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Supplement of

A multi-hazard risk prioritisation framework for cultural heritage assets

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CHeRiSH

RAPID VISUAL SURVEY

Cultural Heritage Resilience & Sustainability to multiple Hazards

GENERAL INFORMATION

Date and Time:		**Surveyor Name:**	
Address:		**Nearby Buildings:**	[ ] Smaller [ ] Same Height [ ] Taller
No. of Building Users:		**GPS Co-Ordinates:**	
Construction Year:		**Confidence:**	[ ] H [ ] M [ ] L
Shape and Composition of the Block:	[ ] Triangular Shape-Synchronic Growth [ ] Triangular Shape-Diachronic Growth [ ] Bulk Shape-Synchronic Growth [ ] Bulk Shape-Diachronic Growth		[ ] Elongated Shape-Synchronic Growth [ ] Elongated Shape-Diachronic Growth [ ] Individual Buildings
Position in Block:	[ ] Corner [ ]Mid-block [ ]End-block [ ]Isolated [ ]Other:		
Type of Survey:	[ ] Desktop Review [ ] Exterior [ ] Part. Interior [ ] Interior		

BUILDING INFORMATION

Simple Building Plan

No. of Stories:	
Storey Height (m):	
Average Height of Upper Horizontal Spandrel (m):	
Connection of the Walls at the Edges (Exterior):	[ ] Adequate [ ] Poor
Wall Openings Max. Dim. $(m \times m)$:	
Wall Openings Total Area (m^2):	
Opening Layout:	[ ] Opening with Vertical Alignment at Both the Edges of Façade [ ] Openings with Vertical Alignment at an Edge of the Façade [ ] Central Column of Opening, Vertically Aligned
Opening Alignment:	[ ] Regular [ ] Medium [ ] Irregular
Dim. Between Int. Structural Wall $(m \times m)$:	

Max. Thickness Ext. Walls (m):			**Min. Thickness Ext. Walls** (m):	
Max. Thickness Int. Walls (m):			**Min. Thickness Int. Walls** (m):	
Non-Continuous Structural Wall:	[ ] Yes [ ] No ⟶ Position:			
Plan Regularity:	[ ] Regular [ ] Medium [ ] Irregular		**Confidence:**	[ ] H [ ] M [ ] L
Height Regularity:	[ ] Regular [ ] Medium [ ] Irregular		**Confidence:**	[ ] H [ ] M [ ] L
Drawings:	[ ] Yes [ ] No [ ] Structural [ ] Architectural ⟶ File Name:			

ROOF INFORMATION

						Unk	Confidence
Type:	[ ] Flat	[ ] Mono Pitch	[ ] Multi Pitch	[ ] Gable		[ ]	[ ] H [ ] M [ ] L
Truss Material:	[ ] RC Slab	[ ] Timber	[ ] Steel	[ ] Other		[ ]	[ ] H [ ] M [ ] L
Slope (°):		**Soffit Width** (m):		**Mean Roof Height** (m):		[ ]	[ ] H [ ] M [ ] L
Panel Material:	[ ] Timber	[ ] Steel	[ ] Other	**Thickness** (mm):		[ ]	[ ] H [ ] M [ ] L
Fastener Type:	[ ] Screw	[ ] Nail	[ ] Other			[ ]	[ ] H [ ] M [ ] L
No. of Purlins:		**No. of Fasteners Per Purlin Bay:**				[ ]	[ ] H [ ] M [ ] L

Fastener Dia. (mm):		**Fastener Penetration** (mm):			[ ]	[ ] H [ ] M [ ] L
Roof-to-Wall Connection:	[ ] Simply Supported	[ ] Pinned	[ ] Fixed Support		[ ]	[ ] H [ ] M [ ] L
Roof-Wall Fastener:	[ ] Metal Plate Connector [ ] Toe Nails	[ ] Single Hurricane Tie [ ] Double Hurricane Tie			[ ]	[ ] H [ ] M [ ] L
Ornaments Type:		**Material:**		**Dimension**$(m \times m)$:	[ ]	[ ] H [ ] M [ ] L

STRUCTURAL INFORMATION					**Unk**	**Confidence**
Material of Lateral Load Resisting System:	[ ] Reinforced Concrete [ ] Steel [ ] Masonry	[ ] Reinforced Masonry [ ] Confined Masonry [ ] Timber	[ ] Other:		[ ]	[ ] H [ ] M [ ] L
Type of Lateral Load Resisting System:	[ ] Moment Resisting Frame System [ ] Bracing	[ ] RC Shear Wall [ ] Load Bearing Walls [ ] Combined	[ ] Other:		[ ]	[ ] H [ ] M [ ] L
Structural Condition:	[ ] Poor / Deteriorated	[ ] Good / Fair	[ ] Excellent / New		[ ]	[ ] H [ ] M [ ] L
Environmental Exposure:	[ ] Dry Environment [ ] Moisture or Wetting	[ ] Aggressive Chemical Environment [ ] Saturated Salt Air			[ ]	[ ] H [ ] M [ ] L
Foundation Type:	[ ] Deep	[ ] Superficial	[ ] Not Accessible	Note:	[ ]	[ ] H [ ] M [ ] L
Floor Type:	[ ] Timber	[ ] Concrete			[ ]	[ ] H [ ] M [ ] L
Load Distribution:	[ ] One-Way Spanning	[ ] Two-Way Spanning			[ ]	[ ] H [ ] M [ ] L
Floor-to-Wall Connection:	[ ] Simply Supported	[ ] Steel Bars	[ ] RC Ring Beam		[ ]	[ ] H [ ] M [ ] L
Retrofitting:	[ ] Yes [ ] No	**Description:**			[ ]	[ ] H [ ] M [ ] L
Modifications:	[ ] Yes [ ] No ⟶ Position: [ ] Addition of Stories [ ] Extension of Plan [ ] Wall Opening Framing [ ] Steel Frame Opening ⟶ Position:				[ ]	[ ] H [ ] M [ ] L
Vulnerability Factors:	[ ] Balconies [ ] Parapet [ ] Gable [ ] Pounding [ ] Mass Irregularity [ ] Built on Slope [ ] Built on Stilts [ ] Other:	[ ] Short Column [ ] Strong Beam-Weak Column [ ] Soft Storey [ ] Roof Thrust ⟶ Length x Height (m): [ ] Vaults / arches ⟶ Length x Height (m): [ ] Connection Between Orthogonal Wall (Interior) [ ] Existing Cracks ⟶ Info:				

