



2.0 Introduction

The Code for Sustainable Homes (CfSH) is used as a benchmarking tool in the design of new residential developments. The aim is to estimate the sustainability of buildings and to promote a programme of design improvement.

Role / Position	Company	Abbreviation
Client	Berkeley Homes Plc	BH
Architect	MAA Architects	MAA
Services Consultant	Hoare Lea	HL
Structural Engineer	RSK Land & Development Engineering	RSK
Quantity Surveyor	Not yet known	QS
CSH / BREEAM Assessor	Hoare Lea Sustainability	HLS
Ecologist	Not yet known	Ecologist

2.1 Background

The CfSH is published by the Department for Communities and Local Government (CLG). The CfSH (November 2010 version) is based upon the categories and issues as set out in table 2.1. Mandatory requirements (M) apply to:

- ENE1 - Dwelling Emission Rate ('Level 4' and above);
- ENE2 - Fabric Energy Efficiency ('Level 5' and above);
- WAT1 - Indoor Water Use ('Level 4' and above);
- MAT1 - Environmental Impact of Materials (all levels);
- SUR1 - Management of Surface Water Runoff (all levels);
- WAS1 - Storage of Non-Recyclable / Recyclable Waste (all levels);
- HEA4 - Lifetime Homes ('Level 6').

Failure to meet the mandatory criteria could restrict a development to a 'zero-rating' regardless of the overall number of credits achieved.



Category	Issue
Energy and CO ₂ Emissions	Dwelling Emission Rate (M) Fabric Energy Efficiency (M) Display Energy Devices Drying Space Energy-labelled White Good External Lighting Low and Zero Carbon Technologies Cycle Storage Home Office
Water	Indoor Water Use (M) External Water Use
Materials	Environmental Impact of Materials (M) Responsible Sourcing of Materials (Building Elements) Responsible Sourcing of Materials (Finishing Elements)
Surface Water Run-off	Management of Surface Water Runoff (M) Flood Risk
Waste	Storage of Non-Recyclable Waste and Recyclable Waste (M) Construction Site Waste Management Composting
Pollution	Global Warming Potential (GWP) of Insulants NO _x Emissions
Health & Wellbeing	Daylighting Sound Insulation Private Space Lifetime Homes (M)
Management	Home User Guide Considerate Constructors Scheme Construction Site Impacts Security
Ecology	Ecological Value of the Site Ecological Enhancement Protection of Ecological Features Change in Ecological Value of the Site Building Footprint

Table 2.1: CfSH Criteria.

2.2 CfSH Process

Figure 2.1 indicates the CfSH process from appointment of the assessor, through to receipt of a post-construction certificate.

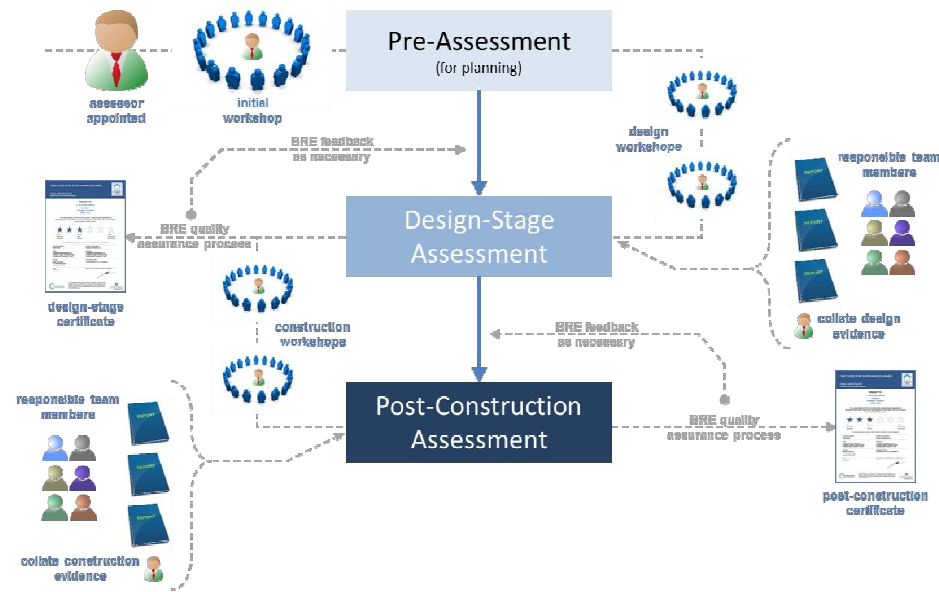


Figure 2.1: Summary of CfSH Process.

