

RECORDING OF STEPS
DUNNOTTAR CASTLE
STONEHAVEN
ABERDEENSHIRE

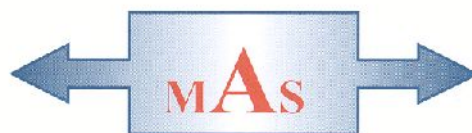


Recording of steps

Carried out 16th August 2018

by

Murray Archaeological Services Ltd



Report No: MAS 2018-19

by

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RECORDING OF STEPS
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- Recording of steps -

1. Background
 - 1.1 Cobbled steps within the main passageway into Dunnottar Castle have become unsafe, especially in wet weather. The volume of footfall has also resulted in the stones becoming polished and some areas have loosened with loss of cobbles. This poses a significant Health and Safety issue in regard to the large number of visitors to the site, all of whom have to walk along this passage.
 - 1.2 A number of temporary repairs and patches have been undertaken by Dunecht Estates but have not solved the underlying problem. As a result Dunecht Estates decided to remove the cobbles and replace them with a coloured concrete with an exposed aggregate finish. The intention is to retain the main stones forming the treads.
 - 1.3 In initial contact HES advised Dunecht Estates to commission an archaeological survey/photographic record of the steps prior to an application for Scheduled Monument Consent. This would identify stones of significance and would be used as the basis for a method statement for archaeological monitoring of repairs (WSI or written scheme of investigation)

- 1.4 Murray Archaeological Services Ltd was commissioned to undertake the work by Dunecht Estates. The site element of the survey was completed on the 16th August 2018.

2 Methodology

- 2.1 Prior to any work being undertaken, each step has been photographed and basic recording undertaken.
- 2.2 The present report will inform a WSI regarding the repaving works.
- 2.3 A second stage of work on site will involve a watching brief and recording as the steps are removed.

3. The Site

- 3.1 Dunnottar Castle occupies a coastal promontory c.3km S of Stonehaven, protected on all sides by steep cliffs [NGR: NO88128 83842; NMRS No: NO88SE 11; Parish: Dunnottar]. Although the castle probably occupies the site of a prehistoric fort, in its present form the remains date to various periods from the 14th to the 17th centuries.

In 1716 the castle was forfeited to the government and sold to the York Mining Company and all fittings of value, including floors and doors were removed, and sold.

In 1919 it was bought by the Pearson family and restoration began soon after. It has continued under the management of Dunecht Estates since then.

Since the end of the 18th century the ruins of Dunnottar have attracted visitors and in the late 19th century a visitors' book has recorded some of their names (Guide Book, 50). In 1925 11,000 visitors came to the castle (*Aberdeen Press and Journal* 13th October 1925) and 9000 the following year (*Aberdeen Press and Journal* 25th October 1926).

Parish: Dunnottar

NGR: NO88128 83842

Aberdeenshire SMR: NO88SE0007

NMRS No: NO88SE 11

NRHE Numlink 36992

HES Index No. SM986

4 Documentary evidence

The passageways prior to restoration

1887

MacGibbon and Ross (1887, 556) describe entry to the castle, ‘ *On passing the archway the visitor is confronted by the portcullis, beyond which, at the top of a flight of steps...at the top of the above-mentioned flight of steps the roadway turns at right angles to the left, and ascends rapidly, with occasional steps in its course to ease the ascent. After 29 feet it again turns at right angles to the right, and, still ascending, at 29 feet further is interrupted by a door, 5 feet wide, strongly secured, leading into an arched passage or tunnel 26 feet in length, defended with a door at the other end. Beyond this the open roadway is continued till it is stopped by another arched passage 26 feet 7 inches long, defended with doors or gratings at either end. This second tunnel passed, the road at length emerges by a round arched doorway on to the open platform on the top of the rock.*

1916

The HES Dunnottar file contains two photographs dated 1916 which show parts of the entrance passage (pers. comm. Richard Heawood). One of them (ref 1916_2) shows the flight of steps leading from the castle entrance / portcullis which is outside the area of the proposed works.

