

Method Consulting

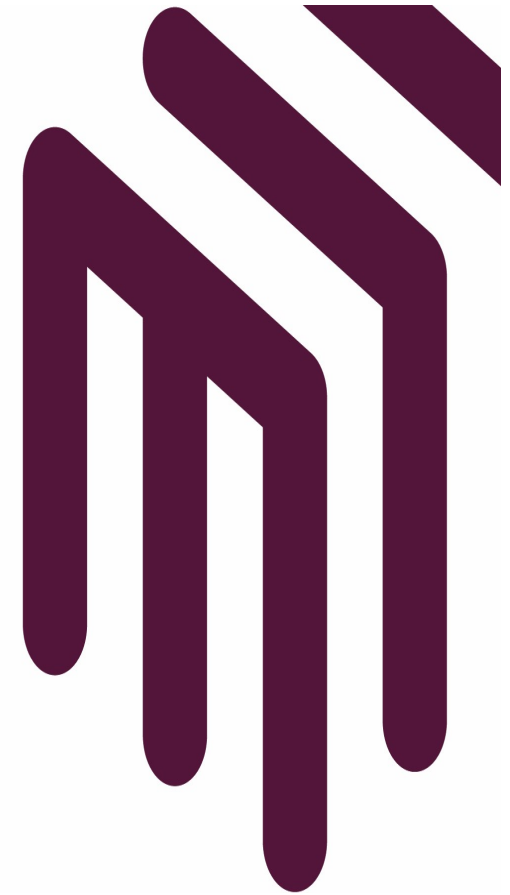
Intelligent engineering,
sustainable buildings

1 Wadham Gardens, London (HA.WG.NW3)

BREEAM Design Stage Pre-Assessment

Domestic Refurbishment 2014 Issue 2.2

Revision P3, 15 December 2021 – Planning Issue



Partnered with
energist

BREEAM Assessments • BREEAM AP • SKA • WELL • Post Occupancy Evaluation • IMPACT LCA • Energy and Sustainability Statements • Home Quality Mark • SAP & SBEM, EPCs • DREAM • Passivhaus

1 Wadham Gardens, London

BREEAM Domestic Refurbishment

Pre-Assessment Summary Sheet

Revision P3, 15 December 2021 - Planning Issue

Based on the BREEAM Domestic Refurbishment 2014 Technical Manual version 2.2 published 29/02/2016.

MINIMUM RATING REQUIRED: Excellent. This equates to a score of 70% and requires the achievement of certain mandatory credits.

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| Baseline Target | This column shows the minimum credits anticipated to be achieved for the development. This column gives a score of 76.82% which is a BREEAM rating of Excellent . |
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Note that the scores shown are target scores only at this stage; gaining these scores in the final BREEAM assessment will depend on the project team submitting sufficient evidence to the BREEAM Assessor to show that the full credit requirements have been met (as outlined in the BREEAM Domestic Refurbishment Technical Manual).

| Credit | CREDITS | | Summary of Requirements (refer to the BREEAM Domestic Refurbishment Technical Manual for the full credit requirements) | Comments/ Actions | |
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| | Credits Available | Baseline Target | | | |
| MANAGEMENT | | | | | |
| Man 01 | Home Users Guide | 3 | 3 | Three credits awarded where a Home User Guide has been produced and supplied to all homes. Refer to the BREEAM Technical Manual which details the contents that must be provided. | A Home Users Guide will be produced to achieve these credits. Three of three credits targeted. |
| Man 02 | Responsible Construction Practices | 2 | 2 | Where the principal contractor has used an independently assessed 'compliant' organisational, local or national considerate construction scheme. One credit awarded where a CCS score of 25-34 is achieved with 5 in each section. The second credit is awarded where the score is between 35-39 with 7 in each section. An additional innovation credit is available - see below. | The Contractor will be required to register the site with the Considerate Constructors Scheme and to achieve a score of at least 35 with 7 in each section to gain two credits. Two of two credits targeted. |
| Man 03 | Construction Site Impacts | 1 | 1 | One credit awarded where there are procedures that cover two of the following, in line with Checklist A4 Large Scale Projects: setting objectives for reducing energy and water use during construction, responsible sourcing of timber, main contractor has an environmental materials statement, main contractor has an EMS | The Contractor will be required to implement at least two of the relevant procedures to enable this credit to be achieved. Credit targeted. |

