The Water House, Highgate

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

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

Category	Issues Assessed	Credit Value
Energy/ CO_2	Operational energy and CO2	1.17
Water	Consumption Issues	1.50
Materials	Environmental impacts of materials selection, recyclable materials	0.30
Surface Water	Flood Risk	0.55
Waste	Reduction and recycling of household and construction waste	0.80
Pollution	Air and water pollution (excluding CO2)	0.70
Health and Wellbeing	Internal and external issues relating to health and comfort	1.17
Management	site management and security	1.11
Ecology	Ecological value of the site, planting and landscaping	1.33

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.

Ratings

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, 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, very low water consumption and demonstrating exemplary environmental performance across the full range of issues will achieve this.

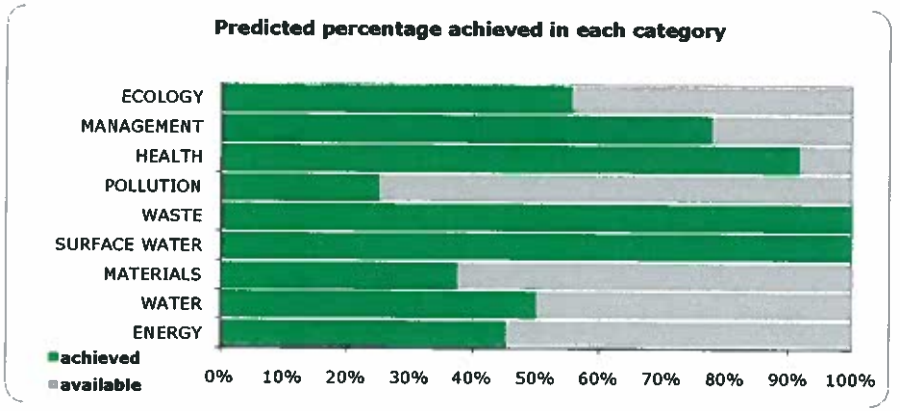
		Energy	Water	Total score
Code Level		Min. improvement over DER (Part L 2006) in %	Max. consumption in litres per person per day	Min. points needed
1	*	10	120	36
2	**	18	120	48
3	***	25	105	57
4	****	44	105	68
5	*****	100	80	84
6	******	100+	80	90

Development Highgate

PREDICTED RATING - CODE LEVEL: 3

Breakdown:
Energy - Code Level: 4
Water - Code Level: 4

Mandatory Requirements: All met
% Tradable Credits: 60.16%



Development Summary

This report addresses the potential achievements, in terms of the Code for Sustainable Homes, of The Water House, Highgate. The project consists of single new luxury dwelling next to Hampstead Heath. The design team are targetting CSH Level 3 for the development, which has been designed to have significant green walls and roofs to blend into the surroundings. The currently assumed total score is 60.16%. The minimum score required for Level 3 is 57%, so the current score provides a buffer. This will be the key to achieving a final Level 4 rating, as credits are often lost as the design progresses due to design or cost constraints.

To ensure that the required level is achieved upon completion it is important to check that all specifications are in line with this pre-assessment and to remain in contact with the assessor throughout the design and delivery process.

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.

CATEGORY 1 ENERGY % of Section Credits Predicted: 48% Contribution to Overall Score: 16.38 points	Overall Level: 4	Assumptions made	Evidence Required	Overall Score 60.16 Credits Level 14 of 29 Credits Level 4	
Ene 1 % DER improvement 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 2009. Minimum standards for each Code level apply. **Select the % improvement** No Improvement ○ 8% Improvement ○ 16% Improvement ○ 25 % Improvement ◉ 36% Improvement ○ 47% Improvement ○ 59% Improvement ○ 72% Improvement ○ 85% Improvement ○ 100% Improvement ○ Net Zero Carbon* ○	Although the development is not required to achieve an improvment over Part L for CSH Level 3, a 25% improvement is targeted. This will be achieved through a combination of energy efficient building form and renewable energy technologies. Please refer to the Energy Statement for full details.	Design Stage – SAP 2010 Worksheet for each Energy Type and accompanying list of specifications from an accredited energy assessor.	**3 of 10 Credits**	**Level 4**
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. **Fabric Energy Efficiency kWh/m2/year** Appartment Blocks, Mid-terraced / End Terrace, Semi-Detached & Detached ◉ ≤ 48 / ≤ 60 ○ ≤ 45 / ≤ 55 ○ ≤ 43 / ≤ 52 ○ ≤ 41 / ≤ 49 ○ ≤ 39 / ≤ 46 ○ ≤ 35 / ≤ 42 ○ ≤ 32 / ≤ 38 ○	It is expected that no credits will be achieved here due to the large surface area of the building.	Design Stage SAP 2010 Worksheet for each Energy Type and accompanying list of specifications from an accredited energy assessor.	**0 of 9 Credits**	-

Issue		Assumptions made	Evidence Required	Credits	Level
Ene 3 Energy Display Devices	Credits are awarded where a correctly specified Energy Display Device is installed monitoring electricity and/or primary heating fuel consumption. **Select whether EED monitors electricity and/or fuel** None specified ○ OR Primary Heating only ○ OR Electricity only ○ OR Electricity and primary heating only ◉	Both primary heat and electricity monitoring energy display devices will be specified.	Drawing of specification confirming: That the correctly specified energy display device is dedicated to the dwelling **AND** What consumption data is displayed by the correctly specified energy display device	2 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 (e.g. for internal pull out lines) 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 externally.	Relevant design stage drawings clearly showing: **For internal drying space:** • Location of drying fixings • Details/location of ventilation provided **For external drying space:** • Location of fixings/footings or posts **AND** Text describing (on drawings or specification): • Location and type of internal or external drying fixings/footings or posts • Confirmation of the minimum length of 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 ☑ OR A+ Rated Fridges and Freezers ☑ AND/OR A Rated washing machines & dishwashers AND B Rated Washer dryers and tumble dryers ☑	EU energy labelling information will be provided. All white goods will be provided. They should have the required ratings (A+ rated fridges and freezers and A rated washing machines and dishwashers) .	If white goods are to be provided: Text describing (on drawings or in the specification): • Make and model of all white goods to be provided • A copy of the EU Energy Efficiency Labelling Scheme energy rating for all white goods to be provided • Where washer dryers or tumble dryers will not be provided, a copy of the EU Energy Efficiency Labelling Scheme leaflet	2 of 2 Credits	-

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 ◉ **Security Lighting** None provided ○ OR Non Code compliant lighting ○ OR Code compliant lighting and controls ◉	**Space lighting** External space lighting will be provided by dedicated energy efficient fittings and will take into account needs of visually impaired people. **Security Lighting** Burglar security lights will be max. 150W and be 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.	Relevant drawings clearly showing location of all external light fittings AND Text describing (on drawings or in specification) location and type of all external light fittings	**1 of 1 Credits** **1 of 1 Credits**	-
Ene 7 Low or Zero Carbon Technologies	Credits are awarded where either 10% or 15% of the dwellings carbon dioxide emissions (SAP 2005) will be offset 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 ○	It is anticipated that the proposed ground source heat pump and solar thermal system will offset at least 10% of the site's carbon emissions (inc. applicances) when measured against the CSH requirements.	Design Stage – SAP 2010 Worksheet for each Energy Type and accompanying list of specifications from an accredited energy assessor. Confirmation that installed renewables meet any additional requirements defined in Directive 2009/28/EC as applicable, and are certified under the Microgeneration Certification Scheme	**1 of 2 Credits**	-

