Code for Sustainable Homes

Technical Guide November 2010 - Full Technical Guide

Pre-Assessment Report

STROMA CERTIFIED CODE ASSESSOR

ashbyenergy assessors

Report Reference:	
Site Registration:	
Site Name:	**Butt Lane**
Assessor Number:	
Company:	**Ashby Energy**
Assessor:	**Nigel Ingham**

THE CODE FOR SUSTAINABLE HOMES

CERTIFICATION MARK

Site Details	
Site Name:	Butt Lane
Site Registration:	
Site Address:	Butt Lane
City/Town:	Hinckley
County:	Leicestershire
Postcode:	
No. of Dwellings:	1
No. of Dwelling Types:	1
Planning Authority:	Hinckley & Bosworth Borough Council
Funding Body:	

Assessor Details	
Company:	Ashby Energy
Assessor Name:	Nigel Ingham
Cert Number:	
Address:	Second Floor
	8a Market street
City/Town:	Ashby de la Zouch
County:	Leicestershire
Postcode:	LE65 1AH
Tel:	01743 861100
Email:	nigel@idea-ingham.co.uk

Client Details	
Company:	
Contact Name:	Mr & Mrs Hitchcock
Job Title:	
Email:	
Tel:	
Address:	
City/Town:	
County:	
Postcode:	

Architect Details	
Company:	Savage Hayward
Contact Name:	
Job Title:	
Email:	
Tel:	
Address:	
City/Town:	
County:	
Postcode:	

Developer Details	
Company:	
Contact Name:	
Job Title:	
Email:	
Tel:	
Address:	
City/Town:	
County:	
Postcode:	

Dwelling ID	Plot No.	Address	Social Unit
1	Butt Lane		No

Development Summary & Ratings

Dwelling Type	Description	Level	Score
		3	58.45

Deviations from Standard

No deviations from standard

Score Sheet for Butt Lane

	ENE									WAT		MAT			SUR		WAS			POL		HEA				MAN				ECO					Summary	
Dwelling ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**1**	**2**	**1**	**2**	**3**	**1**	**2**	**1**	**2**	**3**	**1**	**2**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**5**	**Score**	**Level**
1	**0**	**3**	**2**	**1**	**2**	**2**	**0**	**2**	**1**	**3**	**1**	**6**	**2**	**0**	**2**	**2**	**4**	**2**	**1**	**1**	**2**	**3**	**4**	**1**	**0**	**3**	**1**	**2**	**2**	**1**	**1**	**1**	**2**	**0**	**58.45**	**3**

Summary Score Sheet
Dwelling Type:

Dwellings: 1

	Credit Score	Credits Available	Score Assessment Sub Total	Credits Available	%	Weighting Factor	Points Score
Energy & CO2 Emissions							
ENE 1 Dwelling Emission Rate	0	10	13	31	41.94	36.4	15.26
ENE 2 Fabric Energy Efficiency	3	9					
ENE 3 Energy Display Device	2	2					
ENE 4 Drying Space	1	1					
ENE 5 Energy Labelled White Goods	2	2					
ENE 6 External Lighting	2	2					
ENE 7 Low or Zero Carbon Energy Technologies	0	2					
ENE 8 Cycle Storage	2	2					
ENE 9 Home Office	1	1					
Water							
WAT 1 Internal Water Use	3	5	4	6	66.67	9	6
WAT 2 External Water Use	1	1					
Materials							
MAT 1 Environmental Impact of Materials	6	15	8	24	33.33	7.2	2.4
MAT 2 Responsible Sourcing (Basic Building Elements)	2	6					
MAT 3 Responsible Sourcing (Finishing Elements)	0	3					
Surface Water Run-off							
SUR 1 Management of Surface Water Run-Off from Site	2	2	4	4	100	2.2	2.2
SUR 2 Flood Risk	2	2					
Waste							
WAS 1 Household Waste Storage and Recycling Facilities	4	4	7	8	87.5	6.4	5.6
WAS 2 Construction Site Waste Management	2	3					
WAS 3 Composting	1	1					
Pollution							
POL 1 Global Warming Potential of Insulants	1	1	3	4	75	2.8	2.1
POL 2 NOx Emissions	2	3					
Health & Wellbeing							
HEA 1 Daylighting	3	3	8	12	66.67	14	9.33
HEA 2 Sound Insulation	4	4					
HEA 3 Private Space	1	1					
HEA 4 Lifetime Homes	0	4					
Management							
MAN 1 Home User Guide	3	3	8	9	88.89	10	8.89
MAN 2 Considerate Constructors Scheme	1	2					
MAN 3 Construction Site Impacts	2	2					
MAN 4 Security	2	2					
Ecology							
ECO 1 Ecological Value of Site	1	1	5	9	55.56	12	6.67
ECO 2 Ecological Enhancement	1	1					
ECO 3 Protection of Ecological Features	1	1					
ECO 4 Change of Ecological Value of Site	2	4					
ECO 5 Building Footprint	0	2					
	Level Achieved: 3		Total Points Scored: 58.45				