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| Man 04 | Security | 2 | 1 | <p>One credit is awarded where all retained external doors and windows comply with certain minimum security requirements and new external doors and windows are certified to PAS 24:2012 or LPS1175 Issue 7 Security Rating 1. Refer to the BREEAM Technical Manual for details of the minimum security requirements.</p> <p>Two credits are awarded where <i>Section 2 - Physical Security</i> from 'Secured by Design New Homes' is complied with and an Architectural Liaison Officer (ALO) or Crime Prevention Design Advisor (CPDA) from the local police force is consulted at design stage and their recommendations are incorporated into the refurbishment specification (note an actual Secured by Design certificate is not required).</p> | <p>Existing doors and windows meet the minimum security requirements and any new external doors and windows will be specified to comply with relevant standards.</p> <p>One of two credits targeted.</p> |
| Man 05 | Protection and Enhancement of Ecological Features | 1 | 1 | <p>One credit is awarded where a site survey has been carried out by a member of the project team or a suitably qualified ecologist to determine the presence of ecological features. Where protected species are present on site, the relevant Statutory Nature Conservation Organisation must be notified and the species adequately protected. All existing features of ecological value (including trees, hedges, ponds, watercourses, wetland areas, Protected Species, Local Priority UK BAP species, roosting opportunities for bats and birds, heathland and heather) on the refurbishment site are maintained and adequately protected during refurbishment works.</p> <p>An additional innovation credit is available - see below.</p> | <p>An arboriculturalist has carried out a survey, and the proposals do not include removal of any trees. The Contractor will be required to ensure that any protection measures required are implemented in full.</p> <p>Credit targeted.</p> |
| Man 06 | Project Management | 2 | 2 | <p>One credit is awarded where all of the project team are involved in the project decision making and individual and shared roles and responsibilities are assigned as follows:</p> <ul style="list-style-type: none"> - small scale projects: PM produces a project implementation plan and holds a meeting to assign individual and shared responsibilities including all trades on site. - large scale projects: PM assigns individual and shared responsibilities across the key design and refurbishment stages. <p>One credit is awarded where a handover meeting is arranged and there is a commitment to undertake at least 2 of the following: site inspection within 3 months of occupation; post occupancy interviews/survey with occupants within 3 months; longer term aftercare for at least 12 months after occupation.</p> <p>Two additional innovation credits are available - see below.</p> | <p>PM will assign individual and shared responsibilities across the key design and refurbishment stages; and compliant handover and aftercare arrangements will be put in place.</p> <p>Two of two credits targeted.</p> |
| Sub-Total | | 11 | 10 | One management credit equals 1.09% | |
| Weighted Sub-Total | | 12.0 | 10.90 | | |
| HEALTH AND WELLBEING | | | | | |
| Hea 01 | Daylighting | 2 | 1 | <p>One credit is awarded where an assessment of daylighting is made using Checklist A7 which demonstrates that there is a neutral impact on daylighting levels in the kitchen, living room, dining room and study OR, for extensions, the new spaces achieve minimum daylighting levels and the extension does not reduce light levels in neighbouring properties.</p> <p>Two credits are awarded where, in addition to the above, the dwelling achieves the minimum daylighting levels in the kitchen, living room, dining room and study, as demonstrated via calculations.</p> <p>Refer to the Technical Manual for details of the minimum daylighting criteria.</p> | <p>There will likely be a neutral impact on daylighting levels in all relevant spaces (i.e. kitchens, living rooms, dining rooms and studies) of all apartments. As the basement extension only includes bedrooms and bathrooms, these do not need to comply with the criteria.</p> <p>Current layouts suggest the second credit may be achievable, but a daylighting specialist will need to undertake daylighting calculations to confirm feasibility of this credit.</p> <p>One credit targeted.</p> |