The second photograph (ref 1916-5) shows step 27 looking down towards steps 26 etc.

Restoration

1919

In 1919 the castle was bought by Weetman Pearson 1st Viscount Cowdray. He and his wife, Annie 1st Viscountess Cowdray, began a program of urgently needed restoration (Guide book, 50)

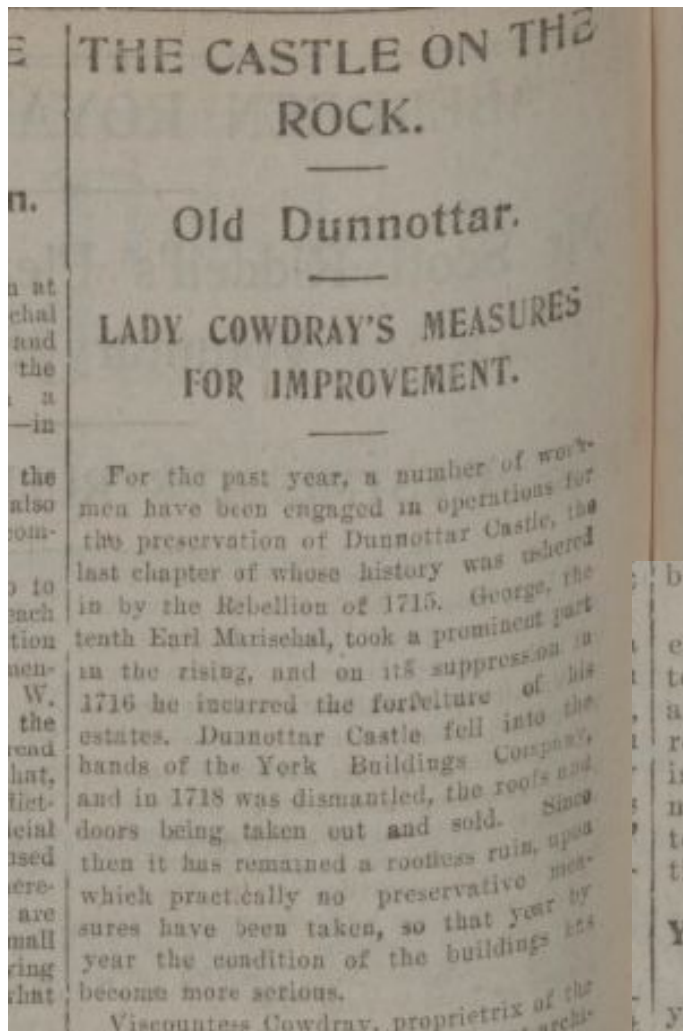
1925

By 1925 Restoration work had recently begun (Illus 1. *Aberdeen Press and Journal* 12 February 1925) and the obituary for Lady Cowdray in 1932 (Illus 3. *Aberdeen Press and Journal* 16th April 1932) remembers it as a major achievement, not only in the restoration of the castle but also in providing work for unemployed workmen from Stonehaven. According to the newspaper account, the architect Sir Robert Lorimer (1864-1929) was initially asked to advise on the work but he appears to have been replaced by Aberdeen

Architect William Kelly (1861-1944), in collaboration with his friend, the antiquarian W Douglas Simpson. Lorimer, who had a reputation for being difficult with clients, was also replaced by William Kelly in restoration works at Castle Fraser also then owned by the Pearson family.

www.scottisharchitects.org.uk/architect .

An account of the restoration published in the Dundee Courier (Illus 2 *Dundee Courier* 30 April 1925.) specifically mentions the reconditioning of paths within the castle.



become more serious.

Viscountess Cowdray, proprietrix of the estate, after consulting the eminent architect, Sir Robert Lorimer, has recently set about removing this reproach, and, while restoring the walls and making them safe, is at the same time preserving this noble monument of Scottish history and architecture for the benefit of future generations.

