



Llywodraeth Cynulliad Cymru
Welsh Assembly Government

Review of national planning policy and guidance to deliver low and zero carbon development in Wales



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1 Introduction

- 1.1 This review considers planning policy and guidance in Wales that should help to deliver low and zero carbon development. The purpose of the review is to identify those elements of policy that relate directly to this project to help the project team establish an understanding of the current situation in Wales. Therefore, this review focuses on the built environment, incorporating elements of built design to improve energy efficiency and matters related to the generation of renewable energy, particularly from micro-renewable technologies. The review does not look in any great detail at ways of reducing energy demand from travel, for instance through policy on creating more walkable neighbourhoods or co-location of housing and employment to reduce commuting, and only contains limited coverage of large scale renewable energy generation.

2 Planning policy and guidance for Wales

- 2.1. National planning policy in Wales is set out in **Planning Policy Wales (PPW) (March 2002)**. This document provides the strategic policy framework for the effective preparation of local authorities' development plans. It covers all topic and strategy related policy for Wales.
- 2.2. PPW is monitored and reviewed in relation to the Welsh Assembly Government's objectives for Wales. Therefore, prior to a full revision of PPW any updates and revisions are issued in the form of Ministerial statements, known as Ministerial Interim Planning Policy Statements (MIPPS). These MIPPS replace and supplement sections of PPW. Several MIPPS related to achieving zero and low carbon development have been issued to update PPW .
- 2.3 These are:
- **MIPPS 01/2005 Planning for Renewable Energy (July 2005)** – this MIPPS adds additional detail to planning policy for large and small scale renewable energy generation in Wales. The MIPPS introduces the use of Strategic Search Areas as the focus for large-scale wind energy development in Wales, in addition to policy on other forms of renewable energy. This MIPPS also contains policy on delivering district heating schemes and combined heat and power.
 - **MIPPS 01/2008 on Good Design (January 2008)** – this MIPPS includes policy on improving the energy performance of new dwellings through their layout on site and the design of individual new buildings.
- 2.4. There is also a MIPPS at consultation, and therefore the policy provision this contains is yet to be adopted:
- **draft MIPPS on Climate Change (December 2006)** – this MIPPS covers climate change mitigation and adaptation. The MIPPS proposes changes throughout PPW, reflecting the cross-cutting nature of climate change issues. Specifically, relevant to this policy, the MIPPS includes matters on design to reduce energy demand and the use of micro-renewable technology as part of new

development. The draft MIPPS includes a draft of a **Climate Change Compendium (CCC)** to provide practical and regularly updated information about the detailed policies and other tools that can be used to implement climate change policy. The intention is that this document is responsive to the pace of change in this field. Planning authorities will need to have regard to the Climate Change Compendium in their LDPs, it is not only a good practice guide. It is intended to cover the main policy topics of climate change, such as energy use, and includes details such as:

- relevant national policy
 - how the topic should be integrated into the LDP, strategy and policies, with examples
 - how the policy can be best implemented, including the role of additional guidance and design statements
 - monitoring
 - references for further information.
- most recent proposed changes to PPW are from the **further Consultation on Planning for Climate Change** (July 2008), this makes changes to the draft MIPPS on climate change. This proposes a new section in PPW specifically on 'climate responsive developments and sustainable building standards'. The proposals include:
 - design of development to consider climate change
 - use of sustainable building standards, including targets
 - incorporation of local renewable and low carbon energy sources
 - standards for strategic sites.
 - commitment to preparing a TAN to provide further guidance.

2.5. National policy is supported by a number of Technical Advice Notes (TANs) that provide topic based advice to support PPW (and MIPPS). They are intended to be taken into account in policy making in local development plans, and may be material to decisions on planning applications.

2.6. Most relevant to achieving low and zero carbon development are:

- **TAN 8 : Renewable Energy (2005)** – containing the technical guidance to support the MIPPS 01/2005 on renewable energy
- **TAN12: Design (2002)** – this is the existing guidance for the design of development although amendments are proposed through the **draft TAN 12: Design (May 2008)**. The draft TAN contains technical guidance to implement MIPPS 01/2008, including detail on the matters that should be addressed as part of Design and Access Statements, and how energy efficiency measures should be incorporated into all new development.

- **TAN21: Waste (November 2001)** – this sets out the waste management planning policies advice and includes a section on planning considerations for energy recovery facilities.

2.7. The planning policy and guidance, both proposed and existing, covers a variety of topics relating to delivering low and zero carbon development. This section of the policy review has sorted this guidance into several broad areas, although evidently much policy and advice is broadly overlapping. In the tables that follow it has been made as clear as possible where some matters are covered by existing policy and guidance, and where others are currently only proposals, and therefore at this stage do not have the weight in guiding planning decisions and local policy as adopted documents. Italics are used in the following tables to indicate direct quotes from policy and advice notes, both existing and proposed. Other text relates to preamble from consultation documents and general explanatory text to help describe the policy approach.

