2). These, and many other projects, represent a genuine advance in knowledge of sustainable, energy efficient building design and construction and in the desire to promote design excellence and build in a way which is more environmentally friendly as well as more economic over the building's lifespan.

Campaign for the Protection of Rural England has been campaigning against light pollution and for the protection of tranquillity. Design can make a difference in both of these areas. Further details are provided in the Landscape and Seascape issue paper.

## 1.8 Emerging Evidence and Policy

The gathering of evidence is an iterative process and must be continued throughout the preparation of the Core Strategy. Additional evidence should be considered right up to the submission stage in the process. Listed below are the known emerging relevant guidance & studies, which will be taken into account if available before the submission of the Core Strategy:

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Building for Life Standards (November 2005) provides 20 questions which can be used throughout the design process; by developers in initiating and working up schemes, by planners to lead pre-application discussions and in assessing design. The Building for Life questions are divided into 4 topic areas:

- Character
- Streets, Parking and Pedestrianisation
- Design and Construction
- Environment and Community

In this way the questions aim to cover the diverse remit of design issues, from architectural detailing to urban design and layout, traffic issues and accommodation of parking and the use of design to support and facilitate community life. From 2009 local authorities have been required to assess new developments against Building for Life criteria as part of their annual monitoring reports. <sup>(3)</sup>

The former district councils provided a design review service. Schemes may also be referred to the South West Design Review Panel in Bristol (15 schemes referred 2006-2008) and to CABE (e.g. St Austell town centre redevelopment plans and Hayle Harbour Masterplan). This kind of design review scrutiny is particularly effective at pre-application stage and a new design review panel is being established for Cornwall Council.

A Sustainable Design and Construction Guide is being developed by Cornwall Council which will provide advice for officers and for the construction industry.

### 1.9 Gaps in Evidence

- There is a general lack of comprehensive design and sustainable construction advice for the county, although there are many good examples from former authorities.
- A central database for best practice examples could be developed.

### 1.10 Key Messages from the Evidence Review

A number of key messages and issues were drawn out from the evidence review. The table below identifies the messages deemed most relevant and the source documents.

Table 1.1

Message	Relevant Document(s)
Planning policies should promote high-quality inclusive design in layout and individual buildings and think long term.	PPS1
Good design should contribute positively to making places better for people. High quality and inclusive design should create well-mixed and integrated developments which avoid	PPS1

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segregation and have well-planned public spaces that bring people together and provide opportunities for physical activity and recreation.	
Planning authorities should prepare robust policies on design and access, based on an evaluation of context and stated objectives for the area.	<b>PPS1</b>
Local plans and policies should be aimed at creating places, streets and spaces which meets the needs of people; which are attractive, have their own distinctive identity, and positively improve local character.	<b>PPS1</b> <b>PPS3</b>
Development for economic uses should be of high quality and inclusive design which takes the opportunities available for improving the character and quality of the area and the way it functions.	<b>PPS4</b>
Economic and main town centre uses should be on offer in an attractive and safe environment.	<b>PPS4</b>
Planning authorities should take a positive approach to innovative, high-quality contemporary designs that are sensitive to their immediate setting	<b>PPS1</b> <b>PPS7</b>
Development must contribute to a sense of local identity and regional diversity and be of an appropriate design and scale for its location	<b>PPS7</b>
Good design should: address the connections between people and places by considering the needs of people to access jobs and key services; be integrated into the existing urban form and the natural and built environments; be an integral part of the processes for ensuring successful, safe and inclusive villages, towns and cities; create an environment where everyone can access and benefit from the full range of opportunities available to members of society; and, consider the direct and indirect impacts on the natural environment.	<b>PPS1</b>
Local planning authorities should take into account the desirability of new  development making a positive contribution to the character and local	<b>PPS5</b>

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distinctiveness of the historic environment. The consideration of design should include scale, height, massing, alignment, materials and use.	
Local Planning Authorities should help to achieve the national timetable for reducing carbon emissions from all buildings.	<b>Supplement to PPS1</b>
LDD should contain policies to promote and encourage the development of renewable energy.	<b>PPS1</b> <b>PPS22</b> <b>Strategy &amp; Action – Economic Strategy for Cornwall &amp; IoS 2007-2021</b>
In Cornwall, good design is based on 5 characteristics: i. It is of its time, unique and specific; ii. Inspired by the context and reinforces the place; iii. Tailored to the site; iv. Sustainable; v. Embraced by local people.	<b>A Design Statement for Cornwall: Achieving Quality in the Built Environment</b>

### 1.11 SWOT Analysis

Table 1.2

<b>Strengths:</b>	<b>Weaknesses:</b>
<ul style="list-style-type: none"> <li>• Attractive historic settlements</li> <li>• Valued and protected landscapes of outstanding natural beauty</li> <li>• Tourism industry which requires protection of this environment</li> <li>• Coastal setting which is valuable both in landscape and historic terms</li> <li>• Strong sense of Cornish identity which can inform the development of new places and communities</li> <li>• Existing design guidance, historic and landscape characterisation</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of design and design appraisal skills</li> <li>• Lack of traditional building skills</li> <li>• Peripheral location</li> <li>• Dispersed rural settlement pattern which makes the sustainable location of development difficult</li> <li>• Lack of infrastructure can prevent development or can lead to the creation of places which are unsustainable, lack facilities and community cohesion</li> </ul>
<b>Opportunities:</b>	<b>Threats:</b>

