

THE OLD VINYL FACTORY – MATERIAL STORE

CODE FOR SUSTAINABLE HOMES AND BREEAM REPORT

IN RELATION TO CONDITION 19

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1 INTRODUCTION

This document has been prepared in order to discharge Condition 19 of the London Borough of Hillingdon's planning permission for The Old Vinyl Factory site, Blyth Road in Hayes (Application Reference 59872/APP/2013/3775).

This document presents the current performance under the Code for Sustainable Homes November 2010 assessment and BREEAM New Construction 2014 assessment to demonstrate that the scheme is on course to achieve Level 4 and Very Good ratings respectively, as required by Condition 19.

CONDITION 19

Unless otherwise agreed in writing by the Local Planning Authority, prior to the commencement of each phase of development plans and details of each building within the relevant phase shall be submitted to the Local Planning Authority for approval in writing. The plans and details shall demonstrate that each residential building will achieve a minimum standard of Code for Sustainable Homes Level 4 and each non-residential building achieving BREEAM 'Very Good'.

The development must be completed in accordance with the approved details and the applicant shall ensure that completion stage certificates have been attained and provided to the Council within 3 months of the first operation of the CHP Unit or within 3 months of completion of the phase, whichever is later.

REASON

To ensure that the objectives of sustainable development in accordance with policies 5.1 and 5.3 of the London Plan (July 2011).

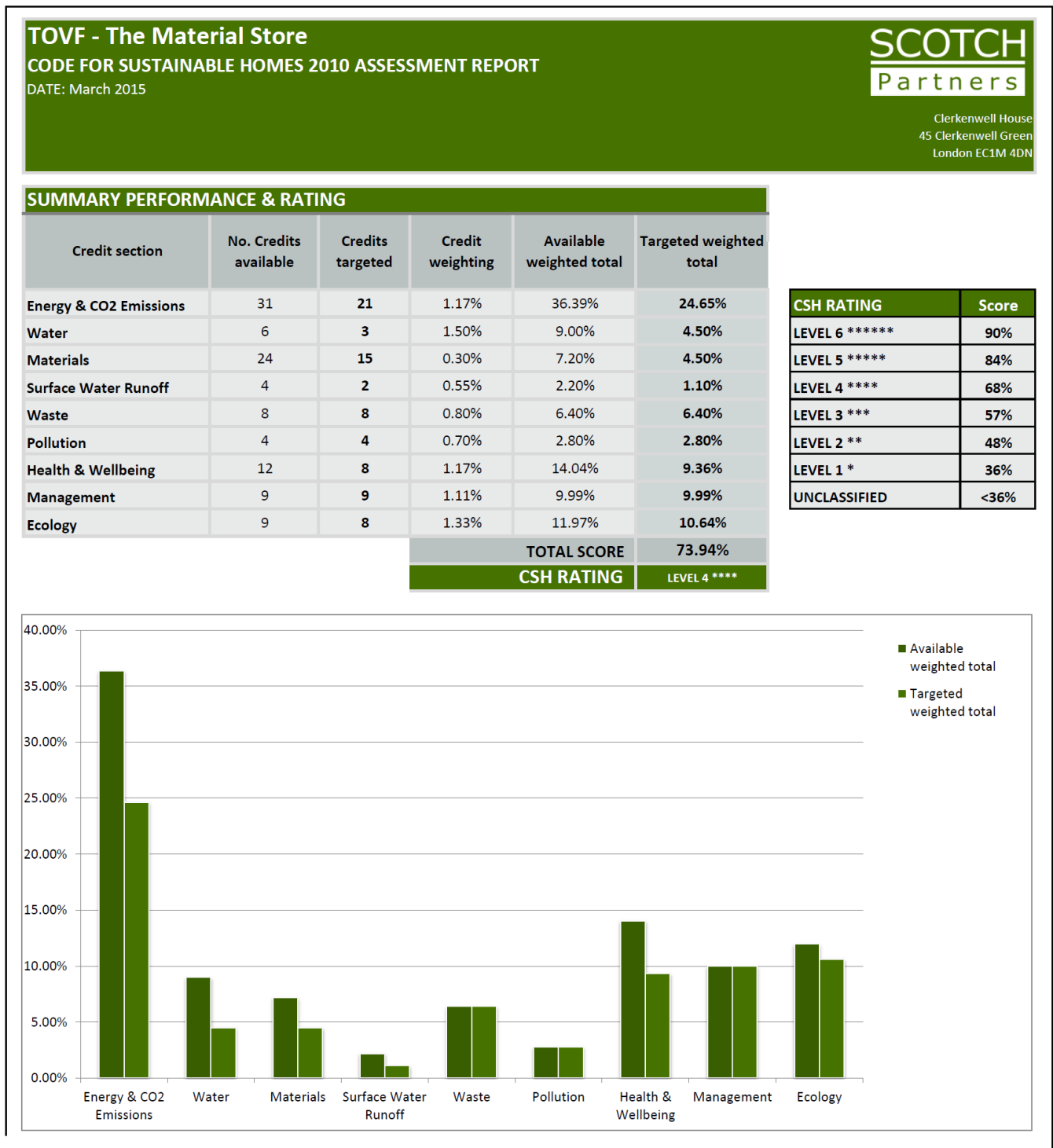
The following sections provide an overview of the current Code for Sustainable Homes (CSH) and BREEAM assessment spreadsheets for the Material Store development.

