

Tactile safety inspection of high-level fabric

REPORT St Andrews Castle PIC034



July 2022



HISTORIC
ENVIRONMENT
SCOTLAND

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EACHDRAIDHEIL
ALBA

CONTROL SHEET

Document Control

Title:	Tactile safety inspection of high-level fabric Report PIC6034 St Andrews Castle
Authors:	[REDACTED]
Document created:	July 2022
Reviewed by:	[REDACTED]
Date Reviewed:	06/07/2022, 14/11/2022 (Update)
Approved by:	[REDACTED]
Date of Approval:	08/07/2022, 14/11/2022 (Update)
Version Number:	V0102

Version Control

Version	Date	Status	Prepared by	Amendments
V0001	01/06/2022	Draft	[REDACTED]	First draft
V0100	08/06/2022	Approved	[REDACTED]	Report reviewed and approved for first issue.
V0101	20/07/2022	Approved	[REDACTED]	Access restriction plan updated to include additional area following Technical Panel Review.
V0102	14/11/2022	Approved	[REDACTED]	Update to report. Zone 3 inspected - no observations found. Z17 added following zone revision - no observations found.

High-Level Tactile Inspection: Report - Introduction



PIC ID # ↓	PIC034	Site name	St Andrews Castle		
Inspection start	08/06/2022	Inspection end	10/06/2022	Submission	08/07/2022
Lead inspector	[REDACTED]				
Other inspectors	[REDACTED]				

Introduction:

The High-Level Fabric Inspection of PIC034 - St Andrews Castle was lead by [REDACTED], Lead Inspector and carried out with Inspectors [REDACTED] from 08/06/2022-10/06/2022

The inspection team assessed 16 zones covering the whole monument, using a range of high level access equipment including rope access, ladders and ground works. [REDACTED] has requested design scaffold to accomodate MEWP access over drawbridge for future works. (Propping of Drawbridge). UPDATE 14/11/2022 Z03 was inspected by a rope access team. No observations found. Z17 added following zone revision - no observations found.

HLF Inspection Risk Matrix:

HES-T1C-HLF-RAS-X-X-V0102-RiskMatrix

Consequence \ Probability		1	2	3	4	5
		No injury	Minor injury	Moderate injury	Major injury	Fatal or life-altering injury
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



Re-inspection frequency: (in years) **Based on pre-pandemic numbers**

		Annual Visitor Numbers				
		up to 5 k	5-20 k	20 - 100 k	100k - 2m	over 2 m
Identified Risk Rating	Low	5 years	5 years	5 years	4 years	4 years
	Medium	3 years	3 years	2.5 years	2 years	2 years
	High	1 year	1 year	1 year	1 year	0.5 year

HL Zones:

Zone:	Colour:	Alt. Ref	
1		A	Hamilton Façade
2		E	West curtain wall. West external elev
3		F	North Range and Sea Tower
4		K	Kitchen Tower. South external elev & return wall
5		J	Kitchen Tower. West facing internal wall
6		I	North Range. South facing internal elev.
7		H	Sea Tower. External face of lower level
8		G	Sea Tower. Internal elevs of upper walls
9		D	West curtain wall. East facing internal elev
10		B	South Range
11		C	South Range, Fore tower
12		O	Entrance pend into South range
13		P	Entrance bridge
14		L	Entrance steps and surrounding walls to mine
15		N	Visitor Centre
16		M	Southern boundary wall/fence