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| Hea 02 | Sound Insulation | 4 | 2 | <p>Credits awarded where it is demonstrated that the requirements of National Regulations are met or exceeded as follows: 2 credits - compliance; 3 credits - airborne sound insulation values are at least 3dB higher; 4 credits - airborne sound insulation values are at least 5dB higher.</p> <p>Pre-completion testing by a Suitably Qualified Acoustician may be required to demonstrate compliance in some instances, and credits may be achievable by default in certain instances - see BREEAM Technical Manual for details.</p> | <p>A minimum of two credits are targeted at this stage based on compliance with Building Regulations being achieved. Potential to achieve a third credit will be reviewed as the design progresses.</p> <p>At least two of four credits targeted.</p> |
| Hea 03 | Volatile Organic Compounds | 1 | 1 | <p>Credit awarded where all decorative paints and varnishes meet the requirements in Table 14. In addition, at least five of the remaining eight categories meet the testing requirements and emission levels for VOC emissions against the relevant standards.</p> | <p>All relevant materials will be procured in line with the requirements of this credit.</p> <p>Credit targeted.</p> |
| Hea 04 | Inclusive Design | 2 | 0 | <p>Up to two credits are awarded where an access expert or suitably qualified member of the team has completed sections 1 and 2 of Checklist A8; Access Statement Template and inclusivity measures are implemented in the refurbishment. The statement must demonstrate that reasonable provision for accessibility to the dwelling has been made.</p> <p>An additional innovation credit is available - see below.</p> | <p>Due to the restrictions of the existing building layout and design it will not be possible to achieve either of these credits.</p> <p>Credits not targeted.</p> |
| Hea 05 | Ventilation | 2 | 1 | <p>One credit awarded where the dwelling meets the following standards: minimum level of background ventilation (via trickle ventilation or equivalent means) for all habitable rooms, kitchens, utility rooms and bathrooms, compliant with Section 7 of Building Regulations Part F; minimum level of extract ventilation in wet rooms which comply with Section 5 of Building Regulations Part F; minimum level of purge ventilation in all habitable rooms and wet rooms, compliant with Section 7 of Building Regulations Part F.</p> <p>Two credits are awarded for full compliance with the requirements of Section 5 of the Building Regulations Part F.</p> <p>Mandatory minimum: One credit for Pass, Good, Very Good, Excellent and Outstanding.</p> | <p>The first credit will be targeted as a minimum based on compliance with Building Regulations for extract and purge ventilation. The second credit will be reviewed as the design progresses.</p> <p>At least one of two credits targeted.</p> |
| Hea 06 | Safety | 1 | 1 | <p>One credit awarded where a compliant fire detection and alarm system is provided and, in dwellings that use gas or other fossil fuels, a compliant carbon monoxide detector and alarm system in addition to this. These should be derived from the main electricity supply to the dwelling where the project involves electrical re-wiring. If not, the alarms should be powered from a battery supply.</p> <p>Mandatory minimum: One credit for Pass, Good, Very Good, Excellent and Outstanding.</p> | <p>A compliant detection and alarm systems will be installed to achieve this mandatory credit.</p> <p>Credit targeted.</p> |
| Sub-Total | | 12 | 6 | One health and wellbeing credit equals 1.42% | |
| Weighted Sub-Total | | 17.0 | 8.50 | | |
| ENERGY | | | | | |
| Ene 01 | Improvement in Energy Efficiency Rating | 6 | 3 | <p>Up to six credits are awarded on a sliding scale depending on the improvement in the Energy Efficiency Rating (EER), over the pre-refurbishment EER as determined from the EPC or full SAP calculations. Refer to the BREEAM Technical Manual for details of the levels of improvement needed to achieve a certain number of credits.</p> | <p>Full SAP worksheets (produced 06.12.21) indicate a post-refurbishment improvement in the EER of 27 (area weighted average across all flats), equivalent to 3 credits. This is attributed to improvements in the building's thermal performance as well as energy efficient lighting.</p> <p>Three of six credits targeted.</p> |

