



Llywodraeth Cynulliad Cymru  
Welsh Assembly Government

## **PLANNING POLICY WALES**

# **(DRAFT) TECHNICAL ADVICE NOTE 22 PLANNING FOR SUSTAINABLE BUILDINGS**

**Consultation**

**May 2009**

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## Consultation Summary

This consultation seeks comments on the draft Technical Advice Note (TAN) 22: Planning for Sustainable Buildings.

Chapter 2 of Planning Policy Wales sets out the Assembly Government's land use planning policies for planning a sustainable future. The 'Planning for Sustainable Buildings' Ministerial Interim Planning Policy Statement (MIPPS) (01/09) details a new national planning policy on sustainable building standards (a new section 2.12 of Planning Policy Wales). This TAN explains how to apply the policy, and covers:

- sustainable buildings standards
- reducing carbon emissions by using the energy hierarchy which sets out steps in building design that reduce emissions in the most effective manner
- preparing development proposals to deliver sustainable building standards
- the role of local planning authorities
- planning conditions and obligations
- setting local requirements for sustainability on certain sites.

Responses from representative groups should indicate the people and organisations they represent.

Responses may be made available for public inspection in the Assembly Government library. The Welsh Assembly Government will assume that you do not object to this openness unless notified otherwise. If you reply by email, any confidentiality clause automatically generated by your provider will not be taken into account unless you specifically request confidentiality. Consultation responses may also be included in a statistical summary and a summary of responses may subsequently be published on the Assembly Government's website.

This consultation is being conducted in accordance with the Welsh Assembly Government's guidance on written consultations.

## How to respond

A consultation form including consultation questions can be found in **Annex D**.

The consultation closes on 31<sup>st</sup> July 2009.

You can respond by  
or by post to:

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Copies can also be found on the Assembly Government's website at [www.wales.gov.uk](http://www.wales.gov.uk) or by contacting 029 2082 3722.

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## List of Abbreviations

BER	Building Emission Rate
BRE	Building Research Establishment
BREEAM	Building Research Establishment Environmental Assessment Method
CO2	Carbon Dioxide
CHP	Combined Heat and Power
CCHP	Combined Cooling, Heat and Power
CSH	Code for Sustainable Homes
DAS	Design and Access Statement
DEC	Display Energy Certificate
DER	Dwelling Emission Rate
DS	Design Stage Assessment
EPC	Energy Performance Certificate
LDP	Local Development Plans
LZC	Low or Zero Carbon Energy
MIPPS	Ministerial Interim Planning Policy Statement
PCS	Post Construction Stage Assessment
PPW	Planning Policy Wales
SAP	Standard Assessment Procedure
SA	Sustainability Appraisal
SBEM	Simplified Building Energy Model
SEA	Strategic Environmental Assessment
SPG	Supplementary Planning Guidance
TER	Target Emissions Rate

## 1.0 INTRODUCTION

### 1.1. Introduction

- 1.1.1 This Technical Advice Note (TAN) should be read in conjunction with *Planning Policy Wales*<sup>1</sup> (PPW) which sets out the land use planning policies of the Welsh Assembly Government (the Assembly Government). PPW, Ministerial Interim Planning Policy Statements (MIPPS), TANS and Circulars should be taken into account by local planning authorities in the preparation of development plans. They may be material to decisions on individual planning applications and will be taken into account by the Welsh Ministers and Planning Inspectors in the determination of called-in planning applications and appeals.
- 1.1.2 Reference documents (listed in the reference column in the margin [see footnotes for draft]) provide information that should be read in conjunction with this TAN.

### 1.2 Context

- 1.2.1 Chapter 2 of PPW sets out the Assembly Government's land use planning policies in respect of planning for sustainability. The Ministerial Interim Planning Policy Statement (01/09) 'Planning for Sustainable Buildings' details a **new national sustainable buildings planning policy**. This TAN provides advice on how to implement the policy.
- 1.2.2 The Planning and Compulsory Purchase Act 2004 introduced a new system of development plan preparation. Local Development Plans (LDP's) are intended to be more focused and streamlined<sup>2</sup>. The MIPPS introduces a new national development control policy to provide a consistent approach to delivering sustainable buildings in Wales. Climate change and sustainable buildings are one of the key issues that LDPs may need to address in setting higher requirements for strategic sites.
- 1.2.3 The Planning & Energy Act 2008<sup>3</sup> enables local planning authorities in Wales to set reasonable requirements in the LDP for the generation of energy from local renewable sources and low carbon energy and for energy efficiency. The Act is complemented by the policies contained in Planning Policy Wales that cover such issues and provides a legal basis for the implementation of LDP policies against the national framework. The Act requires that LDP policies must not be inconsistent with relevant national policies, and the new powers of local planning authorities under the 2008 Act are also subject to the requirements of section 62 of the Planning and Compulsory Purchase Act 2004.

#### ***Climate Change***

- 1.2.4 It is the aspiration of the Welsh Assembly Government for all buildings built from 2011 onwards to be zero carbon. This is part of a wider programme of action to tackle both the causes and consequences of climate change and to promote sustainable development<sup>4</sup>.

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<sup>1</sup> Planning Policy Wales, Welsh Assembly Government, 2002

<sup>2</sup> LDP Wales, Welsh Assembly Government, 2005

<sup>3</sup> [http://www.opsi.gov.uk/acts/acts2008/ukpga\\_20080021\\_en\\_1](http://www.opsi.gov.uk/acts/acts2008/ukpga_20080021_en_1)

<sup>4</sup> [www.wales.gov.uk/climatechange](http://www.wales.gov.uk/climatechange)

1.2.5 The planning system can make an important contribution to wider initiatives to improve the sustainability of developments and tackle climate change. New developments will inherently have an environmental and climate change impact, but opportunities exist to improve the sustainability of the buildings and minimise their impact. Planning Policy Wales (2002) set out the ways in which the planning system can make an important contribution to wider initiatives to tackle the causes of climate change, and adapt to its current and future effects. The new MIPPS (01/2009) 'Planning for Sustainable Buildings' complements this.

### 1.3 The role of Design in delivering Sustainable Buildings

1.3.1 Promoting sustainability through good design is a key part of national planning policy as set out in MIPPS (01/2008) 'Planning for Good Design'. This is supplemented by Technical Advice Note 12 'Design' that provides guidance on the design solutions and issues arising from environmental sustainability that will assist in meeting or exceeding the sustainable building standards expected. This TAN (22) does not provide design and technical advice on the design solutions and technologies that may be employed to attain the expected standards. It sets out guidance on the procedural elements of meeting the policy.

### 1.4 Relationship with Building Regulations

1.4.1 Building Regulations set mandatory standards for design and construction of buildings, which include aspects of health, safety and environment, and are updated regularly to reflect changes in required standards and development in technology.

1.4.2 The policy contained in the MIPPS (01/09) complements existing arrangements under Building Regulations. The Welsh Assembly Government encourages planning officers to work closely with building control colleagues to ensure a consistent approach to the validation of information (on Energy/CO<sub>2</sub>) provided to comply with the national planning policy.

1.4.3 Building Regulations currently apply to England and Wales and the UK Government in '*Building a Greener Future: policy statement*' (2007) confirmed the intention to achieve the target and interim steps to achieve zero carbon through the progressive tightening of the Building Regulations in 2010, 2013 and 2016. The Welsh Assembly Government is currently seeking the devolution of Building Regulations.

### 1.5 Transitional arrangements

1.5.1 The policies contained in the MIPPS (01/09), which are a material consideration in the determination of relevant planning and reserved matters applications by Local Planning Authorities, set out the date from which the 'Planning for Sustainable Buildings' standards are to be introduced. **These only apply to outline and full planning applications submitted after this date, and to reserved matters applications where the relevant outline permission was granted in respect of an application submitted after this date.** Reserved matters applications, attached to a previously granted outline application received prior to the relevant commencement date will not be expected to comply with those standards, and it is also recognised that the applicability of the standards to reserved matters applications will in any event depend on the subject matter of the reserved matters application (for example they will not be relevant if the reserved matter is landscaping).

## 2.0 SUSTAINABLE BUILDING STANDARDS

### 2.1 Introducing Sustainable Building Standards

- 2.1.1 Buildings inherently have an environmental impact; they require natural resources to be used both in their construction and use. Delivering more sustainable developments means that the buildings that form that development also have to be sustainable. Environmental performance methods that assess the sustainability of these buildings provide a convenient and consistent way of bringing the various environmental impacts together into a widely accepted standard. As an independently quality assured scheme, they **do not require a planning officer to assess the technical details of environmental performance.**
- 2.1.2 The policy as contained in the MIPPS (01/09) proposes the use of two well-known and established standards in order to deliver more sustainable buildings.
- 2.1.3 For residential developments the Code for Sustainable Homes ('the Code') has been adopted by the Assembly Government as the preferred tool to assess the sustainability of new homes in Wales.
- 2.1.4 For non-residential buildings, the Building Research Establishment Environmental Assessment Method ("BREEAM")<sup>5</sup>, although not a statutory standard, is widely used and understood by the construction industry.