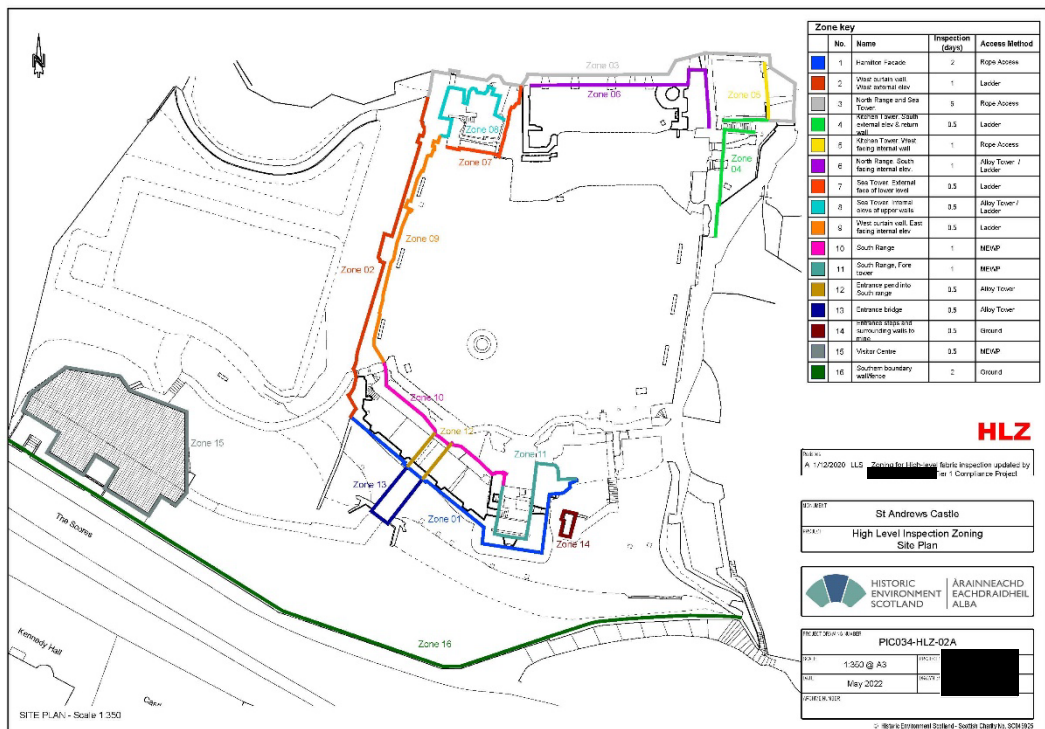
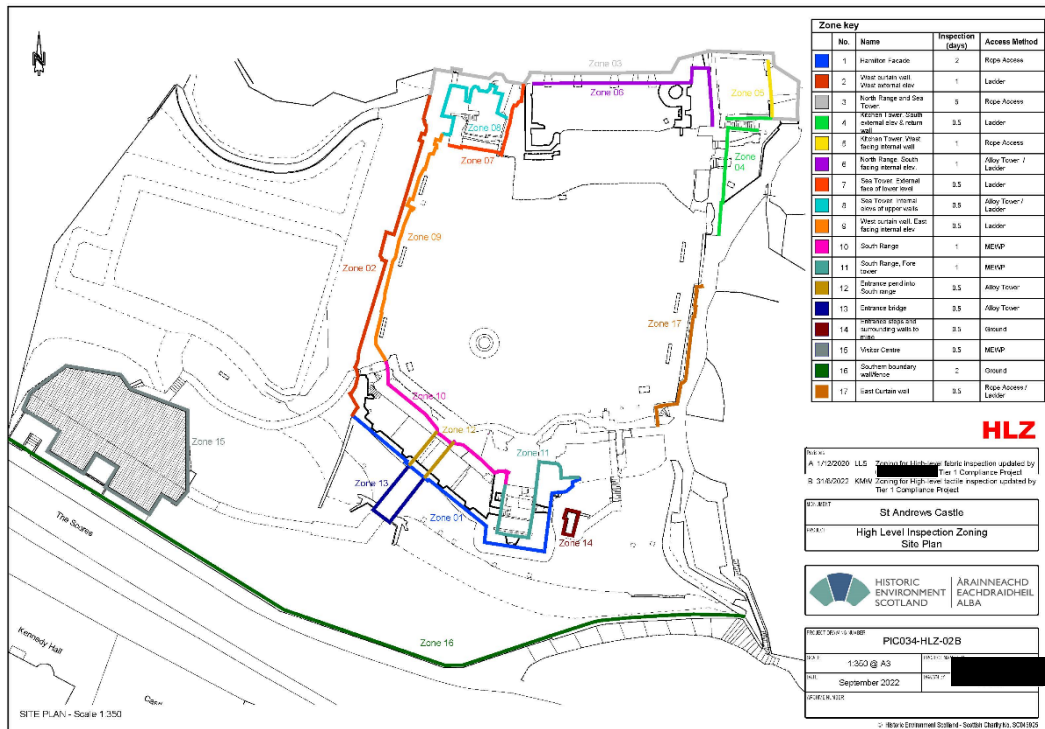
Link to 3D model:

<https://potree.hes.scot/data/034-StAn-2018-75C32CB4BC6F65A0.html>

High-Level Tactile Inspection: Report - High-Level Zoning Drawings



Click on link below image to open drawing in PDF viewer:



[PIC034-HLZ-02A](#)

High-Level Tactile Inspection: Report - Summary dashboard



PIC ID#	PIC034	Site name	St Andrews Castle	
Submission	08/07/2022	Number of zones	16	
Select zone of which data should be displayed ↓	All zones	Number of observations	45	

Identified Risk



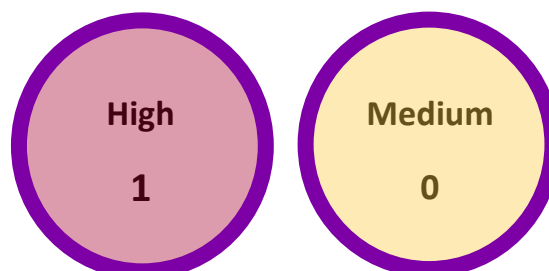
Residual Risk

After Inspection Action



Residual Risk

Mitigated with applied Access Restriction in place



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
	Full site, notifiable	Partial site, notifiable	Partial site, not notifiable	
1	0	1	0	43

Inspection types:	Tactile	45	Visual	0
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Key comments:

KEY FINDINGS

- Generally St Andrews Castle is in very good condition. 1 class V was removed and recorded and left with Works Manager. Zone 3 not completed due to nesting birds - Revisit due September 2022 with Rope access team.

PREDOMINANT RISKS:

- Weight limits on drawbridge - Design propping detail being sourced to mitigate heavy plant accessing site.
Nesting birds (Seasonal) Bat roosts (Seasonal).



High-Level Tactile Inspection: Report - Access Scope



PIC ID #	PIC034	Site name	St Andrews Castle
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Access methods: Select all methods used to conduct inspection ↓

MEWP	No	Design Scaffold	No	Alloy Tower Scaffold	No
Rope Access	Yes	Steeplejack	No	Ladder	Yes
Ground	Yes	Binoculars / Photo	Yes	UAV	No
				Yes	
				Yes	

Inspection info:

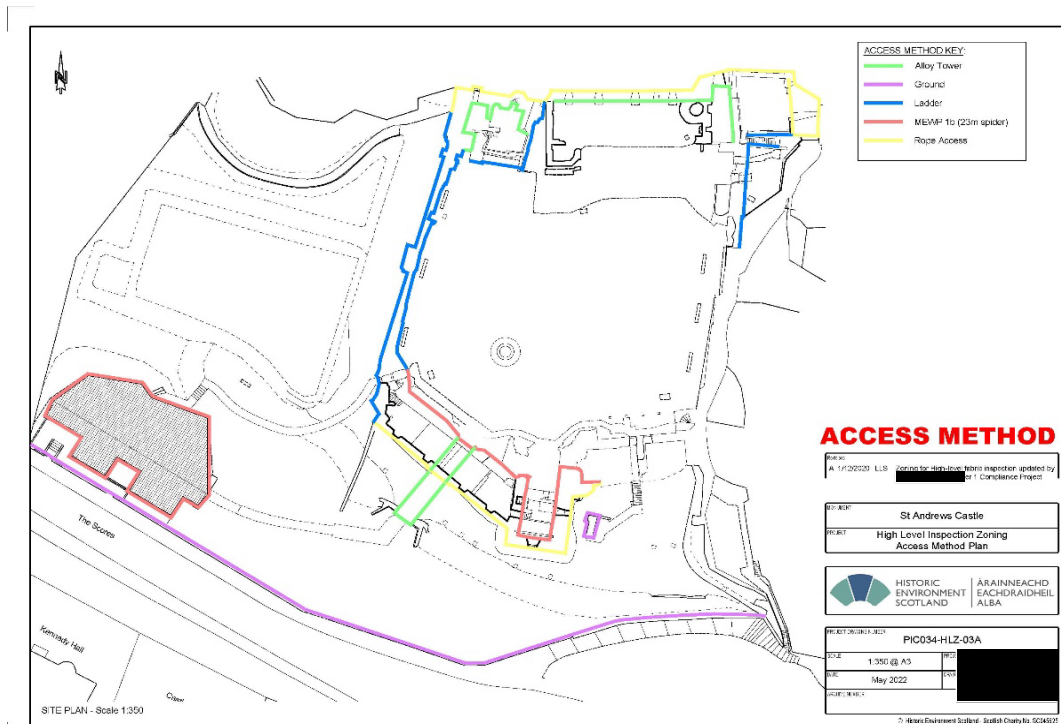
	MEWP access limited due to weight restrictions on bridge. [REDACTED] has requested design scaffold to accommodate MEWP access over drawbridge for future works. (propping of Drawbridge)
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Areas not inspected:	Z03 due to nesting birds & Z15 (Visitor Centre) which was not within current scope as it is modern fabric. UPDATE 14/11/2022 Z03 was inspected by a rope access team. No observations found. Z17 added following zone revision - no observations found.
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High-Level Tactile Inspection: Report - Access Scope



Click on link below image to open drawing in PDF viewer:



[PIC034-HLZ-03A](#)



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.

INTERACTIVE PDF
Click on label to open
linked Excel OBS form

High-Level Zone 01
St Andrews Castle - Main/Port Facade

KEY:

- Z01-01-03: Low Risk - No obs.
- Z01-04-06: Medium Risk - No obs.
- Z01-07-11: High Risk - No obs.
- Z02-01: High Risk - No obs.

Notes:

- Interactive location of Risk.
- Refer to the survey report for detailed information.
- Refer to the OBS form for further information.

HIGH-LEVEL FABRIC TACTILE INSPECTION
09/06/2022 & 01/07/2022

SITE PLAN NTS

IDENTIFIED RISK

PIC034 St Andrews Castle
High-Level Tactile Survey Inspection
Identified Risk - High-Level Zone 01

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PIC034 HLR-Z01
11/08/22
A.A. 2022

[PIC034-HLR-Z01](#)

INTERACTIVE PDF
Click on label to open
linked Excel OBS form

Z03 NOT INSPECTED DUE TO NESTING BIRDS - UPDATE zone inspected on 14/11/2022 - no observations found.

High-Level Zone 02
St Andrews Castle - West outer wall, West external elev

High-Level Zone 03
St Andrews Castle - North Range and Sea Tower

High-Level Zone 09
St Andrews Castle - West outer wall, East facing internal elev

High-Level Zone 13
St Andrews Castle - Entrance bridge

High-Level Zone 14
St Andrews Castle - Entrance steps and surrounding walls to main

High-Level Zone 15
St Andrews Castle - Visitor Centre

High-Level Zone 16
St Andrews Castle - Southern boundary wall/fence

High-Level Zone 17
St Andrews Castle - East Curtain Wall

KEY:

- Z01-01-03: Low Risk - No obs.
- Z01-04-06: Medium Risk - No obs.
- Z01-07-11: High Risk - No obs.
- Z02-01: High Risk - No obs.

Notes:

- Interactive location of Risk.
- Refer to the survey report for detailed information.
- Refer to the OBS form for further information.

