

High Level Masonry Project
Tactile safety inspection of high-level fabric

REPORT
Castle Campbell
PIC016



December 2022



HISTORIC
ENVIRONMENT
SCOTLAND

ÀRAINNEACHD
EACHDRAIDHEIL
ALBA

CONTROL SHEET

Document Control

Title:	Tactile safety inspection of high-level fabric Report PIC016 Castle Campbell
Authors:	[REDACTED]
Document created:	December 2022
Reviewed by:	[REDACTED]
Date Reviewed:	01/03/2023
Approved by:	[REDACTED]
Date of Approval:	01/03/2023
Version Number:	V0100

Version Control

Version	Date	Status	Prepared by	Amendments
V0001	06/02/2023	Draft	[REDACTED]	N/A Document Creation
V0100	01/03/2023	Approved	[REDACTED]	First issue

Template version: PICxxx-T1C-HLF-REP-YYYYMMDD-X-V0500-Report

High-Level Tactile Inspection: Report - Introduction



PIC ID # ↓	PIC016	Site name	Castle Campbell		
Inspection start	30/01/2023	Inspection end	08/02/2023	Submission	01/03/2023
Lead inspector	[REDACTED]				
Other inspectors	[REDACTED]				

Introduction:

The High-Level Fabric Inspection was lead by [REDACTED] (Lead Inspector) and carried out with a team of Inspectors (as named above) from 30/01/2023- 10/02/2023

The HLM Inspection Team assessed 29/29 zones covering the whole monument, using a range of high level access equipment. For further information please refer to tab **5. Access Scope**.

N.B. For limitations of inspection and areas not inspected, please refer to **tab 5. Access Scope**.

Please note that following the inspection, the Engineer provided a supplementary report for information:

[PIC016-CIV-INP-20230223-V0001-Lintels](#)

HLF Inspection Risk Matrix:

HES-T1C-HLF-RAS-X-X-V0300-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)

		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

Link to 3D model:

[N/A](#)

HL Zones:

Zone:	Colour:	Zone Name:
1		Tower. East Elevation
2		Tower. North Elevation
3		Tower. West Elevation inc stairs
4		Tower. South Elevation inc roof pitch & remains of East Elevation
5		Tower. Caphouse roof and chimneys
6		Curtain Wall. North Exterior
7		Curtain Wall. West Exterior
8		Curtain Wall. South Exterior
9		East Range. East Exterior Wall
10		Gatehouse Pend
11		Curtain Wall. North. Interior
12		Curtain Wall. West. Interior
13		East Range. Roof. West pitch
14		East Range. Roof. East pitch
15		East Range. Exterior. West Elevation
16		East Range. Loggia. West elevation and interior
17		East Range. Stair Turret. North and West Elevations
18		East Range. Stair Turret. Interior inc passages (2) to Hall
19		Courtyard. Corridor Retaining Wall. South Elevation
20		Hall and Chamber Range. Exterior. North Elevation
21		Hall and Chamber Range. Interior. North Elevation inc stair tower
22		Hall and Chamber Range. Interior. East Elevation
23		Hall and Chamber Range. Interior. South Elevation inc 2 x latrines
24		Hall and Chamber Ranger. Exterior. Pend inc West facing retaining wall

