

HIGH-LEVEL TACTILE INSPECTIONS

SAMPLING PHASE 1
REPORT
Linlithgow Palace
PIC155



HISTORIC
ENVIRONMENT
SCOTLAND

ÀRAINNEACHD
EACHDRAIDHEIL
ALBA

CONTROL SHEET

Document Control

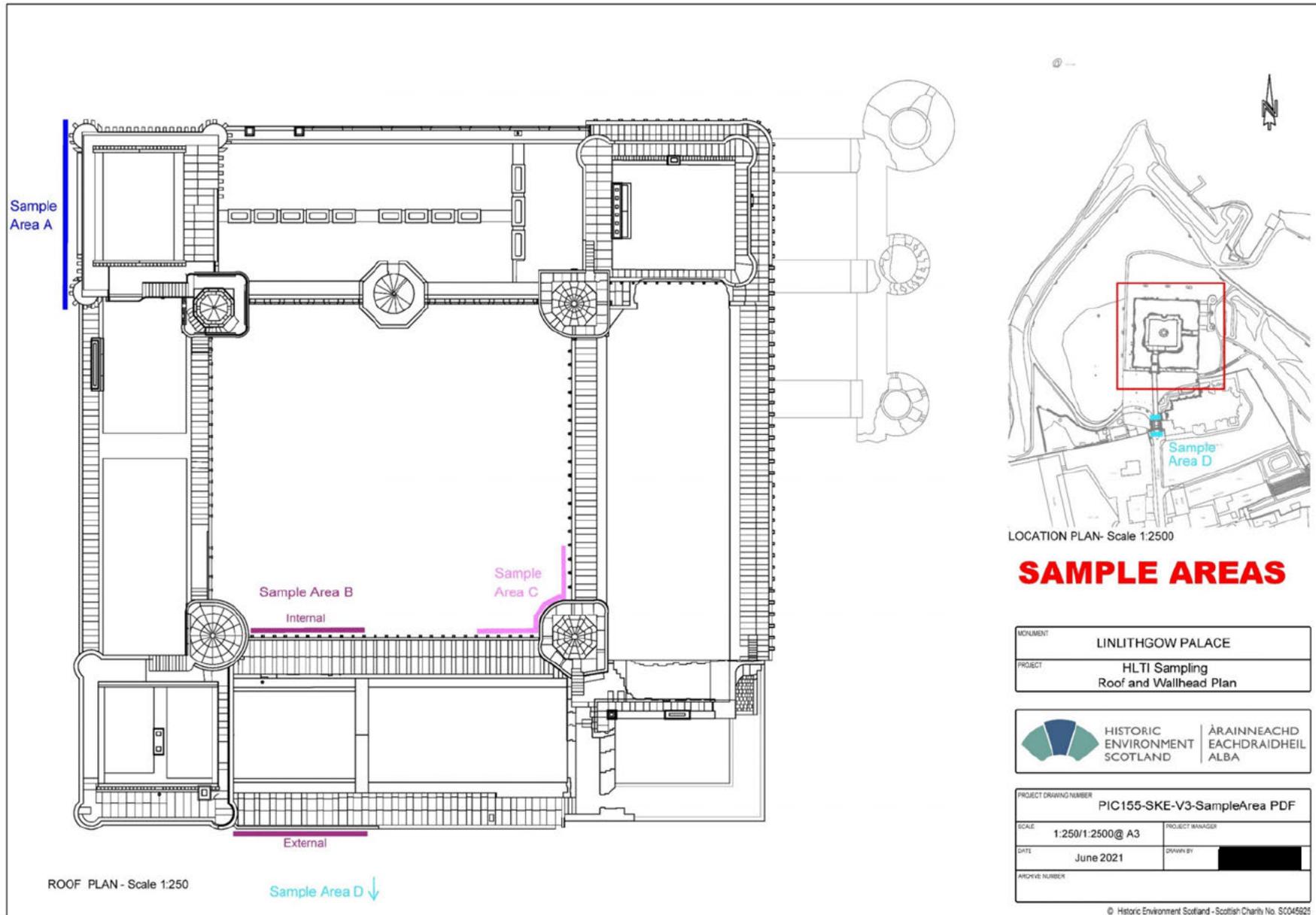
Title:	High-Level Tactile Sample Inspection Project Phase 1 Report PIC155 Linlithgow Palace
Authors:	[REDACTED]
Document created:	September 2021
Reviewed by:	[REDACTED]
Date Reviewed:	30.09.2021
Approved by:	[REDACTED]
Date of Approval:	30.09.2021
Version Number:	V0100

