Code for Sustainable Homes

Technical Guide November 2010 - Full Technical Guide

Pre-Assessment Report

STROMA CERTIFIED CODE ASSESSOR

dynamic energy assessors

Report Reference:	**Test Site - 01**
Site Registration:	**005008-110523-02-xxxx**
Site Name:	**Test Site**
Assessor Number:	**STRO005008**
Company:	**Dynamic Energy Assessors**
Assessor:	**Derek GC White**

THE CODE FOR SUSTAINABLE HOMES

CERTIFICATION MARK

Site Details	
Site Name:	Test Site
Site Registration:	005008-110523-02-xxxx
Site Address:	Any Street
	Any Area
City/Town:	Any Town
County:	Greater London
Postcode:	SE16 7ZY
No. of Dwellings:	2
No. of Dwelling Types:	1
Planning Authority:	London Borough of Lewisham
Funding Body:	

Assessor Details	
Company:	Dynamic Energy Assessors
Assessor Name:	Derek GC White
Cert Number:	STRO005008
Address:	9 Carlton Road
City/Town:	South Croydon
County:	Surrey
Postcode:	CR2 0BP
Tel:	079 7083 9967
Email:	derek.white@dynamicenergyassessors.co.uk

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

Architect Details	
Company:	Any Architects
Contact Name:	Architect One
Job Title:	Architect
Email:	any.one@any_architects.co.uk
Tel:	012 3456 7890
Address:	1 Any Street
	Any Area
City/Town:	
County:	London
Postcode:	SE16 7ZY

Developer Details	
Company:	Any Developer
Contact Name:	One Developer
Job Title:	Developer
Email:	
Tel:	012 6543 7890
Address:	1 Any Street
	Any Area
City/Town:	
County:	London
Postcode:	SE1 9AB

Dwelling ID	Plot No.	Address	Social Unit
1	1	Flat 1 Any Street Any Street	No
2	8	Flat 2 Any Street Any Street	No

Development Summary & Ratings

Dwelling Type	Description	Level	Score
	Flat 1 Any StreetAny Street	3	59.1
	Flat 2 Any StreetAny Street	3	59.23

Deviations from Standard

No deviations from standard

Score Sheet for Test Site

	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**	**0**	**2**	**1**	**2**	**2**	**2**	**2**	**1**	**4**	**1**	**10**	**3**	**2**	**0**	**0**	**4**	**1**	**1**	**1**	**2**	**2**	**3**	**1**	**4**	**2**	**1**	**2**	**2**	**1**	**1**	**1**	**2**	**0**	**59.1**	**3**
2	**3.1**	**0**	**0**	**1**	**2**	**2**	**2**	**2**	**1**	**4**	**1**	**10**	**3**	**2**	**0**	**0**	**4**	**1**	**1**	**1**	**2**	**2**	**3**	**0**	**4**	**2**	**1**	**2**	**2**	**1**	**1**	**1**	**2**	**0**	**59.23**	**3**

Summary Score Sheet

Dwelling Type: Flat 1 Any Street Any Street

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	12	31	38.71	36.4	14.09
ENE 2 Fabric Energy Efficiency	0	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	2	2					
ENE 8 Cycle Storage	2	2					
ENE 9 Home Office	1	1					
Water							
WAT 1 Internal Water Use	4	5	5	6	83.33	9	7.5
WAT 2 External Water Use	1	1					
Materials							
MAT 1 Environmental Impact of Materials	10	15	15	24	62.5	7.2	4.5
MAT 2 Responsible Sourcing (Basic Building Elements)	3	6					
MAT 3 Responsible Sourcing (Finishing Elements)	2	3					
Surface Water Run-off							
SUR 1 Management of Surface Water Run-Off from Site	0	2	0	4	0	2.2	0
SUR 2 Flood Risk	0	2					
Waste							
WAS 1 Household Waste Storage and Recycling Facilities	4	4	6	8	75	6.4	4.8
WAS 2 Construction Site Waste Management	1	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	2	3	10	12	83.33	14	11.67
HEA 2 Sound Insulation	3	4					
HEA 3 Private Space	1	1					
HEA 4 Lifetime Homes	4	4					
Management							
MAN 1 Home User Guide	2	3	7	9	77.78	10	7.78
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: 59.1				

Evidence for ENE 1 (Dwelling Emission Rate) -
Only Part L 2010 Building Regulations compliance achieved. 0 credits allocated
See SAP Report, FEE Report, and L1A 2010 Compliance Report

Evidence for ENE 2 (Fabric Energy Efficiency) -
Apartment 0 credits allocated
See SAP Report, FEE Report, and L1A 2010 Compliance Report

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.