High-Level Tactile Inspection: **Report - Introduction**

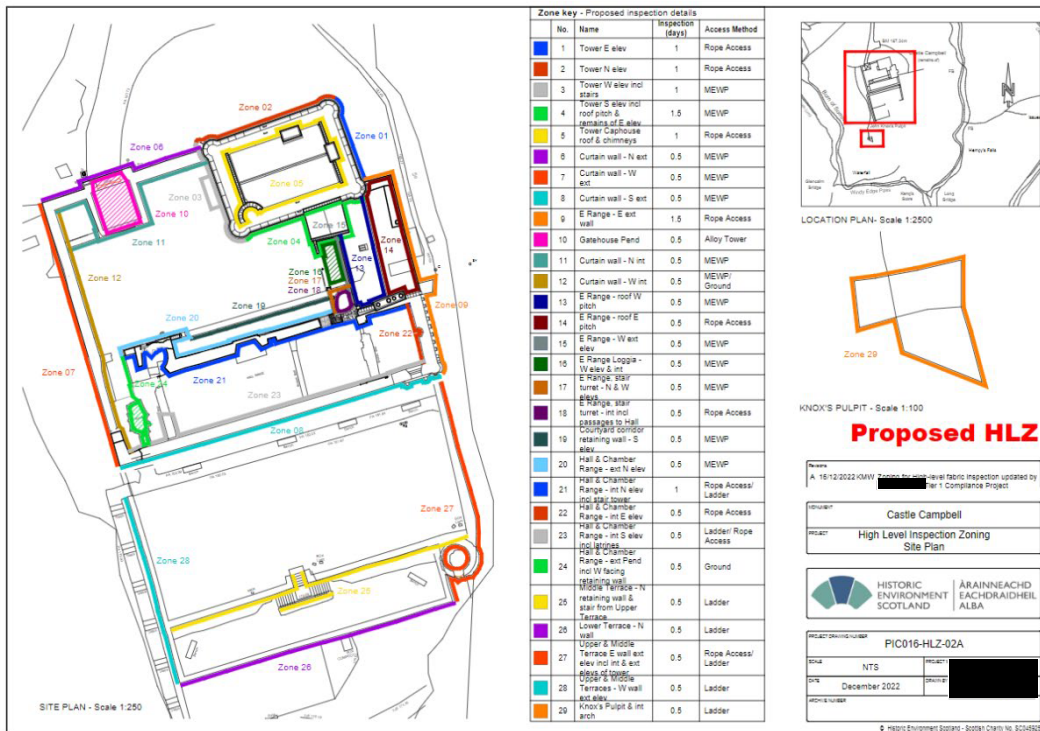


25		Middle Terrace. North retaining wall and stairs from Upper Terrace
26		Lower Terrace. North Wall
27		Upper and Middle Terraces. East Wall. External Elevation inc Internal and External Elevations of t
28		Upper and Middle Terraces. West Wall. External Elevation
29		Knox's Pulpit. All elevations and internal arch

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



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



[PIC016-HLZ-02A](#)

High-Level Tactile Inspection: Report - Summary dashboard



PIC ID#	PIC016	Site name	Castle Campbell		
Submission	01/03/2023	Number of zones	29		
Select zone of which data should be displayed ↓	All zones	Number of observations	98		

Identified Risk



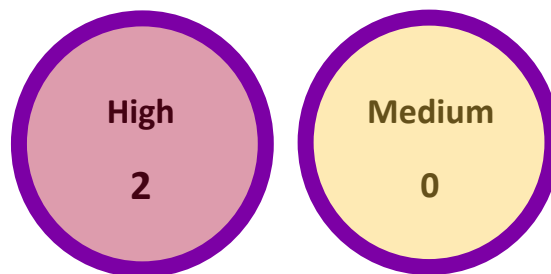
Residual Risk

After Inspection Action



Residual Risk

Mitigated with applied Access Restriction in place



Inspection Action:

Monitor Observation = No immediate action	Plan Repairs = No immediate action	Fabric detached During tactile inspection (Former Class V)	Access Restriction Risk of fabric falling and causing harm		
			Full site, notifiable	Partial site, notifiable	Partial site, not notifiable
30	49	17	0	0	2

Inspection types:	Tactile	97
	Visual	1



Key comments:

KEY FINDINGS

- MCU Repaired majority of High Level Masonry that was loose / removed
- Agreement with DA / DWM / RWM to remove loose stone and store on site

PREDOMINANT RISKS:-

- Access To site with plant & Equipment from Car Park
- Undulating Ground within Castle Courtyard which becomes treacherous when wet
- Tight Access with MEWP to Top Terrace
- Steep Slope around external parts of Castle
- Members of Public accessing the area leading to the castle

N.B. For limitations of inspection and areas not inspected, please also refer to **tab 5. Access Scope.**



Inspection Action:

Monitor Observation = No immediate action	Plan Repairs = No immediate action	Fabric detached During tactile inspection (Former Class V)	Access Restriction Risk of fabric falling and causing harm		
			Full site, notifiable	Partial site, notifiable	Partial site, not notifiable
30	49	17	0	0	2

High-Level Tactile Inspection: Report - Access Scope



PIC ID #	PIC016	Site name	Castle Campbell
----------	--------	-----------	-----------------

Access methods: Select all methods used to conduction inspection ↓

MEWP	Yes	Design Scaffold		Alloy Tower Scaffold	
Rope Access	Yes	Steeplejack		Ladder	Yes
Ground	Yes	Binoculars / Photo		UAV	