2.8. The topics covered are:

- policy objectives
- design of development, including Design and Access Statements and site layout
- locally produced development guidance
- proposed energy efficiency, BREEAM and Code for Sustainable Homes targets
- targets for delivering sustainable buildings
- renewable energy
- combined heat and power and district heating
- other issues, covering skills, building regulations, Energy Advice Reports, land allocation and proposed new TAN
- a final section addresses non-planning related policy and strategies for Wales related to low and zero carbon development

The further consultation on Planning for Climate Change (July 2008) indicated that a new Technical Advice Note would be prepared to supplement the proposed policies contained in the consultation document.

<p>The draft MIPPS proposes additional information on how development allocations and proposals can help meeting Kyoto CO₂ reduction targets as part of a staged approach to development. These are:</p> <ul style="list-style-type: none"> • <i>'maximising design and location opportunities to reduce energy demand</i> • <i>considering the use of energy efficient supply measures to meet the reduced demand; and</i> • <i>incorporating a proportion of on site renewable energy generation.'</i> 	2.2	<p>Planning for climate change – consultation document (December 2006), Part B: draft MIPPS on Climate Change</p> <p>(proposed additional bullets to 2.2.1 PPW 2002)</p>
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4 Design of development

- 4.1. Design policies are set out primarily through PPW (2002) however, *Planning for Good Design MIPPS 01/2008* replaced section 2.9 of PPW and the Assembly Government has recently consulted on limited changes to TAN 12 Design with regards to climate change. The proposed MIPPS on climate change also includes design issues. Design issues relate to many aspects of development that can help in achieving low and zero carbon emissions. The policy and guidance, both existing and proposed, set out ways that energy efficiency and resource use are incorporated into the design of new development. These design matters include the need to consider the design of individual buildings as well as the location and layout of the site. For instance revision to TAN12 advises that new development demonstrates how carbon reductions have been designed into new development from the outset. These policy objectives are shown in table 4.1.

Table 4.1: Guidance and policy relevant to the design of low and zero carbon

Design	Para Ref.	
<p><i>'The planning system should assist in influencing the way that development responds by moving consideration of climate adaptation and mitigation to an earlier stage in the site selection and building design process.'</i> Therefore, climate change response should not be an 'add-on' to the end to of the process but designed into development from the outset.</p>	1.4.14	<p>Planning for climate change – consultation document (December 2006), Part B: draft MIPPS on Climate Change</p> <p>(proposed to replace 1.4.12 – 1.4.14 of PPW 2002)</p>
<p>Good design <i>'should seek to maximise energy efficiency and the efficient use of other resources and minimise the use of non renewable resources'</i></p>	2.9.4	Planning for Good Design MIPPS 01/2008
<p><i>'ensure that development contributes to tackling the causes of climate change (by reducing greenhouse gas emissions)'</i> and this will be in part through the <i>'location, density, layout and built form'</i></p>	2.9.5	Planning for Good Design MIPPS 01/2008

Inherent in the definition of design in TAN12 is the <i>'use of energy and natural resources'</i>	2.2	draft TAN12: Design (May 2008) retained wording from existing TAN12: Design (2002)
Achieving greater resource efficiency has always been part of the approach to good design advocated though TAN12. The draft of the new TAN includes the advice that <i>'In terms of energy, the potential for the development to be designed to meet zero carbon standards should be considered from the outset.'</i>	3.11	draft TAN12: Design (May 2008) proposed additional wording to first bullet of paragraph 3.12 TAN: Design (2002)
The draft TAN identifies that <i>'good design is the responsibility of all those involved in the design process'</i> . It defines certain aspects of design that should be designed into development <i>'from procurement to construction through to completion'</i> . Under the environmental sustainability heading. It is proposed in designing development it is important to address carbon reduction and to show how development has responded to this need (in addition to others). It states: <i>'carbon reduction – the way in which new development seeks to minimise the carbon emissions associated with the development through energy efficiency (including passive design), low-carbon sources and renewable energy. This should include a site appraisal and assessment of options, including a preferred option to deliver carbon reduction in line with local or national policy'</i>	3.25	draft TAN12: Design (May 2008) proposed additional bullet to paragraph 3.26 TAN: Design (2002)
Housing development should <i>'promote environmental sustainability features, such as energy efficiency, in new housing and make clear specific commitments to carbon reductions and/or sustainable building standards'</i>	5.60	draft TAN12: Design (May 2008) proposed additional wording to the fifth bullet of paragraph 3.52 TAN: Design (2002)
In delivering housing the Assembly Government will seek to ensure that <i>'new housing and residential environments are well designed, environmentally sound (especially energy efficient)...'</i>	9.1.1	MIPPS 01/2006: Housing
Local planning authorities should promote <i>'construction of housing with low environmental impact that especially maximises energy efficiency and minimises the use of energy from fossil fuel sources, using renewable energy technology where appropriate'</i> . (9.1.2)	9.1.2	PPW 2002

- 4.2 PPW and the MIPPS require a Design and Access Statement to be produced for new development, with these to be a mandatory regulatory requirement to be submitted with all relevant planning applications. At the outset of any new development pre-application discussions between the developer and local planning authority will help define the context for Design and Access Statements. Policy and guidance gives details of what these statements should contain, including how design of development has taken into account the need for greater energy efficiency, these are show in table 4.2. Design and Access Statements should demonstrate how these design considerations have been integrated into the proposed development from the outset and have been influential in the final design.