Evidence for ENE 1 (Dwelling Emission Rate) -
Only Part L 2010 Building Regulations compliance achieved. 0 credits allocated
Detailed documentary evidence confirming the TER, DER and percentage improvement of DER over TER based on design stage SAP outputs*

Evidence for ENE 2 (Fabric Energy Efficiency) -
Detached 3 credits allocated
Detailed documentary evidence confirming the TER, DER and percentage improvement of DER over TER based on design stage SAP outputs*

Evidence for ENE 3 (Energy Display Device) -
Correctly specified display device showing current primary heating fuel consumption data. Correctly specified display device showing current consumption data.
Detailed documentary evidence confirming: That the correctly specified energy display device is dedicated to the dwelling AND The consumption data displayed by the correctly specified energy display device

Evidence for ENE 4 (Drying Space) -
Compliant internal & external drying space
For internal or external drying space, detailed documentary evidence confirming: • The location of fixings/footings or posts • The length of drying line

Evidence for ENE 5 (Energy Labelled White Goods) -
A+ rated fridge & freezers or fridge/freezer A rated washing machine and dishwasher AND B rated washer-dryers & tumbles dryers, or EU energy efficiency labelling scheme leaflet where washing machines and/or dishwashers not provided
If any white goods are to be provided, detailed documentary evidence confirming: The appliances to be provided with their applicable ratings under the EU Energy Efficiency Labelling Scheme Where washer dryers or tumble dryers will not be provided and the second credit is sought, provide detailed documentary evidence as follows: • A copy of the EU Energy Efficiency Labelling Scheme Information AND • Confirmation that the information will be provided to all dwellings

Evidence for ENE 6 (External Lighting) -
Compliant space lighting Compliant security lighting
Relevant drawings clearly showing the location of all external light fittings AND Detailed documentary evidence confirming: • The types of light fitting and efficacy, in lumens per circuit watt, for all lamps • The control systems applicable to each light fitting or group of fittings

Evidence for ENE 7 (Low or Zero Carbon Energy Technologies) -
A copy of calculations as detailed in the assessment methodology based on design stage SAP outputs AND Detailed documentary evidence confirming that the specified low or zero carbon technologies: • Meet any additional requirements defined in Directive 2009/28/EC as applicable. And are: • Certified under the Microgeneration Certification Scheme*

Evidence for ENE 8 (Cycle Storage) -
2 or 3 bedroom dwelling - Storage for 2 cycles per dwelling
Detailed documentary evidence showing: • The number of bedrooms and the corresponding number of cycle storage spaces per dwelling • Location, type and size of storage • Convenient access to cycle storage • Any security measures • Details of the proprietary system (if applicable) • How the requirements of clause 35 of Secured by Design - New Homes 2010 will be met (if applicable)