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| Ene 02 | Energy Efficiency Rating Post Refurbishment | 4 | 3.5 | <p>Up to four credits are awarded where, as a result of the refurbishment, the dwelling meets a minimum Energy Efficiency Rating. Refer to the BREEAM Technical Manual for details of the EER levels required to achieve a certain number of credits.</p> <p>Mandatory minimum: 0.5 credits for Pass, 1 credits for Good, 2 credits for Very Good, 2.5 credits for Excellent and 3.5 credits for Outstanding.</p> | <p>Interim/ predicted EPCs and Full SAP worksheets (produced 06.12.21) indicate an EER of 80 (area weighted average) post-refurbishment, equivalent to 3.5 credits.</p> <p>Three and a half of four credits targeted.</p> |
| Ene 03 | Primary Energy Demand | 7 | 7 | <p>Up to seven credits are awarded where, as a result of the refurbishment, the dwelling meets the Primary Energy Demand targets (kWh/m²/year). Refer to the BREEAM Technical Manual for details of Post Refurbishment Primary Energy Demand required to achieve a certain number of credits.</p> | <p>Interim/ design stage Full SAP worksheets (produced 06.12.21) indicate an average primary energy demand post refurbishment of ≤ 120kWh/m²/year, equivalent to 7 credits.</p> <p>Seven of seven credits targeted.</p> |
| Ene 04 | Renewable Technologies | 2 | 0 | <p>One credit awarded where at least 10% of the dwellings Primary Energy Demand per annum is supplied by low or zero carbon technologies and where the dwelling has reduced energy demand prior to the specification of LZC technologies with a Primary Energy Demand of 250kWh/m²/year for detached, semi-detached, bungalows and end terraces or 220kWh/m²/year for mid terraces and flats.</p> <p>Two credits where at least 20% of the Primary Energy Demand per annum is supplied by LZC technologies (15% for mid/high rise flats) in addition to reductions in energy demand.</p> | <p>Given site size restrictions and the location within a Conservation area, there is limited scope for the specification of LZCs to enable these credits to be achieved.</p> <p>Credits not targeted.</p> |
| Ene 05 | Energy Labelled White Goods | 2 | 2 | <p>One credit is awarded if fridges, freezers and fridge/freezers with an E rating or better under the new EU Energy Efficiency Labelling Scheme (updated 01/03/21) are specified</p> <p>OR where no white goods are provided information on the EU Energy Efficiency Labelling Scheme is provided to each dwelling.</p> <p>One credit is awarded where washing machines have a B rating or better and dishwashers have an D rating or better under the new EU Energy Efficiency Labelling Scheme (updated 01/03/21)</p> <p>AND EITHER washer dryers have a D rating or better under the new EU Energy Efficiency Labelling Scheme and tumble dryers have an A rating or better under the old EU Energy Efficiency Labelling Scheme.</p> <p>OR if no washer dryer or tumble dryer is provided, information on the EU Energy Efficiency Labelling Scheme is provided to each dwelling.</p> | <p>Two credits will be achieved via the provision of energy efficient equipment.</p> <p>Two of two credits targeted.</p> |
| Ene 06 | Drying Space | 1 | 1 | <p>One credit is awarded where secure drying space is provided in a compliant external or internal space. Drying equipment must be capable of holding 4m+ of drying line for one/two bed dwellings, or 6m+ of drying line for three+ bed dwellings.</p> | <p>Each apartment will be provided with a drying line either internally or externally depending on the availability of a compliant space.</p> <p>Credit targeted.</p> |
| Ene 07 | Lighting | 2 | 2 | <p>One credit is awarded where all space lighting, including lighting in common areas, and security lighting is provided by energy efficient fittings or where energy efficient space lighting is provided but no security lighting.</p> <p>One credit is awarded where the energy required for internal lighting is minimised through the provision of a maximum average wattage across the total floor area of the dwelling of 9W/m².</p> | <p>New LED lighting is to be installed throughout. In addition, a maximum average wattage of 9W/m² will be targeted.</p> <p>Two of two credits targeted.</p> |
| Ene 08 | Energy Display Devices | 2 | 2 | <p>One credit is awarded where either current electricity or primary heating fuel consumption data is displayed to occupants by a compliant energy display device.</p> <p>Two credits are awarded where both electricity and primary heating fuel consumption data are displayed.</p> <p>An additional innovation credit is available - see below.</p> | <p>A fully compliant device will be installed to each apartment to achieve these two credits as well as the exemplary level criteria, in addition to the credit available for a water use display device.</p> <p>Two of two credits targeted.</p> |