Issue		Assumptions made	Evidence Required	Credits	Level
Ene 8 Cycle 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: 4 Number of cycles stored per dwelling 4 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, weatherproof cycle storage will be provided for four bicycles in the garage. This will be in addition to the appropriate space for cars. *NB Stores must be designed to size requirements in Appendix A*	Drawings showing **AND** text describing: • Location, type and size of storage • Access to cycle storage • Any security measures • Details of the proprietary system (if applicable) *(Refer to Appendix A for storage space requirements)*	**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 ○	Provisions for a home office space will be provided. The following requirements should be comfirmed: - 1.8m free wall space (or fitted desk) - 2 double sockets - 2 phone points (if broadband is available only one phone point is needed) - Openable window - Adequate daylight	Drawings or specification text detailing: Home office specifications (refer to Appendix B)	**1 of 1 Credits**	-

CATEGORY 2 WATER % of Section Credits Predicted: 50% Contribution to Overall Score: 4.50 points	Overall Level: 4	Assumptions made	Evidence Required	Overall Score Credits 3 of 6 Credits	60.16 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 ○ OR less than 120 litres/ person/ day ○ OR less than 110 litres/ person/ day ○ OR less than 105 litres/ person/ day ◉ OR less than 90 litres/ person/ day ○ OR less than 80 litres/ person/ day ○	The average water consumption for each unit must be below 105l/person/day to achieve Level 3. It is proposed that the following or similar will be installed to meet the requirements: Wash basin taps - 4l/min Baths: 3no. Standard baths - 140l to overflow max; 1no. Large bath - 250l to overflow max Showers: 3no. low flow showers 9l/min; 1no. higher flow shower 18l/min WC - dual flush 4l/2l Kitchen sink taps - 6l/min Dishwasher - 1l/place setting Washing machine -7l/kg dry load Rainwater harvesting will also be used for WC flushing	Drawings or specification text detailing: • 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. This should include confirmation that the hot and cold water system will be designed to avoid the risk of microbial contamination in line with best practice. • Location, size and details of any rainwater and greywater collection systems in the dwelling	**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 ◉	This credit cannot be achieved due to the presence of a swimming pool.	Drawings or specification text detailing: • Type, size and location of any rainwater collection systems (Refer to Appendix C)	**0 of 1 Credits**	-

CATEGORY 3 MATERIALS % of Section Credits Predicted: 38% Contribution to Overall Score: 2.70 points	Overall Level: 4	Assumptions made	Evidence Required	Overall Score Credits 9 of 24 Credits	60.16 Level All Levels
Mat 1 Environmental 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. Tradable Credits: 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? 6	The mandatory requirements must be met. It is assumed that the development will achieve the following ratings based on the current assumption of masonry construction with timber floor and roof construction, with slate tiles and timber windows: **Ground floor & Upper Floors: C/A** (concrete ground & lightwieght upper) **Roof: A** (ligthweight construction) **External walls**: B/C (SIPS panels or similar with stone cladding, GRP cladding and blockwork) **Internal walls:** A Timber stud **Windows:** C (aluminium)	Drawings or specification text detailing: • Location and area of each of the key building elements • Details of the materials used within the elements	**6 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 *Compliant EMS schemes are EMAS, ISO:14001 & BES 6001:2008	Use of FSC (or equivalent) certified timber and EMS* certified brick, steel and concrete has been assumed	Drawings or specification text detailing: • The location of key building elements and materials specified • Details of the materials specified	**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? 1	Use of FSC certified timber products for finished will be pursued where feasible.	Drawings or specification text detailing: • The location of finishing elements and materials specified • Details of the materials specified	**1 of 3 Credits**	-

CATEGORY 4 SURFACE WATER RUN-OFF Overall Level: 4 % of Section Credits Predicted: 100% Contribution to Overall Score: 2.20 points		Assumptions made	Evidence Required	Overall Score 60.16 Credits Level 4 of 4 Credits All Levels	
Sur 1 Reduction of Surface Water Run-off from Site	Mandatory Requirement: Peak run-off rates and annual run-off volumes post development must not exceed the previous conditions for the site. Tradable Credits: Where rainwater holding facilities / SUDs are used to provide attenuation of water run-off for **Provide the following information** Will the mandatory requirement be met? ☑ **Select the Appropriate option** No SUDS or default case compliance ○ Code compliant SUDS systems ◉ Non Code compliant SUDS systems ○ Site discharges rainwater directly to a tidal estuary or the sea ○	The mandatory requirement must be met. It is currently assumed that code compliant SUDS will be incorporated.	**Mandatory requirement:** Confirmation of the appointment of an appropriate consultant to carry out the calculations and provide design criteria for all relevant elements. Copy of the consultants report & any accompanying drawings/specifications for installed systems.	2 of 2 Credits	All Levels

Issue		Assumptions made	Evidence Required	Credits	Level
Sur 2 Flood Risk	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 in the technical guide. Select the annual probability of flooding (From PPS25*) Zone 1 - Low ◉ OR Zone 2 - Medium ○ OR Zone 3 - High ○ Select the Appropriate option(s) Low risk of flooding from FRA** ☑ All measures of protection are demonstrated in FRA ☐ Ground floor level and access routes are 600 mm above design flood level ☐ * Planning Policy Statement 25 - Planning and Flood Risk ** FRA - Flood Risk Assessment	Environment Agency data suggests that the development is in a low flood risk zone. Credits have been assumed, but are subject to an FRA confirming low flood risk from ALL sources.	A site specific flood risk assessment (FRA) in line with "Development and Flood Risk: A practice guide companion to PPS25" will be required, confirming low flood risk from all sources.	2 of 2 Credits	

CATEGORY 5 WASTE Overall Level: 4 % of Section Credits Predicted: 114% Contribution to Overall Score: 6.40 points		Assumptions made	Evidence Required	Overall Score 60.16 Credits Level 8 of 7 Credits All Levels	
Was 1 Household Waste Storage	Mandatory Requirement: The space provided for waste storage should be sized to hold the larger of either all external containers provided by the Local Authority or the min capacity calculated from BS 5906. Tradable Credits are awarded for adequate internal and/ or external recycling facilities. Tick the boxes that apply Will the minimum space be provided? ☑ Internal storage (capacity 60 litres) ☐ Internal storage (capacity 30 litres) ☑ Local Authority Collection Scheme ☑ External storage (180 litres) ☐ Private recycling operator ☐ 3 types of waste or greater collected? ☑	External space will need to be large enough to meet requirements. Recycling is collected by the LA, 30l internal storage space will be provided inline with the scheme (3 bins for pre-collection sorting or 1 for post) *Size and accessibility requirements set out in Appendix D must be adhered to*	**Mandatory Element:** Provide confirmation that the requirements of Supplementary Information Sheet & Checklist WAS 1 (Appendix D), relating to storage size and accessibility have been met. Drawings or Specification text detailing: • the number of bedrooms • the location of internal and external storage • the types and sizes of internal and external storage • how the storage is accessed • access arrangements conforming to H6 in AD H • written justification where it has not been possible to locate bins within 30m of an external door. **AND** A letter or other confirmation from the Local Authority describing the type, volume and dimensions of containers that they provide for refuse collection and recycling.	**4 of 4 Credits**	**All Levels**

