

Upfront Carbon (A1-A5) Summary

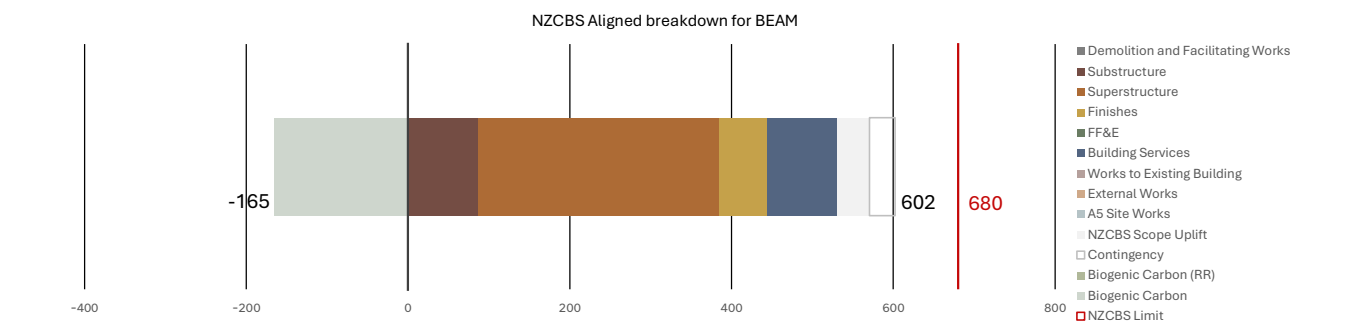
Project BEAM
Typology Culture (Performance)
Location Hertford, UK
GIA 3,228 m²
NIA (Existing | New) 2,367 m² | 861 m²

RIBA Workstage 5
Calculation Method Other RICS Aligned (External)
Prepared by Cundall (10.2021)
Checked by HS (10.03.2025)

Project Overview
The core aims of the Hertford Theatre redevelopment meant increasing the capacity of the existing theatre by building a new extension which accounts for the majority of the upfront carbon. Whilst the flytower was not extended, the main auditorium was remodelled to have a new balcony area to increase capacity to 550. The assessment was undertaken by Cundall for the Net Zero Theatres Study in 2021 using Stage 5 level of information. Adjustments have been made to align this to the UK NZCBS limit scope.

		Upfront Carbon per Module per Building Element (kgCO ₂ e/m ² GIA)							Notes / Comments
Building Element		A1-A3	A1-A3 (Seq.)	A4	A5.3	A1-A5	% Cont.	Contingency	
Demolition and Facilitating Works	Toxic Material Treatment	0.0	0.0	0.0	0.0	0	6	0	
	Major Demolition Works	0.0	0.0	0.0	0.0	0	6	0	
	Facilitating Works	0.0	0.0	0.0	0.0	0	6	0	
Substructure	Foundations and piling	-	-	-	-	87	6	5	Substructure reported in aggregated total.
	Retaining walls / lowest slab	-	-	-	-	-	-	-	
Superstructure	Frame	-	-	-	-	78	6	5	
	Upper Floors	-	-	-	-	46	6	3	
	Roof	-	-	-	-	35	6	2	
	Stairs and Ramp	-	-	-	-	14	6	1	
	External Walls and Roof Finish	-	-	-	-	44	6	3	
	Windows and External Doors	-	-	-	-	35	6	2	
	Internal Walls and Partitions	-	-	-	-	43	6	3	
	Internal Doors	-	-	-	-	3	6	0	
Finishes	Wall Finishes	-	-	-	-	7	6	0	
	Floor Finishes	-	-	-	-	37	6	2	
	Ceiling Finishes	-	-	-	-	16	6	1	
FF&E	FF&E (Fixed)	-	-	-	-	0	6	0	
	FF&E (non-fixed)	-	-	-	-	-	-	-	Scope Uplift
Building Services	Building Services	-	-	-	-	86	6	5	
	Renewable Energy Generation	0.0	0.0	0.0	0.0	0	6	0	Excluded from Scope for Sector
Works to Existing Building	Pre-fab Building Units	0.0	0.0	0.0	0.0	0	6	0	
	Minor Demolition and Alterations	0.0	0.0	0.0	0.0	0	6	0	
External Works	External Works	-	-	-	-	-	-	-	Excluded from Scope for Sector
A5 Site Works	A5.1 Demolition	-	-	-	-	-	-	-	
	A5.2 Site Activities	-	-	-	-	-	-	-	Included in A1-A5 totals.
	A5.4 Workers and Transport	-	-	-	-	-	-	-	Not reported (optional)
SUBTOTAL		N/A	-165	N/A	N/A	530	+	32	
NZCBS Scope Uplift (if reqd.)						40			Uplift for loose FFE.
TOTAL A1-A5						570	+	32	kgCO ₂ e/m ² GIA

Summary and Comparison to UK NZCBS Limit		
Upfront Carbon	602 kgCO ₂ e/m ²	(A1-A5) Excludes Sequestration, includes Contingency
Sequestered Carbon	-165 kgCO ₂ e/m ²	(A1-A3)
UK NZCBS Limit	680 kgCO ₂ e/m ²	Year: 2025 Sector: Culture



Additional Notes
The data breakdown is provided in the most granular form available, based upon the original reporting document.