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| Ene 09 | Cycle Storage | 2 | 1 | <p>One credit is awarded where compliant cycle storage is provided as follows:</p> <ul style="list-style-type: none"> - Studios/one bedroom dwellings - 1 cycle per 2 dwellings - Two/three bedroom dwellings - 1 cycle per dwelling - Four+ bedroom dwellings - 2 cycles per dwelling <p>Two credits are awarded where the following is provided:</p> <ul style="list-style-type: none"> - Studios/one bedroom dwellings - 1 cycle per dwelling - Two/three bedroom dwellings - 2 cycles per dwelling - Four+ bedroom dwellings - 4 cycles per dwelling <p>Refer to the Technical Manual for details of compliant cycle storage.</p> | <p>Communal storage for 7 cycles will be provided in a shed externally, with provision of tool storage also included. Site restrictions prevent provision of 12 storage spaces to achieve the second credit.</p> <p>One of two credits targeted.</p> |
| Ene 10 | Home Office | 1 | 1 | <p>One credit is awarded where sufficient space and services are provided (including a minimum wall length of 1.8m) to allow for a desk and filing cabinet or bookshelf to be installed by the occupant. The location must have 2 double power sockets, telephone point, a window and adequate ventilation.</p> | <p>All apartments will have provision of a home office area in an appropriate location (Apts 4 & 6 in the living/dining area; Apts 1-3 & 5 within Bedroom 2 or 3).</p> <p>Credit targeted.</p> |
| Sub-Total | | 29 | 22.5 | One energy credit equals 1.48% | |
| Weighted Sub-Total | | 43.0 | 33.36 | | |
| WATER | | | | | |
| Wat 01 | Internal Water Use | 3 | 2.5 | <p>Up to three credits are awarded depending on the water usage predicted using the BREEAM Domestic Refurbishment Wat 1 Calculator. Low water usage WCs, taps, showers, dishwashers, washing machines, smaller shaped baths and rainwater or greywater recycling systems will need to be considered.</p> <p>An additional innovation credit is available - see below.</p> <p>Mandatory minimum: 1 credit for Very Good, 2 credits for Excellent, 3 credits for Outstanding.</p> | <p>At least 2.5 credits will be targeted to meet a maximum water consumption limit of 105l/p/d.</p> <p>Two and a half out of three credits targeted.</p> |
| Wat 02 | External Water Use | 1 | 1 | <p>One credit is awarded where a compliant rainwater system to collect rainwater for external/internal irrigation (such as a rainwater butt) is provided to dwellings with a garden, patio or communal garden space. Credit awarded by default if no individual or communal garden spaces are specified or if only balconies are provided.</p> | <p>Water butts will be installed to those apartments with an external garden area to achieve this credit.</p> <p>Credit targeted.</p> |
| Wat 03 | Water meter | 1 | 1 | <p>One credit is awarded where an appropriate water meter for measuring usage of mains potable water is provided to dwellings. The meter should have a visible display of consumption, be a permanent feature in a visible location, capable of recording and displaying historic water use and current consumption either instantaneously or at half hourly intervals.</p> | <p>A compliant water meter display device will be installed to achieve this and all credits under Ene 08.</p> <p>Credit targeted.</p> |
| Sub-Total | | 5 | 4.5 | One water credit equals 2.2% | |
| Weighted Sub-Total | | 11.0 | 9.90 | | |
| MATERIALS | | | | | |
| Mat 01 | Environmental Impact of Materials | 25 | 15 | <p>Up to twenty five credits are awarded depending on the materials specified, their Green Guide ratings and, if required, their thermal performance. Credits are determined via the BREEAM Domestic Refurbishment Mat 1 calculator.</p> | <p>Assessment of this credit is based both on Green Guide ratings and on thermal performance of existing and new materials, and at this stage target scores are an estimate pending a full appraisal of existing and newly specified materials.</p> <p>Fifteen of twenty-five credits targeted at this stage.</p> |
| | Pre-Requisite | 0 | Y | <p>MANDATORY FOR ALL RATINGS: Pre-requisite - All timber used on the project is 'Legally harvested and traded timber'</p> | <p>All new timber will be responsibly sourced.</p> |