Evidence for ENE 9 (Home Office) -
Compliant home office
Detailed documentary evidence showing: • Location of and sufficient space for the home office • Location and number of sockets • Location of telephone points • That adequate ventilation will be provided • That an average daylight factor of at least 1.5% is achieved • Confirmation of one of the following: - cable connection - that broadband is available at the site level (not for individual dwellings), i.e. a letter from the developer confirming that they have checked that broadband is available - two telephone points (or double telephone point)

Evidence for WAT 1 (Internal Water Use) -
Internal water use less than or equal to 105 litres per person per day
Completed Water Efficiency Calculator for New Dwellings internal potable water use for each dwelling which has a different specification AND Detailed documentary evidence showing: • Location, details and type of appliances/ fittings that use water in the dwelling including any specific water reduction equipment with the capacity / flow rate of equipment. • Location, size and details of any rainwater and greywater collection systems provided for use in the dwelling Where detailed documentary evidence is not available at this stage; Completed Water Efficiency Calculator for New Dwellings internal potable water use for each dwelling which has a different specification AND A letter of instruction to a contractor/ supplier or a formal letter from the developer giving a specific undertaking, providing sufficient information to allow the water calculations to be completed

Evidence for WAT 2 (External Water Use) -
Compliant individual rainwater collection system
Detailed documentary evidence stating type, size and location of any rainwater collection systems

Evidence for MAT 1 (Environmental Impact of Materials) -
Mandatory requirements met: At least 3 elements rated A+ to D, 6 credits scored
Completed Code Mat 1 Calculator Tool, showing building elements at the design stage with the relevant Green Guide element numbers AND References stating the design or specification documentation used to complete the tool Assessor will need details of construction materials

Evidence for MAT 2 (Responsible Sourcing (Basic Building Elements)) -
2 credits scored
Completed Code Mat 2 Calculator Tool, showing building elements at the design stage AND Detailed documentary evidence stating the materials specified in each element Assessor will need details of materials to carry out assessment

Evidence for MAT 3 (Responsible Sourcing (Finishing Elements)) -
Zero credits or credits not sought
Completed Code Mat 3 Calculator Tool, showing building elements at the design stage AND Detailed documentary evidence stating the materials specified in each element

Evidence for SUR 1 (Management of Surface Water Run-Off from Site) -
Mandatory Met: Peak rate of run-off and annual volume of run-off is no greater for the developed than for the pre-development. The system has also been designed for local drainage system failure. No discharge to watercourse(s) for rainfall depth up to 5mm. Run-off from all hard surfaces shall receive an appropriate level of treatment (as per the SudS manual) to minimise risk of pollution.
A Hydrologist's report will be required Mandatory Elements: Statement from the appropriately qualified professional confirming that they are qualified in line with the Code definition. AND The appropriately qualified professional's report containing all information necessary to demonstrate compliance with the peak rate of run-off and volume of run-off requirements. The report should include: • Areas of permeable and impermeable surfaces on the site pre- and post- development Where the impermeable area has increased post development the report should also include: • Details of the permeability characteristics of the site pre- and post-development (e.g. infiltration tests etc where appropriate) • Peak rates of run-off (l/s) calculations for the 1 year and 100 year events, pre- and post-development, including an allowance for climate change over the development lifetime • Detailed documentary evidence showing the methods used to reduce the peak rate of run-off to pre-development rates • The pre- development volume of run-off (m3) for the 100 year 6 hour event • The additional volume of run-off (m3) for the 100 year 6 hour event caused by the development without mitigation measures • The additional volume of run-off (m3) with the proposed mitigation

Evidence for SUR 2 (Flood Risk) -
Low flood risk - zone 1
For developments situated in Zone 1: • A Flood Risk Assessment (prepared according to good practice guidance as outlined in PPS25 Development and Flood Risk) which shows that there is a low risk of flooding from all sources. For medium (Zone 2) or high (Zone 3a) flood risk areas: • A Flood Risk Assessment (prepared according to good practice guidance as outlined in PPS25 Development and Flood Risk) which shows there is a medium or high risk of flooding AND • Site plans indicating the design flood level, the range of ground levels of the dwellings, car parking areas and site access (lowest to highest), showing that the criteria (finished floor levels of all habitable rooms and access routes being at least 600 mm above the design flood level) are met, along with any notes explaining the function of any areas lying below the design flood level AND • Confirmation from the local planning authority that the development complies with PPS25 and is appropriately flood resilient and resistant, and has managed any residual risk safely.

