Athlone House

Code for Sustainable Homes

Pre-Assessment

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* STRUCTURES 🙏 GEOMETRICS 🔅 SUSTAINABILITY

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Introduction

The Code for Sustainable Homes (CSH) was developed and launched in April 2007 by DCLG with support from BRE.

The Code is intended as a single national standard to guide industry in the design and construction of sustainable homes. It is a means of driving continuous improvement, greater innovation and exemplary achievement in sustainable home building.

CSH is an independent, transparent, environmental labelling scheme for housing. The scheme covers houses and apartments, both at the design stage and post- construction of new-builds and major refurbishments.

CSH assesses the environmental quality of a development by considering the broad concerns of climate change, use of resources, pollution, and impacts on bio-diversity. These concerns are balanced against the need for a high quality internal environment.

Categories

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The issues assessed by CSH are grouped into the nine categories listed below:

Energy/CO2: Operational energy and CO2 Water: Consumption issues Materials: Environmental implications of materials selection, recyclable materials Surface water run-off: Flood risk Waste: Reduction and recycling of household and construction waste Pollution: Air and water pollution (excluding CO2) Health and well-being : Internal and external issues relating to health and comfort Management: Site management and security Ecology: Ecological value of the site, planting and landscaping

Scale

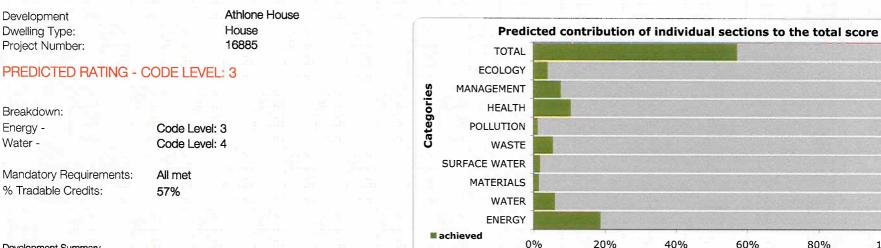
		Energy	Water	Total score
Code Level		Min. improvement over DER (Parl L 2006) in %	Max. consumption in litres per person per day	Min. points needed
1	*	10	120	36
2	**	18	120	48
з	***	25	105	57 ·
4	****	44	105	68
5	*****	100	80	84
6	*****	100+	80	90

Credits are available for each category meeting the specified levels of performance. The number of credits available in each category does not necessarily reflect the relative importance of the issues being assessed. Before the final score is calculated each of the scores in the nine category areas have a weighting factor applied before the final score is calculated.

The CSH scale runs from 'LEVEL 1' to 'LEVEL 6' as depicted below. The final rating is determined by the Code assessor and quality assured and certified by BRE.

- Level 1 Most developments should be able to achieve this with minor design/ specification changes at a minimal additional cost.
- Level 2 The developer has been able to demonstrate good practice in most areas.
- Level 3 Developments pushing forward the boundaries of environmental performance will achieve this.
- Level 4 Developments demonstrating exemplary environmental performance across the full range of issues will achieve this.
- Level 5 Developments with zero carbon emissions[1], very low water consumption and demonstrating exemplary environmental performance across the full range of issues will achieve this.
- Level 6 Developments with "true" zero carbon emissions[2], very low water consumption and demonstrating exemplary environmental performance across the full range of issues will achieve this.

100%



Development Summary

Development

Dwelling Type:

Breakdown:

Energy -

Water -

Project Number:

This report relates to the construction of a new dwelling on the site of Athlone House. It is based on the assumption that the building will be constructed in accordance with the designs of Robert Adam Architects, the structural report prepared by Price & Myers and the M&E report prepared by the Slender Winter Partnership.

The development has the potential to achieve Level 3 with the measures assumed in this report.

The mandatory requirements for carbon emissions reduction and low water use will be met. The scheme performs well in the management and waste sections due to committements to sustainability in the construction process. A high score is also achieved in the health and wellbeing section, particularly due to the incorporation of the Lifetime homes Criteria.