3.0 Credit Assessment Summary

Table 3.1 provides a summary of the credits being targeted:

Category	Issue	Responsible Party	Credits		
			Available	Targeted Houses	Targeted Apartments
Energy and CO ₂ Emissions	Ene 1: Dwelling Emission Rate (M)		10	3	3
	Ene 2: Fabric Energy Efficiency (M)		9	6	4
	Ene 3: Display Energy Devices		2	2	2
	Ene 4: Drying Space		1	1	1
	Ene 5: Energy-labelled White Goods		2	2	2
	Ene 6: External Lighting		2	2	2
	Ene 7: Low and Zero Carbon Technologies		2	2	2
	Ene 8: Cycle Storage		2	1	1
	Ene 9: Home Office		1	0	0
Water	Wat 1: Indoor Water Use (M)		5	3	3
	Wat 2: External Water Use		1	1	1
Materials	Mat 1: Environmental Impact of Materials (M)		15	7	7
	Mat 2: Responsible Sourcing of Materials (Building Elements)		6	3	3
	Mat 3: Responsible Sourcing of Materials (Finishing Elements)		3	1	1
Surface Water Run-off	Sur 1: Management of Surface Water Runoff (M)		2	2	2
	Sur 2: Flood Risk		2	2	2
Waste	Was 1: Storage of Non-Recyclable Waste and Recyclable Waste (M)		4	4	4
	Was 2: Construction Site Waste Management		3	3	3
	Was 3: Composting		1	1	0
Pollution	Pol 1: Global Warming Potential (GWP) of Insulants		1	1	1
	Pol 2: NO _x Emissions		3	3	3
Health & Wellbeing	Hea 1: Daylighting		3	1	1
	Hea 2: Sound Insulation		4	3	3
	Hea 3: Private Space		1	1	1
	Hea 4: Lifetime Homes (M)		4	4	4



Table 3.1: CfSH Pre-Assessment Summary.

Category	Issue	Responsible Party	Credits		
			Available	Targeted Houses	Targeted Apartments
Management	Man 1: Home User Guide		3	3	3
	Man 2: Considerate Constructors Scheme		2	2	2
	Man 3: Construction Site Impacts		2	2	2
	Man 4: Security		2	2	2
Ecology	Eco 1: Ecological Value of the Site		1	0	0
	Eco 2: Ecological Enhancement		1	1	1
	Eco 3: Protection of Ecological Features		1	1	1
	Eco 4: Change in Ecological Value of the Site		4	2	2
	Eco 5: Building Footprint		2	1	2
Weighted Score:			70.16%		
CfSH Pre-Assessment Rating:			'Level 4'	'Level 4'	'Level 4'

Table 3.1 (continued): CfSH Pre-Assessment Summary.



4.0 Conclusion

This pre-assessment outlines that the Proposed Development will achieve a CfSH 'Level 4' rating, exceeding the requirement to achieve 68 points by 0.36-2.16 points.

Figure 4.1 outlines which credits are being targeted for houses:

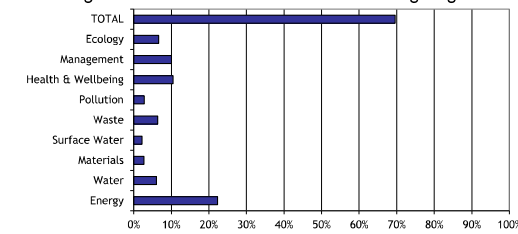


Figure 4.1: Summary of Targeted Credits – houses

Figure 4.2 outlines which credits are being targeted for apartments:

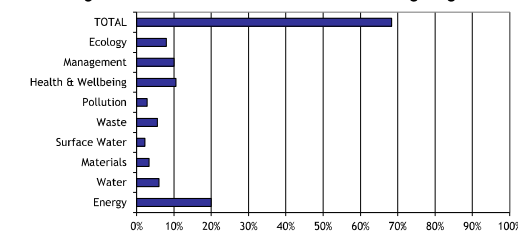


Figure 4.2: Summary of Targeted Credits – apartments

Noteworthy Targets

The following credit targets are of particular note, and highlight the sustainability aims of the Proposed Development:

- CO₂ emissions for all dwellings at least 25% lower than current Building Regulations Part L (2010).
- Provision of 'Energy Display Devices'.
- Provision of energy efficient white goods.
- Water consumption reduced to 105 litres per person per day through the use of high efficiency water systems.
- Provision of sufficient cycle storage.
- Environmental assessment conducted into the materials that make up the main building elements.
- A dedicated area for waste recycling in each dwelling (in addition to space set aside for general waste storage).
- A commitment to go beyond best practice site management techniques, including a strategic review of how to reduce waste arising from the construction process, and the monitoring of construction site impacts throughout the construction process.
- The Proposed Development will enhance the ecological value of the Site.
- All dwellings to be Lifetime Homes compliant.



5.0 Appendix A: Detailed Credit Assessment

The following pages contain a detailed breakdown of the credit selection process.

Issue	Credit Requirements	Credits		Responsible Party																																	
		Available	Targeted																																		
Ene1 Dwelling Emission Rate (Mandatory)	<p>Credits are awarded based on the percentage improvement in the Building Regulations Part L (2010) Dwelling Emission Rate (DER) beyond the Target Emission Rate (TER).</p> <p>Credits are awarded in accordance with the table below. To reach Level 4, 5 and 6 (zero carbon) there are additional requirements (see technical guidance).</p> <table border="1"> <thead> <tr> <th>Improvement over Building Regulations Part L (2010)</th> <th>Credits</th> <th>Mandatory Requirements</th> </tr> </thead> <tbody> <tr> <td>≥ 8%</td> <td>1</td> <td></td> </tr> <tr> <td>≥ 16%</td> <td>2</td> <td></td> </tr> <tr> <td>≥ 25%</td> <td>3</td> <td>Level 4</td> </tr> <tr> <td>≥ 36%</td> <td>4</td> <td></td> </tr> <tr> <td>≥ 47%</td> <td>5</td> <td></td> </tr> <tr> <td>≥ 59%</td> <td>6</td> <td></td> </tr> <tr> <td>≥ 72%</td> <td>7</td> <td></td> </tr> <tr> <td>≥ 85%</td> <td>8</td> <td></td> </tr> <tr> <td>≥ 100%</td> <td>9</td> <td>Level 5</td> </tr> <tr> <td>Zero Net CO₂ Emissions</td> <td>10</td> <td>Level 6</td> </tr> </tbody> </table>	Improvement over Building Regulations Part L (2010)	Credits	Mandatory Requirements	≥ 8%	1		≥ 16%	2		≥ 25%	3	Level 4	≥ 36%	4		≥ 47%	5		≥ 59%	6		≥ 72%	7		≥ 85%	8		≥ 100%	9	Level 5	Zero Net CO ₂ Emissions	10	Level 6	10	3	MAA + HL
Improvement over Building Regulations Part L (2010)	Credits	Mandatory Requirements																																			
≥ 8%	1																																				
≥ 16%	2																																				
≥ 25%	3	Level 4																																			
≥ 36%	4																																				
≥ 47%	5																																				
≥ 59%	6																																				
≥ 72%	7																																				
≥ 85%	8																																				
≥ 100%	9	Level 5																																			
Zero Net CO ₂ Emissions	10	Level 6																																			



