URS

3 Fitzroy Square

Design Stage

CSH Report

November 2014

Prepared for:

Mr and Mrs Harley

UNITED KINGDOM & IRELAND

REVISION SCHEDULE

Rev	Date	Details	Prepared by	Reviewed by	Approved by
V1	7th November 2014 47069765	Final	Gill Smith Sustainable Buildings Team Leader	Ben Spence and Tom Sheldrake Senior Sustainable Buildings Consultant	Gill Smith Sustainable Buildings Team Leader

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TABLE OF CONTENTS

1 PLANNING CONSENT

London Borough of Camden granted planning permission 2011/4445/P on 29th February 2012. The decision notice says Full Planning Permission Granted Subject to a Section 106 Legal Agreement, proposals:

> *"Erection of 3 storey mews building to rear (following demolition of existing mews building) including a rear roof terrace at first floor level; excavation at basement level beneath the mews property and courtyard and refurbishment works to the main house (Class C3).*
>
> *Drawing Nos: Site Location Plan; EX1; EX2; EX3; EX4; EX5; EX6; EX7; EX8; EX9; EX10; EX11; LKB09 001; 002; 003; 050; 051; 100A; 101A; 102; 103; 104; 105; 200; 201A; 202A; 302; 303; 901A; 902A; 903; D133388/SL[2]13 P2; SL[2]14 P2; SL[2]15 P2; SL[2]16 P2; Structural Engineering Report D133388 Rev C by URS Scott Wilson; Historic Support Statement by John Martin Robinson dated August 2010; Vibration Survey Report 4242/VIB by RBA Acoustics dated 11/10/10; Proposed Basement Groundworks (Ref: L-STG1820U-002) by Soiltechnics dated 02/11/10;* ***Code for Sustainable Homes pre-assessment by URS Scott Wilson dated July 2011;*** *Schedule of Decoration for Removal by James Gorst Architects dated 10/02/11; Schedule of Condition by James Gorst Architects dated 21/07/10; Servicing Strategy Proposals by URS Scott Wilson dated 01/07/11; Lifetime Homes Statement by James Gorst Architects; Outline Demolition, Construction, Management Plan by James Gorst Architects, PPS5 and Conservation Area Statement by James Gorst Architects".*

2 VALIDATED DOCUMENTS

2.1 Validated CSH pre-assessment

The CSH pre-assessment that was validated with the planning application, and to which the decision notice specifically relates, demonstrates that the consented dwelling can achieve CSH 3 star in the manner set out in Figure 2.1.

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3 Fitzroy Square

11 Summary of credits likely to be achieved

Tables 11.1 shows a summary of how the assessed new build mews is likely to perform under CSH (credits likely to be achieved and points score), based on the evidence provided.

Table 11.1: Assessed New Build Mews

Issue	Credits available	Credits achieved	% credits achieved	Weighting factor	Score
Energy & CO_2	31	10	32.26	0.36	11.74
Water	6	4	66.67	0.09	6.00
Materials	24	11	45.83	0.07	3.30
Surface Water runoff	4	2	50.00	0.02	1.10
Waste	8	7	87.50	0.06	5.60
Pollution	4	4	100.00	0.03	2.80
Health & Well being	12	9	75.00	0.14	10.50
Management	9	9	100.00	0.10	10.00
Ecology	9	5	55.56	0.12	6.67
				Total score	57.71

Figure 2.1: Validated score table demonstrating how CSH 3 star can be achieved for 3 Fitzroy Square

2.2 Validated Servicing Strategy

The Servicing Strategy that was validated with the planning application, and to which the decision notice specifically relates, states:

> *"The Mews development will be assessed under the Code for Sustainable Homes to achieve level 3, which will address energy consumption amongst other considerations. The pre-assessment is being prepared as part of the planning application supporting information".*

3 CONDITIONS

3.1 Condition 7

The development hereby permitted shall be carried out in accordance with the following approved plans:

Site Location Plan; EX1; EX2; EX3; EX4; EX5; EX6; EX7; EX8; EX9; EX10; EX11; LKB09 001; 002; 003; 050; 051; 100A; 101A; 102; 103; 104; 105; 200; 201A; 202A; 302; 303; 901A; 902A; 903; D133388/SL[2]13 P2; SL[2]14 P2; SL[2]15 P2; and SL[2]16 P2.

Reason: For the avoidance of doubt and in the interest of proper planning.

3.2 Condition 8

Condition 8 of the consent reflected the plans, validated CSH and Servicing Strategy and said:

> *"No works on the development shall take place until an initial design stage for Code for Sustainable by an accredited assessor and an accompanying interim certificate stating that the new mews building has been designed to achieve at least a rating of Code level 3*

However it then went onto add:

> *"target credits of 60% in each of the Energy and Water categories and 40% in the Materials and Waste category, has been submitted to, and approved in writing, by the local planning authority.*
>
> *The use of the mews shall not commence until a final Code certificate of compliance and accompanying statement have been submitted to and approved in writing by the local planning authority demonstrating that by reasonable endeavours the target credits have been met".*

The reason for the condition was stated as *"To ensure a sustainable and resource efficient development in accordance with the requirements of policies CS13 and CS16 of the London Borough of Camden Local Development Framework Core*

Strategy and policies DP22, DP23 and DP32 of the London Borough of Camden Local Development Framework Development Policies".