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| Mat 02 | Sustainable procurement plan | 3 | 3 | <p>For three credits: Where the principal contractor sources materials in accordance with a documented sustainable procurement plan or : Where the principal contractor is a 'micro-enterprise' Parts 1,2 &3 of Checklist A9 are addressed</p> <p>For two credits: Where the principal contractor is a 'micro-enterprise' Parts 1 & 2 of Checklist A9 are addressed</p> <p>For one credit: Where the principal contractor is a 'micro-enterprise' Parts 1 OR 2 of Checklist A9 are addressed</p> | <p>The Contractor will be required to develop a sustainable procurement plan for the project or comply with Checklist A9 in full to achieve all three credits.</p> <p>Three of three credits targeted.</p> |
| | Responsible Sourcing of Materials- Basic Building Elements | 12 | 8 | <p>Up to twelve credits are awarded where the applicable new materials used in the refurbishment building elements (frame, ground floor, upper floors, roof, external walls, internal walls, foundations/substructure, staircase, windows, external and internal doors, skirting, panelling, fascias, balustrades, fixed furniture and any other significant use) are responsibly sourced as defined in the BREEAM Technical Guide. All new timber should be certified and other products should be sourced from manufacturers that can provide BES6001, EMAS or ISO14001 certification in order to gain credits in this section.</p> <p>Mandatory minimum: Criterion 3 for Pass, Good, Very Good, Excellent and Outstanding.</p> | <p>It is likely that a reasonable level of credits could be achieved given the rise in products with responsible sourcing certification in recent years. At present a conservative estimate has been made pending further investigation of procurement options.</p> <p>Eight of twelve credits targeted at this stage.</p> |
| Mat 03 | Insulation | 8 | 8 | <p>Pre-requisite: any new insulation specified for use within the following building elements must be assessed: external walls, ground floor, roof and building services.</p> <p>Four credits are awarded where the Insulation Index for the new insulation is 2 as calculated by the BREEAM Domestic Refurbishment Mat 3 calculator.</p> <p>Four credits are awarded where 80% of the new thermal insulation is responsibly sourced.</p> | <p>Full credits are targeted for the specification of compliant insulation products.</p> <p>Eight of eight credits targeted.</p> |
| Sub-Total | | 48 | 34 | One materials credit equals 0.17% | |
| Weighted Sub-Total | | 8.0 | 5.66 | | |
| WASTE | | | | | |
| Was 01 | Household Waste | 2 | 2 | <p>One credit is awarded where one of the following is present:</p> <ul style="list-style-type: none"> - three internal recycling containers where recycling is not sorted post collection and one internal recycling container where recycled is sorted post collection are provided, with a minimum total capacity of 30 litres and no individual bin smaller than 7 litres. - three internal recycling containers are provided, with a minimum total capacity of 60 litres, but there is no compliant collection scheme in place and insufficient external storage. - three internal recycling containers are provided, with a minimum total capacity of 30 litres and no individual bin smaller than 7 litres in addition to adequate external storage provided but no collection scheme. - storage containers for recycling are provided in addition to non-recyclable waste storage. <p>One credit is awarded where a composting service is provided for green/garden and kitchen waste and an interior container is provided for kitchen waste of at least 7 litres.</p> | <p>Both credits are targeted as LBC provide doorstep collections for recyclables and green/kitchen waste. Appropriate internal waste storage will be provided to support this.</p> <p>Two of two credits targeted.</p> |