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. Tradable Credits: 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 Does the SWMP include: Resource efficency targets, procedures & commitments to minimize waste & monitoring/reporting of waste generated on site? ☑ Procedures & commitments to sort and divert waste from landfill (re-use & recycling)? ☑ - 50% diverted? ☐ - 85% diverted? ☑	SWMP will be produced and implemented with procedures and commitments to minimise waste generated on site and to sort, reuse and recycle construction waste, with at least 85% being re-used and recycled. *SpecificSWMP requirements are detailed in Appendix E*	A copy of the Site Waste Management Plan or the specification describing what the Site Waste Management Plan will contain. Details must be in accordance with the relevant guidance as detailed in Checklist Was 2 (Appendix E).	3 of 3 Credits	All Levels

Issue		Assumptions made	Evidence Required	Credits	Level
Was 3 Composting	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 be provided.	Provide confirmation that the requirements of Checklist WAS 1 (Appendix D), relating to saccessibility have been met. Text on drawings or in the specification, describing: • the location and size of storage • access to the storage • that an information booklet will be supplied. **OR,** Details of the communal/community composting scheme indicating: • distance from dwelling • management arrangements • access, location and size of storage prior to taking the mentioned scheme • details of, the mentioned scheme including opening times and access • that an information booklet will be supplied **OR,** Details of the Local Authority kitchen waste collection scheme **OR,** Details of the automated waste collection system.	**1 of 1 Credit**	-

CATEGORY 6 POLLUTION % of Section Credits Predicted: 25% Contribution to Overall Score: 0.70 points	Overall Level: 4	Assumptions made	Evidence Required	Overall Score Credits 1 of 4 Credits	60.16 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 insulants have a GWP of less than 5 ○ Insulants include: Roofs (including loft access). Walls, internal and external (including lintels and all acoustic insulation). Floors (including ground and upper floors). Hot water cylinder, pipe insulation and other thermal stores. Coldwater storage tanks where provided. External doors.	All insulants will have a GWP of less than 5	For each relevnat building element, drawings or specification text clearly showing the type and location of all insulation materials **AND** Where insulation materials have been specified, manufacturer's / installer's literature (internet sourced specifications are acceptable) for any foamed insulation material or materials installed using blowing agents, confirming that all blowing agents used are either 'deemed to satisfy' Table 6.2 (Appendix F) or have a GWP of less than 5 **OR** For a Design and Build contract: A specification clause or letter of intent to meet the credit requirements must be provided	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. **Select the most appropriate option** Greater than 100 mg/kWh ◉ OR Less than 100 mg/kWh ○ OR Less than 70 mg/kWh ○ OR Less than 40 mg/kWh ○ OR Class 4 boiler ○ OR Class 5 boiler ○	The installation of a GSHP system means that no credits can be achieved, as the NOx emissions from the grid electricity used to run the pump are 1200mg/kWh.	Text describing (on drawings or in specification): • Details of 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 Where a system has been specified, manufacturer's literature (internet sourced specifications are acceptable) confirming the dry NOX levels and/or boiler class of the primary and any secondary system	0 of 3 Credits	-

CATEGORY 7 HEALTH & WELLBEING Overall Level: 4 % of Section Credits Predicted: 92% Contribution to Overall Score: 12.83 points		Assumptions made	Evidence Required	Overall Score 60.16 Credits Level 11 of 12 Credits 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** Room 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.	It is anticipated that applicable rooms will receive sufficient daylight.The incorporation of a 'sun tube' will be investigated to ensure that this can be achieved for the kitchen. A view of the sky is considered unlikely due to the proximity oflarge mature trees. Two credits have been assumed, subject a daylighting study, which will be required to achieve credits.	Calculations required: • Average daylight factor using the formula provided in the Relevant Definition 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 To check these, the following will be necessary: Details of: • The angle of visible sky • The window glazing • The room surface areas Plans and sections showing: • Room dimensions • Position and dimensions of windows and other glazed areas • External buildings and other potential obstructions Ensure the calculations have been signed off by a member of the design team	**2 of 3 Credits**	-

Issue		Assumptions made	Evidence Required	Credits	Level
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 lower ○ OR Airborne: 5db higher; Impact: 5dB lower ○ OR Airborne: 8db higher; Impact: 8dB lower ○ 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 ○	As this is a detached building, all credits are achieved by default.	Text confirming (on drawings or in the specification) a commitment to meet the relevant sound insulation performance levels (as outlined in the Assessment Criteria above) • Details of the programme of pre-completion testing to be carried out, including the number of groups and sub-groups. • Brief details of separating walls/floors and flanking constructions, with evidence of the potential for the constructions to meet the relevant performance standards, e.g. design statement from an acoustic consultant with appropriate expertise in building acoustics, or reference to text in the specification describing these requirements. • A commitment to carry out remedial works and to re-test to demonstrate the necessary performance standard/s is/are achieved should any of the separating walls or floors fail to meet the required standard for sound insulation upon initial testing. • Confirmation that the Compliant Test Body which will carry out pre-completion testing is accredited by UKAS or is a member of a scheme that is deemed to be equivalent.	**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 ○	There are quite extensive garden areas incroporated into the development.	Drawings or specification text confirming: • The number of bedrooms served by the outdoor space • That the outdoor space meets the minimum size requirements and is located adjacent/close to the dwelling • That the outdoor space is accessible to wheelchair users with details shown/described of Low or Level thresholds in accordance with BS8300 As Built drawings and specifications or confirmation that the dwellings have been constructed in accordance with the design stage drawings and specifications. "Design of buildings and their approaches to meet the needs of disabled people – Code of practice" **AND,** where a shared outdoor space is provided; • details of the security/control arrangements for access	**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. **Lifetime Homes Compliance** All Lifetime Homes criteria will be met ◉ OR Credit not sought ○	The dwelling has been designed in line with the lifetime homes criteria. *Lifetime Homes criteria are detailed in Appendix G*	A completed Lifetime Homes Checklist Hea 4 indicating compliance with all applicable points from 1–16, signed by the developer	**4 of 4 Credits**	-

CATEGORY 8 MANAGEMENT % of Section Credits Predicted: 78% Contribution to Overall Score: 7.78 points	Overall Level: 4	Assumptions made	Evidence Required	Overall Score Credits 7 of 8 Credits	60.16 Level All Levels
Man 1 Home User Guide	Credits are awarded where a simple guide is provided to each dwelling covering information relevant to the 'non-technical' home occupier, in accordance with the Code requirements. The guide must be available in alternative formats on request. **Tick the topics covered by the Home User Guide** Operational Issues ☑ Site and Surroundings ☑	A Home User Guide will be provided compiling information from Checklist Man 1 Part 1 and Part 2.	Where a Home User Guide covering operational issues only will be supplied: Confirmation in the Specification that the guide will be: • Supplied to all dwellings within the development • Be developed to the required standards (Appendix H)	**3 of 3 Credits**	-
Man 2 Considerate Constructors Scheme	Credits are awarded where there is a commitment to comply with best practice site management principles using either the Considerate Constructors Scheme or an alternative locally/ nationally recognised scheme. **Select the appropriate scheme and score** No scheme used ○ Considerate Constructors OR Best Practice: Score between 24 and 31.5 ○ OR Best Practice+: Score between 32 and 40 ◉ Alternative Scheme* OR Mandatory + 50% optional requirements ○ OR Mandatory + 80% optional requirements ○ * In the first instance, contact BRE if you are considering using an alternative scheme.	Constructors will comply to Considerate constructors Scheme and achevie a best practice score above 32.	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	**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 ☑ Adopt best practice policies in respect of: - air (dust) pollution from site activities ☑ - water (ground and surface) pollution ☑ 80% of site timber is responsibly sourced ☐	It is currently assumed that four of these measures will be undertaken during construction. *Full details on how to achieve these credits are detailed in Appedix J*	Specification clause or other confirmation of commitment from the contractor or developer, demonstrating: A commitment to meet either, two or more, or four or more, of the items in Checklist Man 3 (Appendix J), with details as top how this will be achieved.	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 ○	Secured by Design will not be incorporated into the development.	Specification clause or other confirmation of commitment, showing: • That an ALO/CPDA has been or will be appointed to provide advice EARLY in the design stage to ensure that the requirements of Section 2 – Physical Security of Secured by Design – New Homes are met • That the advice of the ALO/CPDA will be followed	0 of 2 Credits	-