Evidence for WAS 1 (Household Waste Storage and Recycling Facilities) -
Mandatory requirements met: Adequate storage of household waste with accessibility in line with checklist WAS 1. Local authority collection: After collection sorting with appropriate internal storage of recyclable materials
Where 4 credits are sought: Detailed documentary evidence stating: • the location of internal and external storage • the number, types and sizes of internal and external storage AND A letter, leaflet, website or other published information from the Local Authority/waste scheme provider* describing; • the types of waste collected • the frequency of collection • if there will be pre or post collection sorting * In the case of an automated collection system, the waste scheme operator will only need to confirm the types of waste collected and if there will be pre or post collection sorting

Evidence for WAS 2 (Construction Site Waste Management) -
Compliant site waste management plant containing benchmarks, procedures and commitments for the minimizing and diverting 50% waste from landfill in line with the criteria and with Checklist WAS 2a, 2b & 2c
A copy of the compliant SWMP containing the appropriate benchmarks, commitments and procedures for waste minimisation and diversion from landfill in line with the criteria and with Checklists Was 2a, Was 2b and Was 2c OR Confirmation from the developer that the SWMP includes/will include benchmarks, procedures and commitments for minimising and diverting waste from landfill in line with the criteria and with Checklists W

Evidence for WAS 3 (Composting) -
Individual compositing facility/facilities
Detailed documentary evidence stating: • the location and size of internal and external storage • that an information leaflet will be supplied • distance of storage from dwelling AND Completed Checklist IDP

Evidence for POL 1 (Global Warming Potential of Insulants) -
All insulants have a GWP of less than 5
Completed Checklist Pol 1 showing the proposed insulation materials (or none) for each element and whether they are foamed using blowing agents or are unfoamed (from table Cat 6.1) See attached checklist

Evidence for POL 2 (NOx Emissions) -
NOx emissions less than or equal to 70mg/kWh
Detailed documentary evidence describing: • The primary and any secondary heating systems and flue type • Dry NOX levels and/or boiler class of the primary and any secondary heating systems SAP worksheets to provide additional evidence

Evidence for HEA 1 (Daylighting) -
Kitchen: Average daylight factor of at least 2% Living room: Average daylight factor of at least 1.5% Dining room: Average daylight factor of at least 1.5% Home office: Average daylight factor of at least 1.5% All rooms (kitchen, living, dining and where applicable the home office) have 80% of the working plane with direct light from the sky
Copy of calculations as detailed in the methodology to demonstrate: • Average daylight factor using the formula described in the definitions section (method described in Littlefair (1998) as set out in BS 8206-2) or computer simulation or scale model measurements • Position of the no-sky line and percentage of area of the working plane that receives direct light from the sky Confirmation from the developer that the calculations accurately reflect the dwelling as designed. Calculations to be carried out by CSH assessor based on available drawings

Evidence for HEA 2 (Sound Insulation) -
Detached property
None required

Evidence for HEA 3 (Private Space) -
Credit not sought or no compliant space provided
Detailed documentary evidence confirming: • The number of bedrooms served by the outdoor space • That the outdoor space meets the minimum size requirements AND Completed Checklist IDP (attached)

Evidence for HEA 4 (Lifetime Homes) -
Credits not sought
Confirmation (if claimed) from the developer that all 16 of the Lifetime Homes design criteria are met OR Where an exemption from Lifetime Homes criteria 2 and/or 3 is sought: • Confirmation from the developer that all other design criteria are met AND Detailed documentary evidence demonstrating access routes subject to steeply sloping gradients at pre developmen