Table 4.2: Policy and guidance on design and access statements

Design and access statements	Para ref.	
There is a need for design and access statements to be prepared. These should be <i>“living’ documents which deal with all relevant aspects of design throughout the process and the life of the development, clearly stating the comprehensive design principles adopted”</i> .	2.9.12-13	Planning for Good Design MIPPS 01/2008
Draft TAN12 includes a section relating to ‘design issues’ that will need to be part of creating good design in new development.	5	draft TAN12: Design (May 2008) using existing and proposed additional text to existing TAN12: Design (2002)
Design and Access Statements are to be prepared to show how design considerations are integrated into the planning application, guidance identifies that this should be an on-going process from inception to submission of an application. One of the benefits Design and Access Statements is they are intended to: <i>‘lead to an improvement in the quality, sustainability and inclusiveness of the development’</i> .	Appendix 1 - A2.4 (3.3)	draft TAN12: Design (May 2008) proposed new appendix to TAN12: Design (2002)
CO ₂ emissions from development are addressed as part of the ‘environmental sustainability’ component of Design and Access Statements.		draft TAN12: Design (May 2008)

<p>The Design and Access Statements should contain information on how the development addresses carbon reduction. This includes:</p> <p><i>‘How has the proposal sought to reduce carbon emissions from energy, heating and cooling through</i></p> <ul style="list-style-type: none"> • <i>passive design</i> • <i>energy efficiency</i> • <i>the efficient supply of energy</i> • <i>the use of renewables</i> <p><i>Provided evidence of applying the energy hierarchy in appropriate energy advice reports, energy strategies and carbon reduction assessments.’</i></p>	<p>Appendix 1 – Table 2</p>	<p>draft TAN12: Design (May 2008) proposed new appendix to TAN12: Design (2002)</p>
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4.3 Policy and guidance suggests that this should include in the layout of development on the site, giving consideration to matters such as building orientation, use of topography and sheltering development using planting, as show in table 4.3. This is necessary in demonstrating how development has been designed to integrate energy reduction measures from the outset.

Table 4.3: Policy and guidance related to site layout for low and zero carbon

Site Layout	Para ref.	
<p><i>Local planning authorities should seek opportunities to integrate energy efficiency and conservation objectives into the planning and design of new development in their areas. This includes orientation, mix of use, light penetration, shelter vegetation, and local topography.</i></p>	<p>12.9.4</p> <p>4.4</p>	<p>MIPPS 01/2005 Planning for Renewable Energy</p> <p>TAN8: Planning for Renewable Energy (July 2005)</p>
<p><i>Local planning authorities can be influential in encouraging environmental sustainability by ensuring sustainability approaches to energy/CO₂...are an integral part of the design solution.</i></p>	<p>5.70</p>	<p>draft TAN12: Design (May 2008) proposed new wording to existing paragraph 5.67 of TAN12: Design (2002)</p>
<p><i>In identifying the local context of a development the draft TAN includes the need to consider how the site can make ‘intrinsic resources of the site or area to create more environmentally sustainable development and in particular to consider measures to reduce the effects related to climate change and to build in resilience to the changes (mitigation and adaptation).</i></p>	<p>3.15</p>	<p>draft TAN12: Design (May 2008) mainly additional wording to paragraph 3.16 of existing TAN12: Design (2002)</p>

<p>Design advice given includes the need to consider:</p> <ul style="list-style-type: none"> building orientation, location on slope and planting can reduce significantly the energy requirements of a typical building through the free ambient sources created by passive solar gain and microclimate improvements 	5.71	draft TAN12: Design (May 2008) proposed new paragraph to follow paragraph 5.67 of TAN12: Design (2002)
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5 Locally produced development guidance

- 5.1 Planning policy and advice advocates the use of Supplementary Planning Guidance and development briefs in addition to Local Development Plan policy, to deliver guidance on lower and zero carbon development tailored to the needs of the local area. This local guidance could be 'development briefs' that set out site specific principles for development, and could include details of specific energy efficiency measures to be incorporated into development, such as micro-renewable generation or district heating. Supplementary Planning Guidance could be used to provide topic based advice on matters such as renewable energy or energy efficient design. The further consultation on the climate change MIPPS identifies that these documents can use national policy as their basis, and therefore can be prepared in advance of local policy. Details of the policy and guidance on related to locally produced planning advice is shown in table 5.1.