CATEGORY 9 ECOLOGY % of Section Credits Predicted: 56% Contribution to Overall Score: 6.67 points	Overall Level: 4	Assumptions made	Evidence Required	Overall Score Credits 5 of 9 Credits	60.16 Level All Levels
Eco 1 Ecological Value of Site	One credit is awarded for developing land of inherently low value. **Select the appropriate option** Credit not sought ◉ OR Land has ecological value ○ OR Land has low/ insignificant ecological value* ○ * Low ecological value is determined either a) by using Checklist Eco 1 across the whole development site; or b) where an ecologist is appointed and can confirm that the construction zone is of low/ insignificant value and the rest of the development site will remain undisturbed by the works.	The existing garden contains some mature trees so a low ecological value cannot be assumed.	**Where using the checklist:** Plans of the site and surrounding area prior to development, identifying any features, both built and ecological **AND** Site visit report from the design team/assessor confirming details of ecological features on site. (including photographs) **Where a Suitably Qualified Ecologist is appointed:** A copy of the ecologist's report (in the format outlined in the Code for Sustainable Homes Ecology Report Template) or a detailed letter from the ecologist, confirming that: • The ecologist meets the requirements of a Suitably Qualified Ecologist or confirmation that the ecologist has submitted a Verified Ecological Report • The construction zone is of low ecological value • All land outside the construction zone will remain undisturbed by the construction works in areas of ecological value	0 of 1 Credits	-

Issue		Assumptions made	Evidence Required	Credits	Level
Eco 2 Ecological Enhancement	One credit is awarded where there is a commitment to enhance the ecological value of the development site. **Tick the appropriate boxes** Will a *Suitably Qualified Ecologist* be appointed to recommend appropriate ecological features? ☑ AND Will all key recommendations be adopted? ☑ AND 30% of other recommendations be adopted? ☑	A suitably qualified ecologist will be appointed to recommend ecological features. Key recommendations will be adopted and 30% of other recommendations will be adopted.	A copy of the ecologist's report which: • Clearly outlines the key and additional recommendations • Confirms that all UK and EU legislation in relation to protected species has been met and recommendations go beyond these requirements • Confirms that the ecologist meets the requirements set out in the definition of a Suitably Qualified Ecologist • Confirms that the ecologist made a site visit prior to the commencement of initial site preparation works ideally at RIBA stage B **AND** Specification clause or other confirmation detailing: • 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	**1 of 1 Credits**	

Issue		Assumptions made	Evidence Required	Credits	Level
Eco 3 Protection of Ecological Features	One credit is awarded where there is a commitment to maintain and adequately protect features of ecological value. **Tick the appropriate boxes** Is the site of low ecological value (Eco 1)? ☑ OR If the site has ecological features, will they be maintained and adequately protected during site clearance, preparation and construction works? ☐	Reccomendations from the ecologist for prtecting ecological features will be followed.	Site visit report from the design team including photographs confirming ecological features present prior to commencement of construction works/site clearance. **AND** Drawings or specification text detailing how ecological features will be protected **AND EITHER** • Plans of the site and boundary identifying ecological features prior to construction • Written evidence from an appropriate statutory body of any requirement to remove any features for health and safety and/or conservation reasons • Written confirmation that all EU and UK law with regards to protected species have been adhered to **OR** A copy of the ecologist's report confirming: • That they meet the requirements of a Suitably Qualified Ecologist • The ecological features present (or if low ecological value and no features present) • Recommendations for protecting all ecological features	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 ○	It is expected that3 credits will be achievable by obtaining recommedations from the ecologist that will enhance the ecology to the required standard.	Drawings showing: • Site layout • The existing 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 AND Copy of the calculations from the assessor showing proposed change in ecological value. (If new planting or species to be added or where actual species/hectare values are being used for the site prior to construction, these can only be counted if based on the advice of a suitably qualified ecologist.) The planting schedule	**3 of 4 Credits**	-

Issue		Assumptions made	Evidence Required	Credits	Level
Eco 5 Building Footprint	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 ○ OR Houses: 3:1 OR Flats: 4:1 ○ OR Houses & Flats Weighted (2.5:1 & 3:1) ○ OR Houses & Flats Weighted (3:1 & 4:1) ○	The ratio of NIFA to NIGFA is greater than 4:1.	General layout drawings and elevations including dimensions for: • Each type of dwelling • All other buildings with permanent foundations, such as bin/cycle stores, garages • The site plan **AND** Calculation of the building footprint ratio	**0 of 2 Credits**	

Appendix A

ENE 8 – Cycle storage

Adequately sized Cycle storage	The minimum storage area required to store cycles on the floor, defined by the *New Metric Handbook* which includes space to allow the cycles to be moved independently. • 1 cycle: 2m long 3 0.75m wide • 2 cycles: 2m long 3 1.5m wide • 4 cycles: 2m long 3 2.5m wide OR Where a proprietary storage or hanging system is provided, the space requirements are flexible but the system must allow each cycle to be removed independently and meet all other criteria. Where cycle storage is provided in a shed a minimum of 1m2 is required for garden tools (in addition to the above dimensions). The shed should be set on a concrete foundation and secure fixing needs to be provided. Where cycle storage is provided in a garage, adequate space must be provided to store both the bicycle(s) and the car(s) at the same time. For double garages, it must be assumed that each garage space is occupied by a car. Storage areas above should be added to the typical minimum garage sizes below: • 2.4m 3 4.9m for a single garage; and • 5m 3 5.2m for a double garage
Convenient access	Easy and direct access from/to the dwelling(s) and from/to the cycle store to a public right of way. Access from the store to public right of way through the dwelling is not acceptable i.e. where cycles are stored in a shed in the back garden in a mid-terraced home and there is no back garden gate. Communal cycle store(s) should be located within 100m (from the front door or the main entrance to a block of flats). If for strategic reasons outside the control of the developer the store cannot be located within the required distance, exceptions to the rule may be allowed. Full details must be provided and BRE the Code Service Provider consulted prior to awarding credits.
Cycle storage	Cycles may be stored in any of the following: • garage or shed • external or internal communal cycle store • proprietary system
Secure entrance lock	A permanent mortice deadlock or mortice sash lock that conforms to BS 3621:2007 can be used where the door is at least 44mm thick and is locked to the doorframe.