4 POLICIES

4.1 CS13

London Borough of Camden Local Development Framework Core Strategy policy CS13 Tackling climate change through promoting higher environmental standards. Sections relevant to 3 Fitzroy Square:

a) ensuring patterns of land use that minimise the need to travel by car and help support local energy networks;
b) promoting the efficient use of land and buildings;
c) minimising carbon emissions from the redevelopment, construction and occupation of buildings by implementing, in order, all of the elements of the following energy hierarchy:
    1. ensuring developments use less energy,
    2. making use of energy from efficient sources, such as the King's Cross, Gower Street, Bloomsbury and proposed Euston Road decentralised energy networks;
    3. generating renewable energy on-site; and
d) ensuring buildings and spaces are designed to cope with, and minimise the effects of, climate change. The Council will have regard to the cost of installing measures to tackle climate change as well as the cumulative future costs of delaying reductions in carbon dioxide emissions;
e) making sure development incorporates efficient water and foul water infrastructure;
f) requiring development to avoid harm to the water environment, water quality or drainage systems and prevents or mitigates local surface water and downstream flooding; and
g) recognise the impact of poor air quality on health and implement Camden's Air Quality Action Plan which aims to reduce air pollution levels.

4.2 CS16

London Borough of Camden Local Development Framework Core Strategy policy CS16 Improving Camden's health and well-being:

e) recognise the impact of poor air quality on health and implement Camden's Air Quality Action Plan which aims to reduce air pollution levels.

4.3 DP22

London Borough of Camden Local Development Framework Development Policy DP22 Promoting sustainable design and construction Sections relevant to 3 Fitzroy Square:

The Council will promote and measure sustainable design and construction by:

a) expecting new build housing to meet Code for Sustainable Homes Level 3 by 2010 and Code Level 4 by 2013 and encouraging Code Level 6 (zero carbon) by 2016.;

The Council will require development to be resilient to climate change by ensuring schemes include appropriate climate change adaptation measures, such as:

a) summer shading and planting;
b) limiting run-off;
c) reducing water consumption;
d) reducing air pollution; and
e) not locating vulnerable uses in basements in flood-prone areas.

4.4 DP23

London Borough of Camden Local Development Framework Development Policy DP23 Water.

The Council will require developments to reduce their water consumption, the pressure on the combined sewer network and the risk of flooding by:

a) incorporating water efficient features and equipment and capturing, retaining and re-using surface water and grey water on-site;

b) limiting the amount and rate of run-off and waste water entering the combined storm water and sewer network through the methods outlined in part a) and other sustainable urban drainage methods to reduce the risk of flooding;

c) reducing the pressure placed on the combined storm water and sewer network from foul water and surface water run-off, and ensuring developments in the areas identified by the North London Strategic Flood Risk Assessment and shown on Map 2 as being at risk of surface water flooding are designed to cope with the potential flooding;

d) ensuring that developments are assessed for upstream and downstream groundwater flood risks in areas where historic underground streams are known to have been present; and

e) encouraging the provision of attractive and efficient water features.

4.5 DP32

London Borough of Camden Local Development Framework Development Policy DP32 Air quality and Camden's Clear Zone Sections relevant to 3 Fitzroy Square:

- Mitigation measures will be expected in developments that are located in areas of poor air quality.

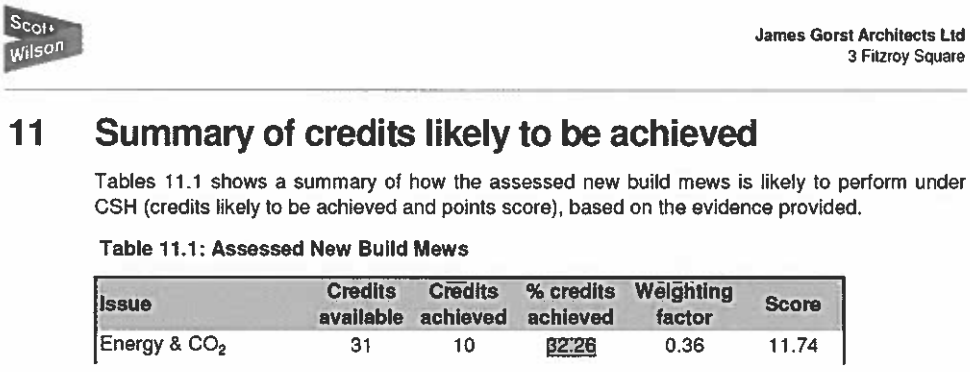
4.6 Conclusion

The CSH pre-assessment as validated with the planning application demonstrated that these policies can be accorded with via the achievement of the scores set out in figure 1.1.