Evidence for MAN 1 (Home User Guide) -
All criteria inline with checklist MAN 1 Part 1 - Operational Issues will be met All criteria inline with checklist MAN 1 Part 2 - Site and Surroundings will be met
Where a home user guide will be supplied covering operational issues only: Confirmation in the form of a letter from the developer or in the specification that the guide will be: • Supplied to all dwellings within the development • Be developed to the required standards (as a minimum including a list of contents showing that the guide will cover all of the issues required in Checklist Man 1 Part 1 Where a home user guide covering operational issues and issues relating to the site and surroundings will be supplied: As above and including information covered in Checklist Man 1 Part 2

Evidence for MAN 2 (Considerate Constructors Scheme) -
Considerate constructors scheme: Best practise only, a score of between 24 and 31.5 and at least a score of 3 in every section
For Considerate Constructors Scheme: Specification clause or other confirmation of commitment from the contractor or developer to comply with the Considerate Constructors Scheme and achieve formal certification under the scheme with either a pass score or a score of 32 points and above AND Confirmation that registration with the Considerate Constructor Scheme has taken place no later than the commencement of the construction phase

Evidence for MAN 3 (Construction Site Impacts) -
Monitor, report and set targets for CO2 production or energy use from site activities Monitor, report and set targets for CO2 production or energy use from site related transport Monitor, report and set targets for water consumption from site activities Adopt best practise policies in respects to air (dust) pollution from site activities Adopt best practise policies in respects to water (ground and surface) pollution
Completed copy of Checklist Man 3 (signed and dated) detailing the procedures that will be employed to minimise construction site impacts

Evidence for MAN 4 (Security) -
Secure by design section 1 & 2 compliant
Detailed documentary evidence showing: • That an ALO/CPDA has been consulted with to ensure that the requirements of Section 2 - Physical Security from 'Secured by Design - New Homes' are met • A commitment to follow the advice provided by the ALO/CPDA

Evidence for ECO 1 (Ecological Value of Site) -
Land of low ecological value, achieved through checklist ECO 1. Development site has been identified as low ecological value by a suitably qualified ecologist
Where using Checklist Eco 1, provision of: • Site visit report from the design team/assessor confirming details adequate to meet Checklist Eco 1 based on plans of the site and surrounding area prior to the commencement of construction works/site clearance Where a suitably qualified ecologist is appointed; A copy of a report or letter from the ecologist highlighting the information required as set out in the 'Code for Sustainable Homes Ecology Report Template' AND Detailed documentary evidence identifying the construction zone and how any areas of ecological value outside the construction zone will remain undisturbed in accordance with the ecologist's recommendations

Evidence for ECO 2 (Ecological Enhancement) -
Key recommendations and 30% additional recommendations by a suitably qualified ecologist
A copy of the ecologist's report highlighting the information required as set out in 'Code for Sustainable Homes Ecology Report Template' AND Detailed documentary evidence stating: • How the key recommendations and 30% of additional recommendations will be incorporated into the design • The planting schedule of any species to be incorporated from suitably qualified ecologists recommendations

Evidence for ECO 3 (Protection of Ecological Features) -
Ecological features will be adequately protected and maintained
Detailed documentary evidence* confirming ecological features present and how they will be protected *Where compliance with the criteria is demonstrated by the relevant documents submitted to the Planning Authority which gained planning approval, these can be used as evidence OR Where ecological features are being removed and are of low ecological value; A copy of the ecologist's report highlighting the information required as set out in the Code for Sustainable Homes Ecology Report Template

Evidence for ECO 4 (Change of Ecological Value of Site) -
Neutral: Greater than -3 and less than or equal to +3
Copy of the calculations completed by the assessor and supported by the following detailed documentary evidence: • Proposed site layout • The pre-development site survey, clearly indicating natural and built features on both the site and land surrounding the site before the proposed development • Landscape and plot categories (in accordance with the Assessment Methodology) with a list of site areas provided for both before and after development

Evidence for ECO 5 (Building Footprint) -
Credit not sought
Calculation of the building footprint ratio, stating the Net Internal Floor Area (NIFA) and the Net Internal Ground Floor Area (NIGFA)

Assessor Declaration

I Nigel Ingham, can confirm that I have compiled this report to the best of my ability, I have based all findings on the information that is referenced within this report, and that this report is appropriate for the registered site.

