

HIGH-LEVEL TACTILE INSPECTIONS

SAMPLING PHASE 1
REPORT
Bothwell Castle
PIC114



HISTORIC
ENVIRONMENT
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HLTI Sampling: Report - Introduction



PIC ID # ↓	PIC114	Site name	Bothwell Castle		
Inspection start	23/08/2021	Inspection end	25/08/2021	Submission	17/09/2021
Lead HBFA	[REDACTED]				
Sample Inspectors	[REDACTED]				

Introduction:

As a result of findings on the first four full site High Level Tactile Inspections, SMT endorsed an accelerated programme that will see high-level tactile sample inspection carried out initially to 16 sites identified as having a high risk potential.

Sample inspection for Bothwell Castle was carried out in accordance with HES Management of Risk presented by High-level Fabric Policy and High level Tactile Inspection Procedures.

Three sample areas were originally planned for high level tactile inspections but, with the input from the Works Manager, Chris Hamilton, a further of two sample areas were added for inspection. The original sample areas included the West section of the North curtain wall (inside and outside faces -Area A), the East section of the North curtain wall (outside face - Area B) and the South elevation of the curtain wall between the Prison Tower sand Latrine (outside face - Area C). The added areas were the the West and North facing inside faces of the Chapel (Area E) and a section of elevated masonry of the South curtain wall to the West of the Latrine (inside face - Area D). All inspections were completed using a MEWP.

HLF Inspection Risk Matrix:

HES-T1C-HLF-RAS-X-X-V0200-RiskMatrix

Consequence		1	2	3	4	5
		No injury	Minor injury	Moderate injury	Major injury	Fatal or life-altering injury
Probability	5 Fabric fall almost certain	5	10	15	20	25
	4 Fabric fall highly likely	4	8	12	16	20
	3 Fabric fall likely	3	6	9	12	15
	2 Fabric fall unlikely	2	4	6	8	10
	1 Fabric fall highly unlikely	1	2	3	4	5

RISK RATING	RISK SCORE RANGE
High	15-25
Medium	10- 14
Low	1-9

HLTI Sample Areas:

Area:	Colour:	Sample Area Name:
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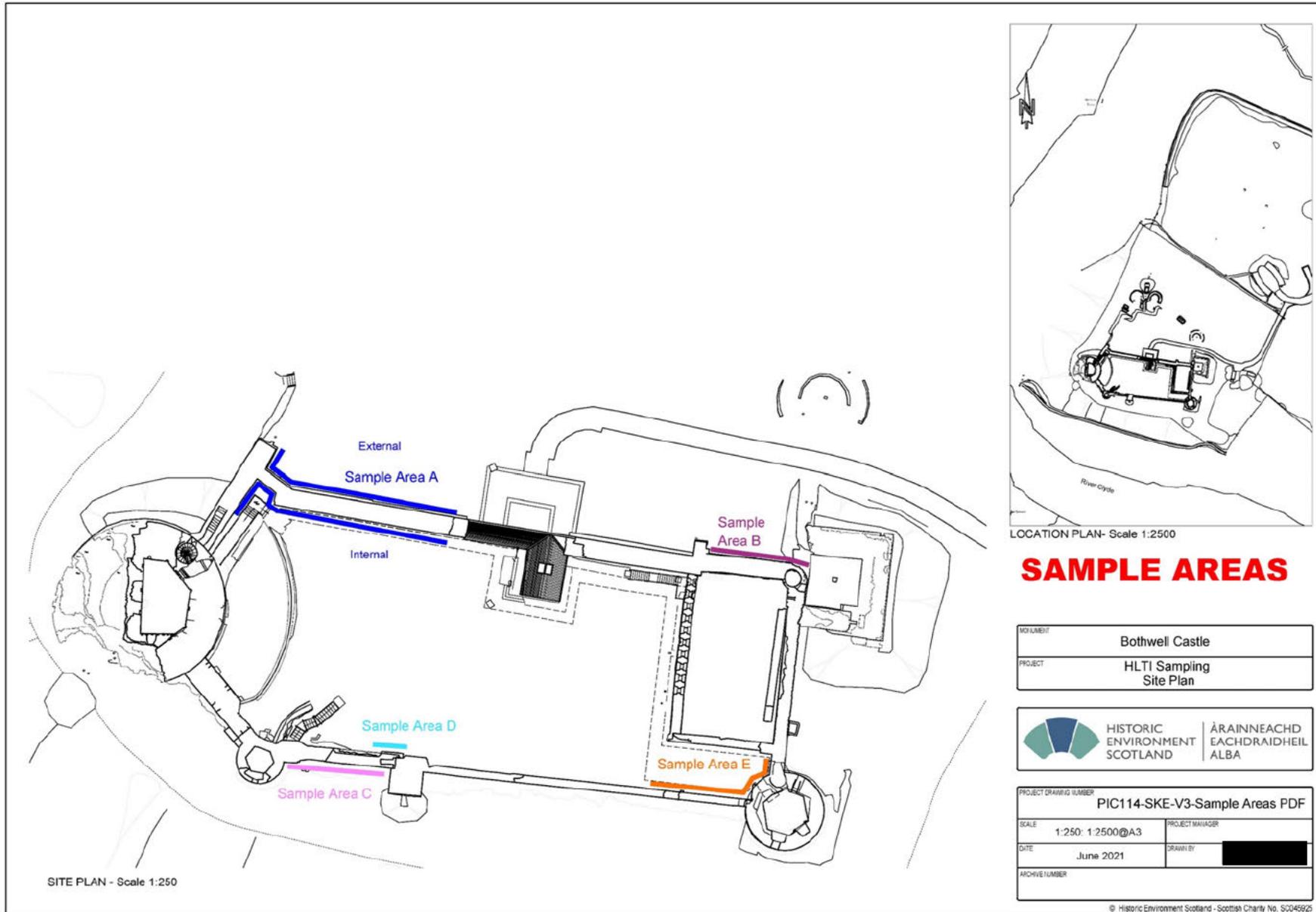
HLTI Sampling: Report - Introduction