### 2.2 Code for Sustainable Homes

- 2.2.1 The Code for Sustainable Home is a recognised standard for key elements of design and construction which affect the sustainability of new homes in the UK. The Code scheme covers nine sustainable design principles and uses a sustainability rating system – indicated by 'stars', to communicate the overall sustainability performance of a home. These include

Energy/CO2	Surface water run-off	Health and Well-being
Water	Waste	Management
Materials	Pollution	Ecology

- 2.2.2 A home can achieve a sustainability rating from one (★) to six (★★★★★★) stars depending on the extent to which it has achieved Code standards. One star is the entry level; and six stars is the highest level – reflecting exemplar development in sustainability terms. The star rating relates to the whole rating for the home. There are mandatory minimum performance standards set for some issues, for four of these, a single mandatory requirement is set which must be met, whatever Code level rating is sought. Credits for each of the categories are weighted to give an overall score.
- 2.2.3 For more information on the Code for Sustainable Homes see [www.planningportal.gov.uk](http://www.planningportal.gov.uk).

<sup>5</sup> Or equivalent quality assured scheme



## 2.3 BREEAM

- 2.3.1 BREEAM is the British Research Establishments Environmental Assessment Method which is used to assess the environmental performance of both new and existing buildings. It is widely regarded as a measure of best practice in environmental design and management. The BREEAM method covers developments of offices, retail units, schools, health care, prisons and industrial units. There will be cases where a building may fall outside these building types. These less common building types can be assessed against tailored criteria using the bespoke BREEAM version<sup>6</sup>. Mandatory standards are included at various levels and for a number of categories.
- 2.3.2 The BREEAM scheme covers nine categories in total and scores them against 5 different ratings of Pass, Good, Very Good, Excellent and Outstanding. A minimum number of credits are required for some categories at various ratings. These categories are :-

Management	Transport	Waste
Health and Wellbeing	Water	Land Use and Ecology
Energy	Materials	Pollution

- 2.3.3 For more information on the BREEAM standards see [www.breeam.org](http://www.breeam.org)

## 2.4 Stages of Assessment

- 2.4.1 Both standards produce two formal documents at the 'Design Stage' (leading to an 'Interim Certificate') and a 'Post Construction' stage (leading to a Final Certificate)<sup>7</sup>. These documents will illustrate whether the expected minimum standard is likely to be achieved by outlining the overall sustainability rating for the building, and a breakdown of how that rating has been achieved including the carbon emissions arising from the building. Pre-Assessments can be carried out for each standard. These can be used to give an early indication of the standard a development is expected to attain. These stages are detailed further in the 'Policy Implementation Map' in section 6. It will be the standard which applies at the time the planning permission is granted that will need to be achieved (see 7.1.2).

## 2.5 Energy Performance Certificate

- 2.5.1 An Energy Performance Certificate (EPCs) provides a rating for the energy performance of a building. The ratings are standard so the energy efficiency of one building can be easily compared with another building of a similar type. They are limited in that they only cover energy performance and carbon emissions, whereas the Code and BREEAM cover none areas of sustainability.
- 2.5.2 EPCs are required for almost all new buildings constructed in Wales<sup>8</sup>, and are similar to the certificates now provided with domestic appliances such as refrigerators and washing machines. The EPC rates the energy efficiency and carbon emissions of a property on a scale of A to G, where A is the best.

<sup>6</sup> <http://www.breeam.org/page.jsp?id=14>

<sup>7</sup> See Annex C for examples of a Final Certificate

<sup>8</sup>

<http://www.communities.gov.uk/planningandbuilding/theenvironment/energyperformance/homes/energyperformancecertificates/>

- 2.5.3 Under the Code the energy rating of a home that has achieved 3 stars is likely to have an energy performance equivalent to EPC 'band B', for a 4 star home this is equivalent to EPC 'band A'<sup>9</sup>. A home that achieves 5 or 6 Code stars exceeds the maximum EPC rating. Under the BREEAM methodology a building which achieves 'Excellent' (where there are mandatory credits) is likely to be equivalent to EPC 'band B'.
- 2.5.4 As part of Building Regulations approval an EPC rating will be required. This is likely to be produced at the same time as the Post Construction Certificate for both schemes<sup>10</sup>. The Code/BREEAM assessor will use the EPC calculation for the Code/BREEAM energy assessment.

<b>Q1</b>	Does this provide sufficient introduction and explanation on sustainable building standards?	Yes	No
<i>Please respond using the consultation response form at Annex D</i>			

<sup>9</sup> <http://www.communities.gov.uk/planningandbuilding/buildingregulations/legislation/englandwales/codesustainable/>

<sup>10</sup> Energy Performance Certificates (EPCs) and New Homes : A Builder's Guide, HM Government

### 3.0 REDUCING CARBON EMISSIONS

#### 3.1 Policy requirements

- 3.1.1 The national development control policy contained in MIPPS (01/09) also concerns the need to minimise the emissions of carbon dioxide (CO<sub>2</sub>) to the atmosphere arising from the operation of a building and its services. Both the Code and BREEAM assess the level at which carbon emissions have been minimised in the design of a development. These relate to credits under category 'Ene1' under both schemes.
- 3.1.2 The Code calculates credits based on the percentage improvement in the estimated carbon dioxide emissions (Dwelling Emission Rate) arising from the building, against the maximum emission rate permitted by Building Regulations (Target Emission Rate)<sup>11</sup>. Hence a higher number indicates greater improvement and greater carbon emissions reduced.
- 3.1.3 The BREEAM system calculates credits by using the buildings CO<sub>2</sub> index, as contained in an Energy Performance Certificate (EPC) with benchmarks. The energy performance of a building is shown on the EPC as a Carbon Dioxide (CO<sub>2</sub>) based index. It is this index that is used to determine where the building falls on the A+ to G rating scale and the number of BREEAM credits that can be awarded<sup>12</sup>. Hence a lower number indicates a lower amount of carbon emissions generated.
- 3.1.4 These are presented below for reference, with the levels expected under the MIPPS (01/2009) highlighted.

<b>Table 1</b>			<b>Carbon reduction levels under Ene1 in the Code and BREEAM</b>	
<b>Code for Sustainable Homes</b>			<b>BREEAM</b>	
Code Level	Credits	Minimum Percentage reduction in Dwelling Emission Rate Over Target Emission Rate	Rating Level	Minimum standard CO <sub>2</sub> Index (EPC Rating)
Level 1	1	10%	Pass	-
	2	14%	Good	-
Level 2	3	18%	Very Good	-
	4	22%	<b>Excellent</b>	<b>40</b>
Level 3	5	25%	Outstanding	25
	<b>6</b>	<b>31%</b>		
	7	37%		
Level 4	8	44		
Level 5	14	100%		
Level 6	15	'Zero Carbon Home'		

- 3.1.5 Details on what carbon level has been achieved will be contained in both the 'Design Stage Certificate' and report (Ene1 worksheet) and the 'Final Stage Certificate' and report (Ene1 worksheet). This will show whether the carbon emissions target has been met under category Ene1.

<sup>11</sup> This is calculated using the Standard Assessment Procedure (SAP) under Part L 2006

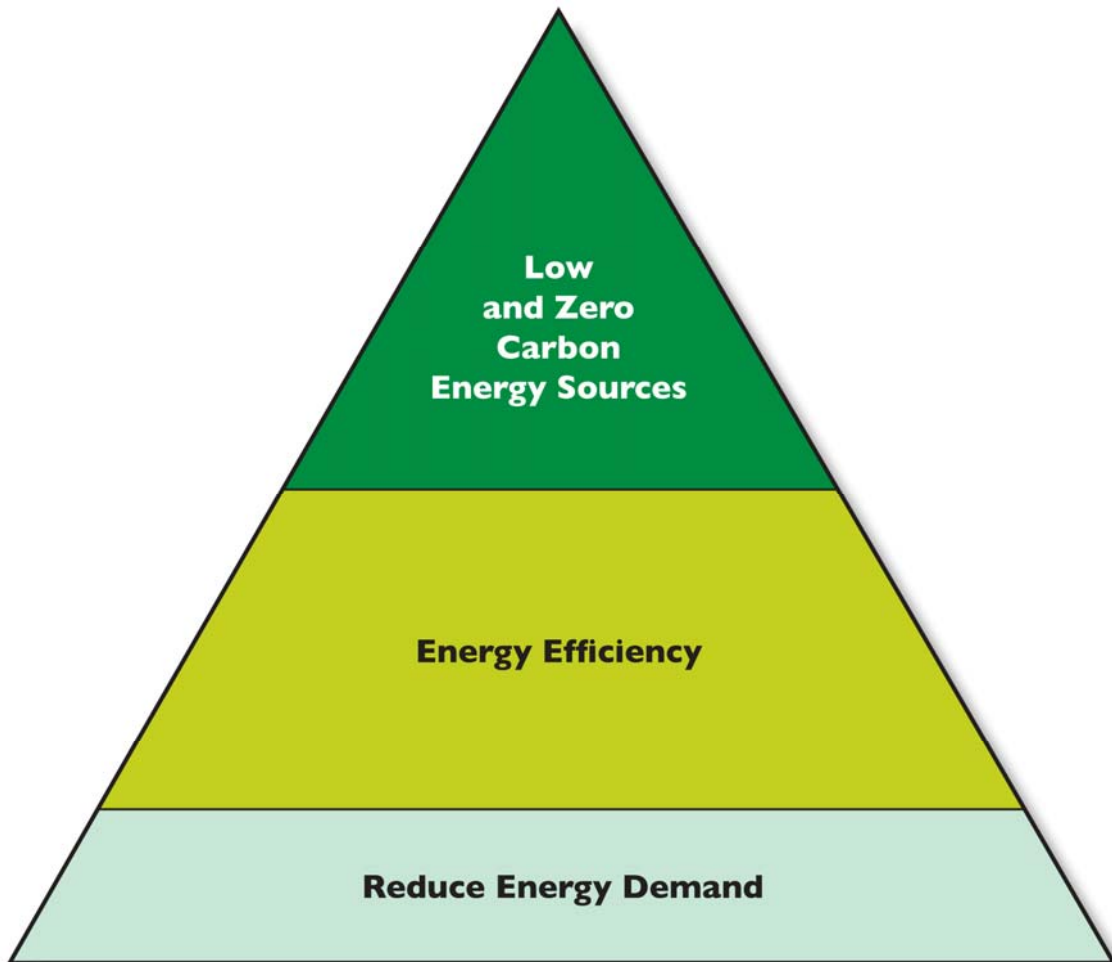
<sup>12</sup> The Energy Saving Trust has produced a number of guidance documents on achieving various levels of the code, please visit [www.est.org.uk](http://www.est.org.uk). For non-domestic buildings please see the carbon trust.