MASONRY					**Unk**	**Confidence**
Masonry Type:	[ ] Chaotic Stone [ ] Hollow Brick [ ] Soft Stone Block [ ] Squared Stone Blocks [ ] Solid Brick Masonry and Lime Mortar [ ] Hollow Brick with Cement Mortar [ ] Hollow Brick without Mortar in Vertical Joints [ ] Concrete Blocks or Expanded Clay Blocks [ ] Concrete Hollow Blocks	[ ] Masonry with Hewn Blocks [ ] Regular Sized Stone [ ] Adobe bricks			[ ]	[ ] H [ ] M [ ] L
Mortar Type & Thickness:	[ ] Cement [ ] Mud with Cement [ ] Lime with Bricks	[ ] Mud [ ] Lime [ ] Other:	**Thickness** (mm):		[ ]	[ ] H [ ] M [ ] L
Maintenance:	[ ] Low	[ ] Medium	[ ] High		[ ]	[ ] H [ ] M [ ] L
Water Infiltration:	[ ] Low	[ ] Medium	[ ] High		[ ]	[ ] H [ ] M [ ] L
Mortar Loss:	[ ] Low	[ ] Medium	[ ] High		[ ]	[ ] H [ ] M [ ] L

Transversal Connection Quality:	[ ] Low	[ ] Medium	[ ] High			[ ]	[ ] H [ ] M [ ] L
Average Size of the Units (mm):						[ ]	[ ] H [ ] M [ ] L
Wall Tie Presence:	[ ] Yes [ ] No					[ ]	[ ] H [ ] M [ ] L
No. of Leaves:	[ ] Single-Leaf [ ] Multi-Leaf		**No. of Header Courses:**			[ ]	[ ] H [ ] M [ ] L
Wall Core:	[ ] Yes [ ] No	**Quality:**	[ ] Poor [ ] Thick [ ] Good			[ ]	[ ] H [ ] M [ ] L
Masonry Improvements:	[ ] Mixture Injection	[ ] Concrete Jacketing				[ ]	[ ] H [ ] M [ ] L
Material Test Results:	Attached File Name:					[ ]	[ ] H [ ] M [ ] L

CONCRETE / CONFINED MASONRY						**Unk**	**Confidence**
No. of Frames:	**X:**		**Y:**		**(If ≠ 0, Fill Rows Below)**	[ ]	[ ] H [ ] M [ ] L
Beam section $(m \times m)$:						[ ]	[ ] H [ ] M [ ] L
Column section $(m \times m)$:						[ ]	[ ] H [ ] M [ ] L
Reinforced Bars:	[ ] Deformed	[ ] Smooth				[ ]	[ ] H [ ] M [ ] L
Infilled:	[ ] Yes	[ ] No	[ ] Confined Masonry			[ ]	[ ] H [ ] M [ ] L
Infill Wall Material:	[ ] Timber Plates Thickness (mm):	[ ] Concrete Block [ ] Other:	[ ] Brick [ ] Adobe			[ ]	[ ] H [ ] M [ ] L
Mortar Type:	[ ] None	[ ] Cement	[ ] Lime	[ ] Mud		[ ]	[ ] H [ ] M [ ] L

Confidence: Unk=Unknown, H=High, M=Medium, L=Low Any extra comments can be added on the back of the sheet.

Notes: Vulnerability factors

a. Short column	At least 20% of the columns in the same Lateral Resisting System (LRS) have a height/depth ratio less than 50% of the average height/depth at that level
b. Pounding	The building is closer than 0.2 m from an adjacent building
c. Soft storey	Infills are missing at a one level
d. Strong Beam-Weak column	The beams are evidently stronger than the columns to which they are connected
e. Built on Slope	There is a sensible grade change from one side of the to the other
f. Plan irregularity	1) The LRSs do not appear relatively well distributed in plan in either or both directions 2) Two or more LRSs are not orthogonal to each other 3) Re-entrant corners exceed the 25% of the plan dimension 4) There is an opening in the diaphragm with a width over 50% of the total diaphragm width at that level
g. Elevation Irregularity	1) The storey height is not sufficiently uniform 2) Vertical elements of the LRS at upper stories are inboard of those at lower stories
h. Mass Irregularity	The area of a given storey is substantially different from the adjacent one