Ene 2 Fabric Energy Efficiency	<p>Credits are awarded in accordance with the table below:</p> <table border="1"> <thead> <tr> <th colspan="2">Fabric Energy Efficiency (kWh/m²/year)</th> <th rowspan="2">Credits</th> <th rowspan="2">Mandatory Levels</th> </tr> <tr> <th>Apartment Blocks, Mid-Terrace</th> <th>End Terrace, Semi-Detached & Detached</th> </tr> </thead> <tbody> <tr> <td>≤ 48</td> <td>≤ 60</td> <td>3</td> <td></td> </tr> <tr> <td>≤ 45</td> <td>≤ 55</td> <td>4</td> <td></td> </tr> <tr> <td>≤ 43</td> <td>≤ 52</td> <td>5</td> <td></td> </tr> <tr> <td>≤ 41</td> <td>≤ 49</td> <td>6</td> <td></td> </tr> <tr> <td>≤ 39</td> <td>≤ 46</td> <td>7</td> <td>Levels 5 & 6</td> </tr> <tr> <td>≤ 35</td> <td>≤ 42</td> <td>8</td> <td></td> </tr> <tr> <td>≤ 32</td> <td>≤ 38</td> <td>9</td> <td></td> </tr> </tbody> </table>	Fabric Energy Efficiency (kWh/m ² /year)		Credits	Mandatory Levels	Apartment Blocks, Mid-Terrace	End Terrace, Semi-Detached & Detached	≤ 48	≤ 60	3		≤ 45	≤ 55	4		≤ 43	≤ 52	5		≤ 41	≤ 49	6		≤ 39	≤ 46	7	Levels 5 & 6	≤ 35	≤ 42	8		≤ 32	≤ 38	9		9	6 (houses) 4 (apartments)	MAA + HL
Fabric Energy Efficiency (kWh/m ² /year)		Credits	Mandatory Levels																																			
Apartment Blocks, Mid-Terrace	End Terrace, Semi-Detached & Detached																																					
≤ 48	≤ 60	3																																				
≤ 45	≤ 55	4																																				
≤ 43	≤ 52	5																																				
≤ 41	≤ 49	6																																				
≤ 39	≤ 46	7	Levels 5 & 6																																			
≤ 35	≤ 42	8																																				
≤ 32	≤ 38	9																																				
Ene 3 Energy Display Devices	<p>Credits are awarded as follows:</p> <table border="1"> <thead> <tr> <th>Criteria</th> <th>Credits</th> </tr> </thead> <tbody> <tr> <td>Where current electricity OR primary heating fuel consumption data are displayed to occupants by a correctly specified energy display device.</td> <td>1</td> </tr> <tr> <td>Where current electricity AND primary heating fuel consumption data are displayed to occupants by a correctly specified energy display device.</td> <td>2</td> </tr> <tr> <td>Default Cases Where electricity is the primary heating fuel and current electricity consumption data are displayed to occupants by a correctly specified energy display device.</td> <td>2</td> </tr> </tbody> </table>	Criteria	Credits	Where current electricity OR primary heating fuel consumption data are displayed to occupants by a correctly specified energy display device.	1	Where current electricity AND primary heating fuel consumption data are displayed to occupants by a correctly specified energy display device.	2	Default Cases Where electricity is the primary heating fuel and current electricity consumption data are displayed to occupants by a correctly specified energy display device.	2	2	2	HL																										
Criteria	Credits																																					
Where current electricity OR primary heating fuel consumption data are displayed to occupants by a correctly specified energy display device.	1																																					
Where current electricity AND primary heating fuel consumption data are displayed to occupants by a correctly specified energy display device.	2																																					
Default Cases Where electricity is the primary heating fuel and current electricity consumption data are displayed to occupants by a correctly specified energy display device.	2																																					

Ene 4 Drying Space	Credits are awarded based on the provision for drying space for each dwelling type in accordance with the table below: ?	1	1	MAA
Ene 5 Energy Labelled White Goods	Where the following appliances are provided and have a rating under the EU Energy Efficiency Labelling Scheme: • Fridges and freezers or fridge-freezers: A+ AND • Information will be provided to each dwelling on the EU Energy Labelling Scheme to inform residents on how to select other energy efficient appliances.	1	1	BH + MAA (applicable to private dwellings only)
	Where the following appliances are provided and have a rating under the EU Energy Efficiency Labelling Scheme: • Washing machines and dishwashers: A AND EITHER • Washer-dryers or tumble driers: B OR • Where washer-dryers or tumble driers are not provided, information on the EU Energy Labelling Scheme is provided to each dwelling where this is the case AND • That information will be provided to each dwelling on the EU Energy Labelling Scheme to inform residents on how to select other energy efficient appliances. It is also assumed that any washing machines, washer dryers or dishwasher are specified to be water efficient appliances (this is not directly related to the machines energy efficiency label, but is specified separately on the energy efficient label), please see the Wat 1 section for further information. Note: Where washer dryers are provided it is not necessary to provide a washing machine to obtain this credit	1	1	BH + MAA (applicable to private dwellings only)
	OR • A single credit can be awarded if no white goods are specified but information on the EU Energy Efficiency Labelling Scheme of efficient white goods is provided to each dwelling.	1	-	N/A (1 credit only to be awarded to the affordable dwellings)