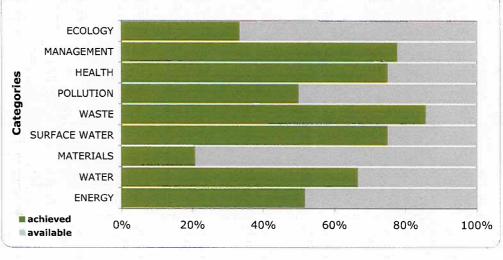
It is key to remain in contact with the assessor throughout the process and to check ali specifications are in line with the pre-assessmnet to ensure the required level is achieved on construction. It is recommended that further credits are targetted in due course to provide some fleixibility in the later stages as credits are often lost later on.

Predicted percentage achieved in each category

40%

60%

80%



NOTE: The rating obtained in this Pre Assessment is for guidance only. Predicted ratings may differ from those obtained through a formal assessment, which must be carried out by a licensed Code assessor.

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available

% of Sect Contributi	RY 1 ENERGY Overall Level: 3 ion Credits Predicted: 52% on to Overall Score: 18.83 points	Assumptions made	Evidence Required	Overall Score Credits 15 of 29 Credits	57.14 Level
Ene 1 % DER improvem- ent Over TER	Credits are awarded based on the percentage improvement of the Dwelling Emission Rate (DER) over the Target Emission Rate (TER) as calculated using SAP 2005. Minimum standards for each Code level apply. Select the % improvement 0% improvement 0% improvement 0R 10% Improvement 0R 14% Improvement 0R 22% Improvement 0R 22% Improvement 0R 31% Improvement 0R 31% Improvement 0R 37% Improvement 0R 37% Improvement 0R 52% Improvement 0R 60% Improvement 0R 60% Improvement 0R 60% Improvement 0R 60% Improvement 0R 79% Improvement 0R 79% Improvement 0R 100% Improvement 0R 100% Improvement 0R 100% Improvement 0R 79% Improvement 0R 79% Improvement 0R 79% Improvement 0R 100% Improveme	A 25% improvement in the DER over the TER must be achieved for the development to meet Code Level 3. This will be achieved through a combination of energy efficient building form and renewable technologies.	SAP calculation by accredited assessor	5 of 15 Credits	Level 3
Ene 2 Building Fabric	Credits are awarded based on the Heat Loss Parameter (HLP) obtained from the SAP 2005 calculations. This is based on the level of insulation provided in the dwellings. Select a HLP range Greater than 1.30 OR Less than or equal to 1.30 OR Less than or equal to 1.10	HLP is greater than 1.3	SAP calculation by accredited assessor	0 of 2 Credits	

Energy

Issue		Assumptions made	Evidence Required	Credits	Level
Ene 3 Internal Lighting	Credits are awarded based on the percentage of dedicated energy efficient lighting provided in habitable spaces within the dwelling. Select the % of dedicated energy efficient lighting Less than 40% OR Greater than or equal to 40% OR Greater than or equal to 75%	Meets minimum building requiremnets.	Lighting drawings and luminaire schedule showing fitting type	0 of 2 Credits	
Ene 4 Drying Space	One credit is awarded for the provision of either internal or external drying space with posts and footings, or fixings capable of holding 4m+ of drying line for 1-2 bed dwellings and 6m+ for dwellings with 3 bedrooms or greater. Will drying space meeting the criteria be provided? Yes OR No	Provisions for drying lines will be provided.	Drawings showing drying line	1 of 1 Credits	
Ene 5 Energy Labelled White Goods	Credits are awarded where each dwelling is provided with either information about the EU Energy Labelling Scheme or White Goods with the ratings stated below: Select the appropriate option below EU Energy labelling information	White good will be provided (A+ rated fridge/freezer and A rated washing machine)	Product information on white goods provided.	2 of 2 Credits	