The Design Stage assessments and Post Construction Reviews are to be carried out by Scotch Partners who are independent, licensed CSH and BREEAM assessor.

2 CODE FOR SUSTAINABLE HOMES ASSESSMENT

2.1 PERFORMANCE SUMMARY

The image below provides an overview of the current performance under the Code for Sustainable Homes assessment.



2.2 DETAILS OF TARGETED CREDITS

It is important to note that at this stage the assessment is not fixed and some credits may be replaced by others whilst the detailed design progresses. However, the overall aspiration for a Level 4 rating will be achieved as required by Condition 19.

DETAILED PRE-ASSESSMENT REPORT				Mandatory credits a
1. ENERGY & CO ₂ Emissions	Credits Available	Credit Criteria	Targeted Credits	
1.17%				
Ene 01 Dwelling emission rate	10	% improvement DER/TER: 1 credit ≥ 8% 2 credits ≥ 16% 3 credits ≥ 25% (Level 4) 4 credits ≥ 36% 5 credits ≥ 47% 6 credits ≥ 59% 7 credits ≥ 72% 8 credits ≥ 85% 9 credits ≥ 100% (Level 5) 10 credits Zero net emissions (Level 6)	3	
Ene 02 Fabric energy efficiency	9	FEE kWh/m ² /year (apartments, mid-terrace) 3 credits ≤ 48 4 credits ≤ 45 5 credits ≤ 43 6 credits ≤ 41 7 credits ≤ 39 (Levels 5 & 6) 8 credits ≤ 35 9 credits ≤ 32	6	
Ene 03 Energy display devices	2	1 credit - Electricity OR primary heating fuel 2 credits - Electricity AND primary heating fuel (2 credits - Electricity is primary heating fuel)	2	
Ene 04 Drying space	1	1-2 beds = 4m+ drying line 3+ beds = 6m+ drying line	1	
Ene 05 Energy labelled white goods	2	1 credit - A+ rated fridges/freezers 1 credit - A rated washing machines & dishwashers plus B rated dryers or info to dwelling OR 1 credit - Info to dwelling only	2	
Ene 06 External lighting	2	1 credit - Energy efficient space lighting & controls Plus 1 credit - Energy efficient security lighting & controls	2	
Ene 07 Low & Zero Carbon Technologies	2	1 credit - 10% CO ₂ emissions reduction Or 2 credits -15% CO ₂ emissions reduction	2	
Ene 08 Cycle storage	2	1 credit: 1 bed - 1no spaces for every 2no dwellings 2 & 3 bed - 1no space per dwelling 4 bed - 2no spaces per dwelling 2 credits: 1 bed - 1no spaces per dwelling 2 & 3 bed - 2no spaces per dwelling 4 bed - 4no spaces per dwelling	2	
Ene 09 Home office	1	1.8m in a suitable room, plus adequate ventilation and 1.5% daylighting	1	
Energy Section Credit Total	31		21	
Weighted Total	36.39%		24.65%	
2. WATER	Credits Available	Credit Criteria	Targeted Credits	
1.50%				