To the best of my knowledge all the information contained within this report is correct and accurate. I have within my possession all the reference material that relates to this report, which is available for inspection by the client, the clients representative or Stroma Certification for Quality Assurance monitoring.

Signed:



Nigel Ingham
Ashby Energy
20 July 2011

Information about Code for Sustainable Homes

The Code for Sustainable Homes (the Code) is an environmental assessment method for rating and certifying the performance of new homes. It is a national standard for use in the design and construction of new homes with a view to encouraging continuous improvement in sustainable home building. The Code is based on EcoHomes©.

It was launched in December 2006 with the publication of 'Code for Sustainable Homes: A stepchange in sustainable home building practice' (Communities and Local Government, 2006), and became operational in England from April 2007.

The Code for Sustainable Homes covers nine categories of sustainable design. Each category includes a number of environmental issues. Each issue is a source of impact on the environment which can be assessed against a performance target and awarded one or more credits. Performance targets are more demanding than the minimum standards needed to satisfy Building Regulations or other legislation. They represent good or best practice, are technically feasible, and can be delivered by the building industry. The issues and categories are as follows:

- Energy & CO2 Emissions
  - Dwelling Emission Rate
  - Building Fabric
  - Internal Lighting
  - Drying Space
  - Energy Labelled White Goods
  - External Lighting
  - Low or Zero Carbon Technologies
  - Cycle Storage
  - Home Office
- Water
  - Internal Water Use
  - External Water Use
- Materials
  - Environmental Impact of Materials
  - Responsible Sourcing of Materials - Basic Building Elements
  - Responsible Sourcing of Materials - Finishing Elements
- Surface Water Run-off
  - Management of Surface Water Run-off from the Development
  - Flood Risk
- Waste
  - Storage of Non-Recyclable Waste and Recyclable Household Waste
  - Construction Site Waste Management
  - Composting
- Pollution
  - Global Warming Potential of Insulants
  - NOx Emissions

- Health & Wellbeing
  - Daylighting
  - Sound Insulation
  - Private Space
  - Lifetime Homes
- Management
  - Home User Guide
  - Considerate Constructors Scheme
  - Construction Site Impacts
  - Security
- Ecology
  - Ecological Value of Site
  - Ecological Enhancement
  - Protection of Ecological Features
  - Change in Ecological Value of Site
  - Building Footprint

The Code assigns one or more performance requirements (assessment criteria) to all of the above environmental issues. When each performance requirement is achieved a credit is awarded (with the exception of the four mandatory requirements which have no associated credits). The total number of credits available to a category is the sum of credits available for all the issues within it.

Mandatory minimum performance standards are 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 are not awarded for these issues. Confirmation that the performance requirements are met for all four is a minimum entry requirement for achieving a level 1 rating. The four un-credited issues are:

- Environmental Impacts of Materials
- Management of Surface Water Run-off from Developments
- Storage of Non-Recyclable Waste and Recyclable Household Waste
- Construction Site Waste Management

If the mandatory minimum performance standard is met for the four un-credited issues, four further mandatory issues need to be considered. These are agreed to be such important issues that separate Government policies are being pursued to mitigate their effects. For two of these, credits are awarded for every level of achievement recognised within the Code, and minimum mandatory standards increase with increasing rating levels.