Other method		If yes, details:	
--------------	--	------------------	--

Ground protection / tracking required:	Yes
--	-----

External Contractor appointed for access requirments:	Yes
---	-----

Inspection info:

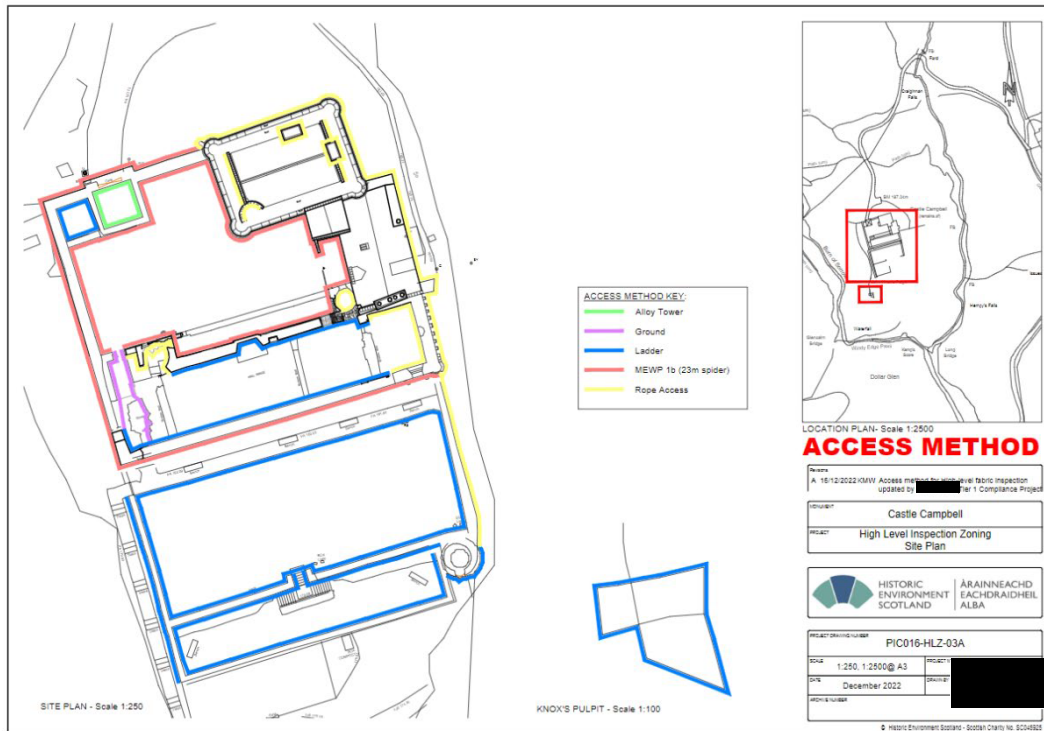
Limitations of inspection:	No Limitations when inspecting
-----------------------------------	--------------------------------

Areas not inspected:	N/A - All zones inspected.
-----------------------------	----------------------------

High-Level Tactile Inspection: Report - Access Scope



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



[PIC016-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 ZONES SHOWN IN THIS DRAWING
Z01-2, Z05-6, Z09, Z14

Z05
PIC016
No OBS

Z02
PIC016
No OBS

Z14
PIC016

Z09
PIC016

SITE PLAN NTS

KEY:

- Low identified risk label → Monitor Observation / Plan Repairs
- Low identified risk → fabric removed under Class V label (low medical risk)
- Medium identified risk label → Monitor Observation / Plan Repairs
- Medium identified risk → Access Restriction (low medical risk)
- Medium identified risk → fabric removed under Class V label (low medical risk)
- High identified risk → Access Restriction (low medical risk)
- High identified risk → fabric removed under Class V label (low medical risk)
- High identified risk →

Z02-01
Label reference: Z02-01, Zone: E.g. 01, 02, etc. 01 = OBS number E.g. 01 to 09
Line with risk control identifying location Structural crack

Z02-01
Informed of repair carried out by MCSI - Leave with regional team for further information.

Notes:

- Indicative location of Risk.
- Refer to Observation Form for precise locations & details of risks & defects.
- MES photos & CAD drawings used in the production of this drawing.