	Alternatively a 'sold secure' Silver Standard padlock with a hasp and staple that are coach bolted through the structure is deemed compliant. Where communal cycle storage will be provided within a block of flats, the entrance must be a secure doorset and meet the requirements of clauses 21.2 to 21.6 and 21.8 to 21.13 of the 'Secured by Design New Homes 2010' document. Note that this room should have no windows.
Secure Fixing	A ground anchor certificated to 'Sold Secure' Silver Standard. Where a communal cycle store will be used, a stand must be provided to support the bike, and a secure ground anchor point for each cycle space (certificated to 'Sold Secure' Silver Standard). Alternatively a *secure stand* can be provided.
Secure Stand	A stand which allows both wheel and frame to be locked and must, as a minimum, be of galvanised steel bar construction (with a minimum thickness of 3mm) and have a minimum foundation depth of 300mm with a welded anchor T-bar set in concrete to prevent it being easily removed from the ground.
Secure Storage	Secure storage is defined as the provision of a fully enclosed solid structure with a *secure entrance lock* and/or *secure fixings* depending the situation and solution. In individual dwellings: – for halls and solid enclosed structures: entrance lock or secure fixing(s) – for non solid structures: entrance lock or secure fixing(s) – for non fully enclosed structures (just three walls and a roof) secure fixing(s) are required Blocks of flats and multi dwellings, with communal areas: – communal halls and solid enclosed structures: secure entrance lock and secure fixing(s), to enable all cycle(s) to be locked – for non solid structures: entrance lock and secure fixing(s) – for non fully enclosed structures (just three walls and a roof) a secure fixing(s) Where an external container specifically designed for secure cycle storage will be provided it must be certified to LPS 1175 SR 1.
Weather-proof	Adequate protection from the elements. This would normally mean at least a roof and three walls.

Appendix B

ENE 9 – Home office specifications

Adequate Ventilation	In all cases the room must have an openable window with an openable casement of a minimum of 0.5m2. A room with only an external door will not meet the minimum requirements for adequate ventilation.
Sufficient services	The following services must be provided in the *suitable room* intended as a home office: • Two double power sockets • Two telephone points (or double telephone point) or one telephone point where the dwelling is connected to cable or broadband is available at the address • Window (Note: The room chosen to be the nominated home office must have a daylight factor of at least 1.5%) • *adequate ventilation*, either through an openable window or with alternative ventilation such as passive stack, etc.
Sufficient space	This is defined as the minimum size (1.8m wall length) to allow a desk, chair and filing cabinet or bookshelf to be installed, with space to move around the front and side of the desk, use the chair appropriately and operate the filing cabinet safely, (the 1.8m wall size requirement can, in some circumstances, be altered if drawings can prove that a desk can be fitted in any other type of arrangement, i.e. alcove or similar, fulfilling all the above criteria).
Suitable room	For dwellings with three or more bedrooms, a suitable room is a room other than the kitchen, living room or, master bedroom or bathroom. For dwellings with one or two bedrooms or studio homes, a suitable room may be in the living room, one of the bedrooms or any other suitable area in the home such as a large hall or dining area (provided the minimum service requirements defined above are met). In all cases, the room must be large enough not to prevent the intended use of that room i.e. if a home office is to be set up in the main bedroom that room also needs to be able to fit in a double bed and other necessary furnishing.

Appendix C

WAT 2

Sufficient Size	**Water butt volume requirements for homes with individual gardens, patios and terraces:** • terraces and patios – 100 litres minimum • 1–2 bedroom home with private garden – 150 litres minimum • 3+ bedroom home with private garden – 200 litres minimum The above volume requirements can be halved if there is no planting provided and the whole of the external space is covered by a hard surface. For houses with a front and a rear garden a water butt is required only in the main (i.e. larger) garden but should meet the capacity requirements above. **Size requirements for communal gardens:** • 1 litre/m2 of land allocated to the dwelling with a minimum of 200 litres per communal garden. Where the communal garden is allocated to more than 6 dwellings, a maximum of 30 litres per dwelling can be applied. The allocated land can either be planted (including grass) or left as unplanted soil and can be either split into plots or communally maintained.

Correctly Specified	The specification of the rainwater collector must meet the following criteria: • No open access at the top of the collector (a child-proof lid is allowed) • Provision of a tap or other arrangement for drawing off water • • Connection to the rainwater downpipes with an automatic overflow into the conventional rainwater drainage system • A means of detaching the rainwater downpipe and access provision to enable the interior to be cleaned • • Where the collection system is to be sited outside, and not buried, it must be stable and adequately supported; the material used for the container shall be durable and opaque to sunlight • Where the system is part of a rainwater collection system providing internal water, water for external use may be provided in a separate tank to water required for internal use. This could be an overflow pipe leading from the main tank to a correctly specified water butt for external water use.

Appendix D

WAS 1 – Household waste and recycling

Table : Cat 5.1: Supplementary Information Sheet for Was 1 – Storage of non-recyclable waste and storage of recyclable household waste			
Development Name:			
Dwelling Reference			
NUMBER OF BEDROOMS:			
MINIMUM REQUIREMENTS OF BS 5906: 2005			
Calculation		TOTAL VOLUME:	
LOCAL AUTHORITY PROVISION			
REFUSE	DIMENSIONS:	VOLUME:	
RECYCLING 1	DIMENSIONS:	VOLUME:	
RECYCLING 2	DIMENSIONS:	VOLUME:	
RECYCLING 3	DIMENSIONS:	VOLUME:	
RECYCLING 4	DIMENSIONS:	VOLUME:	
TOTAL VOLUME:			
SPACE PROVIDED			
Demonstrate (through the use of drawings) how the space allowed for waste storage has been sized to accommodate the maximum requirements between: volume of storage from the Local Authority or minimum from the BS 5906. Checklist Was 1 below lists some of the more important elements of BS 5906:2005, but it is only an indication of the full requirement. Depending on circumstances, other provisions may also be necessary.			
ACCESSIBILITY			
Assess compliance with Checklist 1			

Checklist IDP - Inclusive design principles necessary to provide access and usability to amenities recognised under Was 1, Was 3 and Hea 3				
Inclusive access and usability requirement	**Specifications and dimensions to meet requirement**	**Applicability**		**Tick**
		Typology	**Issue**	
The following guidelines are drawn from BS 8300:2009, BS 5709:2006, BS 1703:2005, Approved Documents Part M and H				
1) The distance of the inclusive access route, taken as the route between the closest external entrance door and the external amenity (the waste storage space, composting facility or private space for which mandatory elements or credits are being awarded), must be kept to a minimum and be level or gently sloping. In all cases, the inclusive access route towards the waste storage/ composting facility/ private space must be from the closest external entrance door and be direct and the shortest possible.	Pathways making up any part of the inclusive access route must preferably be level (no gradient exceeding 1:60 and/ or no crossfall exceeding 1:40) or gently sloping. Where topography prevents this, a 'gently sloping' pathway must be provided. Maximum gradients permitted dependent on the distance are given below: 1:12 on an individual slope up to 2 metres; 1:13 on an individual slope up to 3 metres; 1:14 on an individual slope up to 4 metres; 1:15 on an individual slope up to 5 metres; 1:16 on an individual slope up to 6 metres; 1:17 on an individual slope up to 7 metres; 1:18 on an individual slope up to 8 metres; 1:19 on an individual slope up to 9 metres; 1:20 on an individual slope of 10 metres, or more than 10 m* *Providing there are top, bottom and intermediate landings of not less than 1.2 m excluding the swing of doors and gates for each 10 metre length of slope. Steps specified in accordance with section 6 of Approved Document Part M are only acceptable on an alternative/ secondary route, this secondary route being in addition to the inclusive access route provided to the amenity. Where any part of the inclusive access route is gently sloping (with maximum gradients as set out above), a secondary stepped approach in accordance with section 6 of Approved Document M must also be provided. Note: All dwellings, regardless of site topography, must meet this requirement. Allowance is given for walk-up and basement flats below.	All forms of dwelling – For dwellings with individual entrance doors, an inclusive access route must be provided from the closest entrance door to each amenity (regardless of whether this is a principal or secondary entrance). For blocks of dwellings with communal entrances, this requirement applies to the closest communal entrance door to each amenity (regardless of whether this is a principal or secondary entrance). For walk-up or basement flats with individual external entrances, this requirement applies from the closest external entrance door of the flat to the amenity, regardless of whether the entrance is principal or secondary. In this situation, external stairs are permitted provided they comply with criterion 8.	Was 1, Was 3, Hea 3	
2) The inclusive access route from the closest external entrance door must not exceed: a) 50 m walking distance to the private space	As a principal aim, both private space and composting facilities must be as close to the dwelling or block as possible. Please note that to comply with Part H of the Building Regulations, storage areas for waste containers and chutes should be sited so that the distance householders are required to carry refuse does not usually	All forms of dwelling – as above.	Hea 3	