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Issue		Assumptions made	Evidence Required	Credits	Level
Ene 6 External Lighting	Credits are awarded based on the provision of space lighting with dedicated energy efficient fittings and security lighting with appropriate control gear. Space Lighting None provided OR Non Code compliant lighting OR Code compliant lighting	Space lighting: Including lighting of common areas will be provided by dedicated energy efficient fittings and take into account needs of visually impaired people. Security Lighting: Burglar security lights will have a max. voltage of 150W and	Lighting drawings and luminaire schedule	1 of 1 Credits	
	Security Lighting None provided OR Non Code compliant lighting OR Code compliant lighting and controls	fitted with movement detecting control devices and daylight cut-off sensors. All other security lights will have dedicated energy efficient fittings and fitted with daylight cut-off sensors or timers.			
Ene 7 Low or Zero Carbon Technologies	Credits are awarded where either 10% or 15% of the dwellings heating energy requirements (SAP 2005) are met by low or zero carbon technologies. Note that where funding has not been granted through the Low Carbon Buildings Programme, a feasibility study is required that meets the Code requirements. Select % contribution made by low or zero carbon technologies Less than 10% of demand OR 10% of demand or greater OR 15% of demand or greater	Biomass will be employed to produce 15% of heating energy demands.	Copy of feasibility study	2 of 2 Credits	

Issue		Assumptions made	Evidence Required	Credits	Leve
Ene 8 Cyr. Storage	Credits are awarded where safe, secure and weather proof cycle storage is provided according to the Code requirements. Fill in the development details below Number of bedrooms: Number of cycles stored per dwelling Will the storage be communal? 1 Credit - 1 storage for every 2 one bedroom dwellings. 1 storage per 2 or 3 bedroom dwelling. 2 storage per 4+ bedroom dwelling. 2 Credits - 1 storage per 1 bedroom dwelling. 2 storage per 2 or 3 bedroom dwelling. 4 storage per 4+ bedroom dwelling.	Safe, secure, weatherprood cycle storage will be provided.	Drawings and specification of bike rack	2 of 2 Credits	
Ene 9 Home Office	One credit is awarded for the provision of space for a home office. The location, space and services provided must meet the Code requirements. Will there be provision for a Home Office? Yes OR No Home office space must include wall space of at least 1.8m in length to allow for a desk and filing cabinet or bookshelf. 2 double power sockets, 2 telephone points of 1 phone point where there is a connection to cable or broadband, window, adequate ventilation either through openable window or alternative ventilation.	Provisions for a home office space will be provided.	Drawings	1 of 1 Credits	

% of Sect	RY 2 WATER Overall Level: 3 tion Credits Predicted: 67% ion to Overall Score: 6.00 points	Assumptions made	Evidence Required	Overall Score Credits 4 of 6 Credits	57.14 Level Level 4
Wat 1 Internal Potable Water Use	Credits are awarded based on the predicted average household water consumption, calculated using the Code Water Calculator Tool. Minimum standards for each code level apply. Select the predicted water use greater than 120 litres/ person/ day O OR less than 120 litres/ person/ day O OR less than 110 litres/ person/ day O OR less than 105 litres/ person/ day O OR less than 90 litres/ person/ day O OR less than 90 litres/ person/ day O OR less than 80 litres/ person/ day O	WC: 6/4l dual flush Bidet: 2.64l Shower flow rate: <= 12l/min Hand basin flow rate: <= 4l/min Bath tub overflow volume: 150l Kitchen sink flow rate: <= 6l/min Dish washer: <=13l/run Washing machine : <=49l/run Rain water harvesting for toilet flushing and washing machine: - 39L/person/day Total water consumption = 104.61 l/person/day	Drawings and specifications	3 of 5 Credits	Level 3 Level 4
Wat 2 External Potable Water Use	One credit is awarded where a compliant system is specified for collecting rainwater for external irrigation purposes. Where no outdoor space is provided the credit can be achieved by default. Select the scenario that applies No internal or communal outdoor space OR Outdoor space with collection system OR Outdoor space without collection system OR Outdoor space without collection system OR Outdoor space and patios - 100L. 1-2 bedroom dwelling - 150L. 3+ bedroom dwelling - 200L. For communal garden - 1L/m ² or land with a max of 30L/dwelling	Water butts will be provided for use of external irrigation	Drawings and specifications	1 of 1 Credits	

