

Upfront Carbon (A1-A5) Summary

Project King's Cross Sports Hall
 Typology Culture
 Location London, UK
 GIA 2,032 m²
 NIA (Existing | New) 0 m² | 2,032 m²

RIBA Workstage 7
 Calculation Method Other Informal (External)
 Prepared by BAM
 Checked by BH

Project Overview

The King's Cross Sports Hall is an all-timber building which was completed in 2020. Conceived as a low-rise industrial building, its form is defined by the distinctive serrated roof and façades as a nod to its railway context and heritage. The patinated zinc cladding contrasts with the timber materiality, with much of the building's complexity unseen at ground level. Internally, exposed CLT and glulam panels give warmth to the interior. The carbon assessment formed one of the first LETI Embodied Carbon declarations.

Simplified Approach to Reporting Carbon Data

This calculation is now relatively old and follows outdated practices for carbon assessment. As such, we have chosen to provide a more high level breakdown of the data, and the project total is provided as an upper limit rather than an absolute value.

Project Upper Limit	<400 kgCO ₂ e/m ²
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Building Element	A1-A5 TCO ₂ e	A1-A5 kgCO ₂ e/m ²	Contingency kgCO ₂ e/m ²	Comment
Demolition and Facilitating Works	-	-	-	Excluded from Reporting
Substructure	140	69	7	
Superstructure	394	194	19	
Finishes	8	4	0	
FF&E	20	10	1	
Building Services	81	40	4	
Works to Existing Building	8	4	0	
External Works	-	-	-	Excluded from Reporting
A5 Site Emissions (If Separated)	87	43	4	
Contingency (If Separated)	-	-	-	Included in line items
Subtotals	739 TCO ₂ e	364 kgCO ₂ e/m ²	+ 36 kgCO ₂ e/m ²	Shell + Core, Cat A
Total		400 kgCO ₂ e/m ²		Inclusive of Contingency

Benchmarking against the UK Net Zero Carbon Building Standard

As a practice Bennetts Associates has supported the development of the UK Net Zero Carbon Building Standard and support the role it can play in providing a single unified definition of Net Zero. As such, we have adopted the standard as a default for benchmarking our projects against. We are not claiming alignment with the standard, only aiming to reference against the limits stated. Often our LCAs are conducted for Shell + Core and Cat A (as per LETI Targets' scope) and so where required, an uplift has been applied as a benchmark rate to align with the UK NZCBS scope of assessment.

Upfront Carbon Total	739 TCO ₂ e	364 kgCO ₂ e/m ²	+ 36 kgCO ₂ e/m ²	Shell + Core, Cat A
NZCBS Scope Uplift (if reqd.)				None Required
Total		400 kgCO ₂ e/m ²		Sports and Leisure (New)