continued

Checklist IDP - Inclusive design principles necessary to provide access and usability to amenities recognised under Was 1, Was 3 and Hea 3				
Inclusive access and usability requirement	Specifications and dimensions to meet requirement	Applicability		Tick
		Typology	Issue	
b) 30 m walking distance to composting facilities.	exceed 30 m. It is not the role of the Code assessor to confirm this.			
3) Any pathways making up part of the inclusive access route must be made of a suitable surface. Those within the curtilage of an individual dwelling must have a minimum width of 900 mm. Communal paths must have a minimum width of 1200 mm.	Suitable surfaces must be firm, slip-resistant and reasonably smooth, and must contrast visually against adjacent surfaces. Surfaces in accordance with section 6 of Approved Document Part M can achieve this requirement.	All forms of dwelling.	Was 1, Was 3, Hea 3	
4) Waste containers must be sited on a suitable surface.	As above.	All forms of dwelling.	Was 1	
5) There must be space for turning a wheelchair at the amenity.	A turning circle of 1500 mm diameter or a 1700 mm x 1400 mm ellipse is required. This area must be made of a surface in accordance with criterion 3 above.	All forms of dwelling.	Was 1, Was 3, Hea 3	
6) The closest external entrance door to the amenity must: a) Have level access over the threshold. b) Have a clear opening width of at least 800 mm (including balcony and roof terrace entrances). The minimum clear opening width of any communal entrances along the inclusive access route must be at least 875 mm.	a) If raised, the threshold must be no higher than 15 mm and is to have as few upstands and slopes as practicable; any upstand in excess of 5 mm in height is to be chamfered. b) For details of how to measure the clear opening width of doors please see Figure 11 of BS 8300:2009.	All forms of dwelling. For dwellings with individual entrance doors, this requirement applies to the closest entrance door to each facility. For blocks of dwellings with communal entrances, this requirement applies to the closest communal entrance door to each amenity.	Was 1, Was 3, Hea 3	

continued

Checklist IDP - Inclusive design principles necessary to provide access and usability to amenities recognised under Was 1, Was 3 and Hea 3				
Inclusive access and usability requirement	**Specifications and dimensions to meet requirement**	**Applicability**		**Tick**
		Typology	**Issue**	
c) Be equipped with door opening furniture specified in accordance with section 6.4 of BS 8300:2009.	c) It must be possible to operate all door opening furniture with one hand, without the need to grasp or twist. Door opening furniture used in conjunction with locks and latches must have a lever action.			
7) Gates positioned along the inclusive access route must: a) Have level access over the threshold. b) Have a clear opening width of at least 900 mm.	 a) As 6a above. b) As 6b above. Gates must not be spring loaded and must be operable from both sides. Note: Gates specified in accordance with Secured by Design will achieve requirement 7b by default.	All forms of dwelling.	Was 1, Was 3, Hea 3	
8) Any external stairs that form part of the inclusive access route from walk-up/ basement flats to the amenity must provide easy access.	A stepped approach in accordance with section 6 of Approved Document Part M must be provided. The AD sets out the following requirements for a staircase: 1. Has flights whose unobstructed widths are at least 900 mm; 2. The rise of a flight between landings is not more than 1.8 m; 3. Has a top and bottom and, if necessary to comply with the AD, intermediate landings, each of whose lengths is not less than 900 mm; 4. Has steps with suitable tread nosing profiles (see Diagram 27 of Approved Document Part M) and the rise of each step is uniform and between 75 mm and 150 mm; 5. The going of each step is not less than 280 mm, which for tapered treads, must be measured at a point 270 mm from the 'inside' or the tread; and 6. Where the flight comprises three or more risers, there is a suitable continuous handrail on at least one side of the flight. A suitable handrail should have a grippable profile; be between 850 mm and 1000 mm above the pitch line of the flight; and extend 300 mm beyond the top and bottom nosings.	Walk-up or basement flats (providing accommodation above or below the ground floor of the building and with an individual external entrance accessed by external steps).	Was 1, Was 3, Hea 3	

continued

Checklist IDP - Inclusive design principles necessary to provide access and usability to amenities recognised under Was 1, Was 3 and Hea 3				
Inclusive access and usability requirement	Specifications and dimensions to meet requirement	Applicability		Tick
		Typology	Issue	
9) Communal waste storage and composting facilities must be provided with: a) Signs and information specified in accordance with section 9.2 of BS 8300:2009. b) Lighting specified in accordance with section 9.4 of BS 8300:2009 with adequately controlled dedicated energy efficient fittings.	a) Visual signs must be provided at the communal waste storage and composting facility giving instructions on how to use the facility (identifying different waste types, collection times etc). Signs must comprise simple words, clearly separated from one another, in short sentences. A sans serif typeface with an x height of at least 15 mm to 25 mm (lower case letter height) to capital height must be used. Any symbols or pictograms used on visual signs must be at least 100 mm in overall height. Letters, symbols and pictograms must contrast visually with the signboard. Signboards must contrast visually with their backgrounds. b) Artificial lighting systems should be designed to maintain a level of illumination that is suitable for blind and partially sighted people and is compatible with electronic and radio frequency installations. Where artificial lighting is provided, it should use high frequency electronic ballasts to avoid any perception of flicker. Space lighting must meet the requirements of the Ene 6 Issue (capable of only accepting lamps having a luminous efficacy greater than 40 lumens per circuit Watt and controlled by push button time switches/PIR sensors or equivalent).	All forms of dwelling – communal bin stores/ composting facilities only.	Was 1, Was 3	
10) Switches, sockets and service controls must be at a height usable by all.	Any switches, sockets or service controls situated along the inclusive access route or at the amenity must be located so that they are easily reachable and between 450 mm and 1200 mm from the floor.	All forms of dwelling.		
11) Refuse hoppers** must be located at a height usable by all.	Hoppers must be fixed at a height of 750 mm, measured from floor level to the lower edge of the inlet opening.	All forms of dwelling.		
** A fitting into which refuse is placed and from which it passes into a chute or directly into a refuse container. The fitting consists of a fixed frame and hood unit and a hinged or pivoted combined door and receiving unit, as defined in British Standard 1703 (British Standards Institution, 2005).				

Appendix E

WAS 2 – Construction Site Waste Management

Checklist Was 2a - Mandatory Requirement
Confirmation that SWMP includes procedures for monitoring site waste and target setting to promote resource efficiency (Adapted from DEFRA, 2008).
Criteria
1) Confirmation that target benchmarks are set to reduce waste generated on site. These should be reported as part of the SWMP implementation and on completion. Waste minimisation targets during the construction process can be set using best practice.
2) Set procedures and commitments to minimize nonhazardous construction waste at design stage. Specify waste minimisation actions relating to at least 3 waste groups and support them by appropriate monitoring of waste.
3) Procedures for minimising hazardous waste.