HIGH-LEVEL FABRIC TACTILE INSPECTION
09/06/2022 & 01/07/2022 & 14/11/2022

SITE PLAN NTS

IDENTIFIED RISK

PIC034 St Andrews Castle
High-Level Tactile Survey Inspection
Identified Risk - High-Level Zone 02, 03, 09, 13, 14, 15, 16

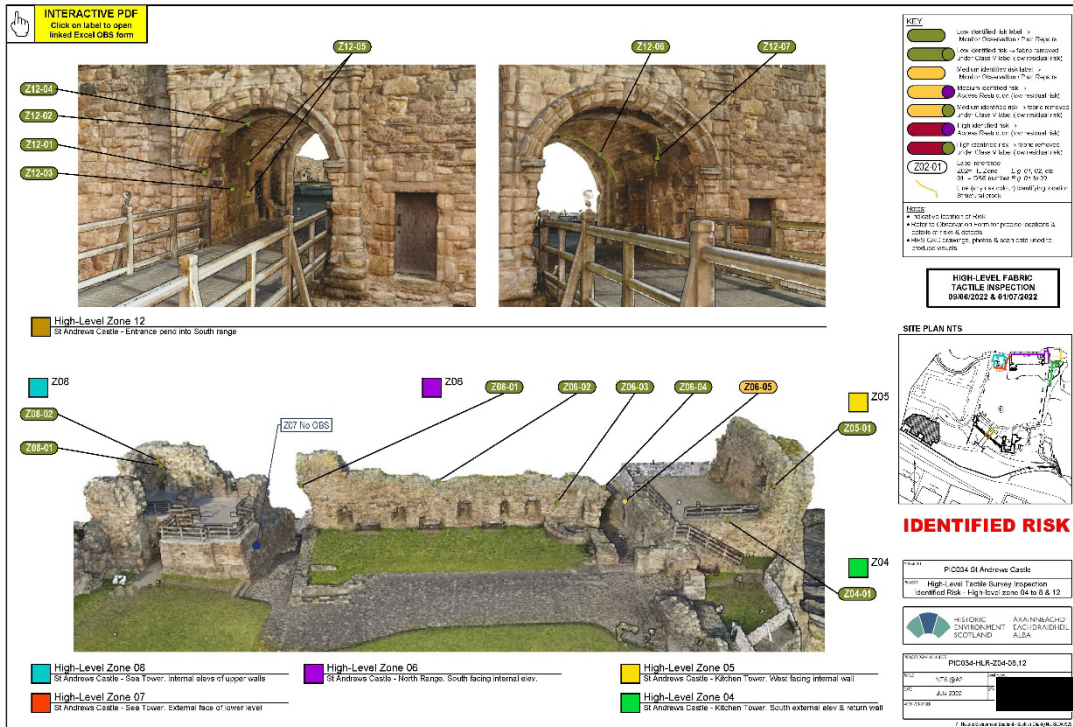
HISTORIC ENVIRONMENT SCOTLAND
ASIAN/INDIAN FACULTY
ALBA

PIC034 HLR-Z02, 03, 09, 13, 14, 15, 16 (V02)
11/08/22
A.A. 2022

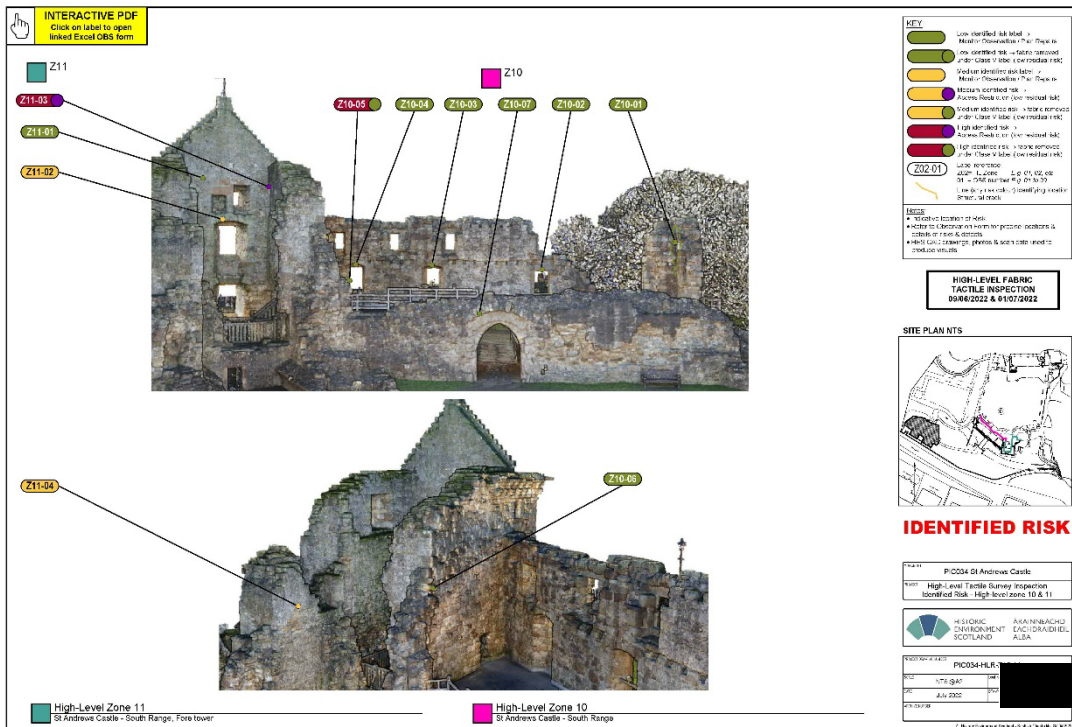
[PIC034-HLR-Z02 03 09 13 14 15 16 \(V02\)](#)



