HILSON MORAN

24-28 WARNER STREET – CODE FOR SUSTAINABLBE HOMES PRE-ASSESSMENT

FOR KARL & KEVAN WOODHOUSE

Date: 17 March 2011

Issue 1.0

One Discovery Place,
Columbus Drive,
Southwood West, Farnborough,
Hampshire, GU14 0NZ

T: +44 (0)1252 550 500
F: +44 (0)1252 550 501
www.hilsonmoran.com
info@hilsonmoran.com

HILSON MORAN

24-28 WARNER STREET – CODE FOR SUSTAINABLE HOMES PRE-ASSESSMENT

FOR KARL & KEVAN WOODHOUSE

ISSUE STATUS:	Final
DOCUMENT REF:	CFSH report
DATE OF ISSUE:	17th March 2011
REVISION:	1.0
AUTHOR:	Emma Flower
CHECKED BY:	Steve Johnson
APPROVED:	Steve Johnson

Contents

24-28 WARNER STREET – CfSH PRE ASSESSMENT
FOR KARL & KEVAN WOODHOUSE

HILSON MORAN

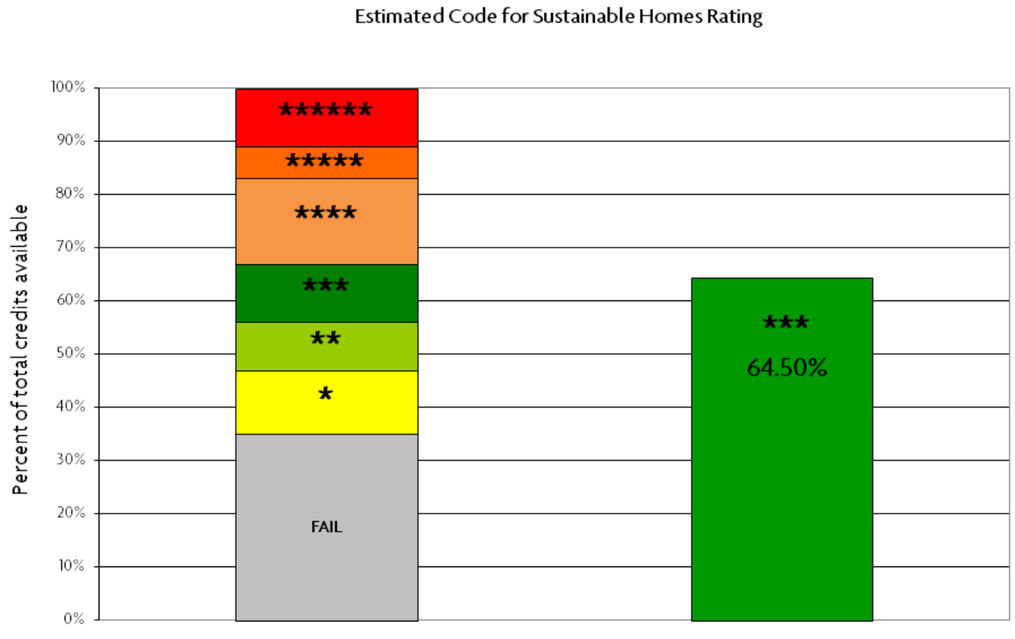
1. EXECUTIVE SUMMARY

Hilson Moran has been commissioned by Karl & Kevan Woodhouse to carry out a Code for Sustainable Homes pre-assessment for the proposed residential apartments at 24-28 Warner Street, London. This report details results of a pre-assessment of these apartments against the November 2010 issue of the Code for Sustainable Homes criteria.

The development is located within the London Borough of Camden. The Pre-Application Meeting Report received following a meeting with Camden Council to discuss the proposals in September 2010 stated:

'Policy DP22 of the LDF is of relevance in a development of this type and scale. You are advised that all new residential schemes will be required to meet with a minimum Level 3 rating (Code for Sustainable Homes) using the appraisal. In addition to this overall target, minimum scores of a least 50% of the available credits should be scored in each of the Energy, Water and Materials sub-categories. An assessment should be submitted as part of any application submission, with a post construction review to be carried out as part of the legal agreement of any approval [S106 agreement].

The prediction indicates that a good **Code Level 3** rating is likely to be achieved. The current predicted score is **64.50%**. The assessor has determined this rating following a prediction meeting held with the design team on 18th February 2011, and will require submission of a full evidence pack for the design stage assessment to take place. The following table sets out the number of credits currently targeted for energy, water and materials.