A		West sections of North Curtain wall. Internal & external elevations.
B		External East corner of North Curtain wall
C		External South elevation of Curtain wall
D		Internal elevation of South curtain wall to West of latrine tower
E		Chapel



Click on link to open drawing in PDF viewer: [PIC114-SKE-V3-SampleAreas](#)





HLTI Sampling: Report - Summary dashboard



PIC ID#	PIC114	Submission	17/09/2021
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Select Sample area of which data should be displayed ↓	All areas	Number of observations	20
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Identified Risk



Residual Risk



Inspection Action:

Class V Report = Fabric detached during tactile inspection	Access Restriction = Risk of fabric falling and causing harm			Monitor Observation / Plan Repairs = No immediate action
	High = Full site closure	Medium = Partial site closure	Low = Minor access restriction	
4	0	1	1	14

Inspection types:	Tactile	20	Visual	0
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Key comments:

Bothwell Castle is built primarily from a soft red sandstone, much of which is now heavily weathered. The high level tactile survey did not identify many observation within the 5 sample areas inspected, with the main issues relating to loose stones, either through delamination or fractures, and friable wall cores, where exposed.

Sizeable loose stones were found in the upper section of the South curtain wall and the risks identified in this area have been communicated promptly to the District Architect and MCU to allow suitable action to be taken to maintain health and safety.

During the sample high level inspection, visits were made by the Science Team and HES Engineers. HES Engineers were provided MEWP access to inspect the propping of the Mural Passage and have provided their initial thoughts and recommendations from this inspection.

Concerns over the stability of masonry of a high level window in the Donjon were raised and passed onto HES Engineers, District Architect and MCU for consideration.

It is noted that the interior faces of the curtain wall had been inspected, with descaling taking place, as required, in April/May 2021 and this may have affected the number of observations found during the sample high level tactile inspection.



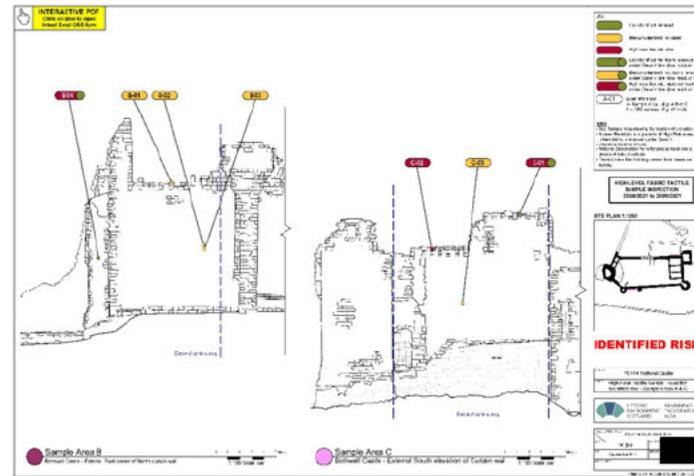
Click on link below image to open Interactive PDF in PDF viewer. In PDF viewer, the drawing is an interactive PDF, click on the labels to open the relevant OBS form for further information.

Sample Area A



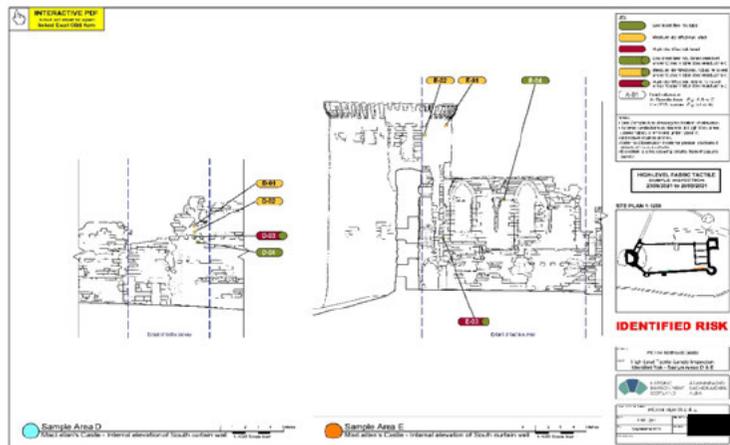
[PIC114-HLR-SI-A](#)

Sample Areas B & C



[PIC114-HLR-SI-B C](#)

Sample Areas D & E



[PIC114-HLR-SI-D E](#)