The walls are an innovative double-leafed, offset structure, using over 750 linear metres of JJI-Joists, to minimise cold bridges. These 430mm extra thick walls allow sufficient depth to use environmentally friendly insulation with excellent thermal performance. The remainder of the structural timber is James Jones's C16 graded spruce to demonstrate the usability of British grown C16 timber in the majority of construction projects.

Douglas Fir has been extensively used in the interior for its stability and characteristic pink hue; the pitched roofs feature closely centred and very narrow Douglas Fir rafters, 160mm deep by 25mm wide. Externally the building is larch clad with black stained, vertical cladding on the lower storey and horizontal natural finish on the upper storey.

Client	James Jones & Sons Ltd
Architect	Konishi Gaffney
Structural Engineer	Entuitive
JJI-Joists	220A+ & 245A & 300A & 400C
Glulam	245A x 38 x 245 x 90 & 400 x 38 & 400 x 90

James Jones & SONS LIMITED

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James Jones & SONS LIMITED

C16 / British Timber Case Study

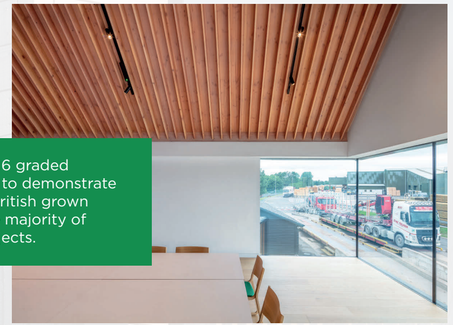
James Jones & SONS LIMITED

Visitor Building, Lockerbie

The James Jones & Sons' Lockerbie site is the largest single site sawmill complex in the UK and the most technically advanced. As such, Lockerbie receives a high number of visitors - including customer visits, customer training courses, academic institutions and industry events.

The building's structure acts as a demonstration project, almost entirely erected from James Jones & Sons' own products with an approach to minimising the use of steel and maximising timber. Glulam beams and structural JJI-Joists were used in the walls, floors and roof, while an unprocessed tree trunk provides loadbearing support to the backbone of the building.

C16 TIMBER



James Jones's C16 graded spruce was used to demonstrate the usability of British grown C16 timber in the majority of construction projects.

The new visitor building has won two categories in the Scottish Design Awards 2021, the 2021 EAA Wood for Good Award and a RIAS Award in 2022. The building has also been shortlisted for the RIAS Doolan Award for the best building in Scotland. (winner not yet announced at time of going to print).

-40 CO2 Te

the amount of CO2 saved using our wood products

Find out more: jamesjones.co.uk

SOLID TIMBER SPAN TABLE

Span table for C16 kiln dried timber (point load included)

	Dead load = 0.25 kN/m² Spans primarily for ground floors				Dead load = 0.5 kN/m² Spans for first floors / intermediate floors to buildings				Dead load = 0.75 kN/m² These spans are for a normal floor with a non-load bearing partition allowance			
	Joist centres in mm											
Joist size	400	450	480	600	400	450	480	600	400	450	480	600
44x120	1543	1537	1534	1520	1499	1489	1482	1459	1459	1445	1437	1407
44x145	2144	2133	2127	2102	2062	2044	2033	1992	1992	1967	1953	1901
44x170	2885	2866	2855	2811	2745	2713	2695	2627	2627	2588	2565	2481
44x195	3734	3636	3571	3378	3511	3463	3435	3331	3331	3272	3238	3115
44x220	4182	4074	4021	3811	4182	4074	4021	3811	4082	3999	3952	3721
72x195	4317	4206	4151	3980	4317	4206	4151	3980	4317	4206	4151	3903
72x220	4716	4594	4534	4353	4716	4594	4534	4353	4716	4594	4534	4353

- This table has been calculated for an intermediate floor (Service Class 1) with 1.5kN/m² imposed load and a 2kN point load according to EN1991-1-1 and its UK National Annex. Joists have been designed using designing principles and limits given EN1995-1-1 and its UK National Annex. It has been assumed that load can be shared by all joists in the floor (k_{sys}=1.1)
- It has been assumed that the joists have a minimum of 89mm bearing with adequate lateral restrain provided by the floor deck (22mm particleboard) and ceiling material (15mm plasterboard). The floor width has been taken as 4m for velocity response checks
- Deadload includes the weight of the joist
- This table serves as a guidance only. **For more detailed appraisal please contact a qualified engineer**