<b>Q2</b>	Does this fully explain the carbon emission requirements expected under the MIPPS?	Yes	No
<i>Please respond using the consultation response form at Annex D</i>			

### 3.2 The energy hierarchy

3.2.1 The design of a building should look to implement the energy hierarchy (Figure 1), in order to reduce carbon emissions associated with a development. This approach can also assist in achieving zero carbon standards<sup>13</sup>.

**Figure 1 – Energy Hierarchy**



3.2.2 A number of approaches exist for delivering very energy efficient homes and buildings. One example is the PassivHaus standard<sup>14</sup>, which originated in Germany. The Energy Saving Trust (EST) publishes guidance on energy efficiency standards which can satisfy the higher levels of the Code<sup>15</sup>.

### 3.3 Low and Zero Carbon Energy Sources

3.3.1 Low and Zero Carbon energy sources can play an important part in tackling climate change and minimising the carbon emissions associated with the energy

<sup>13</sup> A UK-wide definition of Zero Carbon was consulted on in December 2008.

<sup>14</sup> <http://www.passivhaus.org.uk/>

<sup>15</sup> <http://tinyurl.com/6y8eeo>

needed to provide heat, electricity and cooling for a building. PPW and TAN8<sup>16</sup> expects developers to consider the use of low and zero carbon energy sources as part their approach to reducing the carbon emissions associated with their developments. In the current versions of the Code and BREEAM Low and Zero Carbon Energy technologies are defined as follows<sup>17</sup> :

<b>Table 2</b>	<b>Low or Zero Carbon Energy Sources<sup>18</sup></b>
<b>Solar</b>	Solar hot water
	Photovoltaics
<b>Water</b>	Small scale hydro
<b>Wind</b>	Wind turbines
<b>Biomass</b>	Biomass single room heaters/stoves
	Biomass boilers
	Biomass community heating schemes
<b>Combined Heat and Power (CHP) from</b>	Natural gas
	Biomass
	Sewerage gas and other biogases
<b>Community/ District heating</b>	Waste heat from processes such as large scale power generation where the majority of heating comes from waste heat
<b>Heat Pumps</b>	Air source heat pumps (ASHPs)
	Ground source heat pumps (GSHPs)
	Geothermal heating systems
<b>Fuel cells</b>	Using hydrogen generated from any of the above 'renewable' sources

3.3.2 Both the Code and BREEAM provide for additional credits to be obtained where these LZC technologies are incorporated.

### 3.4 Design & Access Statements

3.4.1 Within the Design and Access Statement, information should be supplied on how the development has applied the energy hierarchy and reduced the carbon emissions associated with the development, which can include a feasibility study for low and zero carbon energy technologies<sup>19</sup>.

#### Carbon Reduction (Design and Access Statement)

This should include :-

A clear statement on the approach taken to reducing the carbon emissions from the development through implementation of the energy hierarchy.

<sup>16</sup> Technical Advice Note 8 : Renewable Energy, Welsh Assembly Government, 2005

<sup>17</sup> This list is not exhaustive

<sup>18</sup> Low or Zero Carbon Energy Sources: Strategic Guide, ODPM, 2006.

[http://www.planningportal.gov.uk/uploads/br/BR\\_PDF\\_PTL\\_ZEROCARBONfinal.pdf](http://www.planningportal.gov.uk/uploads/br/BR_PDF_PTL_ZEROCARBONfinal.pdf)

<sup>19</sup> Technical Advice Note 12 : Design, Welsh Assembly Government , 2009 (Appendix 1, A3.2)

Details of how the development has reduced carbon emissions by incorporating, for example :

- Passive design elements, such as natural ventilation, use of natural daylighting, use of orientation and exposed thermal mass to make use of winter solar gains and control of summer solar gains to prevent summer overheating.
- A summary of the likely heating, cooling and electricity demand of the proposed development (and the associated energy consumption and CO2 baseline),
- The predicted annual regulated carbon emissions associated with the development.
- A summary of a feasibility assessment of the LZC energy technologies for the development and where they are to be applied set out the proportion that is to be met from the LZC energy source.
- Indicate through drawings how the design of the building and/or development has incorporated, and reflects, the strategy for reducing carbon emissions. and
- Details and justification on which solutions will be employed.

3.4.2 A feasibility study can establish the opportunities for incorporating LZC energy technologies in a building or development, as a way of implementing the energy hierarchy. The BREEAM/Code assessment process provides credits for conducting a feasibility assessment and for implementing the findings<sup>20</sup>. The process sets out a clear format for the content of the feasibility study which enables a consistent approach to assessing the feasibility of LZC energy technologies. A feasibility study should be carried out at the earliest stage prior to the submission of an outline or full application, and the findings should be submitted with a planning application. This should cover :-

### LZC Energy Feasibility Study

This should cover :-

- Energy generated from LZC energy source per year,
- Carbon emissions saved per £ spent,
- Expected carbon reductions from LZC sources
- Land use
- Planning (local requirements and other planning issues i.e. visual amenity)
- Noise
- Whole life cost and lifecycle impact of the potential specification in terms of carbon emissions
- Any available grants
- All technologies appropriate to the site and energy demand of the development (including type and scale of technology chosen)
- Reasons for excluding other technologies.

<sup>20</sup> See Technical Advice on BREEAM and Code for Sustainable Homes

- Drawings to indicate the location of LZO employed.

3.4.3 In carrying out a feasibility study of the various LZO energy options opportunities for, or connection to existing or proposed community energy schemes should be considered.

<b>Q3</b>	Do you consider the approach to considering the energy hierarchy through the 'Design and Access Statement' appropriate as a way of demonstrating how carbon emissions have been reduced?	Yes	No
<i>Please respond using the consultation response form at Annex D</i>			

### 3.5 Technical constraints

3.5.1 It will be exceptional to find that all types of LZO energy technologies are technically constrained on a site. Examples of technical constraints that may limit the application of LZO energy equipment are listed below; however, this list is not exhaustive. Technical constraints can be avoided by considering the design requirements for LZO energy technologies from the outset<sup>21</sup>. On their own, financial considerations do not constitute a technical constraint.

- Areas where the supply of natural energy sources may be obstructed by another building or structure (e.g. over-shadowing or wind-screening).
- Areas where space is limited for: storage (e.g. for wood pellets); transport/delivery of fuel; or space for pipes.
- Locations which restrict particular emissions (e.g. air quality management areas).
- Locations with an unsuitable type of ground or building for the location of the equipment.
- Buildings with limited roof/wall areas or angles suitable for the equipment.

3.5.2 Information on the issues relevant to particular technologies can be found in TAN8.

<b>Q4</b>	Do you consider it appropriate to set out the technical constraints that may be considered in incorporating Low and Zero Carbon Energy technologies in this TAN?	Yes	No
<i>Please respond using the consultation response form at Annex D</i>			

### 3.6 Policy constraints

3.6.1 Constraints may also be imposed by other material considerations, such as designations which require stricter management, for example built heritage designations; listed buildings or conservation areas. These constraints should be considered in relation to the merits of individual applications. Judgement will be needed to ensure that the policy target is applied in a way that does not compromise the reason for designation. However it should be recognised that the effects of climate change may be experienced by those places and buildings which are designated. Section 7 below gives further guidance on exceptions to compliance with the standards.