Table 5.1: Policy and guidance on preparing local advice documents

Using development briefs and supplementary planning guidance	Para ref.	
<i>Planning and development briefs should be used to outline sustainable design requirements where appropriate.</i>	2.9.15	Planning for Good Design MIPPS 01/2008
The draft climate change compendium highlights that national policy can be used to drive forward locally produced guidance, in advance of local policy preparation: <i>'There is nothing to prevent LPAs from producing SPG in advance of or in tandem with their Local Development Plans and using the MIPPS on Climate Change as a basis for bringing new initiatives forwards'</i>	4	Planning for climate change – consultation document (December 2006), Part C: draft Climate Change Compendium

<p>Local planning authorities are encouraged to produce Supplementary Planning Guidance (SPG) for development within their LDP area. These SPG could be area specific, such as:</p> <ul style="list-style-type: none"> • urban design frameworks or strategies • neighbourhood or district guides, countryside design summaries, landscape design guides, village design statements and town or village action plans • design codes (proposed in draft TAN12) <p>or site specific guidance, such as:</p> <ul style="list-style-type: none"> • development or planning briefs <p>or topic based, such as:</p> <ul style="list-style-type: none"> • design guides <p>Draft TAN12 includes the suggestion that these SPG could include '<i>sustainable building standards</i>' for new development, and this would include carbon reduction measures.</p>	<p>4.6</p>	<p>draft TAN12: Design (May 2008) retained wording from existing paragraph 4.3 TAN12: Design (2002) (unless stated otherwise)</p>
<p>Design and energy should be considered when development plan policy is produced, in supplementary planning guidance such as design briefs. Local planning authorities should actively consider the inclusion of design guidance in their development plans or Supplementary Planning Guidance, which consider the issues of solar panels, CHP and other forms of renewable energy technology (micro-generation).</p>	<p>4.1</p>	<p>TAN8: Planning for Renewable Energy (July 2005)</p>
<p>There is a role for SPG to cover more detailed aspects of planning for renewable energy and designing for energy efficiency. These could cover topics such as housing fenestration, layout, requirements for renewable energy generation capacity for new offices, including heat pumps and community heating networks. Also development briefs for major sites should incorporate requirements regarding renewable energy, energy efficiency and conservation.</p>	<p>5.7</p>	<p>TAN8: Planning for Renewable Energy (July 2005)</p>

6 Targets for delivering sustainable buildings

- 6.1 The Assembly Government aspiration is for all new buildings in Wales constructed from 2011 onwards to achieve zero carbon standards. The Assembly Government has introduced BREEAM 'Excellent' or equivalent as an environmental performance standard for all new buildings influenced by the Assembly Government supported by grant funding, investment or land disposal. For all new housing promoted or supported by the Welsh Assembly Government of Assembly Government Sponsored Bodies (AGSBs) Code for Sustainable Homes Level 3 will be the standard, moving to higher levels as quickly as possible. This is in order to start progressing towards zero carbon and for wider sustainability purposes.
- 6.2 Within national planning policy there are proposed policies expecting minimum sustainability standards (using the Code for Sustainable Homes and BREEAM) for new residential and non-residential development. Additional carbon emission reduction targets are also proposed that go beyond that required by the sustainability standards.

Table 6.1: Targets for delivering sustainable buildings

Targets and regulations	Para. ref.	
<p>Proposed policy: <i>The overall aim is to secure zero carbon development at the earliest opportunity</i></p>	2.10.2	Further Consultation on Planning for Climate Change (July 2008)
<p>Proposed policy: Sustainable building standards <i>The Assembly Government has adopted the Code for Sustainable Homes as a tool to assess the sustainability of new homes. For other types of development the BREEAM or other equivalent quality assured schemes should be used.</i></p>	2.10.3	Further Consultation on Planning for Climate Change (July 2008)
<p>Proposed policy <i>To move towards more sustainable and zero carbon buildings in Wales, it is expected that all planning applications for majority development submitted after 1st April 2009 will meet the following minimum standards:-</i></p> <ul style="list-style-type: none"> • residential development of 10 or more units or with a floor-space of 1000m² or more to meet Level 3 of the 'Code for Sustainable Homes' or an equivalent quality assured scheme • non residential buildings with a floorspace of 1000m² or more to meet BREEAM 'very good' standard, or an equivalent quality assured scheme, and secure carbon reduction equivalent to 25% improvement in the Building Regulations (Part L 2006) 	2.10.4	Further Consultation on Planning for Climate Change (July 2008)

<p>Proposed policy: To help move towards zero carbon development through provision of decentralised, renewable and low carbon energy. <i>Planning applications for major developments submitted after 1st April 2009...will incorporate on-site and / or near-site decentralised and renewable or low-carbon energy equipment contributing at least an additional 10% reduction in regulated CO₂ emissions (10% of the Target Emission Rate). Developers will be expected to demonstrate that they have explored all decentralised and renewable and low carbon energy options, and design their developments to incorporate these requirements.</i></p>	2.10.6	Further Consultation on Planning for Climate Change (July 2008)
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7 Renewable energy

7.1 In Wales there is specific planning policy for delivering large scale renewable energy generation from specific sites suitable for wind energy development identified on a national level. These areas are known as Strategic Search Areas (SSAs) and there are seven identified of various scales throughout Wales. There is a MIPPS 01/2005 Planning for Renewable Energy (June 2005) that replaces 12.8 to 12.10 of PPW 2002 that sets out the policy approach to delivering large scale renewable energy schemes, with an emphasis on generation of energy from wind. TAN8: Planning for Renewable Energy gives full details of the SSAs, including their location and potential capacity of sites. The draft MIPPS on climate change proposed additional policy to support renewable energy generation for local or site specific needs. There are also proposals to change regulations to make the fitting of micro-renewable energy technologies permitted development, and not requiring planning permission subject to certain constraints. Details of the policy and guidance on these matters is shown in table 7.1.

