



Structural Report: 24SP1SC.R1
Project Address: Salisbury, 70 The Close
Project Reference: 24SP1SC

Salisbury Cathedral Close Preservation Society

att. Mr. Terry Byrne

Harnham Lodge
Ayleswade Road
Salisbury, SP2 8DP

Friday 15 March 2024

Re. Leaden Hall School, 70 The Close, Salisbury, SP1 2EP
Comments on unit loading (residential and office)

Reference documents:

12383 – SK4 (a) – Rev C - Beam Strengthening Details
LeadenHall_FFP.dwg - Leaden Hall First Floor Strengthening Plan
LeadenHall_SFP.dwg - Leaden Hall Roof Strengthening Plan
LeadenHall_SFP.dwg - Leaden Hall Second Floor Strengthening Plan

Dear Mr Byrne,

We have briefly appraised the documents referenced above, and take note of the structural proposals to strengthen the existing structure in question. The proposals seem to comprise of additional steel sections to strengthen existing primary and secondary beams, with additional timbers (trimmers) and steel plates to strengthen existing joists for the new office loading proposed.

The steelwork is very heavily specified which would suggest a high level of conservatism has been used in the design approach. It should however be noted the loadings under consideration (office) are considerably larger per unit area compared to residential loads.

With reference is to the Eurocodes (EC), which has superseded most British Standard (BS) references, residential loads are 1.5 kilonewton per square-metre (kN/m²) and office loads are 2.5 kilonewton per square-metre (kN/m²). This is in reference to the UK National Annex, NA to BS EN 1991-1-1:2002 [refer to extract 1.1 and 1.2 in appendix].

We trust this is helpful.

Signed.

Aleur Rahman M Eng (Hons)
Senior Structural Engineer

Office | 020 7993 2055

Email | aleur.rahman@aleurassociates.com

Website | www.aleurassociates.com

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Appendix.

Table NA.2 — Categories for residential, social, commercial and administration areas including additional sub-categories for the UK

Category of loaded area	Specific use	Sub-category	Example
A	Areas for domestic and residential activities	A1	All usages within self-contained dwelling units (a unit occupied by a single family or a modular student accommodation unit with a secure door and comprising not more than six single bedrooms and an internal corridor) Communal areas (including kitchens) in blocks of flats with limited use (see Note 1). For communal areas in other blocks of flats, see A5, A6 and C3
		A2	Bedrooms and dormitories except those in self-contained single family dwelling units and in hotels and motels
		A3	Bedrooms in hotels and motels; hospital wards; toilet areas
		A4	Billiard/snooker rooms
		A5	Balconies in single family dwelling units and communal areas in blocks of flats with limited use (see Note 1)
		A6	Balconies in hostels, guest houses, residential clubs and communal areas in blocks of flats except those covered by Note 1
		A7	Balconies in hotels and motels
B	Office areas	B1	General use other than in B2
		B2	At or below ground floor level
C	Areas where people may congregate (with the exception of areas defined under category A, B and D)	C1	Areas with tables
		C11	Public, institutional and communal dining rooms and lounges, cafes and restaurants (see Note 2)
		C12	Reading rooms with no book storage
		C13	Classrooms
		C2	Areas with fixed seats
		C21	Assembly areas with fixed seating (see Note 3)
		C22	Places of worship
		C3	Areas without obstacles for moving people
		C31	Corridors, hallways, aisles in institutional type buildings not subjected to crowds or wheeled vehicles, hostels, guest houses, residential clubs, and communal areas in blocks of flats not covered by Note 1

*Extract 1.1 - NA to BS EN 1991-1-1:2002. Table NA.2
 (Refer to loads A1 and B1/B2 for appropriate residential and office loads)*

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Table NA.3 — Imposed loads on floors, balconies and stairs in buildings

Category of loaded area		q_k kN/m ²	Q_k kN
Category A	A1	1,5	2,0
	A2	1,5	2,0
	A3	2,0	2,0
	A4	2,0	2,7
	A5	2,5	2,0
	A6	Same as the rooms to which they give access but with a minimum of 3,0	2,0 (concentrated at the outer edge)
	A7	Same as the rooms to which they give access but with a minimum of 4,0	2,0 (concentrated at the outer edge)
Category B	B1	2,5	2,7
	B2	3,0	2,7
Category C	C11	2,0	3,0
	C12	2,5	4,0
	C13	3,0	3,0
	C21	4,0	3,6
	C22	3,0	2,7
	C31	3,0	4,5
	C32	3,0	4,0
	C33	4,0	4,5
	C34	5,0	4,5
	C35	4,0	4,0
	C36	3,0	2,0
	C37	5,0	3,6
	C38	7,5	4,5
	C39	4,0	4,5
	C41	5,0	3,6
	C42	5,0	7,0
	C51	5,0	3,6
	C52	7,5	4,5
	Category D	D1/D2	4,0

Extract 1.2 - NA to BS EN 1991-1-1:2002. Table NA.3
 (Refer to loads A1 and B1/B2 for appropriate residential and office loads)

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