<sup>21</sup> Technical Advice Note 12 : Design, Technical Advice Note 8 : Renewable Energy

Q5	Do you consider that the approach to policy constraints is appropriate?	Yes	No
<i>Please respond using the consultation response form at Annex D</i>			



## 4.0 PREPARING DEVELOPMENT PROPOSALS

### 4.1 Key principles

- 4.1.1 In order to assist efficient determination of planning applications, developers should provide clear evidence with their application (through the Design and Access Statement) that demonstrates compliance with the national planning policies.
- 4.1.2 The general principles for demonstrating compliance specifically to the policies contained in the MIPPS (01/09) are set out below. Developers are encouraged to seek advice on the implications of the policy at the earliest opportunity and should consult TAN 12, TAN 8 and TAN15 to ensure these are considered in the design of the development. Key principles for demonstrating compliance with the sustainable building standards include :-

#### **A Early and continued commitment**

Developers should be aware of implications on their proposal of the sustainable building standard expected (as contained in MIPPS 01/09) and set out a firm commitment to achieving this standard. Each site will have unique circumstances and the potential for achieving high levels of sustainability and in particular the application of the energy hierarchy and the incorporation of LZC energy technologies will vary depending upon the location. Specific expertise should be sought at the earliest opportunity. Including sustainable design solutions at the outset will incur less cost than amendments further on in the design process.

#### **B Sustainable building standards quality assurance**

The sustainability standards are specified in MIPPS (01/09) and developers should produce the relevant documentation (as set out in section 2.5) from an accredited body to confirm that the development will comply with all parts of the policy. Developers are urged to appoint an assessor and seek advice on energy issues at the earliest opportunity.

Reducing carbon emissions from any new development is one of the key design issues arising from a development proposal<sup>22</sup>. At the outset issues of energy infrastructure and space for such infrastructure should be considered, as well as considering opportunities for connection to existing schemes.

#### **C Collaboration**

Collaboration is an important part of delivering good design<sup>23</sup>. Developers should to work with other developers and utility providers on larger sites where two or more separate development schemes are proposed. Opportunities for connection to a decentralised low or zero-carbon energy supply, where available, is encouraged, as are opportunities for working together to benefit from economies of scale.

<sup>22</sup> Technical Advice Note 12 'Design'

<sup>23</sup> See Technical Advice Note 12 'Design'

## 5.0 LOCAL PLANNING AUTHORITIES

### 5.1 Role

5.1.1 Local planning authorities play an important role in facilitating the implementation of national sustainable building planning policies, and in attaining higher standards where opportunities exist.

### 5.2 Skills

5.2.1 It is important that planning officers have a basic understanding of the Code for Sustainable Homes and BREEAM. This includes an understanding of the implications on the location, siting, design and impact of development arising from the mix of 'design solutions' an applicant may elect in meeting the sustainable building standard. Examples include :-

- In order to reduce energy demand a building may be orientated to use free ambient light and heat
- In order to reduce carbon emissions a solar thermal panel may be incorporated which needs to be located at a certain angle and free from obstruction

5.2.1 Examples of Code for Sustainable Homes and BREEAM Certificates are provided in Annex C. These certificates should be used by local planning authorities to determine compliance with the policy.

5.2.2 It is important that local planning authorities have access to professional skills to assess and provide guidance on solutions to meet the sustainable building standard. This could be through closer working with Building Control colleagues, employing staff with those skills, sharing skills with other local authorities or through the use of consultants.

### 5.3 Opportunities

5.2.3 Aside from preparing policies for strategic sites (see section 8) local planning authorities should maximise opportunities for developments to meet higher sustainable building standards. This can include identifying opportunities for multiple sites to deliver area wide energy strategies or facilitating site wide district heating solutions, and connection to existing schemes.

5.2.4 Planning authorities should pay particular attention to opportunities for utilising existing decentralised and renewable or low-carbon energy supply systems and to fostering the development of new opportunities to supply proposed and existing development, arising from new development proposals. Such opportunities could include co-locating potential heat customers and heat suppliers. Where there are existing decentralised energy supply systems, or firm proposals, planning authorities can expect proposed development to connect to an identified system, or be designed to be able to connect in the future.

### 5.4 The role of design guidance

5.4.1 Design guidance on delivering sustainability and in particular in meeting sustainable building standard through various 'Design Solutions' whether area wide or site specific can usefully be addressed through Supplementary Planning Guidance.

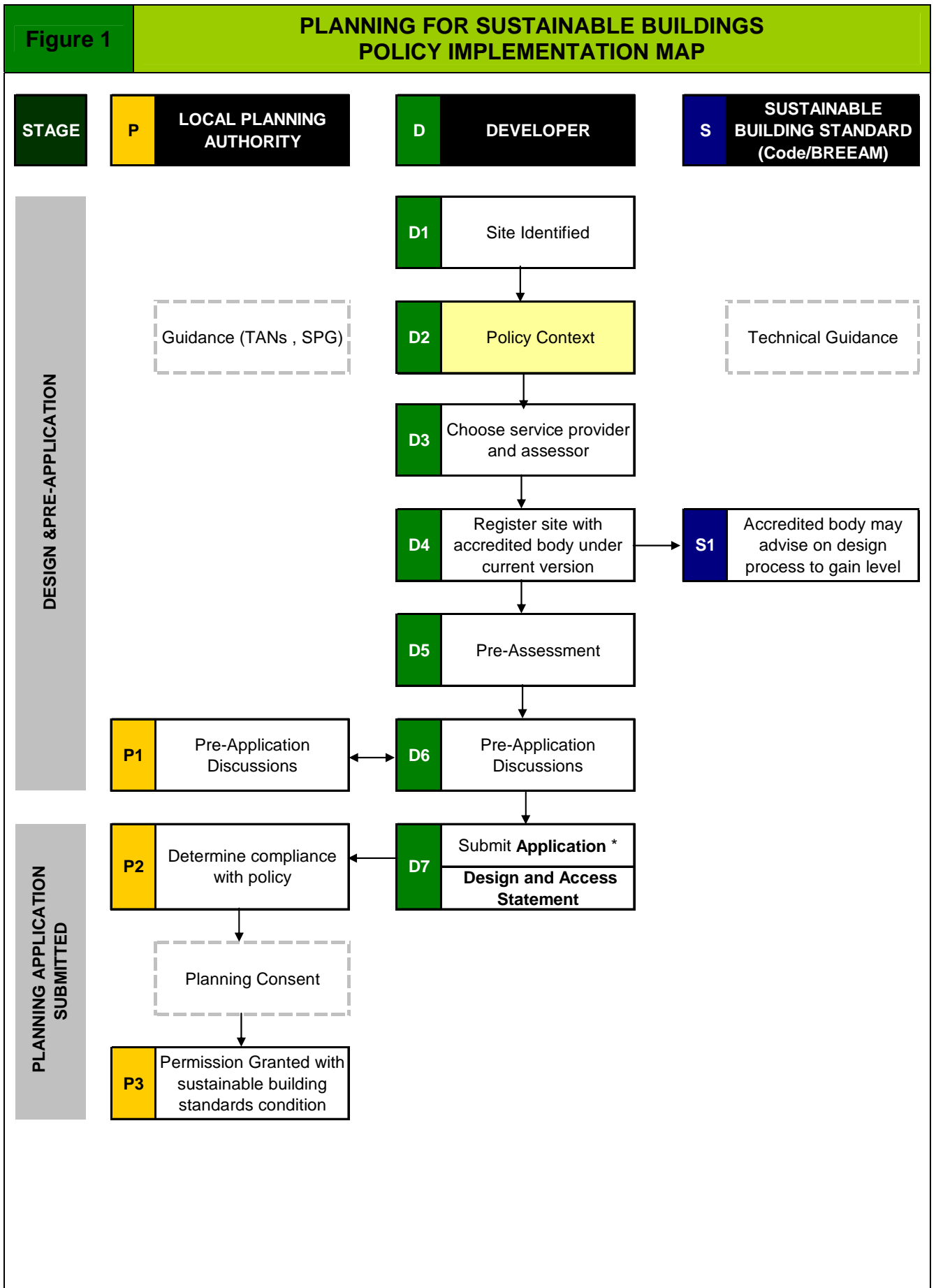
## **6.0 THE POLICY IMPLEMENTATION MAP**