HIGH-LEVEL FABRIC TACTILE INSPECTION
08/01/2023 to 08/02/2023

IDENTIFIED RISK 01

PIC016 Castle Campbell

High-Level Tactile Survey Inspection
Identified Risk = Z01-02 Z05-06 Z09 Z14

HISTORIC ENVIRONMENT SCOTLAND ARANRHAIGH FACHRACHDHEIL ALBA

PIC016-HLR-Z01-02 Z05-06 Z09 Z14

NTS @40
08/02/2023

© Steve Thomson (Author) - Author Draft No. 02/2023

[PIC016-HLR-Z01-02 Z05-06 Z09 Z14 \(DWG 01\)](#)

INTERACTIVE PDF
Click on label to open linked Excel OBS form

HIGH-LEVEL ZONES SHOWN IN THIS DRAWING
Z03-04, Z07, Z13, Z15-18

Z15
PIC016

Z18
PIC016

Z16
PIC016

Z07
PIC016

SITE PLAN NTS

KEY:

- Low identified risk label → Monitor Observation / Plan Repairs
- Low identified risk → fabric removed under Class V label (low medical risk)
- Medium identified risk label → Monitor Observation / Plan Repairs
- Medium identified risk → Access Restriction (low medical risk)
- Medium identified risk → fabric removed under Class V label (low medical risk)
- High identified risk → Access Restriction (low medical risk)
- High identified risk → fabric removed under Class V label (low medical risk)
- High identified risk →

Z02-01
Label reference: Z02-01, Zone: E.g. 01, 02, etc. 01 = OBS number E.g. 01 to 09
Line with risk control identifying location Structural crack

Z02-01
Informed of repair carried out by MCSI - Leave with regional team for further information.

Notes:

- Indicative location of Risk.
- Refer to Observation Form for precise locations & details of risks & defects.
- MES photos & CAD drawings used in the production of this drawing.

HIGH-LEVEL FABRIC TACTILE INSPECTION
08/01/2023 to 08/02/2023

IDENTIFIED RISK 02

PIC016 Castle Campbell

High-Level Tactile Survey Inspection
Identified Risk = Z03-04, Z07, Z13, Z15-18

HISTORIC ENVIRONMENT SCOTLAND ARANRHAIGH FACHRACHDHEIL ALBA

PIC016-HLR-Z03-04 Z07 Z13 Z15-18

NTS @40
08/02/2023

© Steve Thomson (Author) - Author Draft No. 02/2023

[PIC016-HLR-\(Z03-04\) Z07 Z13 \(Z15-18\) \(DWG 02\)](#)

High-Level Tactile Inspection: Report - Risk Drawings



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 ZONES SHOWN IN THIS DRAWING
Z08

KEY:

- Low identified risk label → Monitor Observation / Plan Repairs
- Low identified risk → fabric removed under Class V label (low residual risk)
- Medium identified risk label → Monitor Observation / Plan Repairs
- Medium identified risk → fabric removed under Class V label (low residual risk)
- High identified risk → Access Restriction (low residual risk)
- High identified risk → fabric removed under Class V label (low residual risk)
- Line key risk control identifying location Structural check

202-01 Label reference Z08-01, Zone E.g. 01, 02, etc 01 = OBS number E.g. 01 to 99

202-01 Informed of repair carried out by MCHU - Lines with regional team for further information.

NOTE:

- Positive location of Risk
- Refer to Observation Form for precise locations & details of risks & defects.
- MES photos & CAD drawings used in the production of sheets.

HIGH-LEVEL FABRIC TACTILE INSPECTION
08/01/2023 to 08/02/2023

IDENTIFIED RISK 03

PROJECT: PIC016 Castle Campbell
RISK: High-Level Tactile Survey Inspection identified Risk - Z08

HISTORIC ENVIRONMENT SCOTLAND | ARAINNEACHD EACHDRAIDHEL ALBA

PIC016-HLR-Z08

DATE: NTS @42
08/02/2023

© Historic Environment Scotland. 0424. 0424 to 0424

[PIC016-HLR-Z08 \(DWG 03\)](#)

INTERACTIVE PDF
Click on label to open linked Excel OBS form

HIGH-LEVEL ZONES SHOWN IN THIS DRAWING
Z10-12

KEY:

- Low identified risk label → Monitor Observation / Plan Repairs
- Low identified risk → fabric removed under Class V label (low residual risk)
- Medium identified risk label → Monitor Observation / Plan Repairs
- Medium identified risk → fabric removed under Class V label (low residual risk)
- High identified risk → Access Restriction (low residual risk)
- High identified risk → fabric removed under Class V label (low residual risk)
- Line key risk control identifying location Structural check

202-01 Label reference Z10-01, Zone E.g. 01, 02, etc 01 = OBS number E.g. 01 to 99

202-01 Informed of repair carried out by MCHU - Lines with regional team for further information.

