
Code for Sustainable Homes Pre Assessment Analysis

New Dwelling house at:

1 Mitford Road, Manchester.

24 May 2013



The Warehouse
Saxon Street
Denton
Manchester
M34 3DS

T. +44 (0)161 337 4353
E. office@ashmount.net
W. www.ashmount.net



Index

Introduction

1. Energy (Ene)
2. Water (Wat)
3. Materials (Mat)
4. Surface water run-off (Sur)
5. Household Waste (Was)
6. Pollution (Pol)
7. Health & Wellbeing (Hea)
8. Management (Man)
9. Ecology (Eco)

Introduction

Within this report is our Pre-Assessment analysis. This is the initial stage of the Code for Sustainable homes assessment and based on the information provided and general assumptions based on the scale & design of the project, we have advised what will be necessary for your project to achieve Code level 3. Our assumptions have been made by choosing those credits most suitable to the project and therefore most likely and easier to be achieved.

Everything that the development integrates from the code requirements, achieves Credits under the 9 different areas (Energy, pollution etc) but each area weights what a credit is worth differently, therefore gaining or losing a credit in an area can sometimes mean more or less than 1 point.

This report works on points and fractions of points rather than credits so that there is no confusion between the different areas. The Report indicates the score that is available for each credit/issue and the score that is assumed to be gained.

The scores required to meet the various levels of the Code are as follows:

Level 1 (★) - **36 Points**

Level 2 (★★) - **48 Points**

Level 3 (★★★) - **57 Points**

Level 4 (★★★★) - **68 Points**

Level 5 (★★★★★) - **84 Points**

Level 6 (★★★★★★) - **90 Points**

To meet code level 3 a points score of **57** points must be achieved. With our assumptions alone, the dwelling can achieve **57.65**. Aiming for this score will mean that the project only has a little flexibility as it progresses through the design stage.

We advise that you carefully consider our recommendations below and confirm that you are happy with the credit requirements we have chosen.

1 - Energy (Ene)

Code Ref:	Item Details:	Points Available	Points Assumed
ENE1 Dwelling Emission Rate	Build to a design that achieves an improvement of DER over TER on the dwelling SAP report. At the moment only building regulations compliancy is assumed. Credits maybe gained here once the Sap calculations have been completed.	11.7	0
ENE2 Fabric Energy Efficiency	To improve fabric energy efficiency performance thus future-proofing reductions in CO2 for the life of the dwelling. No credits are assumed at the moment but credits maybe gained here once the Sap calculations have been completed.	10.5	0
ENE3 Energy Display Devices	Where current electricity OR primary heating fuel consumption data are displayed to occupants by a correctly specified energy display device. Where current electricity AND primary heating fuel consumption data are displayed to occupants by a correctly specified energy display device. 1 credit assumed.	2.34	1.17
ENE4 Drying Space	Provide 4m+ of drying line space either outdoors or indoors. Either an outdoor drying line or a pull across 4 line system in the bathroom are popular ways to achieve this. Credit assumed.	1.17	1.17
ENE5 Energy Labelled White Goods	Provide an A+ rated fridge and freezer or 1x A+ rated fridge-freezer	1.17	1.17
	Provide an A rated washing machine & dishwasher and: EITHER -Provide EU energy labelling information regarding white goods. OR- A B rated washer-dryer or tumble dryer. 2 credits assumed.	1.17	1.17
ENE6 External Lighting	Ensure all external lighting (that is non-security related) uses dedicated energy efficient fittings	1.17	1.17
	Ensure all external security lighting fittings are designed for energy efficiency and all burglar security lights have the following: Maximum wattage of 150W Movement detecting control devices (PIR) Daylight cut off sensors or timers 2 credits assumed.	1.17	1.17