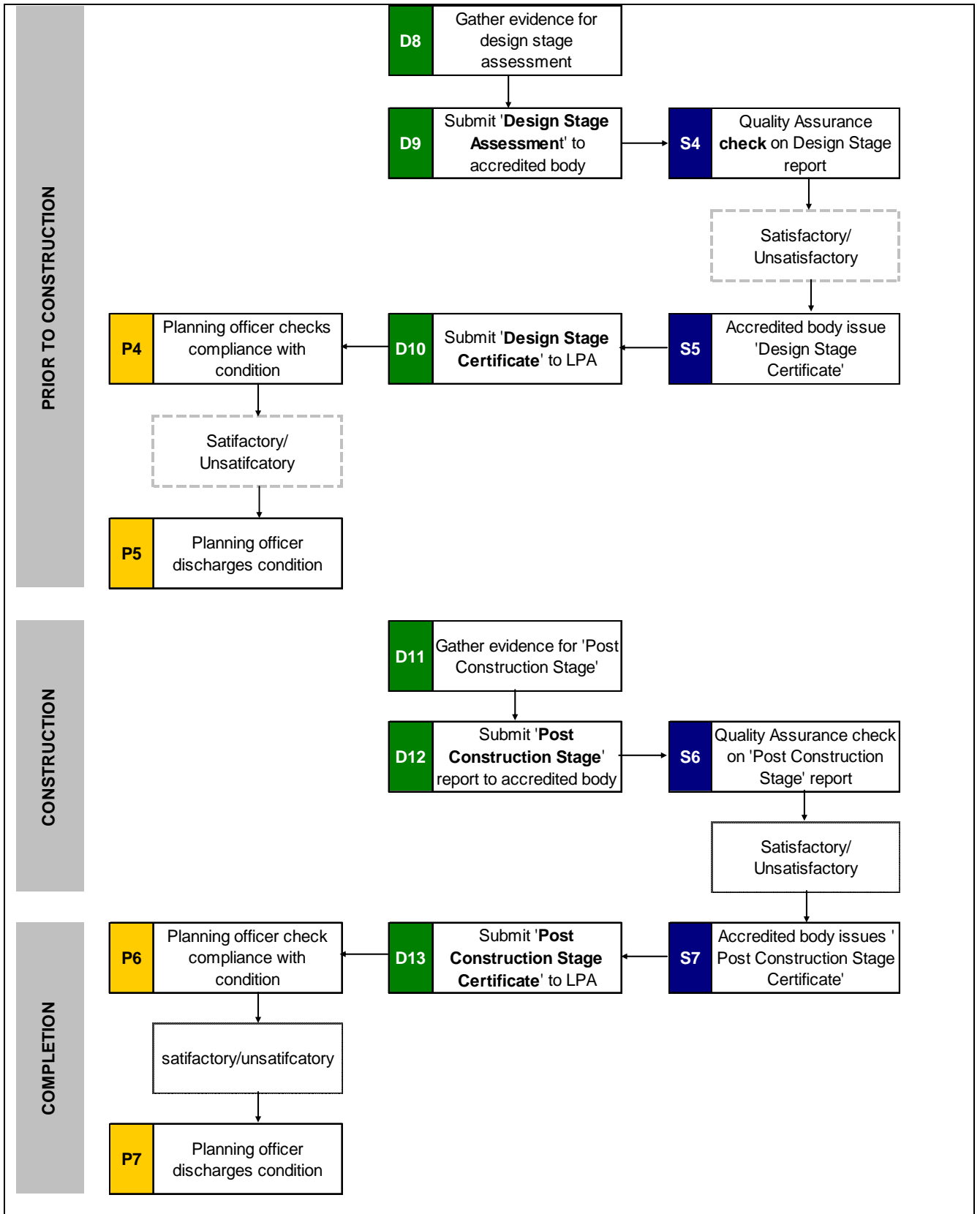
### **6.1 Introduction to the map**

- 6.1.2 There are a number of steps that the developer and local planning authority will need to follow to ensure full implementation of the MIPPS (01/2009). The key steps in this process are identified below, alongside further detailed guidance on each step<sup>24</sup>. Further guidance for developers on the assessment process can be found in the technical guidance on each sustainable building standard and this should be referred to in the first instance.

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<sup>24</sup> Code for Sustainable Homes – Technical Guidance, Communities and Local Government, <http://www.communities.gov.uk/publications/planningandbuilding/codeguide>, BREEAM 2008 Assessor Manual, BREEAM, [www.breeam.org](http://www.breeam.org)





<b>D</b>	<b>Developers</b>	<b>P</b>	<b>Local Planning Authority</b>
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### **D1 Site Identified**

See 'Appreciating the context' in Technical Advice Note 12 : Design (TAN12)

### **D2 Policy Context**

Developers should be aware of the requirement set out in MIPPS (01/09) and consider the implications of meeting the standards on the design of their development at the earliest opportunity.

Developers should also consider

- Local planning policies and guidance
- Technical Advice Notes , and
- Technical Advice on the Code and BREEAM

### **D3 Choose service provider and assessor**

Developers are encouraged to appoint an assessor sufficiently in advance of forming proposals. The role of the assessor is to assess the building at each stage of the CSH/BREEAM process. It is not their primary role to provide advice on how best to meet the standards for the development proposal. However they should work closely with the design team in order to demonstrate that the requirements have been met.

Further guidance can be found in the technical guidance for CSH and BREEAM<sup>25</sup>.

### **D4 Register site**

The site should be registered with an accredited body under the current version of the Code for Sustainable Homes and BREEAM. Ideally this should be carried out prior to detailed design.

### **D5 Pre-Assessment**

Developers are encouraged to prepare a 'Pre-Assessment' of the sustainable buildings standard and carbon reduction level they are likely to achieve. This will give an early indication of compliance with the policy, and identify ways in which to achieve the minimum expected.

It will be good practice to demonstrate through a pre-assessment that the standard can be achieved.

This should inform the Design and Access Statement, indicating which design solutions will be utilised.

<sup>25</sup> Code for Sustainable Homes, [www.planningportal.gov.uk](http://www.planningportal.gov.uk). BREEAM , [www.breeam.org](http://www.breeam.org)

## D6 Pre-Application Discussions

In pre-applications with the local planning authority developers are encouraged to :-

- Demonstrate understanding of the policy to which this TAN refers, and/or any other similar adopted local policy,
- Give an indication of the 'Design Solutions' that will be incorporated in order to meet the policy requirements,
- Use the details contained in a 'Pre-assessment' to identify any constraints or opportunities to meeting the policy with the LPA.

An early version of a 'Design and Access' statement could be used to present the various design solutions incorporated in order to comply with the policy<sup>26</sup>.

## P1 Pre-Application Discussions

Local Planning Authorities should ensure that when pre-application discussions take place :-

- that the developer is fully aware of the policies to which this TAN refers,
- that a pre-assessment or early indication of standards to be met is obtained,

Local planning authorities are encouraged to :-

- give a clear opinion as to whether the initial approach to meeting the sustainable building standards is in accordance with policy and guidance,
- reaffirm the evidence needed to determine compliance with the policy,
- signpost the applicant to sources of information such as case studies and local guidance,
- highlight what additional information the local planning authority would require for full planning applications.
- highlight opportunities for delivering higher standards through local solutions, such as information on existing or proposed local energy sources including district heating schemes.

## D7 Submit Application

Developers should ;

- use the 'Design and Access Statement' to illustrate their approach to delivering sustainable buildings and how the development has applied the energy hierarchy (see section 3.2.1) . This will ensure that it is integral to the design of the whole development and not seen as an add-on,
- state in the Design and Access Statement the sustainable buildings standard and carbon reduction level to be achieved,
- where Low or Zero Carbon Energy technologies are being incorporated submit with the application findings of a feasibility study, including the actions taken and show on relevant plans and drawings where these technologies are located, closely aligned to the Design and Access Statement,
- include the site registration number and a details of a pre-assessment.

<sup>26</sup> Technical Advice Note 12 'Design'

## **P2 Determine compliance with policy**

At the applications stage the 'Design and Access Statement' (including a pre-assessment) should give an indication of whether the application will meet or exceed the policy requirements.

Local planning authorities may appraise the Design and Access Statement to identify whether the design solutions chosen are consistent with achieving the sustainable building standard.

Before arriving at a decision the local planning authority should

- check whether the site been registered and has a registration number been provided,
- check whether the Design and Access Statement (or other supporting information such as a pre-assessment) confirm that the development will be designed to meet the sustainable buildings standard and carbon reduction level to be achieved.

## **P3 Permission Granted - with conditions**

Where planning permission is to be granted, the Local Planning Authority should impose planning conditions to ensure that the policy is complied with

See example conditions (a), (b) and (c) in section 7.

## **D8 Gather evidence for design stage assessment (Permission Granted)**

Evidence is collated and used as the basis for the assessor to determine how many credits are to be awarded for each issue. This is an information gathering process to enable the developer to provide the relevant technical information needed for a 'Design Stage Assessment'. This is in order to demonstrate that performance requirements (assessment criteria) are being achieved, resulting in a credit being awarded.

See technical guidance on the Code for Sustainable Homes and BREEAM<sup>27</sup>.

## **D9 Submit 'Design Stage Assessment' report to service provider**

A summary report of the evidence collated in D8 is submitted by the Code/BREEAM assessor to the service provider for quality assurance and certification.

See technical guidance on the Code for Sustainable Homes and BREEAM<sup>10</sup>.

## **D10 Submit 'Design Stage Certificate report to Local Planning Authority**

Once the accredited body has quality assured the 'Design Stage Assessment' report and issued a 'Design Stage Certificate' this should be provided to the Local Planning Authority to allow them to discharge the planning condition.

A copy of the Ene1 worksheet / EPC should be provided to demonstrate that the carbon emission target has been achieved.

<sup>27</sup> Code for Sustainable Homes , [www.planningportal.gov.uk](http://www.planningportal.gov.uk). BREEAM, [www.breeam.org](http://www.breeam.org).



**P4 Determine compliance with policy (Prior to construction)**

Local Planning Authorities should determine whether the **'Interim Design Stage Certificate'** indicates that the development will be designed to meet the sustainable buildings standard, and carbon reduction level to be achieved.

**P5 Discharge planning conditions**

See example condition (a) & (b) in section 7.

**D11 Gather evidence for 'Post Construction Stage' report (Permission Granted)**

See technical guidance on the Code for Sustainable Homes and BREEAM.

**D12 Submit 'Post Construction Stage' report to accredited body**

See technical guidance on the Code for Sustainable Homes and BREEAM.

**D13 Submit 'Post Construction Stage' report to Local Planning Authority**

Once the accredited body has quality assured the 'Post Construction Stage' report and issued a 'Post Construction Stage' certificate this should be provided to the Local Planning Authority to allow them to discharge the planning condition.