Ene 6 External Lighting	Space Lighting 1 credit is awarded where all external space lighting, including lighting in the common areas, is provided by dedicated energy efficient fittings. Note: Statutory safety lighting is not covered by this requirement	1	1	HL
	Security Lighting 1 credit is awarded where all security light fittings are designed for energy efficiency and are adequately controlled such that: • All burglar security lights have: o A maximum wattage of 150W; o Movement detecting control devices (PIR), and o Daylight cut-off sensors. • All other security lighting: o Has dedicated energy efficient fittings, and o Is fitted with daylight cut-off sensors or timers If no security lighting is installed, then the security lighting credit can be awarded by default, provided all the conditions of the first issue covering space lighting have been met. Dual lamp luminaires with both space and security lamps can be awarded both credits provided they meet the above criteria for energy efficiency	1	1	HL
Ene 7 Low or Zero Carbon (LZC) Technologies	Credits are awarded based on the percentage reduction in total carbon emissions that result from using Low or Zero Carbon (LZC) Energy Technologies for each dwelling using the calculation method detailed in Calculation Procedures, with credits awarded as detailed below: • 1 credit is awarded where energy is supplied from local renewable or low carbon energy sources funded under the Low Carbon Building Programme (or similar), or is designed and installed in a manner endorsed by a feasibility study prepared by an independent energy specialist AND • There is a 10% reduction in carbon emissions as a result of this method of supply. OR • 2 credits are awarded if the above criteria are met and there is a 15% reduction in carbon emissions as a result of this method of supply.	2	2	HL (credit score to be monitored closely throughout design stages to ensure compliance)

<p>Ene 8 Cycle Storage</p>	<p>Where individual or communal cycle storage is provided that is adequate, secure, convenient and weather-proof for the following number of cycles:</p> <ul style="list-style-type: none"> 1 credit <ul style="list-style-type: none"> Studio or 1 bedroom dwelling – storage for 1 cycle for every two dwellings 2 and 3 bedroom dwellings – storage for 1 cycle per dwelling 4 bedrooms and above – storage for 2 cycles per dwelling 2 credits: <ul style="list-style-type: none"> studios or 1 bedroom dwellings – storage for 1 cycle per dwelling 2 and 3 bedroom dwellings – storage for 2 cycles per dwelling 4 bedrooms and above – storage for 4 cycles per dwelling 	2	1	MAA
<p>Ene 9 Home Office</p>	<p>1 credit is awarded where sufficient space and services have been provided which allow occupants to set up a home office in a suitable quiet room, as defined in the Technical Guidance.</p> <p>Sufficient space 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).</p> <p>Sufficient services must be provided in the suitable room intended as a home office:</p> <ul style="list-style-type: none"> Two double power sockets Two telephone points (or double telephone point) or one telephone point where the dwelling is connected to cable services, or where 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. <p>'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.</p> <p>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).</p> <p>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.</p>	1	0	-

<p>Wat 1 Indoor Potable Water Use (Mandatory)</p>	<p>Credits are awarded on the basis of average water consumption for the dwelling in accordance with the following criteria.</p> <p>The credits must be checked using the BRE Code Water Calculator Tool.</p> <table border="1" data-bbox="1902 814 2326 947"> <thead> <tr> <th>Credits</th> <th>Water consumption (l/p/d)</th> <th>Mandatory Levels</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>≤ 120</td> <td>Level 1; Level 2</td> </tr> <tr> <td>2</td> <td>≤ 110</td> <td></td> </tr> <tr> <td>3</td> <td>≤ 105</td> <td>Level 3; Level 4</td> </tr> <tr> <td>4</td> <td>≤ 90</td> <td></td> </tr> <tr> <td>5</td> <td>≤ 80</td> <td>Level 5; Level 6</td> </tr> </tbody> </table>	Credits	Water consumption (l/p/d)	Mandatory Levels	1	≤ 120	Level 1; Level 2	2	≤ 110		3	≤ 105	Level 3; Level 4	4	≤ 90		5	≤ 80	Level 5; Level 6	5	3	MAA
Credits	Water consumption (l/p/d)	Mandatory Levels																				
1	≤ 120	Level 1; Level 2																				
2	≤ 110																					
3	≤ 105	Level 3; Level 4																				
4	≤ 90																					
5	≤ 80	Level 5; Level 6																				
<p>Wat 2 External Potable Water Use</p>	<p>1 credit is awarded where a correctly specified and sufficient sized system to collect rainwater for external/internal irrigation use has been provided to a dwelling with a garden, patio or communal garden space (examples of such systems include rainwater butts and central rainwater collection systems).</p> <p>If no individual or communal garden spaces are specified or if only balconies are provided, the credit can be awarded by default.</p>	1	1	MAA + HL																		
<p>Mat 1 Environmental Impact of Materials. (Mandatory)</p>	<p>It is mandatory at all code levels for at least three of the following five key elements achieve a relevant Green Guide rating from the 2007 version of <i>The Green Guide</i> of A+ to D:</p> <ul style="list-style-type: none"> Roof External Walls Internal Walls (including separating walls) Upper and Ground Floors (including separating floors) Windows <p>Credits are awarded where the <i>Code Materials Calculator</i> is used to assess the number of credits awarded for the five key elements described above.</p>	15	7	MAA																		