The two issues with increasing mandatory minimum standards are:

- Dwelling Emission Rate
- Indoor Water Use

For one issue a mandatory requirement at Level 5 or 6:

- Fabric Energy Efficiency

The final issue with a mandatory requirement for Level 6 of the Code is:

- Lifetime Homes

Further credits are available on a free-choice or tradable basis from other issues so that the developer may choose how to add performance credits (converted through weighting to percentage points) achieve the rating which they are aiming for.

The environmental impact categories within the Code are not of equal importance. Their relative value is conveyed by applying a consensus-based environmental weighting factor (see details below) to the sum of all the raw credit scores in a category, resulting in a score expressed as percentage points. The points for each category add up to 100.

The weighting factors used in the Code have been derived from extensive studies involving a wide range of stakeholders who were asked to rank (in order of importance) a range of environmental impacts. Stakeholders included international experts and industry representatives.

It is also important to note that achieving a high performance in one category of environmental impact can sometimes result in a lower level of performance for another. For instance, if biomass is used to meet heating demands, credits will be available for performance in respect of energy supplied from a renewable source, but credits cannot be awarded for low NOX emission. It is therefore impossible to achieve a total percentage points score of 100.

The Code uses a rating system of one to six stars. A star is awarded for each level achieved. Where an assessment has taken place by where no rating is achieved, the certificate states that zero stars have been awarded:

Code Levels	Total Points Score (Equal to or Greater Than)
Level 1 ★☆☆☆☆☆	**36 Points**
Level 2 ★★☆☆☆☆	**48 Points**
Level 3 ★★★☆☆☆	**57 Points**
Level 4 ★★★★☆☆	**68 Points**
Level 5 ★★★★★☆	**84 Points**
Level 6 ★★★★★★	**90 Points**

Formal assessment of dwellings using the Code for Sustainable Homes may only be carried out using Certified assessors, who are qualified ‘competent persons’ for the purpose of carrying out Code assessments.

Energy & CO2 Emissions
ENE 1: Dwelling Emission Rate **Available Credits:**10 **Aim:**To limit CO2 emissions arising from the operation of a dwelling and its services in line with current policy on the future direction of regulations.
ENE 2: Fabric Energy Efficiency **Available Credits:**9 **Aim:**To improve fabric energy efficiency performance thus future-proofing reductions in CO2 for the life of the dwelling.
ENE 3: Energy Display Device **Available Credits:**2 **Aim:**To promote the specification of equipment to display energy consumption data, thus empowering dwelling occupants to reduce energy use.
ENE 4: Drying Space **Available Credits:**1 **Aim:**To promote a reduced energy means of drying clothes.
ENE 5: Energy Labelled White Goods **Available Credits:**2 **Aim:**To promote the provision or purchase of energy efficient white goods, thus reducing the CO2 emissions from appliance use in the dwelling.
ENE 6: External Lighting **Available Credits:**2 **Aim:**To promote the provision of energy efficient external lighting, thus reducing CO2 emissions associated with the dwelling.
ENE 7: Low or Zero Carbon Technologies **Available Credits:**2 **Aim:**To limit CO2 emissions and running costs arising from the operation of a dwelling and its services by encouraging the specification of low and zero carbon energy sources to supply a significant proportion of energy demand.
ENE 8: Cycle Storage **Available Credits:**2 **Aim:**To promote the wider use of bicycles as transport by providing adequate and secure cycle storage facilities, thus reducing the need for short car journeys and the associated CO2 emissions.
ENE 9: Home Office **Available Credits:**1 **Aim:**To promote working from home by providing occupants with the necessary space and services thus reducing the need to commute.

Water
WAT 1: Indoor Water Use **Available Credits:**5 **Aim:**To reduce the consumption of potable water in the home from all sources, including borehole well water, through the use of water efficient fittings, appliances and water recycling systems.
WAT 2: External Water Use **Available Credits:**1 **Aim:**To promote the recycling of rainwater and reduce the amount of mains potable water used for external water uses.