5 ENERGY

3 Fitzroy Square is to be constructed in accordance with the Site Location Plan; EX1; EX2; EX3; EX4; EX5; EX6; EX7; EX8; EX9; EX10; EX11; LKB09 001; 002; 003; 050; 051; 100A; 101A; 102; 103; 104; 105; 200; 201A; 202A; 302; 303; 901A; 902A; 903; D133388/SL[2]13 P2; SL[2]14 P2; SL[2]15 P2; and SL[2]16 P2 as required by Condition 7.

As figure 5.1 shows, the validated CSH pre-assessment demonstrated that an energy points score that equated to 32.26% would be achieved.



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11 Summary of credits likely to be achieved

Tables 11.1 shows a summary of how the assessed new build mews is likely to perform under CSH (credits likely to be achieved and points score), based on the evidence provided.

Table 11.1: Assessed New Build Mews

Issue	Credits available	Credits achieved	% credits achieved	Weighting factor	Score
Energy & CO_2	31	10	32.26	0.36	11.74

Figure 5.1: Validated energy section demonstrating the energy CSH credits that can be achieved

5.1 Ene1

Air permeability relates to the uncontrolled movement of air leaking out of and into a building. Poor air tightness can be responsible for up to 40% of heat loss from buildings. Air leakage is measured as air permeability, which is the quantity of air (in m^3) that leaks into or out of the dwelling per hour, divided by the internal area (in m^2) of the building fabric at pressure of 50 Pascals (Pa). The mandatory requirement for air tightness has been set in the Building Regulations Part L of 10 $m^3/h.m^2$ at 50 Pa.

The design and speciation for the green roof, pitched roof, windows, ground floor and new walls would enable an air permeability of just 4 $m^3/h.m^2$ at 50 Pa to be achieved. However due to the good practice of reusing walls to provide 65% of the total wall area this changes to a cumulative air permeability of 5 $m^3/h.m^2$ at 50 Pa. This is a

significant improvement over a standard house meeting building regulations but does not have sufficient positive impact for CSH to offset the U-values (see section 5.2).

Of the 31 energy credits available:

- 0 of the credits are achieved for CSH 3 star;
- 3 of the credits are achieved for CSH 4 star;
- 9 of the credits are achieved for CSH 5 star; and
- 10 of the credits are achieved for CSH 6 star.

The validated pre-assessment confirmed that CSH 3 star would be achieved and therefore zero of the Ene1 credits.

The air permeability, the enhanced U-values (see section 5.2) and the PV (see section 5.3) has enabled an improvement of 0.6 of a credit to be achieved.

This leaves a residual of 21 credits available to target.

5.2 Ene 2

The U-value is a measurement of how much heat is transferred through a material or element (e.g. a wall, floor or roof). Each material has a heat transfer co-efficient, the higher the coefficient for a particular material, the more rapidly heat can be transferred through that material. Insulation is used to lower U-values, which reduces the amount of heat lost or gained through the building envelope fabric.

Best endeavours have been followed and the green roof and pitched roof U-values have been reduced to 0.15 and the ground floor to 0.18.

As shown on the drawings covered by Condition 7 the existing walls are to be reused. Using the Government's approved calculation methodology, which is called Standard Assessment Procedure (SAP), the U-value for existing walls is determined using the NCM Database which calculates the U-value based on the age of the property. In the case of 3 Fitzroy Square the NCM Data Base says the exceptionally high U-value of 0.8 must be used for the existing walls.

The new walls will achieve a vastly improved U-value of 0.17.

The area of the existing walls is 170m^2 and the new walls 90m^2. The exceptionally high U-value for 65% of the total wall area means the cumulative the notional U-values (as generated by the NCM Data Base) for 3 Fitzroy Square are poor and 0 credits, of the 9 Ene2 credits, as demonstrated in the validated CSH pre-assessment, will be achieved as a result.

This leaves 12 residual energy credits that are available for 3 Fitzroy Square to target.

5.3 Ene 7

The validated CSH pre-assessment stated that 0 of the 2 credits available would be achieved. Work and this best endeavours review have established that the photovoltaic panels can be enhanced and will now generate 2.5 kWp of electricity enabling 1 credit to be achieved.

This leaves 11 residual energy credits that are available for 3 Fitzroy Square to target.

5.4 Ene 3, 4, 5, 6, 8 and 9

Other measures that are being incorporated into 3 Fitzroy Square include:

- heat reclaim ventilation;
- highly efficient condensing gas boiler plant with low NOx output;
- zoned heating controls;
- low energy lighting fittings;
- PIR and daylight lighting control to external lighting; and
- PIR lighting control to internal ancillary spaces where practicable.