Wat 01	Indoor water use	5	1 credit ≥ 120 l/p/d (Levels 1 & 2) 2 credits ≥ 110 l/p/d 3 credits ≥ 105 l/p/d (Levels 3 & 4) 4 credits ≥ 90 l/p/d 5 credits ≥ 80 l/p/d (Levels 5 & 6)	3
Wat 02	External water use	1	System to collect and reuse water for external use	0
Water Section Credit Total		6		3
Weighted Total		9.00%		4.50%
3. MATERIALS		Credits Available	Credit Criteria	Targeted Credits
0.30%				
Mat 01	Environmental impact of materials	15	A+ to D rated materials in the Green Guide for at least 3No of the following: - roof, - external walls, - internal walls, - upper and ground floors, - windows.	8
Mat 02	Responsible sourcing - basic building elements	6	80% of assessed materials in building elements are responsibly sourced, plus 100% timber	5
Mat 03	Responsible sourcing - finishing elements	3	80% of assessed materials in finishing elements are responsibly sourced, plus 100% timber	2
Materials Section Credit Total		24		15
Weighted Total		7.20%		4.50%
4. SURFACE WATER RUNOFF		Credits Available	Credit Criteria	Targeted Credits
0.55%				
Sur 01	Management of SWR from developments	0	Hydraulic controls criteria: No increase in peak runoff rate and volume runoff rate, plus design for local drainage failure	~
		2	Water quality criteria: 1 credit - No discharge for rainfall up to 5mm And 1 credit - Treatment of runoff to minimise pollution	0
Sur 02	Flood risk	2	1 credit - Zone 2 or 3 plus at least 600mm above design flood level Or 2 credits - Zone 1	2
SWR Section Credit Total		4		2
Weighted Total		2.20%		1.10%
5. WASTE		Credits Available	Credit Criteria	Targeted Credits
0.80%				
Was 01	Storage of non-recyclable and recyclable household waste	0	Household (apply IDP Checklist) : Adequate, inclusive external storage space (larger volume of either BS5906 requirements or LA-provided container).	~
		4	Recyclable (apply IDP Checklist) : 2 credits - Internal storage where no external storage, no LA collection and 60l capacity provided Or 4 credits - Internal storage to support LA recycling collection scheme (30l - single or multiple bins)	4
		1	Minimising construction waste: Targets for resource efficiency; procedures for minimising construction waste; monitoring, measuring & reporting.	1