A copy of the Ene1 worksheet / EPC should be provided to demonstrate that the carbon emission target has been achieved.

**P6 Determine compliance with policy (Post Completion)**

Local Planning Authorities should determine whether the **'Final Code/BREEAM Certificate'** indicates that the development has met the sustainable buildings standard, and carbon reduction level to be achieved.

**P7 Discharge planning conditions**

See example condition (c) in section 7.

<b>Q6</b>	Does the 'Policy Implementation Map' provide the appropriate level of detail and clarity needed to aid implementation of the policy?	Yes	No

*Please respond using the consultation response form at Annex D*

## **7.0 PLANNING CONDITIONS AND NEGOTIATIONS**

### **7.1 The use of conditions to deliver sustainable building standards**

- 7.1.2 LPAs will need to be clear about the relationship between local planning policies, which regulate the location, siting, design and impact of development, and building regulations. It will not be necessary for planning authorities to use planning conditions to control those aspects of a building's construction and fittings that will be required to be in place to meet environmental performance targets set out in building regulations.
- 7.1.3 Any condition should comply with Circular 35/95, which requires conditions to be necessary, relevant to planning, relevant to the development to be permitted, enforceable, precise and reasonable in all other respects. The standard, which is to be achieved, should be that which applies at the time the condition is imposed, and either clearly stated, or a reference provided to its source in Planning Policy Wales, Local Development Plan policy, or Council guidance. The condition should not create a moving target or seek to apply any future changes retrospectively.
- 7.1.4 Close working relationships between planning and building control will be necessary to ensure integrated and timely decisions under the complementary regimes. Planning conditions or obligations could be used to secure the longer term management and maintenance of those aspects of a development proposed to comply with planning policy.
- 7.1.5 Given the importance of the standards in setting a framework for acceptable development, where an outline application is made, LPAs should consider making provision for securing compliance with the standards within the outline permission,
- 7.1.6 Examples of possible conditions are provided below. Text included within a border can be substituted depending on the level set and the updated version of the Code and BREEAM and associated technical guidance.

## Example 1 : Residential

### (a) Outline & Full Applications

Each dwelling hereby permitted shall be constructed to achieve a minimum Code for Sustainable Homes **Level 3** and achieve **6 credits** under category Ene1 in accordance with the requirements of Code for Sustainable Homes: Technical Guide **April 2009**.

### (b) Full and Reserved Matters Applications (for prior to commencement stage)

No development shall begin until details of a 'Design Stage' assessment and related certification have been submitted to and approved in writing by the Local Planning Authority. The development shall be carried out entirely in accordance with the approved assessment and certification unless the Local Planning Authority shall otherwise consent in writing.

### (c) Full and Reserved Matters Applications (for post construction stage)

No dwelling shall be occupied until a Code for Sustainable Homes 'Post Construction Stage' assessment has been carried out in relation to it, a Final Code Certificate has been issued for it certifying that Code **Level 3** and **6 credits** under Ene1 have been achieved and the Certificate has been submitted to and approved in writing by the Local Planning Authority.

## Example 2 : Non-residential

### (a) Outline & Full Applications

Each non-residential building hereby permitted shall be constructed to achieve a minimum **Building Research Establishment BREEAM** (or subsequent equivalent quality assured scheme) overall **'Very Good'** and achieve **6 credits** under category Ene1 in accordance with the requirements of BREEAM **2008**.

### (b) Full and Reserved Matters Applications (for prior to commencement stage)

No development shall begin until details of a 'Design Stage' assessment and related certification have been submitted to and approved in writing by the Local Planning Authority. The development shall be carried out entirely in accordance with the approved assessment and certification unless the Local Planning Authority shall otherwise consent in writing.

### (c) Full and Reserved Matters Applications (for post construction stage)

Following practical completion of the final building in each defined phase, no building unit shall be occupied until a 'Post Construction Stage' assessment has been carried out in relation to it, a Final Certificate has been issued for it certifying that **'Very Good'** and **6 Credits** under Ene1 has been achieved.

<b>Q7</b>	Do you consider that the example planning conditions are appropriate?	Yes	No
<i>Please respond using the consultation response form at Annex D</i>			

## 7.1 Exceptions

7.1.1 There is a strong presumption that these standards can be achieved on all sites captured by the policy. In some limited circumstances technical and policy constraints may exist which would prevent the standards being met.

7.1.2 The onus is on developers to demonstrate why these standards cannot be met, and they should be prepared to show that another legitimate policy objective would be significantly prejudiced if the relaxation sought was not provided. If the local planning authority is satisfied that the standards cannot be met in their entirety, they should consider whether it may be appropriate to seek ;

- a lower sustainable building standard,
- the incorporation of such technologies that are feasible as indicated in a feasibility report,
- measures to be incorporated, so as to facilitate future installation or conversion to higher standards,

7.1.3 Local Planning Authorities may wish to seek independent specialist advice before taking decisions on exceptions.

<b>Q8</b>	Do you agree that the proposed approach to exceptions is appropriate?	Yes	No
<i>Please respond using the consultation response form at Annex D</i>			

## 8.0 STRATEGIC SITES

### 8.1 Developing local policies

- 8.1.1 Local circumstances may provide opportunities to set local requirements in LDP's exceed the sustainable building standards set out nationally in Planning Policy Wales and Building Regulations<sup>28</sup>. In preparing their LDPs, planning authorities should not merely duplicate policy contained in MIPPS (01/09), which sets out national expectations on sustainable building standards, but should apply the policy to their local circumstances and explore opportunities to promote the underlying objectives of the policy in moving towards more sustainable and zero carbon buildings in Wales.
- 8.1.2 The scale and mix of a development can provide opportunities to deliver localised energy solutions where the energy and heat load is advantageous to such solutions. For example higher densities and mixed use developments will often be best for community heating, cooling and power (and reducing energy use from transport) supplied by low/zero carbon technologies<sup>29</sup>. These can also be linked to existing developments. Different approaches, technologies and combinations will vary depending on location and type of development (see Section 3).
- 8.1.3 Before setting local requirements, planning authorities should engage with developers, landowners and the community to identify and discuss the site specific and wider development area opportunities for achieving higher sustainable building standards and use of local and low or zero carbon energy sources. An important part of this will be to consider whether local requirements are viable and will not act as a barrier to development or planned growth, including the delivery of affordable housing.
- 8.1.4 When proposing any local requirements for sustainable building standards and local and low or zero carbon technologies, planning authorities must be able to provide sufficient justification. This could include, for example, where there are clear opportunities for significant use of local and renewable or low carbon energy (including those arising from the local renewable energy assessment (TAN8));
- 8.1.5 Local requirements should ;
- be specified in terms of achievement of nationally described and adopted sustainable buildings standards (i.e. Code for Sustainable Homes);
  - ensure the requirement is consistent with policies contained in the MIPPS (01/2009) and with local policies on renewable energy; and
  - ensure what is proposed is evidence-based and viable, having regard to the overall costs of bringing sites to the market (including the costs of any necessary supporting infrastructure) and the need to avoid any adverse impact on the development needs of communities;
  - be set out in the LDP, so as to ensure examination by an independent inspector. This is so that standards and requirements are properly consulted on and tested to ensure their ambition reflects local potential and are deliverable.

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<sup>28</sup> Planning and Energy Act 2008

<sup>29</sup> Community heating for planners and developers , Energy Saving Trust

8.1.6 Planning authorities may provide appropriate advice to developers on the implementation of these requirements, and how these will be monitored and enforced.

<b>Q9</b>	Does this section provide sufficient clarity on the expectations of local planning authorities when developing policies for their LDP?	Yes	No
<i>Please respond using the consultation response form at Annex D</i>			

## 9.0 MONITORING AND REVIEW

9.1 The Assembly Government is currently considering ways of monitoring the national development control policy to which this TAN refers.

