New construction and major refurbishment sustainability standards

2023





At Royal London Asset Management we aspire to lead within the field of responsible property investment. As part of this we have created a fresh set of development and refurbishment sustainability standards which we consider are market leading. The standards are

applicable to all our development and refurbishment projects and are grouped into eight new sustainability categories: energy; materials; waste; water; climate resilience; biodiversity; health/safety/wellbeing; and community. The full list of our standards is a follows:

ustainability theme	Ref	Sustainability standards	SDG mapping
Energy & GHG emissions	EG1	Non-residential and residential developments to reduce CO_2 emissions by at least 35% less than the level required by Building Regulations Part L (2021) or the existing building for Major refubishments, with at least 15% achieved through a passive, fabric first approach including efficient building system designs and the remainder delivered through low and zero carbon technologies. Residential developments should be aiming to achieve a benchmark improvement over Part L 2021 of 50%.	7 ATTRIBUTED A STATE OF THE PARTY OF T
	EG2	A feasibility study of low and zero carbon technologies, including district heating networks, and renewables shall be undertaken for new build projects and major refurbishment projects.	13 cens
	EG3	Undertake operational energy modelling using the CIBSE TM54 methodology as part of the design process. New build and major refurbishments to target the following operational energy performance in line with UKGBC Net Zero pathway: Commercial Office 130 kWh/m/yr(GIA) aiming for 90kWh/m²/	9 sector sectors P set statisticos 12 sectors sector
		yr (GIA) Hotel: 55 kWh/m²/yr (GIA) Residential: 35 kWh/m²/yr (GIA) Industrial: 60 kWh/m²/yr (GIA) shell & core	
		Retail: 45 kWh/m²/yr (GIA) Science: 325 kWh/m²/yr (GIA) shell & core Student accommodation: 75 kWh/m²/yr (GIA)	
	EG4	All new build and major refurbishment projects at RIBA Stage 2 through to RIBA Stage 4 to undertake a whole life carbon assessment (excluding modules B6 & B7) of materials for developments, and contractors to map and monitor the footprint during the delivery phases to establish an as built whole life carbon assessment.	
	EG5	All new build and major refurbishment projects to aim for a construction A1-A5 embodied carbon target as follows: Office: $600 \text{kg/CO}_2/\text{m}^2$ Hotel: $400 \text{kg/CO}_2/\text{m}^2$ Residential: $400 \text{kg/CO}_2/\text{m}^2$ Industrial: $600 \text{kg/CO}_2/\text{m}^2$ shell & core Life Sciences: $700 \text{kg/CO}_2/\text{m}^2$ shell & core Student Accommodation: $450 \text{kg/CO}_2/\text{m}^2$ Retail: $550 \text{kg/CO}_2/\text{m}^2$	
	EG6	External contractor to procure 100% green tariff energy for construction works. Ofgem recognised green energy suppliers to be chosen where possible. Where agreed not feasible and generators are used the contractor should confirm the environmental credentials of such systems (e.g. gross efficiency, locality of fuel source).	
	EG7	For all new build and major refurbishment projects an operational energy Net Zero Carbon feasibility assessment is to be provided prior to planning. This should set out how the scheme can achieve or be readily adapted in the future to attain Net Zero Carbon in line with UKGBC guidance. Refer to 'increased leadership position' in the UKGBC Net Zero Carbon Buildings: 'Levels of performance' primer (Tables 1 & 2), or other latest UKGBC guidance.	
	EG8	All applicable new building and major refurbishment projects to undertake Post Occupation Evaluations 12 months after full occupation. Contractor to take on role of Soft Landings champion during construction, commissioning and handover.	
	EG9	A target of up to 20% of vehicle spaces to be designated to electric modes of transport with the appropriate infrastructure capacity to convert 100% of vehicle spaces into electric vehicle spaces in the future for all new developments and major refurbishments. Where there is no vehicle spaces, this target is achieved by default.	

Sustainability theme Ref Sustainability standards SDG mapping All timber and timber products used in construction (including site timber) shall be from sustainable sources accredited by the Forest Stewardship Council or the Pan European Forestry Council. MS2 All new and major refurbishments to target the supply of materials $% \left(1\right) =\left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right$ Materials & supply chain with ISO14001 and where possible BES 6001 Very Good certification for plasterboard, aggregates, concrete, cement, asphalt, block-work and rebar. MS3 Design teams to explore modern methods of construction such as Cross Laminated Timber (CLT) or modular construction techniques during the lead up to Stage 2 design. MS4 Insitu concrete specification to be targeted to contain a minimum of 30% cement replacement such as Ground Granulated Blastfurnace Slag (GGBS) or similar product where possible and explore using higher value of cement replacement for pre-cast element. MS5 Suppliers outside of the EU to be checked against fair pay and labour standards. MS6 All granite / stone to be sourced through ETI (Ethical Trading Initiative) accredited companies. MS7 Where possible, the design team is to specify structures and MEP products with Envrionmental Product Declarations (EPD's). MS8 Design team to review and adopt the Living Building Challenge materials Red List where possible. Where products specified do not meet this requirement, this should be flagged to the client. MS9 Undertake a workshop and produce a Circular Economy Statement, by the end of Stage 3, in line with 2020 GLA guidance. MS10 Target 10% of the total value of construction and fit out materials derived from recycled and reused content in the products and materials used. MS11 Where the use of refrigerants is necessary, limit the amount of refrigerant through system type and design, and select systems using low impact refrigerants prioritising ultra-low \leftarrow 50 GWP where possible and no greater than 750 GWP. Leak detection is to be included on systems with refrigerant charge above 6kg. WS1 95% of non hazardous demolition, strip-out, excavation, construction and fit-out waste by weight to be diverted from landfill and recycled or recovered for purposes other than energy generation. Waste WS2 Construction Waste shall not exceed 7.5 m³/6.5 tonnes per 100 $\,m^2\,GIFA$ for new-build development projects, and not exceed $4.5\,$ m³/1.2 tonnes per 100 m² GIFA for refurbishment projects. WS3 Design out waste workshop to be held with the design team by the end of stage 2 to identify and eliminate major areas of waste (including embodied waste). This must be documented and the outcomes measured at RIBA stages following this. WS4 $Contractors \ to \ reduce \ single \ use \ plastic \ packaging \ from \ material$ importation on site. Contractors are to report on single use plastic figures, highlighting reduction measures undertaken as part of construction.