NOTE:

- Positive location of Risk
- Refer to Observation Form for precise locations & details of risks & defects.
- MES photos & CAD drawings used in the production of sheets.

HIGH-LEVEL FABRIC TACTILE INSPECTION
08/01/2023 to 08/02/2023

IDENTIFIED RISK 04

PROJECT: PIC016 Castle Campbell
RISK: High-Level Tactile Survey Inspection identified Risk - Z10-12

HISTORIC ENVIRONMENT SCOTLAND | ARAINNEACHD EACHDRAIDHEL ALBA

PIC016-HLR-Z10-12

DATE: NTS @42
08/02/2023

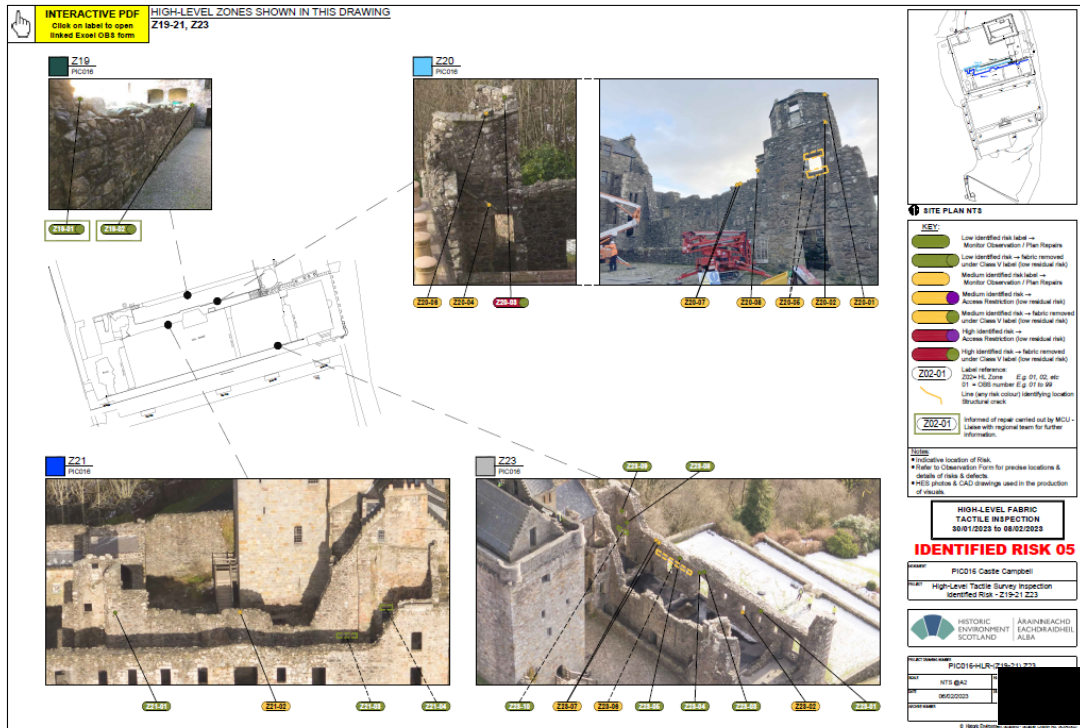
© Historic Environment Scotland. 0424. 0424 to 0424

[PIC016-HLR-\(Z10-12\) \(DWG 04\)](#)

High-Level Tactile Inspection: Report - Risk Drawings



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.



PIC016-HLR-(Z19-21) Z23 (DWG 05)