Table 7.1: Policy and guidance on renewable energy

Renewable energy	Para. ref.	
<p>The MIPPS sets out the Assembly Government's commitment to:</p> <ul style="list-style-type: none"> • <i>achieving its specific targets for renewable energy (electricity) production</i> • <i>maximising the opportunities for renewable energy (heat)</i> • <i>where possible combining the two in combined heat and power systems</i> • <i>recognising that the benefits of renewable energy are part of its overall commitment to reduce greenhouse gas emissions</i> 	12.8.6	MIPPS 01/2005 Planning for Renewable Energy

<p>To help achieve wind power energy targets in Wales seven Strategic Search Areas (SSAs) are defined in MIPPS 01/2005 and TAN8 where onshore wind energy can be delivered. Although the wind energy developments proposed in these locations will not automatically get permission, they have been identified as broadly suitable for this type of scheme. For each of the SSAs an indicative installed capacity target is given for wind energy projects to assist the local planning process to determine the likely scale of new wind development in each location. Local planning authorities, where relevant, should make policies to direct wind energy development to these locations.</p>	<p>12.8.10 12.9.3</p> <p>2.4- 2.10</p>	<p>MIPPS 01/2005 Planning for Renewable Energy</p> <p>TAN8: Planning for Renewable Energy (July 2005)</p>
<p>Outside SSAs smaller (less than 5MW) domestic or community-based wind turbines and small or medium (up to 25MW) on urban/industrial brownfield sites, will be permitted. Local planning authorities should set policy to deliver these sites.</p> <p>The Assembly Government also expects local authorities to <i>‘encourage, via their development plans policies and when considering individual planning applications, smaller community based wind farm schemes (generally less than 5MW)</i></p>	<p>12.8.11 to 12.9.3</p> <p>2.11 to 2.12</p>	<p>MIPPS 01/2005 Planning for Renewable Energy</p> <p>TAN8: Planning for Renewable Energy (July 2005)</p>
<p>There is an expectation on local planning authorities to help facilitate renewable energy, energy efficiency and conservation. This includes the role of policy in enabling contributions to be delivered, and ensuring these are in line with national and international policy and targets. These policies, however, must be delivered in a way that considers wider sustainability implications, including impact on designated areas and local communities.</p>	<p>12.8.12 to 12.8.13</p>	<p>MIPPS 01/2005 Planning for Renewable Energy</p>
<p>The MIPPS contains recommendations for energy policies that should be included in local development plans.</p> <p><i>“Local planning authorities should undertake an assessment of the potential of all renewable energy resources, renewable energy technologies, energy efficiency and conservation measures and include appropriate policies in local development plans.”</i></p>	<p>12.9.1</p>	<p>MIPPS 01/2005 Planning for Renewable Energy</p>
<p>The Assembly Government objectives for delivering ‘infrastructure and services’ includes the need to <i>‘promote the generation and use of energy from renewable sources and energy efficiency, especially as a means of reducing the effects of climate change’</i>.</p>	<p>12.1.4</p>	<p>PPW 2002</p>

<p>In making development control decisions for renewable energy development, beyond that to meet large onshore targets for wind energy, the MIPPS states that there is a need to <i>'encourage developers to integrate energy efficiency and conservation measures as part of the design of new development.'</i></p>	12.10.4	MIPPS 01/2005 Planning for Renewable Energy
<p>Proposed additional wording: <i>Local planning authorities should, where relevant, consider the likely impact of any proposed development on existing or proposed efficient energy supply networks or on-site renewable energy generation...</i></p>	12.10	<p>Planning for climate change – consultation document (December 2006), Part B: draft MIPPS on Climate Change</p> <p>(proposed additional bullets to 12.10.4)</p>
<p>Proposed additional working to PPW 2002 12.1.4: <i>'to ensure every opportunity is taken to maximise the provision of renewable energy generation from micro-generation equipment in new and existing development, including allowing for future inclusion as part of the design of buildings where it is not being incorporated'.</i></p>	12.1	<p>Planning for climate change – consultation document (December 2006), Part B: draft MIPPS on Climate Change</p> <p>(proposed additional bullets to 12.1.4)</p>
<p>There are proposals to remove the requirement for planning permission for the installation of domestic micro-generation renewable energy technology, by making these part of 'permitted development' rights. 'Permitted development' rights would only extend to certain types of building and technology, subject to certain criteria.</p>		<p>Lifting the planning barriers to domestic energy micro-generation: proposed changes to permitted development rights (July 2007)</p>
<p>For 'employment and commercial areas' the design advice is that the design of this type of development can <i>'provide opportunities to develop renewable energy opportunities such as passive solar and in some instances wind turbines'</i></p>	5.66	<p>draft TAN12: Design (May 2008) proposed additional wording to existing paragraph 5.66 of TAN12: Design (2002)</p>