Issue Category	CfSH Credits					LB of Camden	
	Credits available	Credits Definite	Credits Possible	Credits Difficult		Minimum credits required	Credits targeted
Energy	31	3.8	12.5	14.7		50%	52.58%
Water	6	4	0	2		50%	67%
Materials	24	8	4	12		50%	50%

2. INTRODUCTION

2.1. Background

Launched by the Department for Communities and Local Government (DCLG), the Code for Sustainable Homes is an environmental assessment method for new residential developments in England. It also sets out the standards expected from future improvements to Building Regulations.

The Code for Sustainable Homes replaced EcoHomes for assessments of new homes in England. EcoHomes continues to be used for refurbishment projects in England and for new and refurbished housing in Scotland, Wales and Northern Ireland. The Code guidance is updated on a regular basis, and the latest version, against which these apartments will be assessed, is the November 2010 version.

- The Code was initially introduced on a voluntary basis for the private sector, although many local authorities now have planning requirements for a particular level of the Code to be achieved.
- Since 2008, the Government has required that all new publicly-funded housing meets Level 3 of the Code. The Homes and Communities Agency requires Code level 3 for compliance with Corporations core quality standards.

2.2. Issues

The Code for Sustainable Homes assesses the environmental performance of a housing development by considering the impact in terms of nine categories:

- **Energy/ CO_2**, covering operational energy and transport
- **Water**, covering internal and external water use
- **Materials**, covering the environmental impact of materials and recycling facilities
- **Surface water run-off,** covering impacts from flooding and water pollution
- **Waste,** covering construction waste and recycling
- **Pollution,** covering impacts from air pollution
- **Health and Well-Being,** covering daylighting, noise accessibility and outdoor space
- **Management,** covering Home user guide, Construction impacts and Security
- **Ecology and Land Use**, covering landscaping, biodiversity and density.

The relative urgency of the impact of CO_2 emissions is reflected by the fact that 36.4% of the final points are available from the Energy/ CO_2 category.

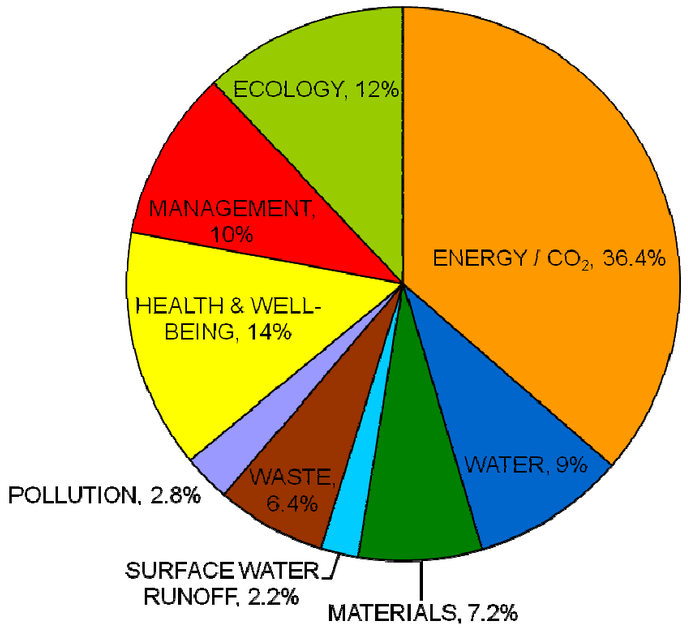
2.3. The Assessment Process

The initial design stage assessment is carried out by awarding points for environmental improvement within each of the categories. A development is assessed in terms of the performance of each Code Dwelling Type, with each individual dwelling awarded a certificate. Each credit awarded must be supported by full evidence in the form of details documented in the design drawings and specification according to the requirements in the technical guidance. As a result an interim Code certificate will be issued recommending a sustainability rating. This will be followed by post-completion checks with a Post Construction report produced to verify the rating before the final Code certificate of compliance is issued.

2.4. Awarding the Rating

The number of points awarded is based on evidence collected from drawings, specifications and other documentation. The total score determines which level of the Code is achieved. For each level of the Code, a minimum number of points must be awarded from the Energy/CO_2 and Water categories, as detailed below.

