

Project:	Bruntwood SciTech Greenheys Development				
Note Ref:	S1	Project No:	3210105	Date:	July 2023
Title:	Embodied Carbon and Energy Usage Intensity Statement				

The Greenheys Redevelopment has been designed for longevity and adaptability with materials selected for their durability and low environmental impact that will be responsibly sourced through local suppliers prioritised for construction through a procurement strategy that will seek to minimise energy associated with transportation and waste generation.

A Site Waste Management Plan (SWMP) will be developed by the Main Contractor to confirm the adoption of good practice waste minimisation in design. This will set targets to minimise the generation of non-hazardous construction waste using the sustainable procurement plan to avoid over-ordering and to use just-in-time delivery policies, and include a pre-demolition audit to identify demolition materials to reuse onsite where possible and salvage appropriate materials to enable their reuse or recycling off-site.

This Embodied Carbon and Energy Usage Intensity Calculation is based on the results of calculations carried out using EccoLab software for Embodied Carbon and a CIBSE TM54 analysis based on predicted Laboratory usage for the Energy Usage Intensity. Although RIBA and LETI both publish figures for Commercial Buildings such as offices, these metrics do not take into account the particular requirements for Laboratory buildings which have much greater services demand and increased plant loads in addition to more stringent vibration response factors which require an enhanced superstructure.

Despite the vibration response factor requirements necessitated by the specialist nature of the building requiring cast in - situ slabs of greater thickness than would be necessary in a standard building, the Embodied Carbon will be within the sample range of 446 – 866 kgCO₂e/m² for new build Science and Technology buildings as reported in the UK Net Zero Carbon Building Standard – (UKNZCBS) Technical Update and Consultation dated 14th June 2023, recently published in draft format. The predicted Energy Usage Intensity will be less than the sample median figure of 860 kWh/m².yr. from the same document based on assumed usage of Tenants' equipment in the Laboratories.

The commitment to minimising the embodied Carbon and Energy Usage Intensity will also be captured in the BREEAM Excellent rating for the building.