Materials
MAT 1: Environmental Impact of Materials **Available Credits:**15 **Aim:**To specify materials with lower environmental impacts over their life-cycle.
MAT 2: Responsible Sourcing of Materials - Basic Building Elements **Available Credits:**6 **Aim:**To promote the specification of responsibly sourced materials for the basic building elements.
MAT 3: Responsible Sourcing of Materials - Finishing Elements **Available Credits:**3 **Aim:**To promote the specification of responsibly sourced materials for the finishing elements.

Surface Water Run-off
SUR 1: Management of Surface Water Run-off from developments **Available Credits:**2 **Aim:**To design surface water drainage for housing developments which avoid, reduce and delay the discharge of rainfall run-off to watercourses and public sewers using SuDS techniques. This will protect receiving waters from pollution and minimise the risk of flooding and other environmental damage in watercourses.
SUR 2: Flood Risk **Available Credits:**2 **Aim:**To promote housing development in low flood risk areas, or to take measures to reduce the impact of flooding on houses built in areas with a medium or high risk of flooding.

Waste
WAS 1: Storage of non-recyclable waste and recyclable household waste **Available Credits:**4 **Aim:**To promote resource efficiency via the effective and appropriate management of construction site waste.
WAS 2: Construction Site Waste Management **Available Credits:**3 **Aim:**To promote resource efficiency via the effective and appropriate management of construction site waste.
WAS 3: Composting **Available Credits:**1 **Aim:**To promote the provision of compost facilities to reduce the amount of household waste send to landfill.

Pollution
POL 1: Global Warming Potential of Insulants **Available Credits:**1 **Aim:**To promote the reduction of emissions of gases with high GWP associated with the manufacture, installation, use and disposal of foamed thermal and acoustic insulating materials.
POL 2:NOx Emissions **Available Credits:**3 **Aim:**To promote the reduction of nitrogen oxide (NOX) emissions into the atmosphere.

Health & Wellbeing
HEA 1: Daylighting **Available Credits:**3 **Aim:**To promote good daylighting and thereby improve quality of life and reduce the need for energy to light the home.
HEA 2: Sound Insulation **Available Credits:**4 **Aim:**To promote the provision of improved sound insulation to reduce the likelihood of noise complaints from neighbours.
HEA 3: Private Space **Available Credits:**1 **Aim:**To improve quality of life by promoting the provision of an inclusive outdoor space which is at least partially private.
HEA 4: Lifetime Homes **Available Credits:**4 **Aim:**To encourage the construction of homes that are accessible and easily adaptable to meet the changing needs of current and future occupants.

Management
MAN 1: Home User Guide **Available Credits:**3 **Aim:**To promote the provision of guidance enabling occupants to understand and operate their home efficiently and make the best use of local facilities.
MAN 2: Considerate Constructors Scheme **Available Credits:**3 **Aim:**To promote the environmentally and socially considerate, and accountable management of construction sites.
MAN 3: Construction Site Impacts **Available Credits:**2 **Aim:**To promote construction sites managed in a manner that mitigates environmental impacts.
MAN 4: Security **Available Credits:**2 **Aim:**To promote the design of developments where people feel safe and secure- where crime and disorder, or the fear of crime, does not undermine quality of life or community cohesion.

Ecology
ECO 1: Ecological value of site **Available Credits:**1 **Aim:**To promote development on land that already has a limited value to wildlife, and discourage the development of ecologically valuable sites.
ECO 2: Ecological enhancement **Available Credits:**1 **Aim:**To enhance the ecological value of a site.
ECO 3: Protection of ecological features **Available Credits:**1 **Aim:**To promote the protection of existing ecological features from substantial damage during the clearing of the site and the completion of construction works.
ECO 4: Change in ecological value of site **Available Credits:**4 **Aim:**To minimise reductions and promote an improvement in ecological value.
ECO 5: Building footprint **Available Credits:**2 **Aim:**To promote the most efficient use of a building’s footprint by ensuring that land and material use is optimised across the development.

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