Sustainability theme Ref Sustainability standards SDG mapping WA1 All new-build and major refurbishment projects shall incorporate water efficiency measures and/or water recycling to reduce mains water use by 40% compared to the BREEAM Baseline. Residential targets to target less than 105 litres/person/day. Offices designed to achieve ←13 litres/person/day. WA2 Complete a cost benefit review of Greywater and rainwater within the design for new developments. WA3 Meet threshold requirements for fundamental Water Quality in line with WELL. V2. Testing to be carried out at the start of design and at post completion to verify compliance. WA4 Reception spaces and changing rooms to have water bottle refilling CR1 Full flood protection review undertaken and appropriate measures implemented within design. This should allow for 1:100 year + 30% event at a minimum. Major refurbishments to undertake feasibility CR2 Explore the opportunity for natural ventilation within developments. resilience & Where natural ventilation is being pursued the design shall limit adaptation the risk of overheating in accordance with CIBSE TM52 and appropriate future weather files. For buildings with specialist functions where natural ventilation is not permitted, office areas and amenities such as breakout areas and receptions to consider these requirements. CR3 For air-conditioned developments incorporate passive design measures to reduce the current cooling demand against current weather files. Design team to test proposed design solutions against future 2030 weather files and demonstrates how the building has been designed to be easily adaptable in the future using further passive design solutions. CR4 Select materials for external horizontal surfaces that have a high albedo (SRI of 78 or higher) or are covered in vegetation to reduce local overheating and the urban heat island effect. CR5 No new residential developments to be built on Flood Zones with high possibility of flooding. CR6 Landscape design to incorporate appropriate native, or of adding to $wild life, drought-tolerant\ planting.\ Planting\ that\ is\ not\ native\ should$ be sourced from within Europe. BH1 All new and major refurbishments to maximise biodiversity net gains with a minimum of 10% in accordance with the Environment Act and DEFRA methodology. Urban Greening Factors of 0.4 for predominately residential and 0.3 for predominately commercial developments should be targeted. **Biodiversity** & habitat BH₂ Actively consider, and where possible, incorporate biodiverse green roofs on all appropriate roof space, for new and major refurbishment schemes. внз Climbers, incorporating native species where possible, to be considered for available vertical surfaces to provide simple green walls for visible green infrastructure. BH4 Install appropriate habitat for native and identified species (e.g. bird and bat boxes and insect walls). BH5 Assess the opportunities to incorporate occupier organic food growing initiatives.

SDG mapping

All new build and major refurbishment projects shall incorporate HS1 materials with lower levels of harmful emissions (e.g. low VOC content) specified. Ambient testing in line with BREEAM to be undertaken after practical completion on the basebuild. Health, safety The Contractor shall be required to commit to achieving zero HS2 & wellbeing reportable health and safety incidents as part of the works. All new build and major refurbishment sites shall be registered HS3 under the Considerate Constructors Scheme and the Contractor shall be required to achieve a CCS score of 40 with a minimum score of 7 achieved in each scoring section of the scheme. Ventilation system designed in line with requirements for HS4 fundamental Air Quality (Parts 1 & 3) in line with WELL V2 where PM2.5 and PM10 levels exceed limiting concentrations. For buildings with specialist functions, office areas and amenities such as breakout areas and receptions to consider these requirements. Active stairwells to be designed that are aesthetically pleasing to HS5 encourage active movement within the buildings. Adhere to BCO and CIBSE Guide A guidelines for ventilation rates. HS6 $Life \ sciences \ buildings \ to \ adhere \ to \ relevant \ HSE \ guidelines \ for$ $ventilation\ with\ consider ation\ for\ air\ change\ rate\ setbacks\ and\ use\ of$ VOC or other monitoring appropriate to lab usage at Containment Level 1 & 2 to improve energy efficiency. Residential buildings to meet ventilation air intake and ventilation rates from '4.6 Ventilation crit 2, 4' in Home Quality Mark. Incorporate design features into the development that promote the HS7 5 ways to wellbeing (Connect, Be Active, Take Notice, Learn, Give). $\label{thm:light} \mbox{Highlight how the design incorporated wellbeing features at the end}$ of Stage 2. 'Give' to be assessed and implemented as part of social value strategy. Contractors to ensure that one Mental Health First aider is present HS8 on site and this is communicated to all construction workers. Shower and changing room provision to be in line with BCO best HS9 practice requirements for offices, and BREEAM shower and changing provision, for all other building types. As part of the Post Occupancy Evaluation, after 12 months of full HS10 occupancy, occupant health and wellbeing to be assessed. Building Evaluation Survey Use Studies (BUS) Wellbeing Survey (WELL Compliant) to be used. Contractors to comply with the real living wage rates and to work HS11 collaboratively with the Gangmasters and Labour Abuse Authority (GLAA) to share information that will help stop or prevent the

exploitation or abuse of workers.

Sustainability theme

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