Level **1** (★)	Total **36** points (min 1.5 from Water)
Level **2** (★★)	Total **48** points (min 1.5 from Water)
Level **3** (★★★)	Total **57** points (min 4.5 from Water)
Level **4** (★★★★)	Total **68** points (min 3.51 from Energy and 4.5 from Water)
Level **5** (★★★★★)	Total **84** points (min 18.72 from Energy and 7.5 from Water)
Level **6** (★★★★★★)	Total **90** points (min 25.89 from Energy and 7.5 from Water, and 4.68 from Health & Wellbeing)



There are a number of minimum standards which must be achieved to be awarded any level of the Code; these cover issues of materials, waste and surface water runoff. Additionally, there are minimum requirements for Energy and Water use, which get progressively harder to achieve as higher Code levels are targeted. A Code rating cannot be awarded unless the relevant minimum standards are achieved. The minimum standards required to achieve Code level 3 are highlighted in the table below.

The development is located within the London Borough of Camden. The Pre-Application Meeting Report received following a meeting with Camden Council to discuss the proposals in September 2010 stated:

'Policy DP22 of the LDF is of relevance in a development of this type and scale. You are advised that all new residential schemes will be required to meet with a minimum Level 3 rating (Code for Sustainable Homes) using the appraisal. In addition to this overall target, minimum scores of a least 50% of the available credits should be scored in each of the Energy, Water and Materials sub-categories. An assessment should be submitted as part of any application submission, with a post construction review to be carried out as part of the legal agreement of any approval [S106 agreement].

Table 1: Code Level and Mandatory Elements

Code Level	**Energy & CO_2 Emissions** Improve-ment on Part L 2010	**Fabric Energy Efficiency**	**Water** Litres per person	**Lifetime Homes**	**Materials** Environmental Impact of materials	**Surface water run-off** Peak rates & annual volumes	**Waste** Household waste storage
1	None	None	120	None	At least 3 key elements to achieve BRE Green Guide 2008 rating of at least D.	To be no greater than previous conditions of the develop-ment site as described above	Adequate accessible storage of household waste as described above
2	None	None	120	None			
3	None	None	105	None			
4	25%	None	105	None			
5	100%	≤39kWh/m^2/yr for flats & mid-terrace ≤46kWh/m^2/yr for end terrace, semi & detached	80	None			
6	Zero Carbon		80	All principals of Lifetime homes applicable must be achieved			

The prediction report takes the form of a matrix showing the number of credits available for each criterion (in the white column) and the likelihood that credits will be awarded to the building are shown in colour coded columns.

- Definite (green column) credits are those that the assessor considers to already form part of the scheme, or for which evidence can easily be supplied.
- Possible (yellow column) credits are those that can be gained by the building, subject to appropriate evidence being supplied. It is possible that this evidence does not yet exist, but to gain the 'Possible' credits does not require significant investment by any design team member beyond that which is normal during the design stages of any project.
- Difficult (orange column) credits are those that the assessor considers to be uncertain for this project, either because they have a cost or design choice attached.

2.5. Purpose

This report will serve to inform Thorne Hiley and the London Borough of Camden of the current predicted CfSH rating for the apartments at 24 – 28 Warner Street, at this stage of the proposed development.

2.6. Scope

This report has been produced to confirm the commitments made by the design team during a preliminary CfSH prediction meeting held between Hilson Moran and the other design team members on 18th February 2011.

2.7. Structure

Following this introductory section, Section 3 will provide a prediction summary for the Warner Street apartments. Section 4 is the Credit responsibility matrix. Document control can be found at the end of the document.