<p>Mat 2 Responsible sourcing of materials: Basic Building Elements</p>	<p>Credits achieved on a scale from 1 to 6 where 80% by volume of materials used in key building elements are responsibly sourced; i.e. responsible sourcing is demonstrated through an auditable third party certification scheme. The key building elements are:</p> <ul style="list-style-type: none"> • Frame • Ground floor • Upper floors (including separating floors) • Roof • External walls • Internal walls (including separating walls) • Foundation/substructure • Staircase <p>100% of any timber in these elements must be legally sourced.</p>	6	3	<p>MAA + BH (Prelims)</p>
<p>Mat 3 Responsible sourcing of materials: Finishing Elements</p>	<p>Credits achieved on a scale from 1 to 3 where 80% by volume of materials used in secondary building and finishing elements are responsibly used. These are:</p> <ul style="list-style-type: none"> • Stair • Window • External & internal door • Skirting • Panelling • Furniture • Fascias • Any other significant use <p>100% of any timber in these elements must be legally sourced.</p>	3	1	<p>MAA + BH (Prelims)</p>
<p>Sur 1 Surface Water Runoff From Site (Mandatory)</p>	<p>The following requirement is mandatory at all Code levels:</p> <p><u>Peak Rate of Runoff</u> Ensure that the peak rate of runoff into watercourses is no greater for the developed site than it was for the pre-development site. This should comply with the Interim Code of Practice for Sustainable Drainage systems (SUDS) (CIRIA, 2004) or for at least the 1 year and 100 year return period events.</p> <p>Calculation Criteria:</p> <ul style="list-style-type: none"> • For sites of less than 200ha, the calculation of Greenfield runoff rates should be in accordance with Flood estimation for small catchments (Marshall and Bayliss, 1994) and any subsequent updates. • For sites of 200ha and more, the calculation of Greenfield runoff rates should be in accordance with the Flood Estimation Handbook (Centre for Ecology and Hydrology, 1999) and any subsequent 	2	2	<p>RSK</p>

	<p>updates.</p> <ul style="list-style-type: none"> • An allowance for climate change should be made in accordance with current best practice (PPS25, 2006). <p><u>Volume of Runoff</u> Ensure that the additional predicted volume of rainwater discharge caused by the new development, for a 1 in 100 year event of 6 hour duration including an allowance for climate change (PPS25, 2006), is entirely reduced using infiltration.</p> <p>AND / OR</p> <p>Is made available for use in the dwelling as a replacement for potable water use in non-potable applications such as WC flushing or washing machine operation. Any residual additional rainwater volume that cannot be prevented from being discharged (reasons must be provided with supporting evidence), for all events up to the 100-year return period, the peak discharge rate from the site should be reduced to (in order of priority):</p> <ul style="list-style-type: none"> • A: the pre-development site's estimated mean annual flood flow rate (Qbar); or • B: 2l/s/ha; or • C: a minimum flow rate (litres per second), based on good practice guidelines to prevent easy blockage, by ensuring the outlet throttle is not too small, unless rainwater is being discharged to a public sewer or adopted surface water sewer, and there is a specific minimum requirement defined by the Sewerage Undertaker. <p>Note: reasons for discounting any of the options above must be provided with supporting evidence.</p> <p>Two credits are available for using SUDS to improve water quality of the rainwater discharged or for protecting the quality of the receiving waters by:</p> <ul style="list-style-type: none"> • Ensuring no discharge to the watercourse for rainfall depths up to 5mm. • Follow guidance in the Interim Code of Practice for Sustainable Drainage systems (SUDS), (CIRIA, 2004). <p>OR</p> <ul style="list-style-type: none"> • Establish agreements for the ownership, long term operation and maintenance of all sustainable drainage elements used. <p>The mandatory requirements can be met by default if the site discharges rainwater directly to a tidal estuary or the sea, because compliance with discharge flow rate requirements will not be required. This is the currently proposed route for this assessment.</p>			
--	---	--	--	--