Evidence for ENE 4 (Drying Space) -
Compliant internal drying space
Floor plans - drawings 111 - 113 shows Tidy Dry above the bath in each flat

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
Drawings 130-132 have details of all such requirements

Evidence for ENE 6 (External Lighting) -
Compliant space lighting Compliant security lighting

Evidence for ENE 7 (Low or Zero Carbon Energy Technologies) -
Contribution of low or zero carbon technologies greater than or equal to 15%
See SAP Report, FEE Report, and L1A 2010 Compliance Report

Evidence for ENE 8 (Cycle Storage) -
Studio or 1 bedroom dwelling - Storage for 1 cycle per dwelling
See drawing 105

Evidence for ENE 9 (Home Office) -
Compliant home office
Home Office - Lighting & Electrical Diagrams - drawings 210-212

Evidence for WAT 1 (Internal Water Use) -
Internal water use less than or equal to 90 litres per person per day
Drawings 130-132 (Plumbing) details 92.5lt/person/day

Evidence for WAT 2 (External Water Use) -
Compliant individual rainwater collection system
Drawings 130-132 (Water Butt) 1 x 150ltr rainwater butt for each ground floor flat

Evidence for MAT 1 (Environmental Impact of Materials) -
Mandatory requirements met: At least 3 elements rated A+ to D, 10 credits scored
Drawings 111, 112 & 113 show the plans with wall make up and drawings 120 & 121 show the elevations All External walls are cavity filled either fairfaced block or brick outer and block innner with plasterboard on dabs (two small sections of the fairfaced block is timber clad on timber battens Roofing elements are shown on drawings 114, included also is the data sheets for the chosen flat roofing installation stating it is GG rated A Windows schedule is in drawings 150 & 151 Floooring details in drawing 140, description in drawings 130 - 132

Evidence for MAT 2 (Responsible Sourcing (Basic Building Elements)) -
3 credits scored
Drawings 130-132 specify the necessary information in the sections entitled: External Walls Ground Floor Intermediate Floors Seperate Walls Partitions Windows Roof

Evidence for MAT 3 (Responsible Sourcing (Finishing Elements)) -
2 credits scored
Taking the building as a whole rather than individual flats Total Door Area = 75.27m2 Drawings 130-132 have detail specifications

Evidence for SUR 1 (Management of Surface Water Run-Off from Site) -
Special Case: No change/decrease in impermeable area. Credits not sought, water quality criteria not met/sought.
Drawings of existing site show garages surrounded by either paved or tarmac areas Google maps pictures show same Drawing 105 shows current landscaping includes areas of planting and grass

Evidence for SUR 2 (Flood Risk) -
Credit(s) not sought

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
Lewisham Council have a weekly collection policy for both household waste and recycled waste (see PDF file)

Evidence for WAS 2 (Construction Site Waste Management) -
Compliant site waste management plant containing appropriate benchmarks, commitments and procedures for waste minimisation in line with the criteria and with Checklist WAS 2a, 2b & 2c
See drawing 130 for details specified

Evidence for WAS 3 (Composting) -
Local authority green waste collection scheme
Lewisham Council offer a Green Waste collection scheme

Evidence for POL 1 (Global Warming Potential of Insulants) -
All insulants have a GWP of less than 5
Drawings 130-132 (Unsulation Products) specifies "All insulation GWP<5 " Dritherm cavity wall insulation (see datasheet) is zero GWP and zero ODP Kooltherm K8 (See datasheet - polyisocyanurate) cavity boards (for the seperating walls) are zero ODP and have a low GWP (Green Guide rated A+)

Evidence for POL 2 (NOx Emissions) -
NOx emissions less than or equal to 70mg/kWh
Specification on drawing 130 Boiler Class A+ rated with NOx <= 70mg/kWh

Evidence for HEA 1 (Daylighting) -
Kitchen: Average daylight factor of at least 2% All rooms (kitchen, living, dining and where applicable the home office) have 80% of the working plane with direct light from the sky
Home Office - Lighting & Electrical Diagrams - drawings 210-212 Flat 1 & Flat 4 only have a single tree at end of garden (half right through window) and end of house at other end/side of garden (half left through window) so effectively infinite x in working plane (used a value of 25m)

Evidence for HEA 2 (Sound Insulation) -
Accredited Part E sound testing has been undertaken Airborne 5dB higher, impact 5dB lower
Written confirmation sound sinsulation will achieve 5dB and Compliant Testing will be performed post build (see "Detailed Information Required at Design Stage.txt)

Evidence for HEA 3 (Private Space) -
Individual private space provided
Drawing 105

Evidence for HEA 4 (Lifetime Homes) -
All criteria of Lifetime Homes in line with all 16 principals of Lifetime Homes
Confirmation of 16 points (see PDF file)

Evidence for MAN 1 (Home User Guide) -
All criteria inline with checklist MAN 1 Part 1 - Operational Issues will be met
See Home User Guide comments on drawing 130

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
Confirmation of intention is detailed in comments section of drawing 130 Evidence of joining a scheme is required before construction starts

Evidence for MAN 3 (Construction Site Impacts) -
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 80% of timer reclaimed, re-used or responsibly sourced
The above 4 elements have been confirmed (see "Detailed Information Required at Design Stage.txt)

Evidence for MAN 4 (Security) -
Secure by design section 1 & 2 compliant
See "1-9 Newlands Pk garages - Liaison Officer report.pdf"

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
The ecologists being used on this project are: Ms. Sabrina Bremer The Ecology Consultancy 6-8, Cole Street London SE1 4YH See Ecologist's Report