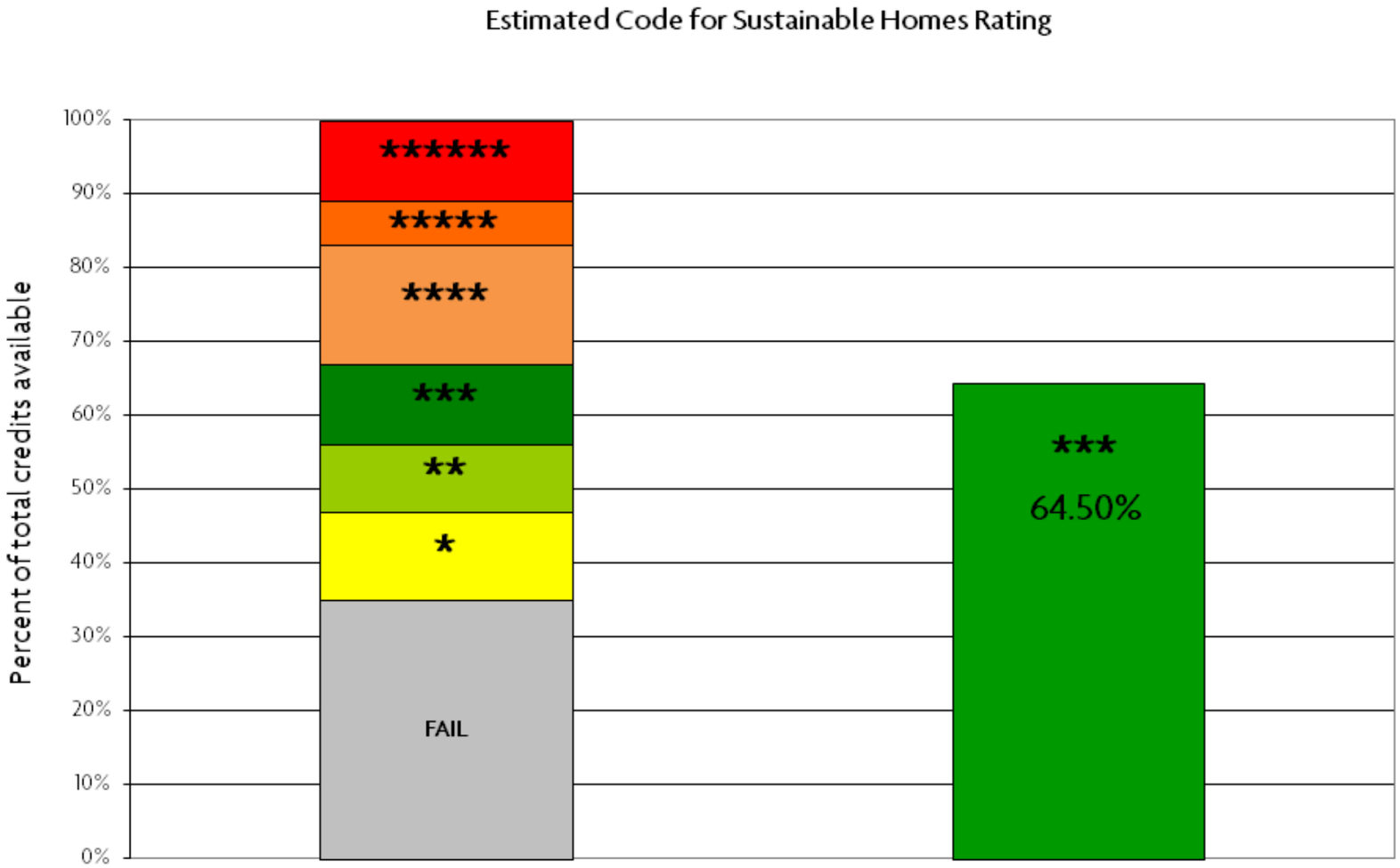
3. CFSH SUMMARY PREDICTION

3.1. Summary for 24-28 Warner Street

The development can expect to secure the "Definite" and "Possible" credits, where supporting evidence is provided to the assessor at the formal assessment meeting. For the purposes of this prediction, the score is given based on the 'Definite' credits, with the 'Possible' credits separated to allow costing. The current prediction is that a good '**Code Level 3'** rating is likely to be achieved (64.50%) at the Warner Street apartments, where evidence is supplied to support the award of CfSH credits. The prediction indicates that all minimum standards will be achieved to meet the Code Level 3 target.

However some elements in this prediction currently stand in the "Possible" and should be targeted to make the desired **Code level 3** rating more secure. Confirmation from the design team that these items can be implemented in the design is required. The following graph shows a breakdown of the "Definite", "Possible" and "Difficult" credits predicted for the Warner Street apartments against the CfSH rating band thresholds

Issue Category	Design & Procurement Credits							LB of Camden	
	Category weighting %	Credits available	Credit Value	Credits Definite	Credits Possible	Credits Difficult		Minimum credits required	Credits targeted
Energy	36.4	31	1.17	3.8	12.5	14.7		50%	52.58%
Water	9.0	6	1.50	4	0	2		50%	67%
Materials	7.2	24	0.30	8	4	12		50%	50%
Surface Water	2.2	4	0.55	0	1	3			
Waste	6.4	8	0.80	3	3	2			
Pollution	2.8	4	0.70	3	1	0			
Health & Wellbeing	14.0	12	1.17	5	4	3			
Management	10.0	9	1.11	7	0	2			
Ecology	12.0	9	1.33	6	1	2			
Totals	100	107		39.8	26.5	40.7			
			Final weighted score	38.97%	64.50%	100%			
			Code Rating	Level 1	Level 3				