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.



[PIC034-HLR-Z04 05 06 07 08 12](#)

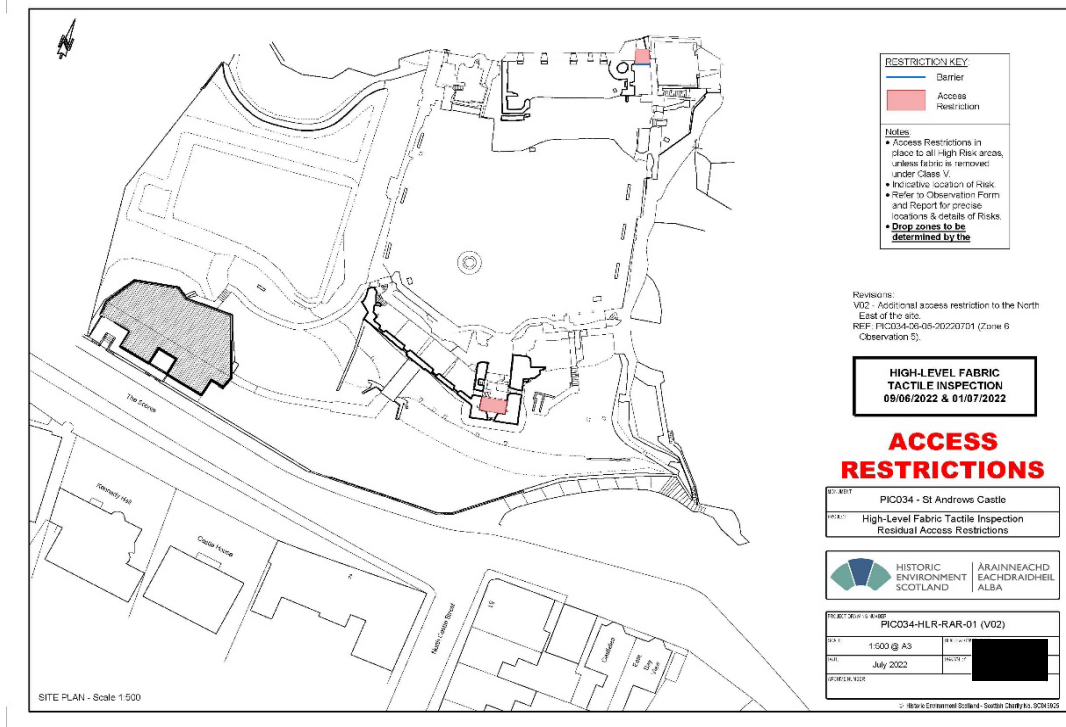


[PIC034-HLR-Z10 11](#)

High-Level Tactile Inspection: Report - Access Restrictions Plan



Click on link below image to open PDF in PDF viewer.



[PIC034-HLR-RAR-01 \(V02\)](#)

