

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

REPORT  
Castle Sween  
PIC060



December 2022



HISTORIC  
ENVIRONMENT  
SCOTLAND

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# CONTROL SHEET

## Document Control

Title:	Tactile safety inspection of high-level fabric Report PIC060 Castle Sween
Authors:	[REDACTED]
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## Version Control

Version	Date	Status	Prepared by	Amendments
V0001	12/12/2022	Draft	[REDACTED]	N/A Document Creation
V0100	07/03/2023	Approved	[REDACTED]	First Issue

# High-Level Tactile Inspection: Report - Introduction



<b>PIC ID # ↓</b>	PIC060	<b>Site name</b>	Castle Sween
<b>Inspection start</b>	21/02/2023	<b>Inspection end</b>	01/03/2023
<b>Lead inspector</b>	[REDACTED]		
<b>Submission</b>	07/03/2023		
<b>Other inspectors</b>	[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 20.02.2023 - 03.03.2023

The HLM Inspection Team assessed 14/14 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**.

## HLF Inspection Risk Matrix:

HES-T1C-HLF-RAS-X-X-V0300-RiskMatrix

Consequence		1	2	3	4	5
		No injury	Minor injury	Moderate injury	Major injury	Fatal or life-altering injury
Probability	5	5	10	15	20	25
	4	4	8	12	16	20
	3	3	6	9	12	15
	2	2	4	6	8	10
	1	1	2	3	4	5

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



Re-inspection frequency: (in years) **NO DATA AVAILABLE**

		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:

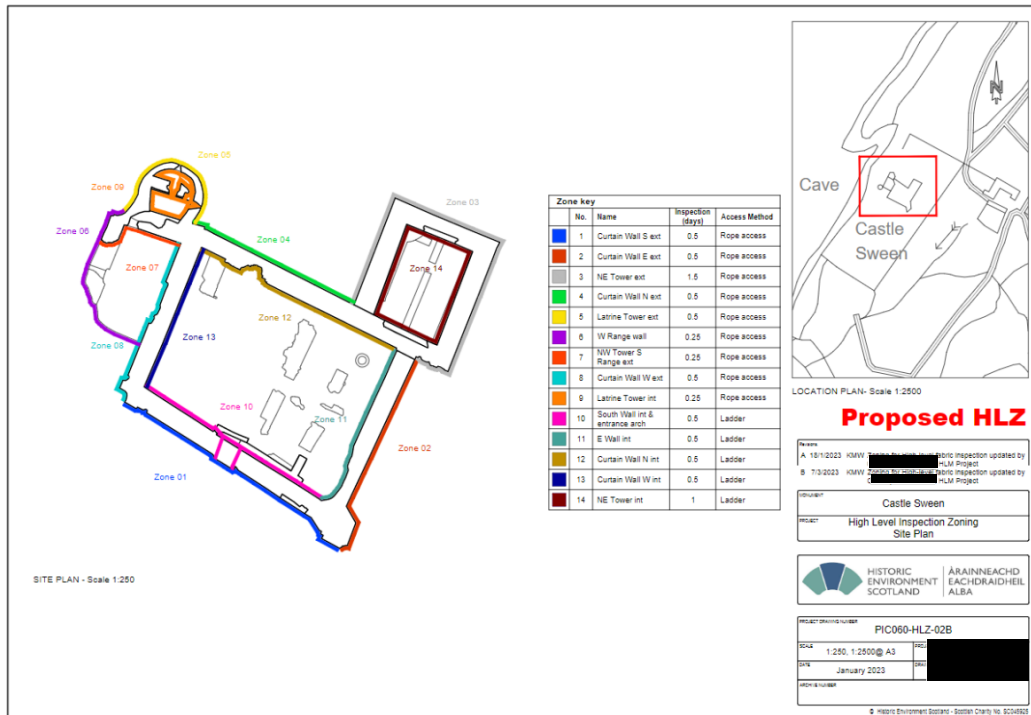
HL Zones:

Zone:	Colour:	Zone Name:
1		Curtain Wall South Ext
2		Curtain Wall East Ext
3		NE Tower Ext
4		Curtain Wall Ext N
5		Latrine Tower Ext
6		West Range Wall
7		NW Tower South Range Ext
8		Curtain Wall West Ext
9		Latrine Tower Internal
10		South Wall internal & entrance arch
11		East Wall Internal
12		Curtain Wall Int
13		Curtain Wall West Int
14		North East Tower Int

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



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



[PIC060-HLZ-02B](#)

# High-Level Tactile Inspection: Report - Summary dashboard



PIC ID#	PIC060	Site name	Castle Sween		
Submission	07/03/2023	Number of zones	14		
Select zone of which data should be displayed ↓	All zones	Number of observations	70		

## Identified Risk



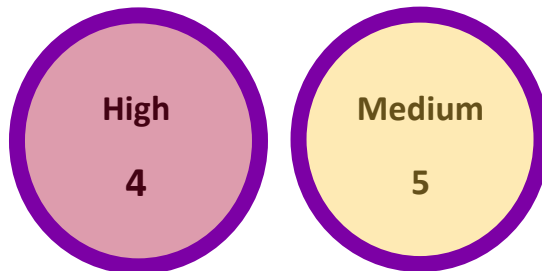
## Residual Risk

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
23	21	21	1	1	3

Inspection types:	Tactile	70
	Visual	0



## Key comments:

### KEY FINDINGS

- Generally site in good condition
- Vegetation Growth on wall heads requires to be removed
- Repairs carried out where required at accessible points
- Three access restrictions recommended if site is to open ( Risk Sketch on TEAMS)
- 
- 
- 

### PREDOMINANT RISKS:-

- Undulating ground- accessing /egress from site
- Steep banks surrounding the castle
- Close working to water
- 
- 
- 

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
23	21	21	1	1	3



# High-Level Tactile Inspection: Report - Access Scope



PIC ID #	PIC060	Site name	Castle Sween
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## Access methods: Select all methods used to conduction inspection ↓

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

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

Ground protection / tracking required:	
--	--

External Contractor appointed for access requirments:	
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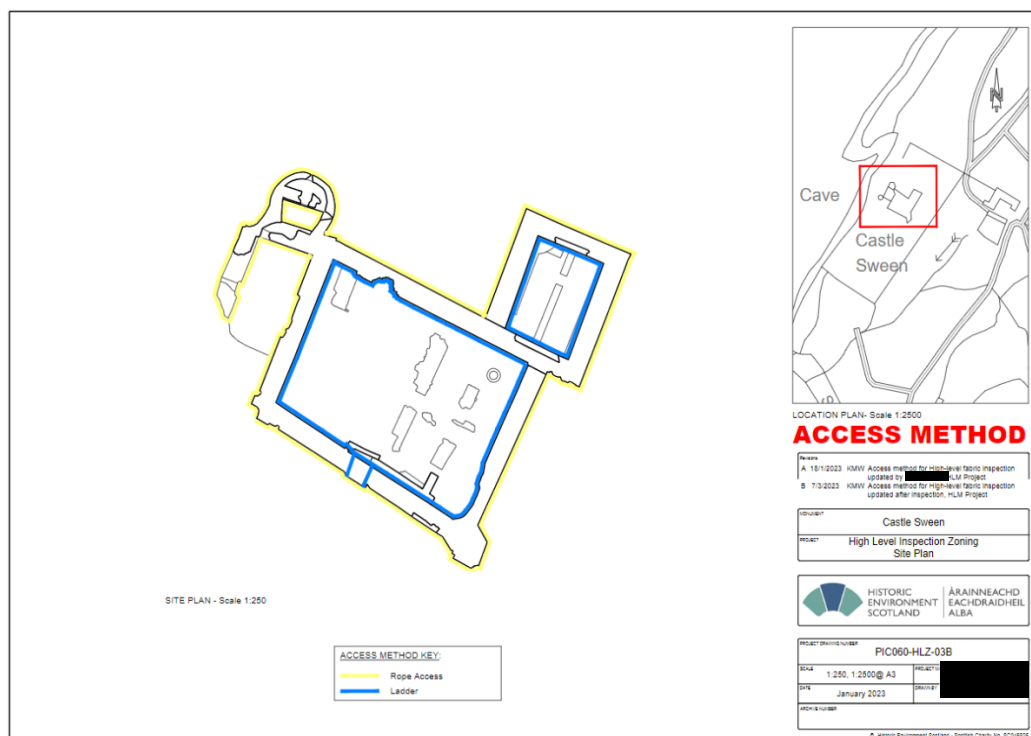
## Inspection info:

<b>Limitations of inspection:</b>	
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<b>Areas not inspected:</b>	
-----------------------------	--



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



[PIC060-HLZ-03B](#)



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**  
Z01-04

Z01-01 Z01-02 Z01-03 Z01-04 Z01-05 Z01-06 Z01-07 Z01-08 Z01-09 Z01-10

**Z01**  
PIC061 - Curran Wall South Est

**Z02**  
PIC061 - Curran Wall East Est

**Z03**  
PIC061 - NE Tower Est

**Z04**  
PIC061 - Curran Wall West Est

**Z05**  
PIC061 - NE Tower Est

**Z06**  
PIC061 - West Range Est

**Z07**  
PIC061 - NW Tower South Range Est

**Z08**  
PIC061 - Curran Wall West Est

**Z09**  
PIC061 - Laine Tower Internal

**Z10**  
PIC061 - South Wall Internal

**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)

**Label reference**  
Z01-HL-Zone (E.g. 01, 02, etc)  
01 = OBS number (E.g. 01 to 50)  
Line and risk colour identifying location structure crack

**Z01-01**  
Internal or repair carried out by MCU - Label with regional team for further information.

**NOTES**

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

**HIGH-LEVEL FABRIC TACTILE INSPECTION**  
21/02/2023 to 01/03/2023

**IDENTIFIED RISK 01**

PIC060 Castle Sween  
High-Level Tactile Survey Inspection  
Identified Risk - Z01 to Z04

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PIC060-HLR-(Z01-04)

DATE: NTS @42 | DRAWN: [Redacted]  
28/02/2023

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[01. PIC060-HLR-\(Z01-04\)](#)

**INTERACTIVE PDF**  
Click on label to open linked Excel OBS form

**HIGH-LEVEL ZONES SHOWN IN THIS DRAWING**  
Z05-10

Z05-01 Z05-02 Z05-03 Z05-04 Z05-05 Z05-06 Z05-07 Z05-08 Z05-09 Z05-10

**Z07**  
PIC061 - NW Tower South Range Est

**Z08**  
PIC061 - Curran Wall West Est

**Z09**  
PIC061 - Laine Tower Internal

**Z10**  
PIC061 - South Wall Internal

**Z05**  
PIC061 - Laine Tower Est

**Z06**  
PIC061 - West Range Est

**Z07**  
PIC061 - NW Tower South Range Est

**Z08**  
PIC061 - Curran Wall West Est

**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)

**Label reference**  
Z05-HL-Zone (E.g. 01, 02, etc)  
01 = OBS number (E.g. 01 to 50)  
Line and risk colour identifying location structure crack

**Z05-01**  
Internal or repair carried out by MCU - Label with regional team for further information.

**NOTES**

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

**HIGH-LEVEL FABRIC TACTILE INSPECTION**  
21/02/2023 to 01/03/2023

**IDENTIFIED RISK 02**

PIC060 Castle Sween  
High-Level Tactile Survey Inspection  
Identified Risk - Z05 to Z10

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PIC060-HLR-(Z05-10)

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[02. PIC060-HLR-\(Z05-10\)](#)



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**INTERACTIVE PDF**  
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**HIGH-LEVEL ZONES SHOWN IN THIS DRAWING**  
Z11-13

**Z11**  
PIC060 - East Wall Internal

**Z13**  
PIC060 - East Wall West Int

**Z12**  
PIC060 - Curtain Wall Int

**SITE PLANNING**

**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 → Access Restriction (low residual risk)
- 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)
- Under Class V label (low residual risk)

**Label reference:**  
Z11-X-Zone E.g. Z11\_02, etc  
Z11 = OBS number E.g. Z11 to Z13

**Z02-01**  
Label reference

**Z02-01**  
Inform of repair carried out by HCU. Label with repair team for further information.

**Notes:**

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

**HIGH-LEVEL FABRIC TACTILE INSPECTION**  
21/02/2023 to 01/03/2023

**IDENTIFIED RISK 03**

PIC060 Castle Sween  
High-Level Tactile Survey Inspection  
Identified Risk - Z11 to Z13