Estimated Code for Sustainable Homes Rating
Percent of total credits available
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
******
*****
****
***
**
*
FAIL
***
64.50%

4. CREDIT RESPONSIBILITY MATRIX

				Available	Definite	Possible	Difficult	Responsibility
ENERGY	Ene	1	Dwelling Emission Rate	10	0.8		9.2	Services Engineer / DLG Architects
	Ene	2	Fabric Energy Efficiency	9		6.5	2.5	Services Engineer / DLG Architects
	Ene	3	Energy Display Devices	2		2		Thorne Hiley / Services Engineer
	Ene	4	Drying Space	1		1		DLG Architects
	Ene	5	Energy Labelled White Goods	2	1	1		Thorne Hiley
	Ene	6	External Lighting	2	2			Services Engineer / DLG Architects
	Ene	7	Low & Zero Carbon Technologies	2			2	Services Engineer / DLG Architects / Thorne Hiley
	Ene	8	Cycle Storage	2		1	1	DLG Architects
	Ene	9	Home Office	1		1		DLG Architects
	Total credits			**31**	**3.8**	**12.5**	**14.7**	
WATER	Wat	1	Indoor Water Use *	5	3		2	DLG Architects / Services Engineer
	Wat	2	External Water Use	1	1			DLG Architects /Services Engineer
	Total credits			**6**	**4**	**0**	**2**	
MATERIALS	Mat	1	Environmental Impact of Materials **	15	6		9	DLG Architects
	Mat	2	Responsible Sourcing of Materials: Basic Building Elements	6	2	2	2	DLG Architects / Contractor / Client
	Mat	3	Responsible Sourcing of Materials: Finishing Elements	3		2	1	DLG Architects / Contractor / Client
	Total credits			**24**	**8**	**4**	**12**	
SURFACE WATER	Sur	1	Management of Surface Water Run-off from Developments **	2		1	1	Structural Engineer / Flood Risk Consultant
	Sur	2	Flood risk	2			2	Structural Engineer / Flood Risk Consultant
	Total credits			**4**	**0**	**1**	**3**	

HILSON MORAN

				Available	Definite	Possible	Difficult	Responsibility
WASTE	Was	1	Storage of Non-recyclable Waste and Recyclable Household Waste**	4	2	2		DLG Architects
	Was	2	Construction Site Waste Management	3	1	1	1	Contractor
	Was	3	Composting	1			1	DLG Architects / Client
	Total credits			**8**	**3**	**3**	**2**	
POLLUTION	Pol	1	Global Warming Potential of Insulants	1	1			DLG Architects / Services Engineer
	Pol	2	Nitrous Oxide (NOx) Emissions	3	2	1		Services Engineer
	Total credits			**4**	**3**	**1**	**0**	
HEALTH AND WELLBEING	Hea	1	Daylighting	3		1	2	DLG Architects
	Hea	2	Sound Insulation	4		3	1	DLG Architects
	Hea	3	Private Space	1	1			DLG Architects
	Hea	4	Lifetime Homes	4	4			DLG Architects
	Total credits			**12**	**5**	**4**	**3**	
MANAGEMENT	Man	1	Home User Guide	3	3			DLG Architects / Client
	Man	2	Considerate Constructors Scheme	2	2			Contractor
	Man	3	Construction Site Impacts	2	2			Contractor
	Man	4	Security	2			2	DLG Architects
	Total credits			**9**	**7**	**0**	**2**	
LAND USE AND ECOLOGY	LE	1	Ecological Value of Site	1	1			DLG Architects / Ecologist
	LE	2	Ecological Enhancement	1		1		DLG Architects / Ecologist
	LE	3	Protection of Ecological Features	1	1			Ecologist
	LE	4	Change in Ecological Value of the Site	4	2		2	DLG Architects / Ecologist
	LE	5	Building Footprint	2	2			DLG Architects
	Total credits			**10**	**6**	**1**	**2**	

5. CONCLUSION

If the design team incorporate all of the credits which have been targeted as 'definite' and 'possible' in the above prediction into the scheme design, then the proposed flats at 24-28 Warner Street have the potential to achieve a Code for Sustainable Homes rating of 64.50% which is a secure Code level 3 rating. In addition to this, the above pre-assessment has demonstrated that the flats have the potential to secure half of the credits in each of the Energy, Water and Materials sections as required by Camden Borough Council.

DOCUMENT HISTORY

ISSUE NO	DATE	DETAILS
1.0	17th March 2011	Final issue