Best Practice Summary

Building Performance

PF1 Prioritise the refurbishment and retrofit of existing buildings where possible. Also, aim to re-use elements of existing buildings if at all possible, for example foundations (subject to structural engineer input), bricks or even floorboards for a new purpose.

PF2 A fabric first and building physics approach to be implemented during all design stages.

PF3 All new building to achieve the Passivhaus Plus Standard, incorporating renewable energy within the design.

PF4 Achieve an air permeability of below $3m^3/h.m^2$ @50pa in all new developments. However an airtightness of $<0.6m^3/h.m^2$ @50pa required for Passivhaus is encouraged. For an airtightness of below $3m^3/h.m^2$ @50pa, this will need to be in combination with a mechanical ventilation heat recovery system.

PF5 All new development to be designed and built to meet CIBSE TM59 overheating standards. Future climate scenario modelling to also be completed. The Good Homes Alliance overheating tool could be used for smaller developments.

PF6 Installation of MVHR in all buildings where possible.

PF7 Target an embodied carbon performance of $<750\ kgCO^2e/m^2$ for non-domestic office buildings and $<625\ kgCO^2e/m^2$ for domestic buildings, $<540\ kgCO^2e/m^2$ for education buildings and $<535\ kgCO^2e/m^2$ for retail by 2030 (minimum 40% reduction in embodied carbon compared to the current business as usual benchmarks) by using low carbon materials that are responsibly and ethically sourced.

PF8 Evaluate embodied carbon using the RICS Whole Life Carbon Assessment for the Built Environment professional statement 2017 methodology.

PF9 On projects where Whole Life Carbon assessments are not being undertaken, effort should be made to reduce embodied carbon and quantify the embodied carbon savings achieved.

PF10 Householder Extensions: Consider and implement the 9 householder environmental building considerations.

PF11 Householder Extensions: consider extending the environmental improvements to the existing property, and look to achieve the Passivhaus EnerPHit standard as a whole house approach.

PF12 Consider all 4 Aims when working with a historic building.

Energy Use

EU1 No onsite combustion of fossil fuel for new development.

EU2 All development shall assess the viability of on-site renewable generation and design a strategy to maximise storage.

EU3 Major development shall match total energy demand through a combination of renewable energy generation capacity, energy storage and smart controls.

EU4 Compliance of the evaluation of operational energy shall be demonstrated through performance methods such as the Passivhaus Planning Package (PHPP), CIBSE TM54 or Better Buildings Partnership Design for Performance (2019).

EU5 Offset remaining carbon emissions by contributing to renewable energy projects that will help facilitate decarbonising the national and/or local grid. Alternatively, offset through investment in a retrofit programme, requiring certification to Passivhaus EnerPHit or another agreed target.

External Environment

EN1 Achieve Biodiversity Net Gain across the development.

EN2 Incorporate living roofs as part of the whole sustainable water management strategy, minimising large expanses of flat roof.

EN3 Implement SuDS as the primary drainage solution through Green and Blue Infrastructure.

EN4 Development should not add to surface water run-off and should aim to reduce existing run-off rates and volumes.

EN5 New build residential water efficiency of 75 litres/person/day as a minimum.

EN6 New build non-residential equivalent to BREEAM 3 for water consumption as a minimum.

EN7 Development above householder level to be Air Quality Neutral or better.

Accessibility

AC1 Prioritising pedestrians and cyclists over vehicles; delivering cycling, walking and passenger transport networks.

AC2 Large developments to strengthen existing public transport, cycleways and implement community transport initiatives.

AC3 Non-residential development to provide cycle user showers, changing facilities and secure cycle storage.

AC4 New residential development to provide bike storage for all properties.

AC5 Inclusion of charge points for all residential and visitor parking spaces, and 1 for every 5 cars in non residential.

Construction

CS1 All developments shall calculate life-cycle carbon emissions (including embodied carbon emissions) with a nationally recognised methodology and demonstrate actions taken to minimise life-cycle carbon emissions.

CS2 A Site Waste Management Plan to be implemented.

CS3 Carry out an air test on all new buildings and a minimum airtightness reading of 0.6 air changes/ hr @ n50 should be achieved.

CS4 All developments shall put in place a recognised monitoring regime to allow the assessment of energy use, indoor air quality and overheating risk and ensure that the information recovered is provided to the owners and the planning authority. Monitoring running and user satisfaction should also be implemented on larger developments.

CS7 All major developments shall implement a soft landings scheme from the outset.