8 Combined heat and power and district heating

- 8.1 National policy and guidance includes a great deal of emphasis on the more efficient use of generated heat and power in development, through the use of local and district power and/or heat schemes. This includes specific facilities to provide both heat and power, as well as making use of co-location of mixed use development to make best use of energy, for example through using waste heat from industry for heating or providing power that is used by different uses at different times of day. Details of the policy and guidance on combined heat and power and district heating are show in table 8.1.

Table 8.1: Policy and guidance on CHP and district heating

CHP and District Heating	Para ref.	
<p>In identifying 'strategic sites' where there are good opportunities to go beyond targets for carbon reductions <i>'Particular attention should be given to opportunities for utilising existing or proposed decentralised and renewable or low-carbon energy supply systems and to encouraging the development of new opportunities to supply proposed and existing development. Such opportunities could include co-locating potential heat customers and heat suppliers.'</i></p>	2.10.7	Further Consultation on Planning for Climate Change (July 2008)
<p><i>'to ensure every opportunity is taken to use energy efficient, low carbon supply measures to meet demand. Major development is expected to incorporate decentralised heating, cooling and power (CHP) networks, preferably powered by renewable energy sources, or to connect to existing CHP (and CCHP) or communal/district heating networks.'</i></p>	12.1	<p>Planning for climate change – consultation document (December 2006), Part B: draft MIPPS on Climate Change</p> <p>(proposed additional bullets to PPW 12.1.4)</p>
<p>TAN8 raises the potential for community (or District) heating, recognising that <i>'these installations will require collaborative working between developers, energy companies and planning authorities in order to achieve significant results'</i>. To achieve these schemes the TAN notes <i>'community heating networks utilising CHP or low-carbon fuels should be thoroughly investigated'</i> in design briefs are being prepared for larger developments. These matters should also be integrated into development plan policy and supplementary planning guidance.</p>	3.7	TAN8: Planning for Renewable Energy (July 2005)
<p>Specific reference is given to CHP and district heating,</p> <p><i>'...large urban sites and new urban areas are likely to provide the greatest opportunity for development of combined heat and power and district heating systems. Higher densities and a mix of uses to balance energy demand over different time periods (such as between industrial & residential or with a major institutional use such as a hospital or a leisure centre) can improve the viability of opportunities for CHPs and district heating systems that incorporate renewable energy sources.'</i></p>	5.71	draft TAN12: Design (May 2008) proposed new paragraph to follow paragraph 5.67 of TAN12: Design (2002)
<p>Design issues for 'housing design and layout' included in the draft TAN12 is the need to create better linked development, not only dealing with public transport but also district heating.</p>	5.59	draft TAN12: Design (May 2008) proposed additional wording to existing paragraph 5.51 of TAN12: Design (2002)

<i>'All residential proposals should seek to minimise energy use, larger schemes should investigate the feasibility of district heating schemes especially when mixed uses are proposed for the site'</i>	5.61	draft TAN12: Design (May 2008) proposed additional wording to existing paragraph 5.53 of TAN12: Design (2002)
Grouping of employment could help provide <i>'opportunities to minimise energy use through district heating schemes including CHP and run on low carbon fuel'</i> , as for housing where mixed use is proposed this could improve the feasibility and viability of these schemes.	5.68	draft TAN12: Design (May 2008) proposed additional wording to existing paragraph 5.60 of TAN12: Design (2002)
The TAN21: Waste includes the use of waste as a fuel as a disposal option. It suggests that: <i>'Proposals that incorporate combined heat and power plant could contribute to district heating schemes for development such as schools or hospitals, providing these are environmentally acceptable.'</i>	4.8	TAN21: Waste (November 2001)

9 Land allocation

9.1 There is an emphasis in policy and advice on the need to consider the potential for low and zero carbon development when making land allocations. This is not only in terms of creating a sustainable spatial strategy and reducing the need to travel, but also in terms of delivering low and zero carbon buildings. This includes considering the suitability of land to create lower energy demand development, and the potential for on-site renewable energy generation and energy efficient power generation, such as combined heat and power and district heating. Details of the policy and guidance is show in table 9.1.