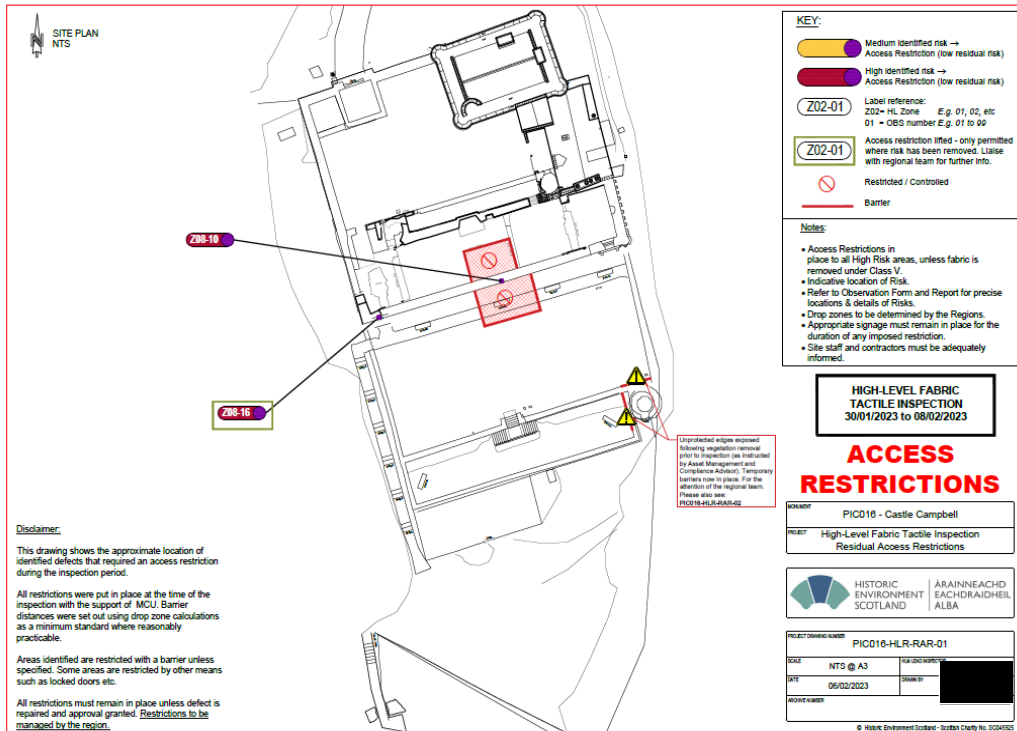


PIC016-HLR-Z22 (Z24-29) (DWG 06)

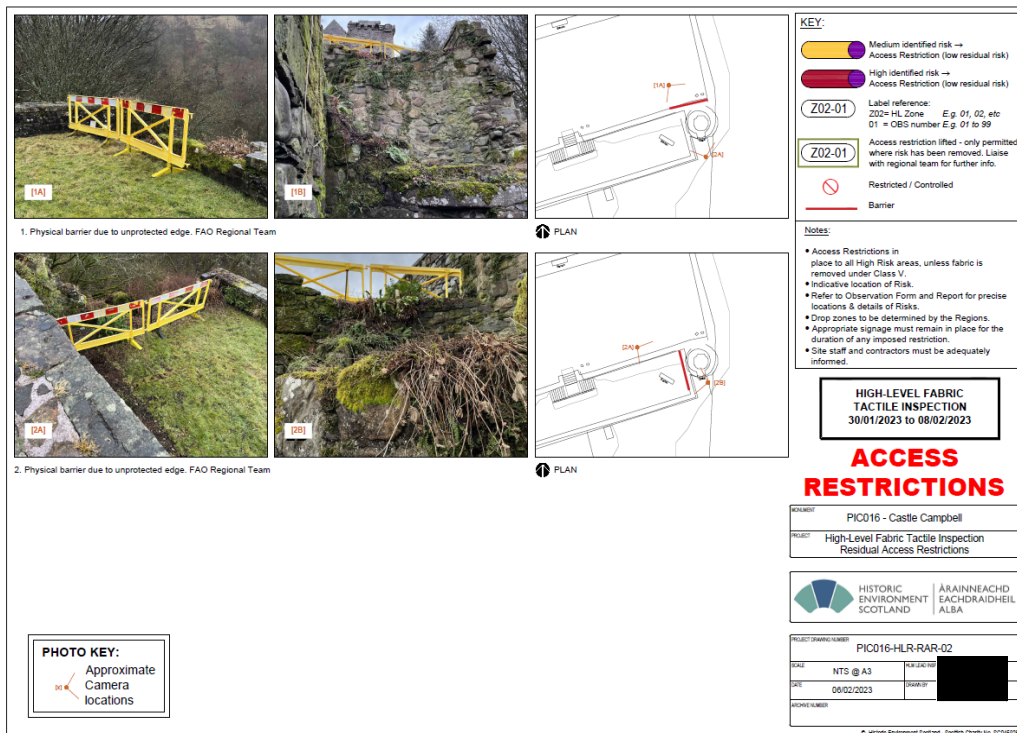
High-Level Tactile Inspection: Report - Access Restrictions Plan



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



PIC016-CLR-RAR-01



PIC016-CLR-RAR-02