Table 4.4 summary of residual 11 energy credits

Credit number	Credits available	Credits achieved within the validated CSH pre-assessment	Credits achieved after best endeavour review	% achieved
Ene 3	2	2	2	100%
Ene 4	1	1	1	100%
Ene 5	2	2	2	100%
Ene 6	2	2	2	100%
Ene 8	2	2	2	100%
Ene 9	1	1	1	100%

The remaining 6 credit topics account for just 11 of the credits available within the energy section of CSH. Of these 100% were being achieved at the validation stage and 100% are still being achieved.

5.5 Conclusion

The validated CSH pre-assessment demonstrated that 32.26% of the energy section CSH credits could be achieved.

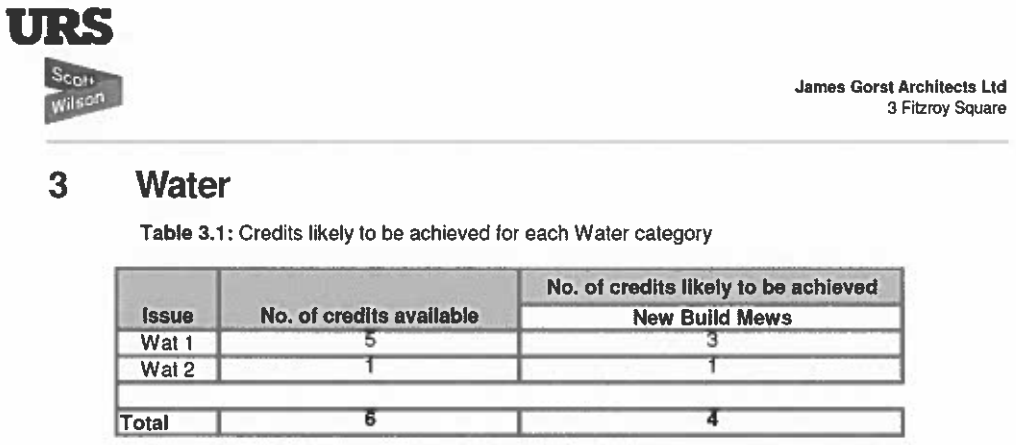
Whilst the notional value issues for reused wall U-value still remain, resulting in 19 credits being unavailable, the best endeavours work and review has enabled a 10% improvement to 37.42% points and of the 13 credits that can be influenced 12/92% have been achieved.

6 WATER

3 Fitzroy Square is to be constructed in accordance with the Site Location Plan; EX1; EX2; EX3; EX4; EX5; EX6; EX7; EX8; EX9; EX10; EX11; LKB09 001; 002; 003; 050; 051; 100A; 101A; 102; 103; 104; 105; 200; 201A; 202A; 302; 303; 901A; 902A; 903; D133388/SL[2]13 P2; SL[2]14 P2; SL[2]15 P2; and SL[2]16 P2 as required by Condition 7.

As figure 6.1 shows the validated CSH pre-assessment demonstrated that a water points score that equated to 66.7% would be achieved.

This includes the mandatory CSH 3 star requirement for the potable water to be reduced to 105 litres per person per day.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3 Water

Table 3.1: Credits likely to be achieved for each Water category

Issue	No. of credits available	No. of credits likely to be achieved
		New Build Mews
Wat 1	5	3
Wat 2	1	1
Total	6	4

Figure 6.1: Validated water section demonstrating the energy CSH credits that can be achieved

The best endeavours work and review have confirmed that these credits can still be achieved.

6.1 Conclusion

The validated CHS pre-assessment and CSH certificate demonstrated that 66.7% of the water section CSH credits could be achieved. This accords fully with CSH 3 star as required by condition 8, the mandatory CSH potable water requirements and surpasses the best endeavours target contained within condition 8.

7 MATERIALS

3 Fitzroy Square is to be constructed in accordance with the Site Location Plan; EX1; EX2; EX3; EX4; EX5; EX6; EX7; EX8; EX9; EX10; EX11; LKB09 001; 002; 003; 050; 051; 100A; 101A; 102; 103; 104; 105; 200; 201A; 202A; 302; 303; 901A; 902A; 903; D133388/SL[2]13 P2; SL[2]14 P2; SL[2]15 P2; and SL[2]16 P2 as required by Condition 7.

As figure 7.1 shows the validated CSH pre-assessment demonstrated that the materials points score that equated to 45.8%.