Table 9.1: The role of land allocations in delivering low and zero carbon development

Land allocation	Para no.	
<i>Climatic consideration need to be addressed in LDPs' land allocations and whilst climate and particularly, aspect, should not be overriding considerations in allocating land in LDPs, there factors need to be considered from the outset.</i>	5.5	TAN8: Planning for Renewable Energy (July 2005)

<p>Proposed policy <i>'Local planning authorities should assess 'strategic sites' to identify opportunities to require higher sustainable building standards and / or decentralised and renewable or low carbon energy targets than the national minimum.'</i> <i>'Particular attention should be given to opportunities for utilising existing or proposed decentralised and renewable or low-carbon energy supply systems and to encouraging the development of new opportunities to supply proposed and existing development. Such opportunities could include co-locating potential heat customers and heat suppliers.'</i> These need to be based on a 'robust evidence base' this can use the 'local energy assessment' developed under PPW (MIPPS) 12.9.1.</p>	<p>2.10.7</p>	<p>Further Consultation on Planning for Climate Change (July 2008)</p>
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10 Other issues

10.1 The existing and proposed policy and guidance also sets out some additional matters that will help in delivering low and zero carbon development, details are show in table 10.1. They include:

- **Skills** – there will be a clear need for Local Planning Authority to have suitable expertise to advise applicants on renewable energy matters from the outset of enquiries
- **Building Regulations** – guidance raises the need for development design to take into account the Building Regulation requirements, and this may include the need for close working of planning offers and building inspectors to ensure this is fully taken into account in design
- **Energy Design Advice Reports** – there is an expectation in TAN8 that Energy Advice Reports will be prepared to help deliver more efficient development
- **Proposed New TAN** – the further consultation on the proposed Climate Change MIPPS refers to the preparation of a new TAN related to climate change
- **Permitted Development Rights for Micro-generation** – in 2007 the Assembly Government consulted on lifting the barriers to domestic energy micro-generation to help residents take up individual sources of renewable energy in Wales by reducing the need to obtain planning permission where the impact would not be significant. Secondary legislation is likely to be secured at the earliest opportunity.

Table 10.1: Other policy and guidance issues relevant to delivering low and zero carbon development

Other issues	Para ref.	
<p>Skills:</p> <p>TAN8 raises the need for local planning authorities to have an understanding of the various forms of renewable energy technology and have access to experts where necessary. These skills are essential to be able to deal with preliminary enquiries and pre-application discussions for proposed development.</p>	6.2	TAN8: Planning for Renewable Energy (July 2005)
<p>Building Regulations:</p> <p>Proposed additional paragraph to existing TAN12 <i>Design issues, as influenced through the planning system, should not duplicate the role of buildings regulations...However, the initial design of a building in the planning process can affect the ability of the building to meet Building Regulation requirements and design should therefore anticipate these requirements and not be developed in isolation.</i></p>	1.5	draft TAN12: Design (May 2008) proposed additional paragraph after 1.4 of TAN12: Design
<p>The design TAN does recognise the relationship between LDP policy and any SPG prepared, working in combination with other more specific instruments to achieve energy savings and the use of renewable resources. This specifically relates to Building Regulations Part L (2006) that addresses energy use in dwellings. As recognised in the draft TAN this highlights the need for '<i>Close working between local planning officers and building inspectors...to ensure that opportunities to include resource efficient measures and sustainable waste and water management are maximised through the design process.</i>'</p>	5.75	draft TAN12: Design (May 2008) proposed additional paragraph to follow existing paragraph 5.69 TAN: Design (2002)

<p>Energy advice reports:</p> <p>TAN advises that development plan policies and SPG should include a requirement for new non-residential buildings over 1000 sq.m to be accompanied by an '<i>Energy Design Advice Report if appropriate</i>'. These reports should recommend how energy efficiency and renewable energy should be incorporated into development. Where insufficient consideration has been given to energy issues in project design, they '<i>should consider refusing planning permission</i>'.</p>	4.5	TAN8: Planning for Renewable Energy (July 2005)
<p>Proposed new TAN:</p> <p><i>Further guidance on the use of the Code and BREEAM for land use planning purpose will be set out in a Technical Advice Note to be published in 2009</i></p>	3.2.5	Further Consultation on Planning for Climate Change (July 2008)
<p><i>'The definition of decentralised and renewable and low carbon energy sources, and on-site/off-site will be contained in the new TAN</i></p>	3.3.4	Further Consultation on Planning for Climate Change (July 2008)

11 Other strategies of the Welsh Assembly Government related to reducing carbon

11.1 In addition to planning policy there are other strategies and plans produced by the Assembly Government that aim to lead to lower carbon development in Wales:

One Wales: a progressive agenda for the government of Wales (June 2007)

11.2 In July 2007 the Welsh Assembly Government published the programme for Government over the next four years, entitled *One Wales*. Commitments which have an impact on reducing carbon emissions include:

- Aim to achieve annual carbon reduction-equivalent emission reductions of 3% per year by 2011 in areas of devolved competence. This will include specific sectoral targets in relation to residential, public and transport areas.
- Commit to targets on the carbon neutrality of public buildings.

- Draw up an energy strategy which will be integrated with a planning framework, to include actions on energy efficiency, microgeneration, eco roofs, diversified renewable energy generation and biomass.
- Following production of a Renewable Energy Route Map and an Assembly Government Energy Strategy, review TAN 8, revising upwards the targets for energy from renewables, drawn from a range of sources.
- To pursue the devolution of building regulations to the Assembly.