ENE7 Low and Zero Carbon Technologies	Achieve either a 10% or 15% reduction in carbon emissions as a result of renewable technology. 0 credits assumed.	2.34	0
ENE8 Cycle Storage	Cycle storage is provided, that is adequately sized, secure and convenient, for: 2 and 3 bedroom dwellings – storage for 2 cycles per dwelling 4 bedrooms and above – storage for 4 cycles per dwelling Minimum sizes are as follows: • 2 cycles: 2 m long × 1.5 m wide • 4 cycles: 2 m long × 2.5 m wide The cycle storage can either be located within a shed in the garden or within the garage provided that there is sufficient space for a car also. 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 must be set on a concrete foundation and secure fixing needs to be provided.	2.34	2.34
ENE9 Home Office	Home office credit assumed. It is usually easy to provide extra phone and power sockets in one room and the room does not need to be an office, it must just have room to become one if desired. It can be in a living or bedroom or any other suitable space. Credit assumed.	1.17	1.17
Total Points in this section:		36.4	10.57

2 - Water (Wat)

Code Ref:	Item Details:	Points Available	Points Assumed
WAT1* Mandatory Indoor water use	Achieving reduced internal water use, aiming for 90 l/p/day. A Suitable Spec is as follows however variation is possible. Incorporating rainwater harvester for flushing or washing will reduce the amount further. WC – Flush Volume = 4/2.6l Taps (excluding kitchen) -Flow rate l/min = 4l Bath (where shower also present) - Capacity to overflow = 160l Shower (where bath also present) - Flow rate l/min = 6 Kitchen taps - Flow rate l/min = 6 Washing Machine – l/kg dry load = 8 Dishwasher – l/place setting = 1 4 credits assumed.	7.5	6
WAT2 External Water Use	Fit a water butt for external rainwater collection of at least 200 litre capacity. Credit assumed.	1.5	1.5
Total Points in this section:		9	7.5

3 - Materials (Mat)

Code Ref:	Item Details:	Points Available	Points Assumed
MAT1* Mandatory Environmental Impact of Materials	Demonstrate that you will build using key element materials as detailed in the Code technical manual to achieve a score of 12 out of 15 credits. This level of score is usually achievable so is assumed at this stage, also mandatory that 3 elements achieve A-D Green Guide rating. 12 credits assumed.	4.5	3.6
MAT2 Responsible Sourcing of Materials – Basic Building Elements	Demonstrate that will you source key building element materials as detailed in the Code technical manual. No credits assumed here as certificates of sourcing can be complicated to gather and are not worth a lot of points. 0 credits assumed.	1.8	0
MAT3 Responsible Sourcing of Materials – Finishing Elements	Demonstrate that will you source finishing materials as detailed in the Code technical manual. No credits assumed here as certificates of sourcing can be complicated to gather. 0 credits assumed.	0.9	0
Total Points in this section:		7.2	3.6

4 - Surface water run-off (Sur)

Code Ref:	Item Details:	Points Available	Points Assumed
SUR1* Mandatory Management of Surface Water Run-off from Developments	Using a report from a hydrological consultant/engineer demonstrate that you will 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. This is a mandatory requirement 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), should be reduced using infiltration and/or 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. Where this additional rainwater volume cannot be prevented from being discharged for any reason, for all events up to the 100-year return period, the peak discharge rate from the site should be reduced to: • The pre-development site's estimated mean annual flood flow rate (Q_{bar}); OR • 2l/s/ha; OR • 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. If rainwater is discharged to a public sewer or adopted surface water sewer, flow rate requirements will be defined by the Sewerage undertaker. This is a mandatory requirement and a hydrological consultant needs to be appointed to create this report along with a flood risk report for SUR2 as soon as the projects starts design stage.	0 M A N D A T O R Y	0 M A N D A T O R Y