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4 Materials

Table 4.1: Credits likely to be achieved for each Materials category

Issue	No. of credits available	No. of credits likely to be achieved
		New Build Mews
Mat 1	15	7
Mat 2	6	3
Mat 3	3	1
Total	24	11

Figure 7.1: Validated materials section demonstrating the materials CSH credits that can be achieved

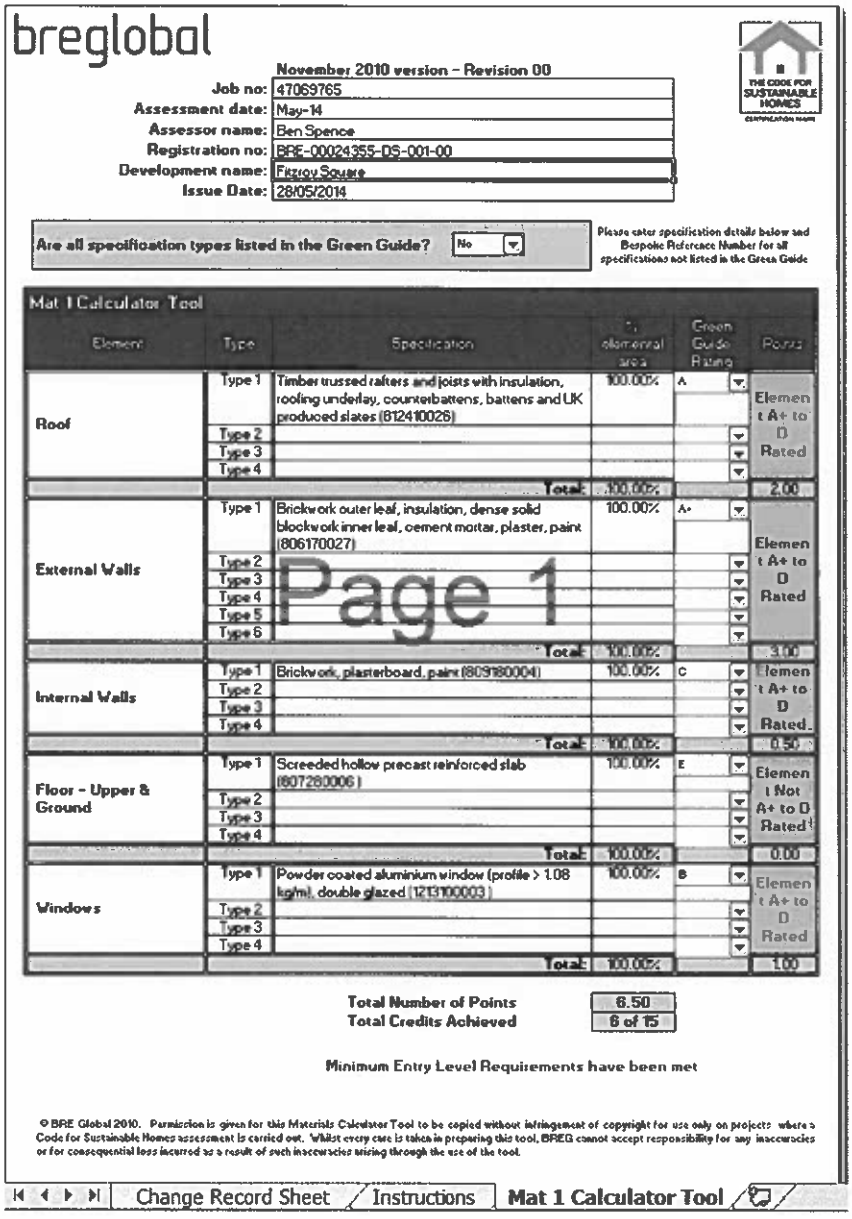
7.1 Mat 1

65% of the walls will be reused. This represents best environmental practice as it reduces the volume of materials required and the impact on resources and impacts from manufacturing and transportation.

A green roof will be provided which represents best environmental practice as it provides habitation and reduces run off from precipitation.

There is a large amount of information that has to be gathered, checked and verified for each and every CSH assessment. There often comes a point where only one or

two small details are outstanding and a pragmatic approach needs to be taken in order that the project remains on track. This was the case for the ground floor and a worst case was therefore used. The results are shown in the CSH materials calculator figure 7.1a.



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November 2010 version - Revision 00

Job no:	47069765
Assessment date:	May-14
Assessor name:	Ben Spence
Registration no:	BRE-00024355-DS-001-00
Development name:	Fitzroy Square
Issue Date:	28/05/2014

Are all specification types listed in the Green Guide? No

Please enter specification details below and Bespoke Reference Number for all specifications not listed in the Green Guide