Was 02	Construction site waste management	2	Diverting waste from landfill: Achieve the above plus procedures to sort and divert waste to achieve either: <i>1+1 credits</i> - 50% by weight or volume (non-haz) <i>1+2 credits</i> - 85% by weight or volume (non haz)	2
Was 03	Composting	1	Individual composter, or community scheme, or LA collection	1
Waste Section Credit Total		8		8
Weighted Total		6.40%		6.40%
6. POLLUTION		Credits Available	Credit Criteria	Targeted Credits
0.70%				
Pol 01	Global warming potential (GWP)	1	Roofs, walls, floors, external walls and building services to have insulation using substances with GWP <5 (manufacture and installation)	1
Pol 02	Nitrous Oxide (NOx) emissions	3	Dry Nox level (mg/kWh): <i>1 credit</i> - ≤ 100 <i>2 credits</i> - ≤ 70 <i>3 credits</i> - ≤ 40	3
Pollution Section Credit Total		4		4
Weighted Total		2.80%		2.80%
7. HEALTH & WELLBEING		Credits Available	Credit Criteria	Targeted Credits
1.17%				
Hea 01	Daylighting	3	Average daylight factor: <i>1 credit</i> - Kitchens 2% <i>1 credit</i> - Living & dining, studies, home office 1.5% <i>1 credit</i> - 80% working plane direct light from sky	0
Hea 02	Sound insulation	4	Airborne and impact sound insulation values improvement over Part E: <i>1 credit</i> - 3dB <i>3 credits</i> - 5dB <i>4 credits</i> - 8dB Or Use of construction assessed as Robust Details to the standards above. <i>(Default: 4 credits - detached dwellinas)</i>	3
Hea 03	Private space	1	Inclusive private (1.5sqm/bed) or semi-private (1sqm/bed) outdoor space. Accessible only to intended occupants	1
Hea 04	Lifetime Homes	4	Compliance with all principles of Lifetime Homes. <i>Unless exemption of criteria 2 and/or 3 applies (awarded 3 credits)</i>	4
Health & Wellbeing Section Credit Total		12		8
Weighted Total		14.04%		9.36%
8. MANAGEMENT		Credits Available	Credit Criteria	Targeted Credits
1.1%				
Man 01	Home user guide	3	<i>2 credits</i> - Checklist Man 1, Part 1. Available in alternative formats. Plus <i>1 credit</i> - Additional info on the site & surroundings	3
Man 02	Considerate Constructors Scheme	2	<i>1 credit</i> - Score ≥5 in every section, total score 24 - 34 <i>2 credits</i> - Score ≥7 in every section, total score 35 - 50	2
Man 03	Construction site impacts	2	<i>1 credit</i> - 2 or more items <i>2 credits</i> - 4 or more items	2
Man 04	Security	2	Consult ALO/CPDA at design stage and incorporate recommendations. Plus compliance with SBD Section 2 <i>Physical Security</i>	2

Management Section Credit Total	9		9
Weighted Total	10.00%		10.00%
9. ECOLOGY	Credits Available	Credit Criteria	Targeted Credits
1.33%			
Eco 01 Ecological value of site	1	Site is confirmed as land of low ecological value	1
Eco 02 Ecological enhancements	1	Suitably qualified ecologist + report. Adopt all key recommendations and 30% of additional recommendations.	1
Eco 03 Protection of ecological features	1	Eco features and maintained and protected	1
Eco 04 Change in ecological value	4	Species per hectare change: <i>1 credit</i> -9 and ≤ -3 <i>2 credits</i> -3 and ≤ +3 <i>3 credits</i> 3 and ≤ 9 <i>4 credits</i> +9	3
Eco 05 Building footprint	2	Ratio of net internal floor area:net internal ground floor area <i>1 credit:</i> Houses - ≥ 2.5:1 Apartments - ≥ 3:1 <i>2 credits:</i> Houses - ≥ 3:1 Apartments - > 4:1	2
Ecology Section Credit Total	9		8
Weighted Total	11.97%		10.64%
TOTAL PRE-ASSESSMENT WEIGHTED SCORE			73.95%
CODE FOR SUSTAINABLE HOMES RATING			Level 4

3 BREEAM ASSESSMENT

3.1 PERFORMANCE SUMMARY

The image below provides an overview of the current performance under the BREEAM New Construction 2014 assessment.

