



# RECOMMENDED PROJECT ENVIRONMENTAL STANDARDS

October 2020

Version 1.2

[www.scape.co.uk](http://www.scape.co.uk)



## Context and Purpose

These Recommended Project Environmental Standards should be read alongside Scape's Environmental Sustainability Policy.

**Scape recognises that every project is unique, and every client has project specific criteria and sustainability ambitions and policies which must always be the focus for the delivery team.** The ambitions of every client should be identified and agreed in the Project Sustainability Strategy, with suitable project objectives set.

The standards are designed to offer clients and project delivery teams outcomes-focussed project objectives that enable the decarbonisation of the UK building stock and a wider focus on environmental sustainability and enhancement. They have been selected as "Paris Proof" objectives; this approach determines the amount of energy demand reduction required in order for the UK's economy to be fully-powered by zero carbon energy in 2050.

**The standards represent those we believe are required to secure a genuinely sustainable future.** We believe the promotion of these standards is essential, and we will select our supply chain partners for their capability to deliver to these standards and develop our own capabilities to do the same.

**Scape does not directly align ourselves and endorse anyone professional industry body over others.** We have however undertaken a comprehensive review of the existing external standards and approaches available, and we believe those selected represent the best and most straightforward.

**Sustainability considerations are continuously evolving.** The standards will be regularly reviewed, updated and published, and we welcome feedback to develop the scope and level of these targets over time.

As part of our Sustainability Action Plan, **we will monitor and report on the level of adoption of the standards** across projects delivered.

## 1. Recommended deliverables for each new building project

All new and refurbishment building projects should be delivered in line with the UKGBC's "Net Zero Carbon Buildings: A Framework Definition."

<https://www.ukgbc.org/ukgbc-work/net-zero-carbon-buildings-a-framework-definition/>

For more detail on performance expectations see RIBA 2030 Climate Challenge 2030 Targets: <https://www.architecture.com/-/media/files/Climate-action/RIBA-2030-Climate-Challenge.pdf>

### Domestic Buildings

Item	Current Benchmark	Target
<b>Operational Energy</b>	146 kWh/m <sup>2</sup> /y (Ofgem benchmark)	Less than 35 kWh/m <sup>2</sup> /y (assessed after 1 yr)
<b>Embodied Carbon</b>	1000 kgCO <sub>2</sub> e/m <sup>2</sup> (M4i benchmark)	Less than 300 kgCO <sub>2</sub> e/m <sup>2</sup> (assessed upon hand-over)
<b>Potable Water Use (Litres/Person/Day)</b>	125 l/p/d (Building Regs. England & Wales)	Less than 75 l/p/d (average/day after 1 yr)

### Non-domestic Buildings

For a practical range of interim operational energy targets, see the UKGBC's "Energy Performance Targets for Offices"

<https://www.ukgbc.org/ukgbc-work/net-zero-carbon-energy-performance-targets-for-offices/>

Item	Current Benchmark	Target
<b>Operational Energy</b>	225 kWh/m <sup>2</sup> /y (Ofgem benchmark) DEC D rated (CIBSE TM46 benchmark)	Less than 55 kWh/m <sup>2</sup> /y (assessed after 1 yr) DEC A rated
<b>Embodied Carbon</b>	1100 kgCO <sub>2</sub> e/m <sup>2</sup> (M4i benchmark)	Less than 500 kgCO <sub>2</sub> e/m <sup>2</sup> (assessed upon hand-over)
<b>Potable Water Use (Litres/Person/Day)</b>	Less than 16 l/p/d (Building Regs. England & Wales) (CIRA W11 benchmark)	Less than 10 l/p/d (average/day after 1 yr)

*Nb. Floor area where specified is Gross Internal Area (GIA)*

## All Buildings- Best practice metrics (assessed within one month of occupation)

Item	Target
<b>Overheating</b>	25-28 deg.C max for 1% of occupied hours
<b>Daylighting</b>	Greater than 2% av.daylight factor, 0.4 uniformity
<b>CO2 Levels</b>	Less than 900 ppm
<b>Total Volatile Organic Compounds (VOCs)</b>	Less than 0.3 mg/m <sup>3</sup>
<b>Formaldehyde</b>	Less than 0.1 mg/m <sup>3</sup>

## 2. Recommended deliverables for refurbishment projects

Item	Target
<b>Basic Compliance (where Passive House criteria can't be fully complied with)</b>	(*3) PHI Low Energy Building Standard
<b>Retrofit standard</b>	(*3) EnerPHit-Standard (Quality-Approved Energy Retrofit)

(\*3) [https://passiv.de/downloads/03\\_building\\_criteria\\_en.pdf](https://passiv.de/downloads/03_building_criteria_en.pdf)

## 3. Recommended standards for each non-building project

Item	Target
<b>Sustainability</b>	(*4) CEEQUAL v6
<b>Carbon Management</b>	(*5) PAS 2080

(\*4) <https://www.ceequal.com/version-6/>

(\*5) <https://www.bsigroup.com/en-GB/our-services/product-certification/product-certification-schemes/pas-2080-carbon-management-in-infrastructure-verification/>