Mat 1 Calculator Tool

Element	Type	Specification	% elemental area	Green Guide Rating	Points
Roof	Type 1	Timber trussed rafters and joists with insulation, roofing underlay, counterbattens, battens and UK produced slates (812410026)	100.00%	A	Element A+ to D Rated
	Type 2				
	Type 3				
	Type 4				
		Total:	100.00%		2.00
External Walls	Type 1	Brickwork outer leaf, insulation, dense solid blockwork inner leaf, cement mortar, plaster, paint (806170027)	100.00%	A+	Element A+ to D Rated
	Type 2				
	Type 3				
	Type 4				
	Type 5				
	Type 6				
		Total:	100.00%		3.00
Internal Walls	Type 1	Brickwork, plasterboard, paint (809180004)	100.00%	C	Element A+ to D Rated
	Type 2				
	Type 3				
	Type 4				
		Total:	100.00%		0.50
Floor - Upper & Ground	Type 1	Screeded hollow precast reinforced slab (807280006)	100.00%	E	Element Not A+ to D Rated
	Type 2				
	Type 3				
	Type 4				
		Total:	100.00%		0.00
Windows	Type 1	Powder coated aluminium window (profile > 1.08 kg/m), double glazed (121310003)	100.00%	B	Element A+ to D Rated
	Type 2				
	Type 3				
	Type 4				
		Total:	100.00%		1.00

Page 1

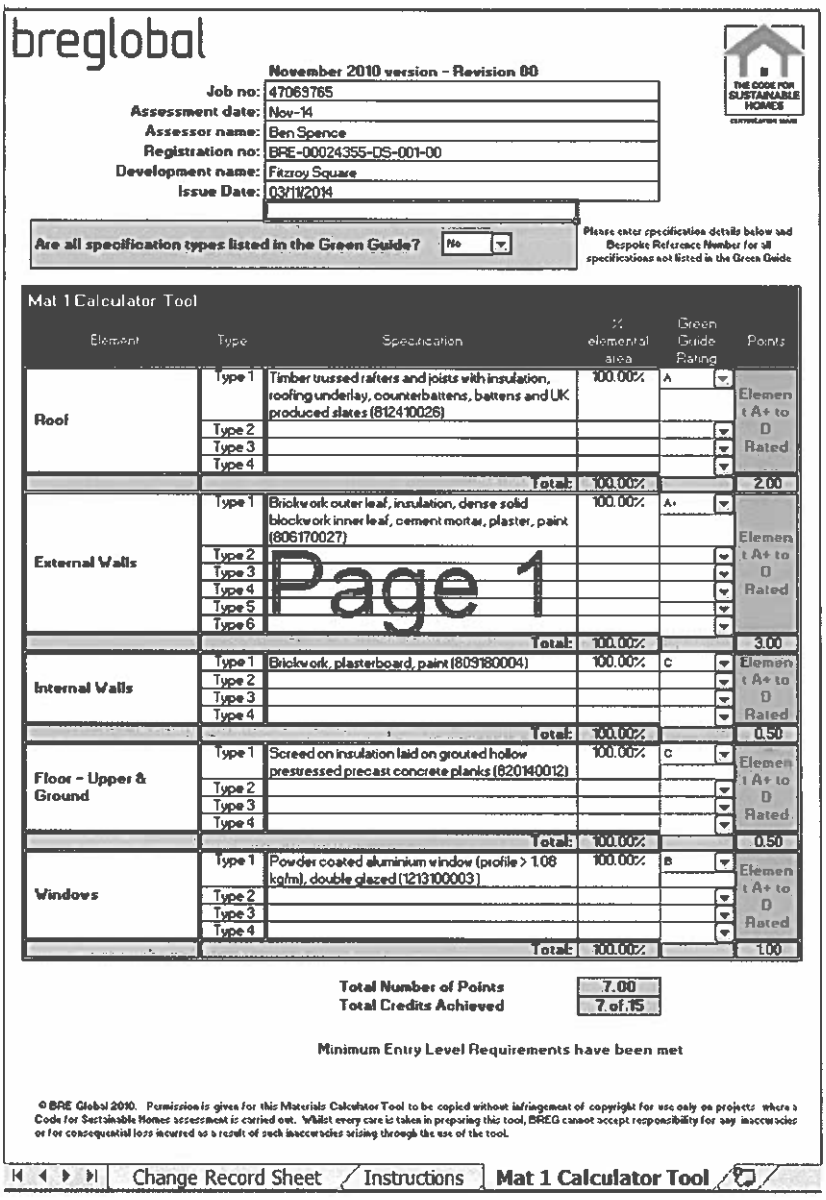
Total Number of Points	6.50
Total Credits Achieved	6 of 15

Minimum Entry Level Requirements have been met

Change Record Sheet | Instructions | Mat 1 Calculator Tool

Figure 7.1a CSH materials calculator without the precise ground floor specification

This information is now available and the CSH materials calculator has therefore been rerun. As the results in figure 7.1b shown this confirms that the final certificate will achieve the same 7 credits as at the validated CSH stage.



breglobal

November 2010 version - Revision 00

Job no:	47069765
Assessment date:	Nov-14
Assessor name:	Ben Spence
Registration no:	BRE-00024355-DS-001-00
Development name:	Fitzroy Square
Issue Date:	03/11/2014

Are all specification types listed in the Green Guide? No

Please enter specification details below and Bespoke Reference Number for all specifications not listed in the Green Guide