% of Section	RY 3 MATERIALS Overall Level: 3 on Credits Predicted: 21% on to Overall Score: 1.50 points	Assumptions made	Evidence Required	Overall Score Credits 5 of 24 Credits	57.14 Level All Levels
Mat 1 Environm- ental Impact of Materials	Mandatory Requirement: At least three of the five key building elements must achieve a Green Guide 2007 Rating of A+ to D. <u>Tradable Credits:</u> Points are awarded on a scale based on the Green Guide Rating of the specifications. The Code Materials Calculator can be used to predict a potential score. Enter the predicted score Will the mandatory requirement be met? What is the predicted number of credits? 3	Ground floor: tbc Upper floors: tbc Roof: tbc . External walls: C-rated or better, TBC. Internal walls: C-rated or better, TBC. Windows: Softwood, A- rated or better	Drawings and specifications	3 of 15 Credits	All Levels
Mat 2 Responsible Sourcing of Materials - Basic Building Elements	Credits are awarded where materials used in the key building elements are responsibly sourced. The Code Materials Calculator can be used to predict a potential score. Predicted Score What is the predicted number of credits? 2	Use of FSC certified timber, certified brick and concrete	Certificates and specifications	2 of 6 Credits	
Mat 3 Responsible Sourcing of Materials - Finishing Elements	Credits are awarded where materials used in the finishing elements are responsibly sourced. The Code Materials Calculator can be used to predict a potential score. Predicted Score What is the predicted number of credits?	credit not sought		0 of 3 Credits	

% of Section	Y 4 SURFACE WATER RUN-OFF Overall Level: 3 on Credits Predicted: 75% on to Overall Score: 1.65 points	Assumptions made	Evidence Required	Overall Score Credits 3 of 4 Credits	57.14 Level All Levels
Sur 1 Reduction of Surface Water Run- off from Site	Will appropriate attenuation be provided from Hard Surfaces? from Roofs? 50% for low flooding areas.	Measures will be implemented such that 50% of rain water will be attenuated from hard surfaces through soak aways.		1 of 2 Credits	All Levels
Gur 2 Flood Risk	moderate flood areas. 100% for significant flooding areas. Credits are awarded where developments are located in areas of low flood risk, or where in areas of medium or high flood risk appropriate measures are taken to prevent damage to the property and its contents in accordance with the Code criteria. Select the appropriate option Low Flood Risk O OR Medium flood risk with measures OR High flood risk with measures OR High flood risk without measures OR High flood risk without measures	Low risk flood zone, tbc	Flood map from EA	2 of 2 Credits	

	RY 5 WASTE Overall Le tion Credits Predicted: 86% ion to Overall Score: 5.49 points	/ei: 3	Assumptions made	Evidence Required	Overall Score Credits 6 of 7 Credits	Level
Was 1 Household Waste Storage	Mandatory Requirement: The space provided for waster should be sized to hold the larger of either all external of provided by the Local Authority or the min capacity call BS 5906. Tradable Credits are awarded for adequate if or external recycling facilities. Tick the boxes that apply	ontainers culated from	Space will be large enough to accomadate minimum capacity calculated by BS 5906. 30L internal storage will be provided for Local Authority collection.	Drawings and specifications	6 of 7 Credits 4 of 4 Credits	All Levels