TOVF - MATERIAL STORE PROGRESS REPORT

BREEAM 2014 NEW CONSTRUCTION

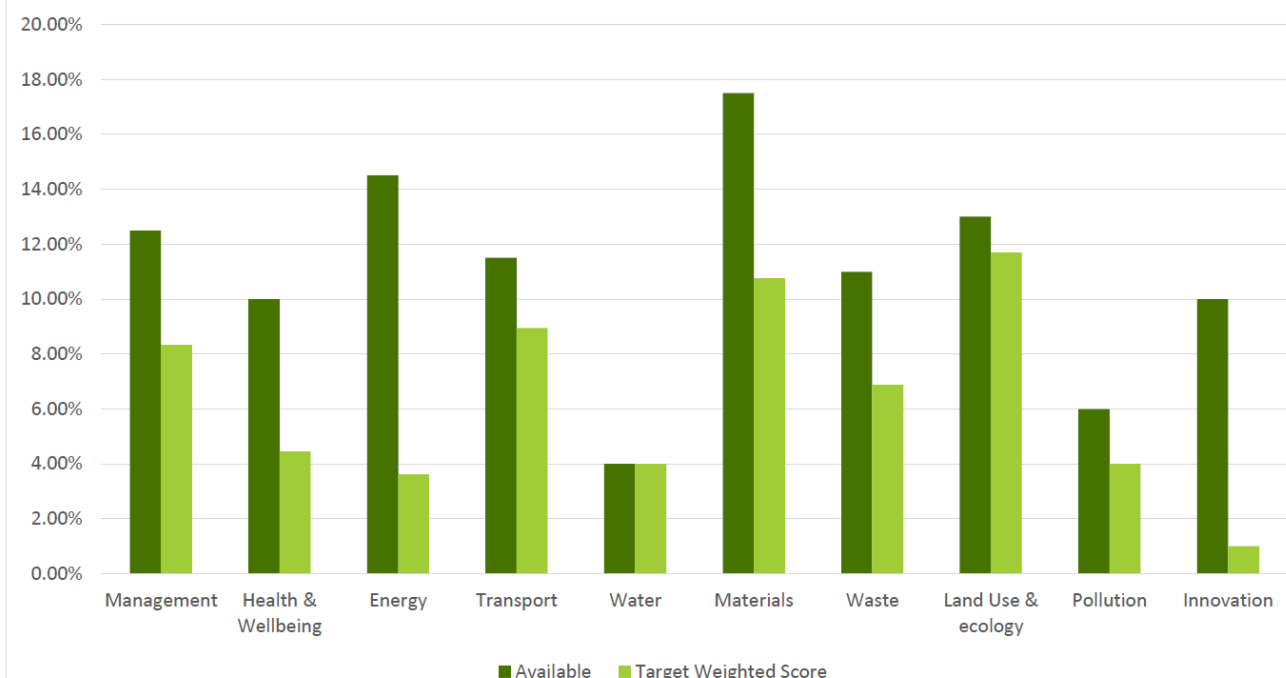
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SUMMARY OF PERFORMANCE & RATING

Assessment Section	Credits Available	Section Weighting	Credit Value	Credits Targeted	Target Weighted Score
Management	15	12.50%	0.83%	10	8.33%
Health & Wellbeing	9	10.00%	1.11%	4	4.44%
Energy	16	14.50%	0.91%	4	3.63%
Transport	9	11.50%	1.28%	7	8.94%
Water	2	4.00%	2.00%	2	4.00%
Materials	13	17.50%	1.35%	8	10.77%
Waste	8	11.00%	1.38%	5	6.88%
Land Use & ecology	10	13.00%	1.30%	9	11.70%
Pollution	6	6.00%	1.00%	4	4.00%
Innovation	10	10.00%	1.00%	1	1.00%
Expected BREEAM Score					63.69%
Expected BREEAM Rating					Very Good

BREEAM Rating	% Score
Outstanding	85
Excellent	70
Very Good	55
Good	45
Pass	30
Unclassified	<30

Summary of Performance Against BREEAM 2014 New Construction Shell Retail Criteria



3.2 DETAILS OF TARGETED CREDITS

It is important to note that at this stage the assessment is not fixed and some credits may be replaced by others whilst the detailed design progresses. However, the overall aspiration for a Very Good rating will be achieved as per Condition 19.