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PIC060-HLR-(Z11-13)

DATE: NTR (04) 20/02/2023

BY: [Redacted]

FOR: [Redacted]

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[03. PIC060-HLR-\(Z11-13\)](#)

**INTERACTIVE PDF**  
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**HIGH-LEVEL ZONES SHOWN IN THIS DRAWING**  
Z14

**Z14**  
PIC061 - North East Tower Int

**Z14**  
PIC061 - North East Tower Int

**Z14**  
PIC061 - North East Tower Int

**Z14**  
PIC061 - North East Tower Int

**SITE PLANNING**

**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 → Access Restriction (low residual risk)
- 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)
- Under Class V label (low residual risk)

**Label reference:**  
Z14-X-Zone E.g. Z14\_01, etc  
Z14 = OBS number E.g. Z14 to Z14

**Z02-01**  
Label reference

**Z02-01**  
Inform of repair carried out by HCU. Label with repair team for further information.

**Notes:**

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

**HIGH-LEVEL FABRIC TACTILE INSPECTION**  
21/02/2023 to 01/03/2023

**IDENTIFIED RISK 03**

PIC060 Castle Sween  
High-Level Tactile Survey Inspection  
Identified Risk - Z14

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PIC060-HLR-Z14

DATE: NTR (04) 20/02/2023

BY: [Redacted]

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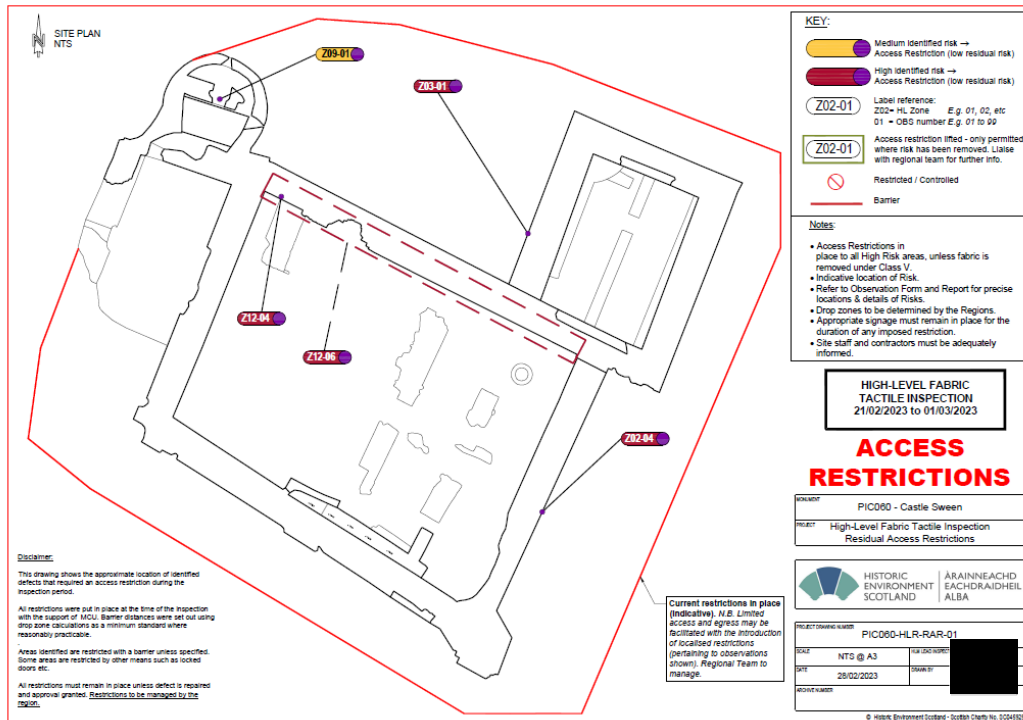
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[04. PIC060-HLR-Z14](#)

# High-Level Tactile Inspection: Report - Access Restrictions Plan



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[PIC060-HLR-RAR-01](#)