Sur 2 Flood Risk	EITHER	2 credits are available for developments situated in Zone 1 – low annual probability of flooding (as defined in PPS25 – ‘Planning and Flood Risk’) and where the site specific Flood Risk Assessment (FRA) indicates that there is low risk of flooding from all sources.	2	2	RSK
	OR	1 credit is available for developments situated in Zones 2 and 3 – medium and high annual probability of flooding where the finished ground floor level of all habitable parts of dwellings and access routes to the ground level and the site, are placed at least 600mm above the design flood level of the flood zone. The Flood Risk Assessment (FRA) accompanying the planning application must demonstrate to the satisfaction of the local planning authority and statutory body that the development is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed.	1	-	N/A
Was 1 Storage of non-recyclable waste and recyclable household waste (Mandatory)	The space allocated for waste storage should be able to hold containers with a volume of containers provided for waste storage should be at least the minimum recommended by British Standard BS 5906 (British Standards, 2005) i.e. 100 litres volume for a single bedroom dwelling, with a further 70 litres volume for each additional bedroom. A Local Authority recycling scheme offering containers equal to or greater than this volume would meet the requirement, providing adequate external space is allocated to accommodate them. If the Local Authority provides containers with a smaller volume, or if no Local Authority scheme exists, the developer will need to ensure and demonstrate that the minimum recommended volume is met. All containers must be accessible to disabled people (Checklist Was 1), particularly wheelchair users, and sited on a hard, level surface. To allow easy access, the containers must not be stacked.		Mandatory		MAA
	2 credits are available for internal storage capacity for recyclable household waste Dedicated internal storage for recyclable household waste can be credited where there is no external storage for recyclable material, no Local Authority Collection Scheme and where the following criteria are met:		2	-	N/A
	At least, three internal storage bins:				
	<ul style="list-style-type: none"> o All located in an adequate internal space o No individual bin smaller than 15 litres o Minimum total capacity 60 litres 				



	OR 4 credits are available for providing a combination of internal storage capacity, provided in an adequate internal space, with either a Local Authority Collection Scheme or adequate external storage. A <u>Local Authority collection scheme</u> must meet at least one of the following requirements: <ul style="list-style-type: none"> • Where recyclable household waste is sorted after collection and at least a single 30 litre bin is provided in an adequate internal space (and with a collection of at least fortnightly) • Where materials are sorted before collection and at least three separate bins are provided with 30 litres total capacity. Every bin provided must have at least 7 litres capacity and be located in an adequate internal space (and with a collection of at least fortnightly). • An automated waste collection system which collects at least 3 different types of recyclable waste External storage space, but <u>no Local Authority collection scheme</u> There must be at least three identifiably different internal storage bins for recyclable waste, located in an adequate internal space: <ul style="list-style-type: none"> • With a minimum total capacity of 30 litres • Where every bin has at least 7 litres capacity • All bins should be located within 30m* of an external door AND <ul style="list-style-type: none"> • For blocks of flats, a private recycling scheme operator must be appointed to maintain bins and collect recyclable waste regularly. Recycling containers must: <ul style="list-style-type: none"> o Be located in an adequate external space o Be sized according to the frequency of collection, based on guidance from the recycling scheme operator o Store at least 3 types of recyclable waste in identifiably different bins o Be located within 30 m* of an external door. * Where strategic reasons outside the control of the developer make it impossible to meet this requirement, the maximum allowable distance is 50 m, and a written justification must be provided to the Code Service Provider.	4	4	MAA
Was 2 Construction Site Waste Management	The Site Waste Management Plan must include procedures and commitments for reducing waste generated on site in accordance with best practice and the defined waste groups. AND The Site Waste Management Plan must include procedures and commitments to sort and divert waste at least 85% of non-hazardous waste from landfill (reuse, recycle, compost or otherwise recover) according to the defined waste groups. This must be performed either on site or through a licensed external contractor, in accordance with best practice.	3	3	Contractor (BH to include in prelims)