	One credit can be awarded by ensuring there is no discharge from the developed site for rainfall depths up to 5 mm (see Calculation Procedures). One credit can be awarded by ensuring that: • The run-off from all hard surfaces shall receive an appropriate level of treatment in accordance with The SuDS Manual to minimise the risk of pollution. Note: The SuDS Manual best practice recommendations should be followed where there is a risk to groundwater from infiltration (for example contaminated land, developments with high risk of pollution incidents) 0 credits assumed.	1.1	0
SUR2 Flood Risk	Demonstrate that the site is in an area of low flood risk using a Flood Risk Assessment (prepared according to good practice guidance as outlined in Development and Flood Risk: A practice guide companion to PPS25) which shows that there is a low risk of flooding from all sources. The site looks to be in an area of low flood risk from a check on the Environment Agency website. Easiest to use the same hydrological consultant as for the above mandatory credit to confirm this – we can recommend a consultant if required. Both credit assumed.	1.1	1.1
Total Points in this section:		2.2	1.1

5 - Household Waste (Was)

Code Ref:	Item Details:	Points Available	Points Assumed
WAS1* Mandatory Storage of Non-recyclable Waste and Recyclable Household Waste	Provide waste storage at a level of 100l for the first bedroom and 70l for every bedroom thereafter (mandatory requirement) and all containers must be accessible to disabled people – i.e. situated on a hard surface that a wheelchair could get to and with a 1.8m turning circle – see code document for detailed checklist. Provide dedicated storage for recyclable material in the home. The location should be a dedicated non-obstructive place such as a kitchen cupboard or utility room. The storage should be at least 30 litres overall and should have at least 3 different bins of at least 7 litres each capacity if the LA provide a before collection sorting service or 1 single bin for an after collection service. 4 credits assumed.	3.2	3.2
WAS2 Construction Site Waste Management	Where there is a compliant Site Waste Management Plan (SWMP) that contains: a. Target benchmarks for resource efficiency, i.e. m3 of waste per 100 m2 or tonnes of waste per 100 m2 set in accordance with best practice b. Procedures and commitments to minimize non-hazardous construction waste at design stage. Specify waste minimisation actions relating to at least 3 waste groups and support them by appropriate monitoring of waste. c. Procedures for minimising hazardous waste d. Monitoring, measuring and reporting of hazardous and non-hazardous site waste production according to the defined waste groups (according to the waste streams generated by the scope of the works)	0.8	0.8

	Where there is a compliant Site Waste Management Plan (SWMP) including procedures and commitments to sort and divert waste from landfill, AND Where at least 50% by weight or by volume of non-hazardous construction waste generated by the project has been diverted from landfill.	0.8	0
	Where at least 85% by weight or by volume of non-hazardous construction waste generated by the project has been diverted from landfill. 1 credit assumed.	0.8	0
WAS3 Composting	Provide and install a dedicated composting facility (must be accessible to disabled people and come with an information leaflet). Also provide internal storage for a kitchen waste container This is assumed as there are no other easier areas to gain credits from. 1 credit assumed.	0.8	0.8
Total Points in this section:		6.4	4.8

6 - Pollution (Pol)

Code Ref:	Item Details:	Points Available	Points Assumed
POL1 Global Warming Potential (GWP) of Insulants	Ensure all of the following materials used on site will only use substances that have a Global Warming Potential (GWP) of less than 5 (manufacture & installation): • 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 Normally this is easily achievable. Credit assumed.	0.7	0.7
POL2 NOX Emissions	Install a gas boiler that has NOx emissions less than 40mg/kWh. 3 Credits assumed.	2.1	2.1
Total Points in this section:		2.8	2.8

7 - Health & Wellbeing (Hea)