Version Control

Version	Date	Status	Prepared by	Amendments
V0001	09/09/2021	Draft	[REDACTED]	First draft
V0100	30/09/2021	Approved	[REDACTED]	Approved



Click on link to open drawing in PDF viewer: [PIC155-SKE-V3-SampleAreas](#)



HLTI Sampling: Report - Introduction



PIC ID # ↓	PIC155	Site name	Linlithgow Palace, Peel & Park		
Inspection start	06/09/2021	Inspection end	09/09/2021	Submission	30/09/2021
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. The Sample inspection for Linlithgow Palace was carried out in accordance with HES Management of Risk Procedures as set out in High-level Fabric Policy and High level Tactile Inspection Procedures.

The Sample Inspection Report only reports on high level fabric risks within pre-determined areas and does not provide any assessment of risk in other areas on site.

Tactile inspections of four sample areas were agreed by the T1 team and the Region and completed from MEWPs.

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:
--------------	----------------	--------------------------

HLTI Sampling: **Report - Introduction**



A		West External Elevaton - North end
B		South External & Internal Elevations - Main entrance
C		South East Corner - Courtyard
D		Gatehouse - North & South elevations

HLTI Sampling: Report - Summary dashboard



PIC ID#	PIC155	Submission	30/09/2021
---------	--------	------------	------------

Select Sample area of which data should be displayed ↓	All areas
--	-----------

Number of observations	111
------------------------	-----

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	
11	0	18	13	68

Inspection types:	Tactile	111	Visual	0
-------------------	---------	-----	--------	---

Key comments:



Four sample areas were inspected at Linlithgow Palace:

Sample Area A: West elevation - North end

Sample Area B: South wall - Main entrance to staff entrance (externally) and main entrance area internally

Sample Area C: Internal South east corner of courtyard including Southeast tower staff entrance

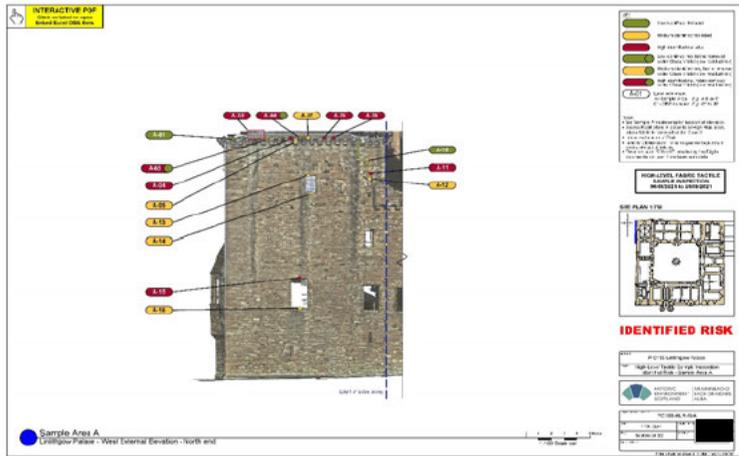
Sample Area D: Gatehouse

Linlithgow Palace is predominantly constructed from soft sandstone. Surface scaling, bossing and stone delamination along bedding planes are the common symptoms of decay in all sample areas. Most surface scaling is likely to occur in relatively small and thin sections which are unlikely to cause a potential risk to life. However, face bedded stones may suffer larger sheet delaminations e.g. from lintels, mullions and cills. Failing pointing has resulted in loose sections of mortar and hungry joints. The latter is particularly evident at the Southeast tower parapet wall, however the masonry appears secure. In addition, a number of cracked lintels were identified which resulted in the on site consultation with the Structural Engineer. One lintel was propped. The Engineer noted bulging of the internal South wall (outside the inspection sample area) and a loose tie plate which was removed by him.