<b>Q10</b>	Do you have any views on how the national sustainable building standards national planning policy could be monitored and reviewed?
<i>Please respond using the consultation response form at Annex D</i>	

## 10.0 REFERENCES AND FURTHER READING

### General

The Planning Portal	<a href="http://www.planningportal.gov.uk">www.planningportal.gov.uk</a>
Welsh Local Government Association - 'Shaping the Way We Work, Live and Play	<a href="http://www.wlga.gov.uk">www.wlga.gov.uk</a>
Design Commission for Wales	<a href="http://www.dcfw.org.uk">www.dcfw.org.uk</a>
Sustainable Development Commission - Wales	<a href="http://www.sd-commission.org.uk/wales.php">http://www.sd-commission.org.uk/wales.php</a>
Stern Review on the Economics of Climate Change	<a href="http://www.sternreview.org.uk">www.sternreview.org.uk</a>
Planning and Renewable Energy News (England only)	<a href="http://www.planningrenewables.org.uk/index.cgi">http://www.planningrenewables.org.uk/index.cgi</a>

### Energy Hierarchy – Carbon Reduction

Technical Advice Note 8 ' Renewable Energy'	<a href="http://www.wales.gov.uk/planning">www.wales.gov.uk/planning</a>
Energy Saving Trust	<a href="http://www.est.org.uk">www.est.org.uk</a>
The Carbon Trust	<a href="http://www.carbontrust.co.uk">www.carbontrust.co.uk</a>
UK Green Building Council	<a href="http://www.ukbc.org">www.ukbc.org</a>
Passive Solar Estate Layout (GIR27) (Energy Saving Trust)	<a href="http://www.est.org.uk">www.est.org.uk</a>
PassivHaus	<a href="http://www.passivhaus.org.uk">www.passivhaus.org.uk</a>
Sustainable Energy By Design (Town and Country Planning Association)	<a href="http://www.tcpa.org.uk">www.tcpa.org.uk</a>
Community heating – a guide for developers and planners (Energy Saving Trust)	<a href="http://www.est.org.uk">www.est.org.uk</a>
Low or Zero Carbon Energy Sources : Strategic Guide (ODPM, 2006)	<a href="http://www.planningportal.gov.uk/uploads/br/BR_PDF_PTL_ZEROCARBONfinal.pdf#search=%22zero%20and%20low%20carbon%20guide%2C%20ODPM%22">www.planningportal.gov.uk/uploads/br/BR_PDF_PTL_ZEROCARBONfinal.pdf#search=%22zero%20and%20low%20carbon%20guide%2C%20ODPM%22</a>
Centre for Alternative Technology (CAT)	<a href="http://www.cat.org.uk">www.cat.org.uk</a>
UK Climate Impacts Programme (UKCIP)	<a href="http://www.ukcip.org.uk">www.ukcip.org.uk</a>

### Energy Technology Trade Associations

Solar Trade Association	<a href="http://www.greenenergy.org.uk/sta">www.greenenergy.org.uk/sta</a>
British Photovoltaic Association	<a href="http://www.greenenergy.org.uk/pvuk2">www.greenenergy.org.uk/pvuk2</a>
British Wind Energy Association	<a href="http://www.bwea.com">www.bwea.com</a>
British Hydro-power Association	<a href="http://www.british-hydro.co.uk">www.british-hydro.co.uk</a>
The National Energy Foundation (Biomass)	<a href="http://www.nef.org.uk/logpile">www.nef.org.uk/logpile</a>
Ground Source Heat Pump Association	<a href="http://www.nef.org.uk/gshp">www.nef.org.uk/gshp</a>
UK Heat Pump Network	<a href="http://www.heatpumpnet.org.uk">www.heatpumpnet.org.uk</a>
Combined Heat and Power Association	<a href="http://www.chpa.co.uk">www.chpa.co.uk</a>
National Assembly Sustainable Energy Group	<a href="http://www.naseg.co.uk">www.naseg.co.uk</a>

## Sustainable Buildings

Building Regulations

[www.communities.gov.uk](http://www.communities.gov.uk)  
<http://www.planningportal.gov.uk/england/professionals/en/1115314112742.html>

Building Research Establishment  
BREEAM  
Code for Sustainable Homes

[www.bre.co.uk](http://www.bre.co.uk)  
[www.breeam.org](http://www.breeam.org)  
<http://www.planningportal.gov.uk/england/professionals/en/1115314116927.html>

National Home Energy Rating  
Energy Saving Trust - Code For Sustainable  
Homes guidance

<http://www.nher.co.uk/index.php>  
[www.est.org.uk](http://www.est.org.uk)  
<http://www.energysavingtrust.org.uk/business/Business/Building-Professionals/New-housing/A-history-of-our-new-build-standards>

Constructing Excellence  
Environment Agency Wales  
Forestry Stewardship Council  
Waste Resource Action Programme (WRAP)  
(Wales)  
Technical Advice Note 15 'Development and  
Flood Risk

[www.constructingexcellence.org.uk](http://www.constructingexcellence.org.uk)  
[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)  
<http://www.fsc.org/>  
[www.wrap.org.uk](http://www.wrap.org.uk)

[www.wales.gov.uk/planning](http://www.wales.gov.uk/planning)

**Q11**

Do you have any further references, signposts or case studies that could be included in this section?

*Please respond using the consultation response form at Annex D*



## Annex A

### GLOSSARY

#### **Adaptation**

Adjustment of behaviour to limit harm, or exploit the beneficial opportunities arising from the impacts of a changing climate.

#### **Climate Change**

Refers to changes in long-term trends in the average climate, such as changes in average temperatures.

#### **Carbon Emissions**

Carbon is used as a shorthand unit derived from carbon dioxide (1 tonne of CO<sub>2</sub> or CO<sub>2</sub>e is equivalent to 12/44 tonne of carbon)

#### **Carbon vs Carbon Dioxide Emissions**

One tonne of Carbon is equivalent to 2.67 tonnes of Carbon Dioxide

#### **Greenhouse Gas Emissions**

Any atmospheric gas (either natural or released as a result of human action) which absorbs thermal radiation emitted by the Earth's surface. This traps heat in the atmosphere and keeps the surface at a warmer temperature than would otherwise be possible; this commonly called the greenhouse effect.

#### **Combined Heat and Power/Combined Cooling Heat and power (CHP/CCHP)**

A technology which generates electricity at the same time as usable heat. Technologies range from small units similar to domestic gas boilers which generate electricity whilst heating homes through to large-scale Combined Cycle Gas Turbine plants which provide surplus heat for major industrial processes.

#### **Decentralised (Local) Energy Supply**

Energy Supply from local renewable and low-carbon sources usually on a relatively small scale and including electricity generation that is connected to the distribution networks (distributed energy) rather than directly to the national transmission systems. Decentralised energy is a broad term used to denote a diverse range of technologies that can serve an individual building, development or wider community.

#### **Emissions**

The release of greenhouse gases and aerosols into the atmosphere

#### **Energy Efficiency**

Making the best or most efficient use of energy in order to achieve a given output of goods or services, and of comfort and convenience.

#### **Greenhouse gas**

A gas which 'traps' energy radiated by the Earth within the atmosphere. Carbon dioxide (CO<sub>2</sub>) is the most important greenhouse gas emitted by humans.

#### **Low Carbon Development**

A low carbon development is one that achieves a significant reduction in carbon emissions over and above that expected by Building Regulations.

## **Mitigation**

Action to tackle the causes of climate change by reducing the emissions of greenhouse gases (or enhance the sinks that can absorb the gases).

## **Renewable and low-carbon energy**

Renewable energy covers those energy flows that occur naturally and repeatedly in the environment - from the wind, the fall of water, the movement of the oceans, from the sun and also from biomass. Low carbon technologies are those that can help reduce carbon emissions. Renewable and low-carbon energy supplies include, but not exclusively, those from biomass and energy crops; CHP/CCHP (and micro-CHP); energy-from-waste; ground source heating and cooling; solar thermal and photovoltaic generation; wind generation.

This is defined in both the Code for Sustainable Homes and BREEAM, see section 3.

## **Zero Carbon Developments**

This will be defined by the UK Government.

**Annex B**

**Local Planning Authority Planning for Sustainable Buildings Procedural Checklist**

This checklist is to ensure the minimum procedural elements of the policy are met.

**Application**

	Y	N
<b>All</b>		
Has a pre-assessment been carried out?		
Does the 'Design and Access Statement' contain a commitment that the sustainable buildings standard and carbon reduction level will be achieved? Does it include appropriate information to demonstrate this (including design) (see D7).		

**Prior to Construction**

	Y	N
<b>Residential (Code for Sustainable Homes)</b>		
Does the 'Interim Design Stage Certificate' confirm that a minimum <b>Level 3</b> will be achieved?		
Does the 'Interim Design Stage Certificate' confirm that <b>6 credits</b> under <b>Ene1</b> will be achieved?		
<b>Non-residential (BREEAM)</b>		
Does the 'Interim Design Stage Certificate' confirm that a minimum ' <b>Very Good</b> ' will be achieved?		
Does the 'Interim Design Stage Certificate' confirm that <b>6 credits</b> under <b>Ene1</b> will be achieved?		

**Post-Construction**

	Y	N
<b>Residential (Code for Sustainable Homes)</b>		
Does the 'Final Code Certificate' confirm that a minimum <b>Level 3</b> has been obtained?		
Does the 'Final Code Certificate' confirm that <b>6 credits</b> under <b>Ene1</b> have been obtained?		
<b>Non-residential (BREEAM)</b>		
Does the 'Final BREEAM Certificate' confirm that a minimum ' <b>Very Good</b> ' has been obtained?		
Does the 'Final BREEAM Certificate' confirm that <b>6 credits</b> under <b>Ene1</b> have been obtained?		

## **Annex C**

Examples of a Code for Sustainable Homes and BREEAM Certificate.

These have been provided by BRE/Stroma Ltd and CLG for the sole purpose of the draft Technical Advice Note 22 – Planning for Sustainable Buildings.



## INTERIM CERTIFICATE

(Issued at the Design Stage)

### ISSUED TO:

**Example Plot 1, Example Street,  
Example Town, Example County,  
EX1 1ST**

The sustainability of this home has been independently assessed at the Design Stage and has achieved a Code rating of 3 out of 6 stars under the October 2008 version.



Above  
Regulatory  
Standards

Current  
Best  
Practice

Highly  
Sustainable  
and Zero Carbon

The next page sets out how this home achieved its rating in the nine categories.