Code Ref:	Item Details:	Points Available	Points Assumed
HEA1 Daylighting	That the following daylighting factors in key rooms will be achieved through design of glazing and room depths/sizes: • Kitchens at least 2% • Living rooms, dining rooms and study's at least 1.5% • 80% of working plane in kitchen, living room, dining room & study must receive direct light from sky 3 credits assumed.	3.51	3.51
HEA2 Sound Insulation	Where: • airborne sound insulation values are at least 3dB higher • impact sound insulation values are at least 3dB lower OR • airborne sound insulation values are at least 5dB higher • impact sound insulation values are at least 5dB lower OR • airborne sound insulation values are at least 8dB higher • impact sound insulation values are at least 8dB lower than the performance standards set out in the Building Regulations approved for England and Wales, <i>Approved Document E</i> (2003 Edition, with amendments 2004). This can be demonstrated through EITHER a programme of pre-completion testing or use of <i>Robust Details</i> by Robust Details Limited (RDL) and found to achieve the performance standards stated above. All relevant dwellings must be registered with RDL. Assumed 5db improvement – 3 Credits	4.68	3.51
HEA3 Private Space	This credit is for private space and has been assumed as there seems to be private gardens for each dwelling. 1 Credit assumed.	1.17	1.17
HEA4 Lifetime Homes	Where all principles of Lifetime Homes, applicable to the dwelling being assessed, have been complied with. Credits assumed.	4.68	4.68
Total Points in this section:		14	12.83

8 - Management (Man)

Code Ref:	Item Details:	Points Available	Points Assumed
MAN1 Home User Guide	That you will provide a 'home user guide' (A guide to occupants of the dwelling containing necessary details about the everyday use of the home) as well as information about the site and its surroundings. Use checklist MAN1 parts 1&2 from the Code technical guide to create this document. 3 Credits assumed.	3.33	3.33
MAN2	Demonstrate that the development will meet Best Practice under a nationally or locally recognised certification scheme such as the Considerate Constructors Scheme.	1.11	1.11
Considerate Constructors Scheme	Improve the above achievement to beyond Best Practice (a score between 32-40 and at least 4 in each section) This depends on the contractor and if they are able to work to Considerate Constructors. 1 Credit assumed.	1.11	0
MAN3 Construction Site Impacts	Construction site impacts – implement procedures that cover 2 or 4 of the following items: • Monitor, report and set targets for CO2 production or energy use arising from site activities • Monitor and report CO2 or energy use arising from commercial transport to and from site • Monitor, report and set targets for water consumption from site activities • Adopt best practice policies in respect of air (dust) pollution arising from site activities • Adopt best practice policies in respect of water (ground and surface) pollution occurring on the site • 80% of site timber is reclaimed, re-used or responsibly sourced 1 Credit assumed.	2.22	1.11
MAN4 Security	Comply with 'Section 2 – Physical security' from 'Secured by design new homes' Has been assumed as is usually a cheap and relatively simple process to incorporate. Both Credits assumed.	2.22	2.22
Total Points in this section:		10	7.78

9 - Ecology (Eco)

Code Ref:	Item Details:	Points Available	Points Assumed
ECO1 Ecological value of Site	Demonstrate that the build site has low ecological value (very little natural habitat for plants/wildlife). An ecologist needs to confirm that the site or construction zone is low ecological value. Credit assumed.	1.33	1.33
ECO2 Ecological Enhancement	Where a suitably qualified ecologist has been appointed to recommend appropriate ecological features that will positively enhance the ecology of the site. AND Where the developer adopts all key recommendations and 30% of additional recommendations. Credit assumed.	1.33	1.33
ECO3 Protection of Ecological Features	Protection of any ecological features on the site – would get by default if deemed as low ecological value under ECO1. Credit assumed.	1.33	1.33
ECO4 Change in Ecological Value	Changes in ecological value of the site – assumed neutral change to site. 2 Credits assumed.	5.32	2.66
ECO5 Building Footprint	Buildings Net Internal Floor Area: Net Internal Ground Floor Area ratio. For houses, where the net internal floor area: net internal ground floor area ratio is greater than or equal to 2.5:1 0 Credits assumed.	2.66	0
Total Points in this section:		12	6.67

TOTAL POINTS	100	57.65
CODE LEVEL ACHIEVED	3	