Mat 1 Calculator Tool

Element	Type	Specification	% elemental area	Green Guide Rating	Points
Roof	Type 1	Timber trussed rafters and joists with insulation, roofing underlay, counterbattens, battens and UK produced slates (812410026)	100.00%	A	Element A+ to D Rated
	Type 2				
	Type 3				
	Type 4				
		Total:	100.00%		2.00
External Walls	Type 1	Brickwork outer leaf, insulation, dense solid blockwork inner leaf, cement mortar, plaster, paint (806170027)	100.00%	A+	Element A+ to D Rated
	Type 2				
	Type 3				
	Type 4				
	Type 5				
	Type 6				
		Total:	100.00%		3.00
Internal Walls	Type 1	Brickwork, plasterboard, paint (809180004)	100.00%	C	Element A+ to D Rated
	Type 2				
	Type 3				
	Type 4				
		Total:	100.00%		0.50
Floor - Upper & Ground	Type 1	Screed on insulation laid on grouted hollow prestressed precast concrete planks (820140012)	100.00%	C	Element A+ to D Rated
	Type 2				
	Type 3				
	Type 4				
		Total:	100.00%		0.50
Windows	Type 1	Powder coated aluminium window (profile > 1.08 kg/m), double glazed (1213100003)	100.00%	B	Element A+ to D Rated
	Type 2				
	Type 3				
	Type 4				
		Total:	100.00%		1.00

Page 1

Total Number of Points 7.00
Total Credits Achieved 7 of 15

Minimum Entry Level Requirements have been met

Change Record Sheet | Instructions | Mat 1 Calculator Tool

Figure 7.1b CSH materials calculator with the precise ground floor specification

7.2 Mat 2 and 3

Credits are awarded where 80% of the materials are responsibly sourced and 100% of timber is legally sourced. The following elements are assessed:

- Frame;
- Ground floor;

- Upper floors (including separating floors);
- Roof (structure and cladding, including any loft boarding);
- External walls (including external cladding);
- Internal walls (including internal partitions and separating walls);
- Foundation/ substructure; and
- Staircase (includes the tread, rises and stringers).

Credits are dependent on procuring materials from suppliers that have certification (for timber) or an Environmental Management System (EMS). Materials that account for less than 10% by volume of an element are excluded. For each of the elements listed above, the following materials are taken into account:

- Brick (including clay tiles);
- Composites;
- Concrete (including blocks, tiles etc);
- Glass;
- Plastics;
- Metals (steel, aluminium etc.);
- Stone;
- Timber; and
- Plasterboard.

Suppliers of the applicable elements have been identified and they are able to provide the certification at the time of delivery of the materials. These certificates will be submitted with the final CSH assessment and the credits for Mat 2 and Mat 3 will be added to the certification score at that point.

7.3 Conclusion

The materials and the procurement of the materials will enable the final CSH certificate to demonstrate that more than 40% of the available CSH material credits have been achieved.

This accords fully with CSH 3 star as required by condition 8 and will surpass the best endeavours target contained within condition 8.

8 WASTE

3 Fitzroy Square is to be constructed in accordance with the Site Location Plan; EX1; EX2; EX3; EX4; EX5; EX6; EX7; EX8; EX9; EX10; EX11; LKB09 001; 002; 003; 050; 051; 100A; 101A; 102; 103; 104; 105; 200; 201A; 202A; 302; 303; 901A; 902A; 903; D133388/SL[2]13 P2; SL[2]14 P2; SL[2]15 P2; and SL[2]16 P2 as required by Condition 7.

As figure 8.1 shows the validated CSH pre-assessment demonstrated that the waste points score that equated to 87.5%.

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3 Fitzroy Square

6 Waste

Table 6.1: Credits likely to be achieved for each Waste category

Issue	No. of credits available	No. of credits likely to be achieved
		New build Mews
Was 1	4	4
Was 2	3	2
Was 3	1	1
Total	8	7

Figure 8.1: Validated waste section demonstrating the waste CSH credits that can be achieved

The best endeavours work and review has enabled Was 2 to achieve an additional credit as ways have been identified to increase the amount of waste diverted from landfill from over 50% to over 85%.

Table 8.1: summary of waste credits

Credit number	Credits available	Credits achieved within the validated CSH pre-assessment	Credits achieved after best endeavour review	% achieved
Was1	4	4	4	100%
Was2	3	2	3	100%
Was3	1	1	1	100%

8.1 Conclusion

The CSH certificate demonstrated that 100% of the waste section CSH credits could be achieved. This accords fully with CSH 3 star as required by condition 8, the mandatory CSH waste requirements and surpasses the best endeavours target contained within condition 8.

9 CSH INTERIM ASSESSMENT AND CERTIFICATE

The CSH Design Stage (Interim) Report and certificate confirm that all of the mandatory requirements a score of 58 have been achieved for 3 Fitzroy Square. A copy of the certificate is contained in Appendix A.