---

Licensed Assessor  
**Example Assessor Name**

Assessor Organisation  
**Code Assessor Organisation**

---

Client  
**Example Client,  
Client Street, Client Town,  
Client County**

Developer  
**Example Developer,  
Developer Street, Developer Town,  
Developer County**

---

Architect  
**Example Architect Firm/Name**

Certificate Number  
**EXAMPLE-DS-2009427021817**

---

Date  
**XX-XX-XXXX**

Signed for & on behalf of 'The Code Service Provider'

## INTERIM CERTIFICATE

(Issued at the Design Stage)

Certificate Number: **EXAMPLE-DS-2009427021817**

Score: **58.16**

### What Your Code Star Rating Means

Combined Score	36-47	48-56	57-67	68-83	84-89	90-100
Stars	1	2	3	4	5	6

The Code for Sustainable Homes considers the effects on the environment caused by the development and occupation of a home. To achieve a star rating a home must perform better than a new home built to minimum legal standards, and much better than an average existing home.

How this home scored												
Category	Percentage of Category Score attained										What is covered in the category	
	0	10	20	30	40	50	60	70	80	90		100
Energy	55											Energy efficiency and CO2 Saving measures.
Water	67											Internal & external water saving measures.
Materials	50											The sourcing & environmental impact of materials used to build the home.
Surface Water Run-off	75											Measures to reduce the risk of flooding and surface water run-off, which can pollute rivers
Waste	100											Storage for recyclable waste & compost, and care taken to reduce, reuse and recycle construction materials.
Pollution	25											The use of insulation materials and heating systems that do not add to global warming.
Health & Wellbeing	58											Provision of good daylight quality, sound insulation, private space, accessibility and adaptability.
Management	89											A Home User Guide, designing in security, and reducing the impact of construction.
Ecology	22											Protection and enhancement of the ecology of the area and efficient use of building land.

Further detailed information regarding The Code for Sustainable Homes can be found at [www.communities.gov.uk/thecode](http://www.communities.gov.uk/thecode)



## FINAL CERTIFICATE

(Issued at the Post Construction Stage)

### ISSUED TO:

**Example Plot 1, Example Street,  
Example Town, Example County,  
EX1 1ST**

The sustainability of this home has been independently assessed at the Post Construction Stage and has achieved a Code rating of 3 out of 6 stars under the October 2008 version.



Above  
Regulatory  
Standards

Current  
Best  
Practice

Highly  
Sustainable  
and Zero Carbon

The next page sets out how this home achieved its rating in the nine categories.

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Licensed Assessor  
**Example Assessor Name**

Assessor Organisation  
**Code Assessor Organisation**

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Client  
**Example Client,  
Client Street, Client Town,  
Client County**

Developer  
**Example Developer,  
Developer Street, Developer Town,  
Developer County**

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Architect  
**Example Architect Firm/Name**

Certificate Number  
**EXAMPLE-DS-2009427021817**

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Date  
**XX-XX-XXXX**

Signed for & on behalf of 'The Code Service Provider'



## FINAL CERTIFICATE (Issued at the Post Construction Stage)

Certificate Number: EXAMPLE-DS-2009427021817      Score: 58.16

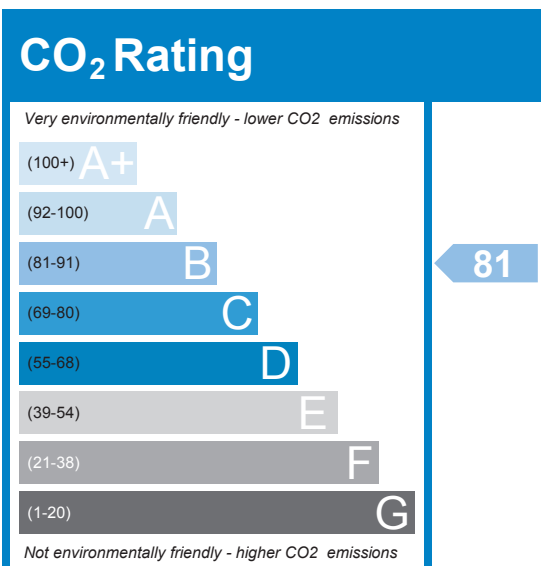
### What Your Code Star Rating Means

Combined Score	36-47	48-56	57-67	68-83	84-89	90-100
Stars	1	2	3	4	5	6

The Code for Sustainable Homes considers the effects on the environment caused by the development and occupation of a home. To achieve a star rating a home must perform better than a new home built to minimum legal standards, and much better than an average existing home.

How this home scored			What is covered in the category
Category	Percentage of Category Score attained		
	0 10 20 30 40 50 60 70 80 90 100		
Energy	55		Energy efficiency and CO2 Saving measures.
Water	67		Internal & external water saving measures.
Materials	50		The sourcing & environmental impact of materials used to build the home.
Surface Water Run-off	75		Measures to reduce the risk of flooding and surface water run-off, which can pollute rivers
Waste	100		Storage for recyclable waste & compost, and care taken to reduce, reuse and recycle construction materials.
Pollution	25		The use of insulation materials and heating systems that do not add to global warming
Health & Wellbeing	58		Provision of good daylight quality, sound insulation, private space, accessibility and adaptability.
Management	89		A Home User Guide, designing in security, and reducing the impact of construction
Ecology	22		Protection and enhancement of the ecology of the area and efficient use of building land.

Further detailed information regarding The Code for Sustainable Homes can be found at [www.communities.gov.uk/thecode](http://www.communities.gov.uk/thecode)



The CO<sub>2</sub> rating is a measure of a home's Carbon Dioxide (CO<sub>2</sub>) emissions. This rating is shown on your Energy Performance Certificate as the Environmental Impact Rating. This Certificate available from the seller, and also includes information on how you can improve the home's performance.

The Code measures the sustainability of a home as a complete package, and takes into account other aspects of energy use as well as wider sustainability issues, such as water and waste.

The CO<sub>2</sub>/Environmental Impact Rating is shown here for information only and does not form part of The Code for Sustainable Homes. Neither 'The Code Service Provider' nor the assessment organisation is responsible for the accuracy of this number. This certificate remains the property of 'The Code Service Provider' and is issued subject to terms and conditions. Copies can be made for the purposes of the Home Information Packs. It is produced from data supplied by the licensed Code Assessor (a 'certified' competent person under Scheme Document SD123). To check the authenticity of this certificate, please contact 'The Code Service Provider'.



**Code Service  
Provider Logo**



This is to certify that

## Plot 1, Any Road, Any Town, Any Where, ABCD

has achieved a final score of 62%, and a BREEAM rating of

### VERY GOOD



Pass



Outstanding

This Post Construction assessment was carried out under the 2008 version of BREEAM Education

Signed on behalf of BRE Global Ltd

Assessor

Licensed Assessor

Developer

Developer

Date

Date

Company

On behalf of

Architect

Architect

Certificate Reference: REF

**Annex D**

**Consultation Form**

Technical Advice Note 22 - Planning for Sustainable Buildings (Consultation)	
<b>Name</b>	
<b>Organisation</b>	
<b>Address</b>	
<b>E-mail address</b>	

The Welsh Assembly Government intends to publish a summary of the responses to this document. Normally, the name and address (or part of the address) of its author are published along with the response, as this gives credibility to the consultation exercise. If you do not wish to be identified as the author of your response, please state this expressly in writing to us.

Q1	p. 10	Does this provide sufficient introduction and explanation on sustainable building standards?	Yes	No
<i>Comments</i>				

Q2	p. 11	Does this fully explain the carbon emission requirements expected under the MIPPS?	Yes	No
<i>Comments</i>				

Q3	p. 14/15	Do you consider the approach to considering the energy hierarchy through the 'Design and Access Statement' appropriate as a way of demonstrating how carbon emissions have been reduced?	Yes	No
<i>Comments</i>				

<b>Q4</b>	p.15	Do you consider it appropriate to set out the technical constraints that may be considered in incorporating Low and Zero Carbon Energy technologies in this TAN?	Yes	No
			<input type="checkbox"/>	<input type="checkbox"/>
<i>Comments</i>				

<b>Q5</b>	p.16	Do you consider that the approach to policy constraints is appropriate?	Yes	No
			<input type="checkbox"/>	<input type="checkbox"/>
<i>Comments</i>				

<b>Q6</b>	p.26	Does the 'Policy Implementation Map' provide the appropriate level of detail and clarity needed to aid implementation of the policy?	Yes	No
			<input type="checkbox"/>	<input type="checkbox"/>
<i>Comments</i>				

<b>Q7</b>	p.27	Do you consider that the example planning conditions are appropriate?	Yes	No
			<input type="checkbox"/>	<input type="checkbox"/>
<i>Comments</i>				

Q8	p.28	Do you agree that the proposed approach to exceptions is appropriate?	Yes	No
<i>Comments</i>				

Q9	p.30	Does this section provide sufficient clarity on the expectations of local planning authorities when developing policies for their LDP?	Yes	No
<i>Comments</i>				

Q10	p.30	Do you have any views on how the national sustainable building standards national planning policy could be monitored and reviewed?
<i>Comments</i>		

Q11	p.32	Do you have any further references, signposts or case studies that could be included in this section?
<i>Comments</i>		