Checklist Was 2b - Waste Groups		
Actions identified to monitoring, reduce, sorting and diverting from landfill site construction waste (fill in where applicable, i.e. waste groups arising on housing project) :		
Codes (European Waste Catalogue)	**Key Group**	**Examples**
170102	Bricks	Bricks
170101	Concrete	pipes, kerb stones, paving slabs, concrete rubble, precast and in situ
170604	Insulation	Glass fibre, mineral wool, foamed plastic
1501	Packaging	Paint pots, pallets, cardboard, cable drums, wrapping bands, polythene sheets
170201	Timber	Softwood, hardwood, boards products such as plywood, chipboard, medium density fibreboard (MDF)
1602	Electrical and electronic equipment	Electrical & electronic TVs, fridges, air-conditioning units, lamps equipment
	Canteen/office	Office waste, canteen waste, vegetation
	Oils	Hydraulic oil, engine oil, lubricating oil
1703	Asphalt and tar	Bitumen, Coal tars, Asphalt

170103	Tiles and ceramics	Ceramic tiles, clay roof tiles, ceramic, sanitary ware
1705	Inert	Mixed rubble/excavation material, glass
1704	Metals	Radiators, cables, wires, bars, sheet
170802	Gypsum	Plasterboard, render, plaster, cement, fibre cement sheets, mortar
170203	Plastics	Pipes, cladding, frames, non packaging sheet
	Floor coverings (soft)	Carpets, vinyl flooring
200307	Furniture	Tables, chairs, desks, sofas
	Liquids	Non hazardous paints, thinners, timber treatments
1705	Soils	Soils, clays, sand; gravel, natural stone
	Hazardous	defined in Environment Agency technical guidance (see www.environment-agency.gov.uk/subjects/waste)
	Architectural Features	Roof tiles, reclaimed bricks, fireplaces
Other/Mixed		Efforts should be made to categorise waste into the above categories wherever possible

Checklist Was 2C: Diverting from Landfill Construction Waste Generated on Site			
Criteria	**Evidence Demonstrating how Criteria will be Met**	**Reference**	**Tick**
1) Procedures and commitments to sort and divert waste from landfill, either; a. Re-use on site (in situ or for new applications) b. Re-use on other sites c. Salvage/reclaim for re-use d. Return to the supplier via a 'take-back' scheme e. Recovery and recycling using an approved waste management contractor f. Compost g. according to the defined waste groups (according to the waste streams generated by the scope of the works).			
2) Confirmation of the percentage of non-hazardous construction waste generated by the project that has been diverted from landfill			

Appendix F

POL 1 – Global Warming Potential of Insulants

Table : Cat 6.1: Foamed and Non Foamed Insulating Materials	
Foamed Insulation	**Non-foamed Insulation**
Expanded polystyrene	Mineral wool or fibre
Extruded polystyrene	Glass wool or fibre
Polyurethane (PU) insulation	Cork
Cellular glass or foamed glass	Cellulose insulation
Nitrile rubber or elastomeric insulation	Wood fibre board
Phenolic insulation	Wool
Polyisocyanurate foam	Flax
Icynene foam	Recycled newspaper and jute
Tripolymer foam	Straw or strawboard
Foamed polyethylene	

Table : Cat 6.2: Blowing agents deemed to satisfy the issue requirements and/or believed to have a GWP of less than 5
Air
Carbon Dioxide (CO_2)
Pentane (iso-pentane, cyclopentane, n-pentane)
Isobutene

Appendix H

Man 1 – Home Users Guide

Checklist Man 1 - Home User Guide	
Part 1 - Operational Issues **The list below indicates the type of information that should be included**	
a. Environmental strategy/design and features	• Details of any specific environmental/energy design strategy/features including an overview of the reasons for their use (e.g. environmental and economic savings and restrictions on making alterations) and how they should best be operated (where they are not passive features such as insulation and SUDS). Strategies/features could include passive solar design, super insulation, energy efficient timber windows, heat recovery systems, solar hot water systems, photovoltaics, passive vents or the use of certified timber or SUDS within the boundary of individual properties. (Each dwelling will in any case be issued with a copy of the Code Certificate.)
b. Energy	• Information as described in the Building Regulations ADL1A (requirement note c) i.e. Sufficient information about the building, the fixed building services (this should include things like the implication of covering heating outlets with bags etc and other hazards) and their maintenance requirements so that the building can be operated in such a manner as to use no more fuel and power than is reasonable in the circumstances • A way of complying would be to a provide suitable set of operating and maintenance instructions aimed at achieving economy in the use of fuel and power in a way that householders can understand. The instructions should be directly related to the particular system/s installed in the dwelling • The instructions should explain to the occupier how to operate the system(s) efficiently. These should include: the making of seasonal adjustments to control settings and what routine maintenance is needed to enable operating efficiency to be maintained at a reasonable level through the service live/s of the system/s • Details of any renewable system/s and how it/they operate/s • Details of low-energy light fittings, their use and their benefits, e.g. how much energy they save compared to traditional light fittings and what this can mean in terms of reduced energy bills • Details of the EU labelling scheme for white goods • General information on energy efficiency
c. Water Use	• Details of water-saving measures and tips • External water use and efficiency, e.g. the use of water butts or other type of rainwater recycling systems
d. Recycling and Waste	• Information about the Local Authority collection scheme (if applicable)

and Waste	• If the home is not covered by a Local Authority collection scheme, details and location of communal recycling bins/skips/facilities • Information on the location and use of any recycling bins • Information on the location and use of any compost bins • Information on WRAP which can offer guidance on recycling and sustainable waste disposal
e. Sustainable DIY	• Environmental recommendations for consideration in any home improvement works, such as the use of low VOC products or the purchase of certified timber
f. Emergency Information	• Information on smoke detector/s
g. Links, References and Further Information	• Include references/links to other information including websites, publications and organisations providing information on how to run the home efficiently and in the best environmentally sound way. As a minimum, this should include links to: – The Energy Saving Trust good practice guidance (*www.est.org.uk/myhome*) – The Local Authority – The company responsible for the construction of the property – The company responsible for the management of the home (where applicable) • In all instances both an address/telephone contact number and a web link will need to be provided
h. Provision of Information in Alternative Formats	• Include details of the procedure for obtaining a copy of the guide in alternative formats, including foreign languages, Braille, large print or audio cassette / CD. It should include the contact details of the person/organisation responsible for producing the guide
Part 2 – Site and Surroundings **The list below indicates the type of information that should be included**	
a. Recycling and Waste	• Information on what to do with waste not covered by the standard weekly Local Authority collection scheme for example fridges/freezers, computer equipment, batteries and other potentially hazardous equipment. In some areas the Local Authority will collect these items. If this is the case details and information of such a collection should be provided • Information and location of local recycling facilities and waste tips
b. Sustainable (Urban) Drainage Systems	• Details of SUDS within the site boundary including an overview of the reasons and benefits behind their use (e.g. prevention of localised flooding) and advice on maintenance and operation