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Issue		Assumptions made	Evidence Required	Credits	Level
Was 2 Site Waste Management Plan (SWMP)/ Construction Waste	Mandatory Requirements: A SWMP plan including the monitoring of waste generated on site and the setting of targets to promote resource efficiency must be produced and implemented. <u>Tradable Credits:</u> The SWMP should also include procedures and commitments for minimising waste and/ or commitments to sort, reuse and recycle construction waste. Contents of the SWMP Is the development cost less than £200K? Does the SWMP Is the development cost less than £200K? + monitoring of waste generated on site? + targets to promote resource efficiency? + procedures for minimising waste? + commitments for minimising waste? + procedures to sort, reuse and recycle waste? + commitments to sort, reuse and recycle waste?	SWMP will be produced and implemented with procedures and commitments to minimise waste generated on site and to sort, reuse and recycle construction waste.	Copy of site waste management plan	2 of 2 Credits	Ali Level
	One credit is awarded where individual home composting facilities are provided, or where a community/ communal composting service, either run by the Local Authority or overseen by a management plan is in operation. Select the facilities available No composting facilities Individual composting facilities OR Communal/ community composting? Local Authority OR Private with management plan	Composting facilities will not be provided.	Drawings and specifications	0 of 1 Credit	

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% of Section Contribution	RY 6 POLLUTION Overall Level: 3 ion Credits Predicted: 50% on to Overall Score: 1.40 points	Assumptions made	Evidence Required	Overall Score Credits 2 of 4 Credits	57.14 Level All Levels
Pol 1 Global Warming Potential (GWP) of Insulants	One credit is awarded where all insulating materials have a Global Warming Potential (GWP) of less than 5. Select the most appropriate option All insulants have a GWP less than 5 OR Some insulants have a GWP of less than 5 OR No insulation and external (including lintels and all acoustic insulation). Floors (including of the formation of the	All insulants will have a GWP of less than 5	Drawings and specifications	1 of 1 Credits	
Pol 2 NOx Emissions	Credits are awarded on the basis of NOx emissions arising from the operation of the space heating system within the dwelling.	Biomass system backed up by gas combi boiler will be assumed to have emissions of NOx less than 100mg/kWh.	Boiler specifications	1 of 3 Credits	

% of Secti	Y 7 HEALTH & WELLBEING Overall Level: 3 on Credits Predicted: 75% on to Overall Score: 10.50 points	Assumptions made	Evidence Required	Overall Score Credits 9 of 12 Credits	57.14 Level All Levels
Hea 1 Daylighting	Credits are awarded for ensuring key rooms in the dwelling have high daylight factors (DF) and a view of the sky. Select the compliant areas <u>Room</u> Kitchen: Avg DF greater than 2% Living Room*: Avg DF greater than 1.5% Dining Room*: Avg DF greater than 1.5% Study*: Avg DF greater than 1.5% Do all above rooms have a view of the sky? Any room used for Ene 9 Home Office must also achieve a min DF of 1.5%. *Tick the box if there is no study/ home office as this aspect of the credit will be awarded by default.	Daylight studies will show that there is sufficient daylight.	Copy of results from daylighting analysis showing that view of the sky and all daylighting factors listed are achieved	0 of 3 Credits	
Hea 2 Sound Insulation	Credits are awarded where performance standards exceed those required in Building Regulations Part E. This can be demonstrated by carrying out pre-completion testing or through the use of Robust Details. Select a performance standard or type of property Credit not sought Airborne: 3db higher; Impact: 3dB Iower OR Airborne: 5db higher; Impact: 5dB Iower OR Airborne: 8db higher; Impact: 8dB Iower OR Airborne: 8db higher; Impact: 8dB Iower OR Detached Property OR Separating walls and floors only occur between non habitable spaces OR Separating walls and floors only occur between habitable and non-habitable spaces	Detached property	Sound testing results from accredited assessor	4 of 4 Credits	

Issue		Assumptions made	Evidence Required	Credits	Level
Hea 3 Private Space	One credit is awarded for the provision of an outdoor space that is at least partially private. The space must allow easy access to all occupants. Will a private/ semi-private space be provided?				
	Yes, private/semi-private space will be provided OR No private/semi-private space	Dwelling is accompanied by a garden of sufficient size	Drawings	1 of 1 Credits	
Hea 4 Lifetime Homes	Credits are awarded where the developer has implemented all of the principles of the Lifetime Homes scheme.			4 of 4 Credits	-