TOVF - MATERIAL STORE PROGRESS REPORT			12th March 2015
BREEAM 2014 NEW CONSTRUCTION			63.69%
Credit	Available	Criteria Summary	Baseline
MANAGEMENT - 0.83% credit weighting			
Man01.1	1	Stakeholder Consultation (Project Delivery)	1
Man01.2	1	Stakeholder Consultation (Third Party)	0
Man01.3	1	Sustainability Champion (Design)	1
Man01.4	1	Sustainability Champion (Monitoring Progress)	1
Man02.1	2	Elemental/Strategic Life Cycle Cost Assessment	0
Man02.2	1	Component Level LCC Plan	0
Man02.3	1	Capital Cost Reporting	1
Man03.0	0	Responsible Sourcing of Site Timber	Yes
Man03.1	1	Environmental Management	1
Man03.2	1	Sustainability Champion (Construction Monitoring)	1
Man03.3	2	Considerate Construction	2
Man03.EX	1	Considerate Construction Exemplary Practice	1
Man03.4	1	Monitoring of Construction Site Impacts - Energy & Water Consumption	1
Man03.5	1	Monitoring of Construction Site Impacts - Transportation	1
Man04.1	N/A	Commissioning , Testing Schedule & Responsibilities	N/A
Man04.2	N/A	Commissioning Building Services	N/A
Man04.3	1	Testing & Inspection of Building Fabric	0
Man04.0	N/A	Building User Guide	N/A
Man04.4	N/A	Handover	N/A
Man05.1	N/A	Aftercare Support	N/A
Man05.2	N/A	Seasonal Commissioning	N/A
Man05.3	N/A	Post Occupancy Evaluation	N/A
Man05.EX	N/A	Aftercare Support - Exemplary Performance	N/A
15			Total Credits 10

TOVF - MATERIAL STORE PROGRESS REPORT			12th March 2015
BREEAM 2014 NEW CONSTRUCTION			63.69%
Credit	Available	Criteria Summary	Baseline
HEALTH & WELLBEING -1.11% credit rating			
Hea01.1	1	Glare Control	1
Hea01.2	2	Daylighting	0
Hea01.2EX	1	Daylighting - Exemplary Performance	0
Hea01.3	1	View Out	1
Hea02.5	1	Adaptability - Potential for Natural Ventilation	0
Hea04.1	1	Thermal Modelling	0
Hea05.2	1	Indoor Ambient Noise Levels	1
Hea06.1	1	Safe Access	0
Hea06.2	1	Security of Site & Building	1
9			Total Credits 4

TOVF - MATERIAL STORE PROGRESS REPORT

12th March 2015

BREEAM 2014 NEW CONSTRUCTION

63.69%

Credit	Available	Criteria Summary	Baseline
ENERGY - 0.91% credit weighting			
Ene01	12	Energy Performance	3
Ene01EX	5	Zero Regulated Carbon & Carbon Negative Buildings	0
Ene03	1	Energy Efficient External Lighting	1
Ene04.1	1	Passive Design Analysis (requires Hea 04 to be achieved)	0
Ene04.2	1	Free Cooling	0
Ene04.3	1	LZC Feasibility Study	0
16		Total Credits	4

TOVF - MATERIAL STORE PROGRESS REPORT

12th March 2015

BREEAM 2014 NEW CONSTRUCTION

63.69%

Credit	Available	Criteria Summary	Baseline
TRANSPORT - 1.28% credit weighting			
Tra01	5	Proximity and frequency of public transport services.	5
Tra02	1	Compliant amenities within the required distance.	1
Tra03.1	1	Cycle Storage	0
Tra03.2	1	Cyclist Facilities	0
Tra05	1	Travel Plan	1
9		Total Credits	7

TOVF - MATERIAL STORE PROGRESS REPORT

12th March 2015

BREEAM 2014 NEW CONSTRUCTION

63.69%

Credit	Available	Criteria Summary	Baseline
WATER - 2.00% credit weighting			
Wat02.0	Required	Main Supply Water Meter	Yes
Wat03.1	1	Leak Detection System	1
Wat04	1	Water efficient equipment	1
2		Total Credits	2