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<ul style="list-style-type: none"> <li>• New development – opportunity for design excellence and to create a new vernacular for Cornwall which incorporates energy efficiency</li> <li>• Establish County Level design panel</li> <li>• Use ‘Building for Life’ and SW Sustainability checklists to ensure best practice</li> <li>• Opportunity to provide strategic district level CHP</li> <li>• Opportunity to incorporate microgeneration into new development</li> <li>• Opportunity to provide space for recycling storage within new homes and commercial buildings, for instance in a new eco-town</li> </ul>	<ul style="list-style-type: none"> <li>• Potential large amount of growth within the county</li> <li>• Pressure for affordable housing and economic development – danger that this may override design considerations</li> <li>• New infrastructure required – will this be delivered in a timely and well designed way</li> <li>• Climate change and the need for energy efficiency will have impact on design – if not properly managed this could be a negative impact</li> </ul>
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### 1.12 Climate Change Considerations

Changes in climate will require various design solutions, for example:

- Increased flood risk could prevent development occurring, hindering the delivery of affordable housing. It could also require development to be located in areas which are either visually not typical in the landscape (i.e. to avoid floodplain) or which are poorly accessible. It could also require design solutions which are out of keeping with the context (e.g. floor levels raised, houses on stilts).
- Increases in temperature will require design to consider shading and cooling both in terms of layout and building design and possibly landscaping.
- Maximising the energy efficiency of existing building stock, especially post 1930s buildings which are the least energy efficient.
- Incorporating renewable energy technologies into development.
- Ensuring that development does not contribute to surface water run off/flood risk.

Climate change is further explored in a separate issues paper in this series, as well as in the Sustainability Appraisal Scoping Report (visit [www.cornwall.gov.uk](http://www.cornwall.gov.uk)). The scoping report sets out a series of sustainability objectives against which the Core Strategy and other parts of the LDF will be assessed, to gauge how far they will promote sustainable development. The relevant objective for design and efficient use of resources states:

*To promote and achieve high quality design in development, sustainable land use and sustainable built development, maintaining local distinctiveness and encouraging a good quality of life.*

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### 1.13 Main Spatial Planning Issues

Taking into account the key messages from the current evidence available, the spatial planning issues are listed below.

#### Issue D 1

The Core Strategy should explore ways to preserve and enhance local character, support the creation of sustainable communities through layout and provision of facilities, encourage a new modern vernacular for Cornwall and ensure careful use of resources.

#### Issue D 2

The Core Strategy should explore how to promote sustainably located development and energy and resource efficiency in new development.

These issues will work towards achieving the following long term objectives for Cornwall as set out in the Sustainable Community Strategy - 'Future Cornwall':

- To improve our communities through quality building, using housing development to meet local need and drive the regeneration and sustainability of communities, promoting smaller settlements to be centres of employment and services and set an example in design for sustainable living
- To make the most of our environment, reduce greenhouse gas emissions and invest in and promote sustainable use of natural resources

This paper summarises the evidence on design and efficient use of resources brought together to inform the Cornwall Core Strategy. However, it will be added to and kept up-to-date as other relevant evidence becomes available. In updating these papers all previous versions will be archived to ensure it is clear what evidence was available at each stage.

### 1.14 Appendix A

#### Appendix A

##### Consultation to date:

The Issues papers were first published for stakeholder consultation in September 2009. The papers were amended to take into account consultee responses and were then circulated to Planning Policy Advisory Panel members in November 2009. They were also given to all members at a series of three area based consultation events in March 2010.

##### Revisions to Issues Papers:

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In writing the draft Issues and Options report in March 2010 it was clear that it was necessary to revise the issues identified in some of the topic based issues papers. Some issues were requirements under other legislation or procedural matters, and therefore options could not be set against them (*e.g. The Core Strategy should work with other plans and programmes...*) Others were in fact options and needed to be set as options under an overarching issue (*e.g. The Core Strategy has a role in supporting the growth and sustainability of the micro and small business economy*). There was also some repetition between different topics and these issues could be amalgamated.

### Criteria for Changes:

The issues have been rationalised against the following criteria:

- Is this a Spatial Planning Issue?
- Is the issue covered by other legislation?
- Can options be generated against each issue?
- Is this an issue and not an option?
- Is the issue rooted in evidence?
- Is there potential to amalgamate issues?

### Issues in Consultation Version:

**Issue D1:** The Core Strategy should explore ways to preserve and enhance local character, support the creation of sustainable communities through layout and provision of facilities, encourage a new modern vernacular for Cornwall and ensure careful use of resources.

**Issue D2:** The Core Strategy should consider the use of design policies for development management which relate to specific local conditions and objectives.

**Issue D3:** The Core Strategy should explore how to promote clear targets for sustainably located development and energy and resource efficiency in new development.

### Revised Issues:

**Issue D1:** The Core Strategy should explore ways to preserve and enhance local character, support the creation of sustainable communities through layout and provision of facilities, encourage a new modern vernacular for Cornwall and ensure careful use of resources.

**Issue D2:** The Core Strategy should explore how to promote sustainably located development and energy and resource efficiency in new development.