Evidence for ECO 2 (Ecological Enhancement) -
Key recommendations and 30% additional recommendations by a suitably qualified ecologist
The ecologists being used on this project are: Ms. Sabrina Bremer The Ecology Consultancy 6-8, Cole Street London SE1 4YH See Ecologist's Report

Evidence for ECO 3 (Protection of Ecological Features) -
Land of low ecological value as identified under ECO 1
The ecologists being used on this project are: Ms. Sabrina Bremer The Ecology Consultancy 6-8, Cole Street London SE1 4YH See Ecologist's Report

Evidence for ECO 4 (Change of Ecological Value of Site) -
Neutral: Greater than -3 and less than or equal to +3
The ecologists being used on this project are: Ms. Sabrina Bremer The Ecology Consultancy 6-8, Cole Street London SE1 4YH See Ecologist's Report

Evidence for ECO 5 (Building Footprint) -
Credit not sought

Summary Score Sheet

Dwelling Type: Flat 2 Any Street Any Street

Dwellings: 2

	Credit Score	Credits Available	Score Assessment Sub Total	Credits Available	%	Weighting Factor	Points Score
Energy & CO2 Emissions							
ENE 1 Dwelling Emission Rate	3.1	10	13.1	31	42.26	36.4	15.38
ENE 2 Fabric Energy Efficiency	0	9					
ENE 3 Energy Display Device	0	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	2	2					
ENE 8 Cycle Storage	2	2					
ENE 9 Home Office	1	1					
Water							
WAT 1 Internal Water Use	4	5	5	6	83.33	9	7.5
WAT 2 External Water Use	1	1					
Materials							
MAT 1 Environmental Impact of Materials	10	15	15	24	62.5	7.2	4.5
MAT 2 Responsible Sourcing (Basic Building Elements)	3	6					
MAT 3 Responsible Sourcing (Finishing Elements)	2	3					
Surface Water Run-off							
SUR 1 Management of Surface Water Run-Off from Site	0	2	0	4	0	2.2	0
SUR 2 Flood Risk	0	2					
Waste							
WAS 1 Household Waste Storage and Recycling Facilities	4	4	6	8	75	6.4	4.8
WAS 2 Construction Site Waste Management	1	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	2	3	9	12	75	14	10.5
HEA 2 Sound Insulation	3	4					
HEA 3 Private Space	0	1					
HEA 4 Lifetime Homes	4	4					
Management							
MAN 1 Home User Guide	2	3	7	9	77.78	10	7.78
MAN 2 Considerate Constructors Scheme	1	2					
MAN 3 Construction Site Impacts	2	2					
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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: 59.23				

Evidence for ENE 1 (Dwelling Emission Rate) -
Improvement above Part L Building Regulations 2010. 3.1 credits allocated
See SAP Report, FEE Report, and L1A 2010 Compliance Report

Evidence for ENE 2 (Fabric Energy Efficiency) -
Apartment 0 credits allocated
See SAP Report, FEE Report, and L1A 2010 Compliance Report

Evidence for ENE 3 (Energy Display Device) -
False

Evidence for ENE 4 (Drying Space) -
Compliant internal drying space
Floor plans - drawings 111 - 113 shows Tidy Dry above the bath in each flat

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
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Contribution of low or zero carbon technologies greater than or equal to 15%
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Evidence for ENE 8 (Cycle Storage) -
Studio or 1 bedroom dwelling - Storage for 1 cycle per dwelling
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Compliant home office
Home Office - Lighting & Electrical Diagrams - drawings 210-212

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Drawings 130-132 (Water Butt) 1 x 150ltr rainwater butt for each ground floor flat

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Evidence for POL 2 (NOx Emissions) -
NOx emissions less than or equal to 70mg/kWh
Specification on drawing 130 Boiler Class A+ rated with NOx <= 70mg/kWh

Evidence for HEA 1 (Daylighting) -
Kitchen: Average daylight factor of at least 2% All rooms (kitchen, living, dining and where applicable the home office) have 80% of the working plane with direct light from the sky
Home Office - Lighting & Electrical Diagrams - drawings 210-212 Flat 1 & Flat 4 only have a single tree at end of garden (half right through window) so effectively infinite x in working plane (25m used) Flats 2,3 and 5,6 and 7,8 all are 15m from 7m high building across Tredown Road

Evidence for HEA 2 (Sound Insulation) -
Accredited Part E sound testing has been undertaken Airborne 5dB higher, impact 5dB lower
Written confirmation sound sinsulation will achieve 5dB and Compliant Testing will be performed post build (see "Detailed Information Required at Design Stage.txt)

Evidence for HEA 3 (Private Space) -
Credit not sought or no compliant space provided

Evidence for HEA 4 (Lifetime Homes) -
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Evidence for MAN 1 (Home User Guide) -
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The ecologists being used on this project are: Ms. Sabrina Bremer The Ecology Consultancy 6-8, Cole Street London SE1 4YH See Ecologist's Report

Evidence for ECO 5 (Building Footprint) -
Credit not sought

Assessor Declaration

I Derek GC White, 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:

Derek GC White
Dynamic Energy Assessors
26 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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