100% of the CSH pollution credits have been achieved.

77% of the Management and 77% of the Ecology credits have been achieved.

66% of the Health and Wellbeing credits have been achieved.

50% of the Surface Water credits have been achieved.

10 CSH ASSESSORS QUALIFICATIONS

The validated CSH pre-assessment was produced by:

- Rich Knight, Commercial Sustainability Consultant;
- Ben Spence, Senior Commercial, Sustainability Consultant; and
- Gill Smith, Commercial Sustainability Team Leader.

Rich, Ben and Gill are all fully qualified and licensed Code for Sustainable Homes Assessors.

The design stage (interim) report and certificate have been produced by

- Ben Spence and Tom Sheldrake, Senior Sustainable Buildings Consultant;
- Gill Smith Sustainable Buildings Team Leader.

Tom, Ben and Gill are all fully qualified and licensed Code for Sustainable Homes Assessors and Tom and Gill are also On Construction Domestic Energy (SAP) Assessors.

11 CONCLUSION

The CSH Design Stage (Interim) Report and certificate confirm that all of the mandatory requirements and a score of 58 have been achieved for 3 Fitzroy Square. This accords fully with the pre-commencement on site component of Condition 8 which says:

> *"No works on the development shall take place until an initial design stage for Code for Sustainable by an accredited assessor and an accompanying interim certificate stating that the new mews building has been designed to achieve at least a rating of Code level 3"*

It also demonstrates that reasonable endeavours have been used to:

> *"target credits of 60% in each of the Energy and Water categories and 40% in the Materials and Waste category".*

This design stage report and certificate are therefore suitable to be submitted to the London Borough of Camden for them to approve in writing that the design stage component of condition 8 has been satisfied and hence works on the development can therefore commence.

The Main Contractor, Mr and Mrs Harley and the Project Manager are fully aware of all of the CSH requirements and need to obtain the materials responsible sourcing certificates. URS has been appointed to continue providing CSH advice and guidance, to produce the final CSH Report and to submit the information to obtain the final CSH certificate.

The final CSH Report and certificate will be submitted to the London Borough of Camden once complete.

APPENDIX A

Code for Sustainable Homes Certificate

THE CODE FOR SUSTAINABLE HOMES

INTERIM CERTIFICATE
(Issued at Design Stage)

THE CODE FOR SUSTAINABLE HOMES
CERTIFICATION MARK

ISSUED TO:

3 Fitzroy Square,
London,
Greater London, W1T 5HG

The sustainability of this home has been independently assessed at the Design Stage and has achieved a Code rating of 3 out of 6 stars under the November 2010 version.

★ ★ ★ ☆ ☆ ☆

Above Regulatory Standards

Current Best Practice

Highly Sustainable and Zero Carbon

The next page sets out how this home achieved its rating in the nine categories.

Licensed Assessor **Ben Spence**	Assessor Organisation **URS Infrastructure & Environment UK Limited**
Client **Phil & Linda Harley**	Developer **Phil & Linda Harley**
Architect **James Gorst Architects**	Certificate Number **BRE-00024355-DS-001-00-0001**
Date **09 June 2014**	Signed for and on behalf of BRE Global Ltd

Communities and Local Government

breglobal

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Certificate Number: BRE-00024355-DS-001-00-0001 **Score: 58**

What Your Code Star Rating Means

Combined Score	36-47	48-56	57-67	68-83	84-89	90-100
Stars	1	2	3	4	5	6

The Code for Sustainable Homes considers the effects on the environment caused by the development and occupation of a home. To achieve a star rating, a home must perform better than a new home built to the minimum legal standards, and much better than an average existing home.

How this home scored

Category		Percentage of Category Score attained (10 20 30 40 50 60 70 80 90 100)	What is covered in the category
Energy	37		Energy efficiency and CO_2 saving measures
Water	66		Internal and external water saving measures
Materials	25		The sourcing and environmental impact of materials used to build the home
Surface Water Run-off	50		Measures to reduce the risk of flooding and surface water run-off which can pollute rivers
Waste	100		Storage for recyclable waste and compost, and care taken to reduce, reuse and recycle construction materials
Pollution	100		The use of insulation materials and heating systems that do not add to global warming
Health & Wellbeing	66		Provision of good daylight quality, sound insulation, private space, accessibility, and adaptability
Management	77		A Home User Guide, designing in security, and reducing the impact of construction
Ecology	77		Protection and enhancement of the ecology of the area and efficient use of building land

Further detailed information regarding The Code for Sustainable Homes can be found at www.communities.gov.uk/thecode

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The methodology adopted and the sources of information used by URS in providing its services are outlined in this Report. The work described in this Report was undertaken between 2011 and November 2014 and is based on the conditions encountered and the information available during the said period of time. The scope of this Report and the services are accordingly factually limited by these circumstances.

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