Systems (SUDS)	
c. Public Transport	• Details of local public transport facilities including maps and timetables and the location of nearby bus stops and/or train/tube stations • Details of cycle storage and cycle paths in the area including, if available, cycle path network maps for the whole town/local area • Details of car parking and information on available park and ride, car sharing schemes and/or car pools/car hire in the area • Details on how to get to local amenities in the area by public transport or cycling
d. Local amenities	• The location of food shops, post boxes, postal facilities, bank/cash points, pharmacies, schools, medical centres, leisure centres, community centres, places of worship, public houses, children's play areas, outdoor open access public areas • Other local amenities such as places of interest/cultural value, areas of beauty / wildlife / conservation / allotments etc.
e. Responsible Purchasing	• Include information about the purchasing of: – Low energy/low water white goods – Electrical equipment, including light fittings and bulbs – Timber products from sustainable sources – Organic food procurement/food growing/local produce/local food provision, e.g. farmers markets, organic box schemes etc
f. Emergency Information	• Contact details for emergency services including: – Location of local minor injuries clinics and A&E departments – Location of nearest police/fire station
g. Links, References and Further Information.	• This should include references/links to other information including websites, publications and organisations providing information on how to reduce the environmental impact in terms of transport, the use of local amenities, responsible purchasing etc. Such links/references may include links to: – Sustrans (for cycle networks, www.sustrans.org.uk) – The local authority (including information about recycling and waste tips) – Local transport providers (e.g. bus or train companies) – Local amenities • In all instances both an address/telephone contact number and a web link will need to be provided
By entering a 'YES' against the criteria above, I confirm that all dwellings of this	

specification type on the **ENTER SITE NAME** site meet the stated criteria.
Signature: Date: Print Name:

Appendix J

Man 3 – Construction Site Impacts

Checklist Man 3 - Construction Site Impacts
a. Commitment to monitor, report and set targets for CO_2 production of energy use arising from site activities
Criteria
1. Confirmation is required that monthly measurements of energy use will be recorded and displayed on site.
2. Appropriate target levels* of energy consumption must be set and displayed (targets could be annual, monthly, or project targets).
3. As a minimum, monitoring must include checking the meters and displaying some form of graphical analysis in the site office to show consumption over the project duration and how actual consumption compares to the targets set.
4. The design/site management team is to nominate an individual who will be responsible for the monitoring and collection of data.
* Targets for energy consumption during the construction process should be set using DTI's Environmental KPI benchmarks. These documents do not specify targets but facilitate projects in setting appropriate targets (see references section of main credit for further details). Note: The Code does not require targets to be met but is encouraging the process of setting, monitoring and reporting against targets.
b. Commitment to monitor and report CO_2 or energy arising from commercial transport to and from the site
Criteria
1. Confirmation is required that a site monitoring system will be in place to monitor and record deliveries*. This system will need to record:
The number of deliveries
The mode of transport
The kilometres/miles travelled for all deliveries
Where the delivery is specifically for the site, a figure of total distance travelled should be used, i.e. a round trip (from the point of origin, to the site and back to the point of origin).
Where the delivery to the site is part of a multiple delivery route, the recorded figure for distance travelled should be the distance travelled to the site (from the previous delivery), plus the distance to the next delivery or return.
This information can then be used to estimate a total figure for kg of CO_2 for the project. The Code does not require this information to be converted to CO_2 but the information must be made available to the senior project and site management staff/suppliers to establish benchmarks and aid future decision-making towards improving site and transport efficiency. If the project team wishes to convert this information into CO_2 emissions, there are tables provided at the end of this checklist, which can be used.

2. If the design team or contractor confirms that the project is aiming to achieve the "Construction Site Transport" 'measures for traffic movements and distances' (published April 2003, see references) then this aspect has been achieved automatically. The information obtained for this item can also be used to satisfy the DTI's Environmental KPI on transport.
3. The design/site management team is to nominate an individual who will be responsible for the monitoring and collection of data.
* Please see *Tables 1-4* below on monitoring site transport CO_2
c. Commitment to monitor, report and set targets for water consumption arising from site activities
Criteria
1. Compliance is demonstrated by the design/site management team confirming, in writing, that monthly measurements of water consumption will be recorded and displayed on site.
2. Appropriate target* levels of water consumption must be set and displayed (targets could be annual, monthly or project targets).
3. As a minimum, monitoring must include checking the meters and displaying some form of graphical analysis in the site office to show consumption over the project duration and how actual consumption compares to targets set.
4. The design/site management team is to nominate an individual who will be responsible for the monitoring and collection of data.
* Targets for water consumption during the construction process should be set using DTI's Environmental KPI benchmarks. These documents do not specify targets but facilitate projects in setting appropriate targets (see *References and Further Information* for details). Note: The Code does not require targets to be met but is encouraging the process of setting, monitoring and reporting targets.
d. Commitment to adopt best practice policies in respect of air (dust) pollution arising from site activities
Criteria
1. Confirmation is required of the site's procedures to minimise air/dust pollution. This can include:
'dust sheets'
regular proposals to damp down the site in dry weather
covers to skips etc.
2. The site team must indicate how this information is disseminated to site operatives.
Note: Further information can be obtained from DTI/BRE publications 'Control of Dust from Construction and Demolition Activities' and Pollution Control Guide Parts 1-5 provide good practice guidelines on construction related pollution (see *References and Further Information* for details).
e. Commitment to adopt best practice policies in respect of water (ground and surface) pollution occurring on the site

Criteria
1. Confirmation is required of the site's procedures to minimise water pollution following best practice guidelines outlined in the following documents.
PPG 1 - General guide to the prevention of pollution. Environment Agency
PPG 5 - Works in, near or liable to affect watercourses. Environment Agency
PPG 6 - Working at demolition and construction sites. Environment Agency
2. The site team must also indicate how this information is disseminated to site operatives

f. 80% of site timber is reclaimed, re-used or responsibly sourced

Criteria
1. 80% of timber used during construction, including formwork, site hoardings and other temporary site timber used for the purpose of facilitating construction, is to be procured from sustainably managed sources, independently certified by one of the top two levels as set out in the Responsible Sourcing of Materials Issues (Mat 2 and Mat 3) in the Materials section of this document. Re-used timber from off site can be counted as equivalent but re-usable formwork only complies if it meets the above criteria. This credit can be awarded where all the timber used is reclaimed timber.

Appendix K

ECO 1 – Ecological Value of Site

Checklist Eco 1: Ecological Value of Site	
General Information: In order for the development to be defined as 'land of low ecological value', the assessor must answer NO to all of the questions in Section 1 and YES to any of the questions in Section 2.	
Section 1: Ecological features of the site	
Instruction: Criteria 1.1-1.5 can be used to determine the presence of existing ecological features across the site. If YES is recorded against **any** question in Section 1 then the site cannot be defined as having *land of low ecological value* and the credit cannot be awarded. If NO is recorded against **all** the questions in Section 1 then proceed to Section 2.	
1.1	Does the site contain any trees or hedges above 1m high or with a trunk diameter greater than 100mm?
1.2	Are there any ponds, streams or rivers on, or running through the site?
1.3	Is there any marsh or other wetland present on the site?
1.4	Are there any meadows or species-rich grassland present on the site?
1.5	Is there any heath land, consisting of heather and/or scrub present on site?
Section 2: Type of land	
Instruction: in addition to answering NO to all the questions in Section 1, if YES is recorded against one or more of the questions in Section 2, the *development site* can be defined as having *land of low ecological value* and the credit can be awarded. (The assessor **MUST** check that these agree with the site drawings.)	
2.1	Does the *development site* consist of land which is entirely within the floor plan(s) of existing building(s) or building(s) demolished within the past two years?
2.2	Does the *development site* consist of land which is entirely covered by other constructions such as sporting hard surfaces, car parking or such constructions which have been demolished within the past two years?
2.3	Does the *development site* consist of land which is contaminated by industrial or other waste to the extent that it would need decontamination before building?
2.4	Does the *development site* consist of land which is a mixture of either existing building, hard surfaces and/or contaminated land?
2.5	Does 80% of the land within the *development site* comply with statements 2.1, 2.2 or 2.3 and the remaining 20% of the *development site* extend into land which has been either; used for single-crop arable farming for at least 5 years, or consists of regularly cut lawns and sports fields?