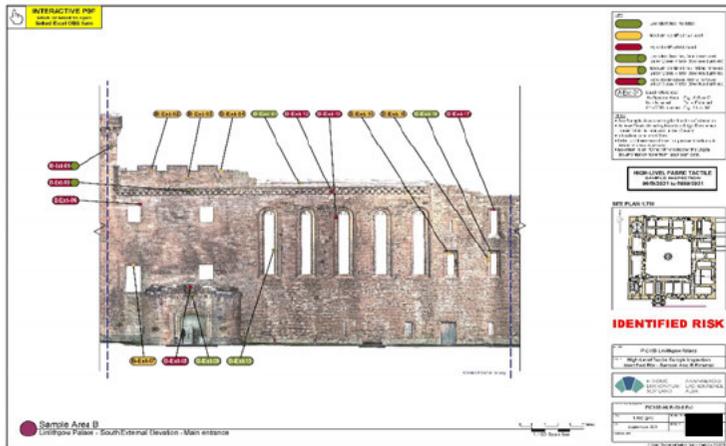
Click on link below image to open Interactive PDF in PDF viewer. In PDF viewer, the drawing is an interactive PDF, click on the labels to open the relevant OBS form for further information.

Sample Area A



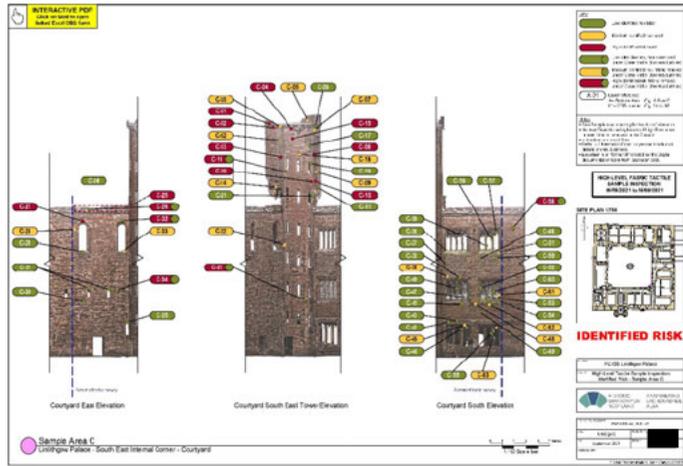
[PIC155-HLR-SI-A](#)

Sample Area B



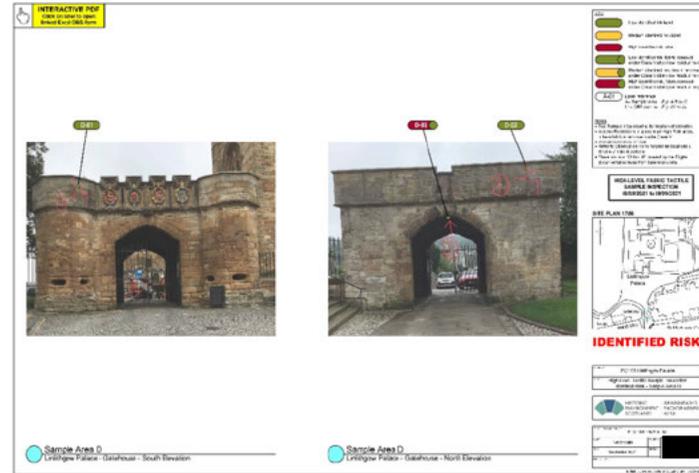


Sample Area C



PIC155-HLR-SI-C

Sample Area D



PIC155-HLR-SI-D