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| Was 02 | Refurbishment Site Waste Management | 3 | 3 | <p>One credit awarded where the waste generated through the refurbishment process is managed in accordance with checklist A-9 of the BREEAM Technical Manual for projects up to a value of £100k, or for projects over £100k, the implementation of a compliant level 2 SWMP.</p> <p>One credit where non-hazardous construction waste generated by the dwellings' refurbishment meets or exceeds the resource efficiency benchmark of 26.52m3 or 16.90 tonnes, and a compliant pre-refurbishment audit, inclusive of demolition materials (where appropriate) is completed and referenced in the SWMP.</p> <p>One credit where non-hazardous demolition waste generated by the dwellings' refurbishment meets or exceeds the refurbishment & demolition waste diversion benchmarks, i.e. 65% (by tonnage) of non-hazardous construction waste and 90% (by tonnage) of non-hazardous demolition waste is diverted from landfill.</p> <p>An additional innovation credit is available - see below.</p> | <p>Given the scale of the project the Contractor will be required to implement a compliant site waste management plan. A pre-demolition/pre-refurbishment audit will be undertaken to determine whether there are further opportunities to re-use or recycle materials/fittings from the demolition/strip-out either on or off-site.</p> <p>Resource efficiency benchmarks and diversion from landfill targets will also be met to achieve minimum 3 credits (see also innovation credit below).</p> <p>Three of three credits targeted.</p> |
| Sub-Total | | 5 | 5 | One waste credit equals 0.6% | |
| Weighted Sub-Total | | 3.0 | 3.00 | | |
| POLLUTION | | | | | |
| Pol 01 | Nitrogen Oxide Emissions | 3 | 3 | <p>One credit is awarded where the dry NOx emissions of the space heating and hot water systems are less than 100mg/kWh (NOx class 4 boiler). Two credits if less than 70mg/kWh (NOx class 5 boiler). Three credits if less than 40mg/kWh.</p> | <p>Space and hot water heating will be provided via gas boilers to achieve 3 credits (NOx emissions < 40mg/kWh).</p> <p>Two of three credits targeted.</p> |
| Pol 02 | Surface Water Runoff | 3 | 1 | <p>One credit is awarded where new hardstanding areas are permeable, any additional run-off for rainfall depths up to 5mm are maintained on site using SuDS and calculations are undertaken by an appropriately qualified professional to demonstrate this.</p> <p>One credit is awarded where calculations demonstrate that all run-off from the roof for rainfall up to 5mm is managed on site using source control methods.</p> <p>One credit is awarded where an appropriately qualified professional is appointed to design an appropriate drainage strategy for the site and where run-off as a result of refurbishment is managed on site using source control methods.</p> <p>An additional innovation credit is available - see below.</p> | <p>The first credit will be achieved as there will be no increase to impermeable areas. Site restrictions make it unlikely that any SUDs measures can be incorporated to achieve additional credits.</p> <p>One of three credits targeted.</p> |
| Pol 03 | Flooding | 2 | 2 | <p>Two credits awarded where a Flood Risk Assessment (FRA) has been carried out and the area is defined as having a low annual probability of flooding.</p> <p>Two credits can be awarded where an FRA has been carried out and the area is defined as having a medium or high annual probability of flooding and measures are specified to keep water away from the dwelling or where a full flood resilience/resistance strategy is implemented with recommendations made by a suitably qualified building professional.</p> <p>Mandatory minimum: Two credits for Excellent and Outstanding.</p> | <p>The EA flood map confirms that the site is in an area at low risk of tidal and fluvial flooding, although a short flood risk assessment from a specialist will be produced to confirm that there is no risk of flooding from all other sources.</p> <p>Two of two credits targeted.</p> |
| Sub-Total | | 8 | 6 | One pollution credit equals 0.75% | |
| Weighted Sub-Total | | 6.0 | 4.50 | | |

INNOVATION CREDITS - A maximum of 10 credits are available in aggregate from any combination of the following:

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| Man 02 | Responsible Construction Practices | 1 | 0 | One credit is awarded where there is a commitment to comply with the Considerate Constructors Scheme (CCS), with a score of at least 40 and 7 in each section. | This credit is not targeted at this stage as it can be particularly challenging to achieve a higher score. However, this may be achievable at post construction stage depending on the Contractor's final CCS score. Credit not targeted at this stage. |
| Man 05 | Protection and Enhancement of Ecological Features | 1 | 0 | Credit awarded 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 general ecological recommendations and 30% of additional recommendations. | This credit is not targeted at this stage. It would require the appointment of an ecologist, which would seem inappropriate for a site with limited opportunities for ecological enhancement. Credit not targeted |
| Man 06 | Project Management | 2 | 0 | One credit awarded where a BREEAM Accredited Professional (AP) has been appointed at an early stage of the project, prior to the production of a refurbishment specification and to oversee key stages within the project. One credit awarded where thermographic surveying and airtightness testing have been carried out at both pre and post refurbishment stages and an improved air tightness target has been set at design stage and testing demonstrates that this has been achieved post refurbishment. | The BREEAM assessor Georgie James is a BREEAM AP, however as she has not been appointed at an early enough stage for these credits cannot be achieved. Thermographic testing is not considered appropriate given the scope of the refurbishment. Credits not targeted. |
| Hea 04 | Inclusive Design | 1 | 0 | Credit awarded where an access expert or suitably qualified member of the team has completed sections 1, 2 and 3 of Checklist A8; Access Statement Template and inclusivity measures are implemented in the refurbishment. The statement must demonstrate that reasonable provision for accessibility to the dwelling has been made. | This credit is not considered to be achievable so is not targeted. Credit not targeted |
| Ene 02 | Energy Efficiency Rating Post Refurbishment | 2 | 0 | One credit awarded where the assessed dwellings achieve a post-refurbishment EER of >90, equivalent to an Energy Performance Certificate band A. Two credits awarded where the assessed dwelling achieves a post-refurbishment EER of >100. | This credit is not considered to be achievable (based on the current assumptions an EER of 65). Credit not targeted. |
| Ene 08 | Energy Display Devices | 1 | 1 | Credit awarded where any specified Energy Display Devices are capable of recording consumption data. | This credit will be targeted. Credit targeted. |
| Wat 01 | Internal Water Use | 1 | 0 | Credit awarded where the Wat 1 calculations demonstrate that the whole house consumption is less than 80 litres per person per day. | This credit is not considered to be achievable so is not targeted. Credit not targeted. |
| Was 02 | Refurbishment Site Waste Management | 1 | 0 | Credit awarded where the non-hazardous waste produced does not exceed 17.32m ³ /8.78 tonnes per £100k of project value and 85% (by tonnage) of non-hazardous construction waste and 95% (by tonnage) of non-hazardous demolition waste is diverted from landfill. | This credit is not targeted at this stage, although has the potential to be targeted by the Contractor if it is considered to be feasible. Credit not targeted at this stage. |

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| Pol 02 | Surface Water Runoff | 1 | 0 | Credit awarded where an appropriately qualified professional has been appointed to provide calculations and design a drainage strategy that ensures that all run-off from the developed site is managed on site using source control. The peak rate of run-off as a result of the refurbishment for the 1 in 1 and the 1 in 100 year event is reduced to zero, including an allowance for climate change. In addition, there is no volume of run-off discharged into watercourses and sewers for a 1 in 100 year event of 6 hour duration, allowing for climate change. | This credit is not targeted as site restrictions give limited scope for attenuation measures to be incorporated. Credit not targeted. |
| Extra | Innovation | 10 | 0 | Up to ten credits are awarded where a successful application is made to the BRE to have a particular product or technique used in the refurbishment process recognised as innovative. One credit is awarded per successful application. | These credits are not targeted as there will be no appropriate innovations utilised on the project. Credit not targeted. |
| Sub-Total | | 10 | 1 | One Innovation credit = 1%. A maximum of 10% can be awarded in this section. | |

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| TOTALS | Score (%) |
| Baseline Target | 76.82 |

Meeting record: 11/11/2015
8/12/2021

| | |
|--------------------------------|----|
| Total required for Pass | 30 |
| Total required for Good | 45 |
| Total required for Very Good | 55 |
| Total required for Excellent | 70 |
| Total required for Outstanding | 85 |
| Mandatory criteria met? | Y |

Project Team

| |
|---|
| Client: Marcus Cooper Group |
| Architect: Hub Architects (Mauro Fernandez, Simon Watkins, Jennifer Creighton) |
| BREEAM Assessor: Method Consulting (Georgie James, Sarah Briaris) |
| Arboriculturalist: Landmark Trees (Adam Hollis) |
| Energy Assessor: Energist |

Completed by: SAB Date: 15/12/2021
Checked by: GAJ Date: 15/12/2021

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