Wales Spatial Plan

- 11.3 The Planning and Compulsory Purchase Act 2004 requires the Welsh Assembly Government to prepare a Spatial Plan covering the whole of Wales. The Plan, which was adopted by the Assembly in November 2004 and subsequently updated in July 2008, complements and helps to translate into practice the Welsh Assembly Government's sustainable development duty. The recent revision has given greater emphasis to climate change.

Responding to our changing climate

- 11.4 In 2007 the Welsh Assembly Government consulted on *Responding to our changing climate*. This contained a climate change adaptation action plan for Wales. Under three broad themes, the Adaptation Action Plan outlines the impacts that Wales can expect as a result of climate change and identifies the actions required to adapt to these impacts in Wales across six broad headings. The Assembly Government intend to consult on a combined Climate Change Strategy next year.

Renewable Route Map for Wales: consultation on the way forward to a leaner, greener and cleaner Wales (2008)

- 11.5 This is a consultation document that will lead to the preparation of a comprehensive set of climate change and energy strategies for Wales by the end of 2008. The aim is to achieve annual 3% reductions in greenhouse gas emissions from 2011 onwards through joint working across all parts of the Assembly Government (1.2).
- 11.6 There is an aim to achieve 'much more distributed generation of energy', with the 2007 Wales micro-generation action plan prepared to detail this.
- 11.7 The consultation document looks at each type of renewable energy generation technology in turn to identify how these can help contribute to overall generation in Wales. This includes maps of existing schemes. Relevant technologies include:
- **Wind:** focused on the SSA, although the consultation document highlights the need for more definition to be given to what is meant by 'smaller community based' developments, as these are not tied to SSA locations. Revisions for TAN8 may be necessary. There is a specific aim (7.13) for the Assembly Government to '*develop, with partners, a strategic bid for a Convergence Fund project at delivering a series of community scale wind energy generation projects access the eligible area.*'

11.8 The second part of the consultation document considers matters relating to 'energy conservation and distrusted generation'. There are a variety of proposed measures for achieving energy efficiencies, one of the most significant for energy savings in new buildings is the devolution of the Buildings Regulations to give the Assembly Government control of these in Wales. The aspiration is that '*Higher standards through devolved Buildings Regulations would be aimed at delivering the aspiration for all new buildings to be zero carbon by 2011*' specifically the '*Assembly Government will looking to demonstrate a path to zero carbon buildings through construction work it funds.*' (8.3).

11.9 There is a emphasis on understanding the contribution that micro-generation can make to increasing renewable energy generation. There is current consultation on changes to the permitted development rights in relation to micro-generation on domestic properties. There is an intention for the Assembly Government to:

"issue planning guidance to make micro generation easier to install; in particular for:

- *roof mounted solar heat and solar (photo-voltaic) electrical panels*
- *ground, water and air source heat pumps*
- *building mounted micro-wind electricity turbines or stand alone wind turbines*
- *biomass electricity or heat generating units, especially for larger properties or community projects.*' (8.5)

11.10 Micro-generation could be expected only to deliver around 3% of the total installation generation capacity (MWe).

Micro-generation Action Plan for Wales March 2007

11.11 This document is a set of actions drawn up by the Assembly Government to help the implementation of micro generation technologies.

11.12 The actions fall into a number of categories, several of which have implications for planning policy and delivering low and zero carbon developments in the future. These are:

Increasing information and knowledge

Including:

- training for planners, architects and surveyors – with training for planners and planning committees and others involved in the design and specification of buildings to make sure the outcomes required from new buildings are not lost (3.2.3)

Overcoming barriers

- planning issues including extended permitted development rights for micro-renewables (by end 2007), and use of design statements and implementation of outcomes of consultation on planning and climate change
- building regulations with the Assembly Government seeking devolution of building regulations to achieve zero carbon objectives (decision sought by end 2007) (3.3.1). This also includes the Assembly Government requiring that a condition of its funding of projects and programmes involving new development has a requirement of BREEAM 'excellent' (end of 2007)

- requirement for new buildings in Wales to be zero carbon (from 2011) (3.3.2).

Exemplar projects

- demonstrate the potential for microgeneration in new developments on WAG owned land (major demonstration by 2009)
- exemplar installations in public sector funded buildings

11.13 Micro-generation action plan has targets of:

- a) 20,000 micro heating systems installed by 2012, rising to 100,000 by 2020
- b) 10,000 micro electricity systems installed by 2012 rising to 200,000 by 2020
- c) 50 combined heat and power and/or district heating systems in place by 2020.

Environment strategy for Wales 2006

11.14 The Environment Strategy provides the framework for the Assembly Government and its partners to protect and enhance the environment in Wales. (p9) A priority of the strategy is to '*minimise our greenhouse gas emissions*'.

National Energy Efficiency Strategy

11.15 Alongside the 'One Wales' 3% carbon reduction commitment it stated that the Assembly Government will prepare a National Energy Efficiency and Savings Plan. This is currently being prepared and a draft for consultation is expected later this year.