TOVF - MATERIAL STORE PROGRESS REPORT

12th March 2015

BREEAM 2014 NEW CONSTRUCTION

63.69%

Credit	Available	Criteria Summary	Baseline
MATERIALS - 1.35% credit rating			
Mat01	5	Life cycle impacts of main building elements	3
Mat01.EX1	1	Exemplary Performance - Green Guide Elemental Approach	0
Mat01.EX2	2	Exemplary Performance - IMPACT Analysis	0
Mat02	1	Hard landscaping and boundary protection - A or A+ rated materials only	1
Mat03.0	Required	Legally Sourced Timber	Yes
Mat03.1	1	Sustainable Procurement Plan	1
Mat03.2	3	Responsible Sourcing of Materials	1
Mat03.EX	1	Exemplary Performance - Responsible Sourcing	0
Mat04	1	Embodied impact - insulation index	1
Mat05.1	1	Protecting Vulnerable & Exposed Areas/Building Parts	1
Mat06	1	Material Efficiency	0
13		Total Credits	8

TOVF - MATERIAL STORE PROGRESS REPORT

12th March 2015

BREEAM 2014 NEW CONSTRUCTION

63.69%

Credit	Available	Criteria Summary	Baseline
WASTE - 1.38% credit weighting			
Wst01.1	3	Construction Resource Efficiency	2
Wst01.2	1	Diversion from landfill	1
Wst01.1EX	1	Construction Resource Efficiency - Exemplary Performance	0
Wst02	1	Use of recycled aggregates	0
Wst02EX	1	Recycled aggregates - Exemplary Performance	0
Wst03	1	Provision of compliant recyclable waste storage facilities.	1
Wst05	1	Adaptation to Climate Change - Structural & Fabric Resilience	0
Wst06	1	Functional Adaptability	1
	8	Total Credits	5

TOVF - MATERIAL STORE PROGRESS REPORT

12th March 2015

BREEAM 2014 NEW CONSTRUCTION

63.69%

Credit	Available	Criteria Summary	Baseline
LAND USE & ECOLOGY - 1.30% credit weighting			
LE01.1	1	Previously Occupied Land	1
LE01.2	1	Contaminated Land	0
LE02.1	1	Ecological Value of The Site	1
LE02.2	1	Protection of Ecological Features	1
LE03.1	1	No negative change in ecological value	1
LE03.2	1	Minimising negative change in ecological value.	1
LE04.1	1	SQE report & recommendations.	1
LE04.2	1	Increase in ecological value.	1
LE05.1	1	Mandatory + 2 additional measures	1
LE05.2	1	Mandatory + 4 additional measures	1
	10	Total Credits	9

TOVF - MATERIAL STORE PROGRESS REPORT

12th March 2015

BREEAM 2014 NEW CONSTRUCTION

63.69%

Credit	Available	Criteria Summary	Baseline
POLLUTION - 1.00% credit weight		Credit Weighting	
Pol03.1	2	Flood Resilience/Flood Risk	2
Pol03.2	1	Attenuation of Surface Water Run-off	1
Pol03.3	1	Resilience to Local Drainage Failure & further attenuation	0
Pol03.4	1	Minimising Watercourse Pollution	0
Pol04	1	Reduction of night time light pollution	1
	6	Total Credits	4
INNOVATION/EXEMPLARY PERFORMANCE - 1.00% credit rating			
	10	Exemplary Performance Credits	1
		Approved Innovation Credits	0
	10	Total Credits	1
		Expected BREEAM Score	63.69%
		Expected BREEAM Rating	Very Good

4 CONCLUSION

In order to comply with Condition 19, the Material Store is seeking to achieve a Level 4 rating under the Code for Sustainable Homes (CSH) November 2010 version, and a Very Good rating under BREEAM New Construction 2014.

The latest CSH and BREEAM assessment spreadsheets for the development indicate that the project is on track to achieve these target ratings.

A design Stage assessment will be carried out to determine the interim performance against CSH and BREEAM, which will be followed by a Post Construction Review and formal certification. The final CSH and BREEAM certificates indicating a Level 4 and Very Good rating will be provided to the Council within 3 months prior to either the first operation of the CHP unit or completion of the phase.

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