CATEGOR % of Section Contribution	on Credits on to Overa	Predicted: 78% Il Score: 7.78 points		Assumptions made	Evidence Required	Overall Score Credits 7 of 9 Credits	57.14 Level All Levels
Man 1 Home User Guide	dwelling o occupier, must be a	re awarded where a simple guide is provided to covering information relevant to the 'non-technic in accordance with the Code requirements. The available in alternative formats on request. The topics covered by the Home User Guide Operational Issues Site and Surroundings	al' home	Home Users Guide will be provided.	Copy of home user guide	3 of 3 Credits	
Man 2 Considerate Constructors Scheme	best prac Consider recognise Select OR OR OR OR	re awarded where there is a commitment to cor tice site management principles using either the ate Constructors Scheme or an alternative local ed scheme. the appropriate scheme and score No scheme used <u>Considerate Constructors</u> Best Practice: Score between 24 and 31.5 Best Practice+: Score between 32 and 40 <u>Alternative Scheme*</u> Mandatory + 50% optional requirements Mandatory + 80% optional requirements Mandatory + 80% optional requirements	ly/ nationally	Contractors will follow Consierate contractors Scheme and surpass best practice.	Copy of CCS score sheet	2 of 2 Credits	

Issue		Assumptions made	Evidence Required	Credits	Level
Man 3 Construction Site impacts	Credits are awarded where procedures meeting the Code requirements are in place for the following: Tick the impacts that will be addressed Monitor, report and set targets for: - CO ₂ / energy use from site activities - CO ₂ / energy use from site related transport - Water consumption from site activities - air (dust) pollution from site activities - water (ground and surface) pollution - water is responsibly sourced		Documents to be provided by contractor	2 of 2 Credits	
Man 4 Security	Credits are awarded for complying with Section 2 - Physical Security from Secured by Design - New Homes. An Architectural Liaison Officer (ALO), or alternative, needs to be appointed early in the design process and their recommendations incorporated. Secured by Design Compliance Credit not sought OR Secured by Design Section 2 Compliance	Credit not sought	Copy of letter from ALO stating Secured By Design potential	0 of 2 Credits	

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	Overall Level: 3 33% 4.00 points	Assumptions made	Evidence Required	Overall Score Credits 3 of 9 Credits	57.14 Level All Levels
Ecological Value of Site Select the appropriate Credit not s OR Land has lo OR Land has lo * Low ecological value is dete whole development site; or b)	sought cological value w/ insignificant ecological value*	Credit not sought		0 of 1 Credits	
Ecological Enhancement Cological value of the operation Cological value of the operation Will a Suital appointed the ocological for AND Will all key to	by <i>Qualified Ecologist</i> be or recommend appropriate	e Credit not sought		0 of 1 Credits	
Protection of Ecological Features Tick the appropriate book Is the site of OR If the site has maintained ar	where there is a commitment to maintain an ures of ecological value.	No trees or other features of ecological value have to be removed to make way for the new build dwellings.		1 of 1 Credits	

Issue		Assumptions made	Evidence Required	Credits	Level
Eco 4 Change of Ecological Value of Site	Credits are awarded where the change in ecological value has been calculated in accordance with the Code requirements and is calculated to be: Change in Ecological Value Major negative change: fewer than -9 Minor negative change: between -9 and -3 OR Neutral: between -3 and +3 Minor enhancement: between +3 and +9 Major enhancement; greater than 9	Credit not sought		2 of 4 Credits	
Eco 5 Building Fabric	Credits are awarded where the ratio of combined floor area of all dwellings on the site to their footprint is: Ratio of Net Internal Floor Area: Net Internal Ground Floor Area Credit Not Sought OR Houses: 2.5:1 OR Flats: 3:1 O OR Houses: 3:1 OR Flats: 4:1 O OR Houses & Flats Weighted (2.5:1 & 3:1) O OR Houses & Flats Weighted (3:1 & 4:1) O	Footprint ratio lower than 2.5		0 of 2 Credits	