Was 3 Composting	<ul style="list-style-type: none"> Individual home composting facilities. <p>OR</p> <ul style="list-style-type: none"> A local communal or community composting service, which the Local Authority runs or where there is a management plan in place. <p>OR</p> <ul style="list-style-type: none"> A Local Authority green/kitchen waste collection scheme, including an automated waste collection system. <p>All facilities must also:</p> <ul style="list-style-type: none"> Be in a dedicated position Be accessible to disabled people (Checklist 1) Have an information leaflet that is delivered to each dwelling 	1	1 (houses) 0 (apartments)	MAA												
Pol 1 Global Warming Potential (GWP) of Insulants	<p>Credits are awarded where all insulating materials in the elements of the dwelling listed below only use substances that have a GWP < 5 (manufacture AND installation):</p> <ul style="list-style-type: none"> 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 Cold water storage tanks: where provided External doors 	1	1	MAA (envelope) + HL (services) + Contractor (BH to include in prelims)												
Pol 2 NO _x Emissions	<p>Credits are awarded on the basis of NO_x emission arising from the operation of all space heating and hot water systems for each dwelling type in accordance with the following criteria.</p> <table border="1"> <thead> <tr> <th>Credits</th> <th>Dry NO_x level (mg/kWh)</th> <th>Boiler class (BS EN 297: 1994)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>≤ 100</td> <td>4</td> </tr> <tr> <td>2</td> <td>≤ 70</td> <td>5</td> </tr> <tr> <td>3</td> <td>≤ 40</td> <td>-</td> </tr> </tbody> </table> <p>3 points are awarded where all space heating and hot water energy requirements are fully met by systems which do not produce NO_x emissions.</p>	Credits	Dry NO _x level (mg/kWh)	Boiler class (BS EN 297: 1994)	1	≤ 100	4	2	≤ 70	5	3	≤ 40	-	3	3	HL
Credits	Dry NO _x level (mg/kWh)	Boiler class (BS EN 297: 1994)														
1	≤ 100	4														
2	≤ 70	5														
3	≤ 40	-														



Hea 1 Daylighting	<p>1 credit is awarded where kitchens achieve a minimum average daylight factor of at least 2%.</p> <p>1 credit is awarded where all living rooms, dining rooms and studies (including any room designated as a home office under Ene 9 – Home Office) achieve a minimum average daylight factor of at least 1.5%.</p> <p>80% of the working plane in each kitchen, living room, dining room and study (including any room designated as a home office under Ene 9 – Home Office) must receive direct light from the sky.</p>	3	1	Daylight consultant (BH to appoint)
Hea 2 Sound Insulation	<p>Credits are awarded for achieving higher standards of sound insulation than those given in Approved Document E of the Building Regulations for England and Wales (2003 Edition, with amendments 2004) as follows:</p> <p>1 credit is awarded where:</p> <ul style="list-style-type: none"> Airborne and impact sound insulation values are at least 3 dB higher, Impact sound insulation values are at least 3dB lower <p>3 credits are awarded where:</p> <ul style="list-style-type: none"> Airborne and impact sound insulation values are at least 5 dB higher Impact sound insulation values are at least 5dB lower <p>4 credits are awarded where:</p> <ul style="list-style-type: none"> Airborne and impact sound insulation values are at least 8 dB higher Impact sound insulation values are at least 8dB lower <p>This can be demonstrated through:</p> <p><i>EITHER</i></p> <ul style="list-style-type: none"> A programme of pre-completion testing based on the Normal programme of testing described in Approved Document E, for every group or sub-group of houses or flats, demonstrating that the above standard or standards are achieved. <p><i>OR</i></p> <ul style="list-style-type: none"> Use of constructions for all relevant building elements that have been assessed and approved by Robust Details Limited (RDL), and found to achieve the performance standards stated above and all relevant dwellings are registered with RDL. 	4	3	Acoustic Consultant