Years of Labour.

The work so recently begun may take years to complete. Gaps in the walls are being filled up, parts of masonry demolished, and reconstruction is proceeding with the view of preserving the original plan; and so deftly have the workmen done their part so far that the new stonework is almost indistinguishable from the old. The materials for renovation purposes are being conveyed across the gully to the castle from the high cliff on the right by means of a blondin.

Illus 1 Aberdeen Press and Journal 12 February 1925

Stall—Mrs Moffet, Mrs Lyon, and Mrs M'Kendrick. Flowers, Produce, &c.—Mrs M. B. Lamb. Tea—Miss Moffet and Mrs Charles Anderson. Parcels—Miss Hutcheon.

DUNNOTTAR CASTLE IMPROVEMENTS.

APPOINTMENT OF NEW CUSTODIAN.

In place of Mr William Miller, who died recently, the position of custodian of Dunnottar Castle, Stonehaven, has been given to Mr William George.

Mr George is a son of ex-Chief Constable George, and was formerly in Kincardineshire Police Force, acting as sergeant at Bervie, Banchory, and Stonehaven.

Lady Cowdray of Duncricht, the proprietrix of Dunnottar Castle estate, has drawn up a scheme of improvements, which are meanwhile being carried out. A new motor road has been built to replace the narrow path from the main road to the castle, and the paths around the castle and along the cliffs have been reconditioned, widened in places, and banked up in others.

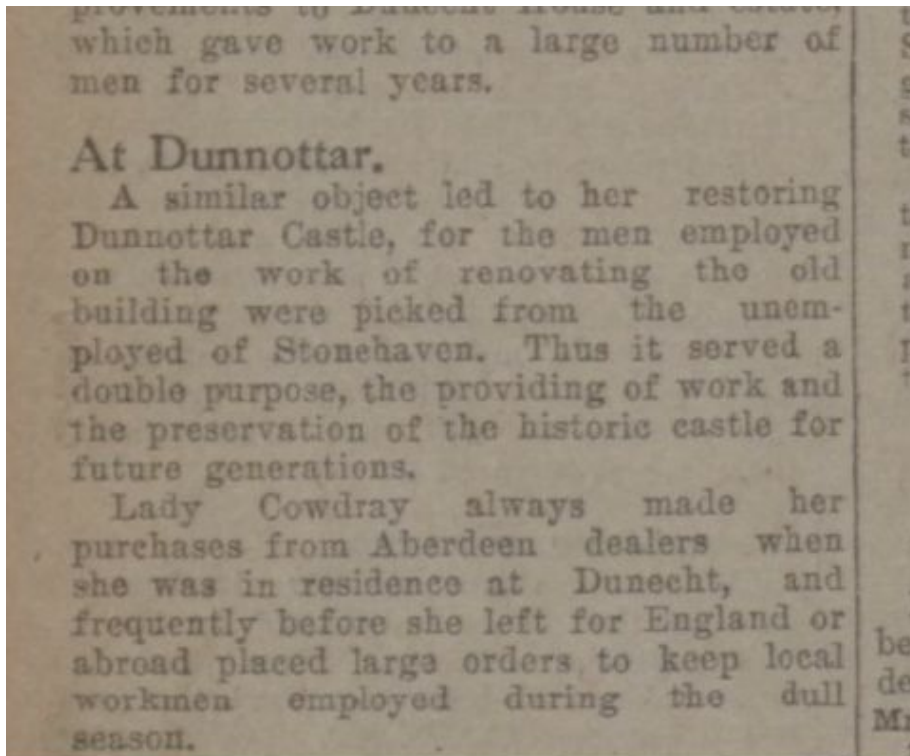
The castle walls are being renovated and in places completely rebuilt.

BLAIRGOWRIE OPERATIC SOCIETY'S NEXT STUDIES.

A credit balance of £8 4s 11d was reported by Mr William Stewart, hon. treasurer, at the annual meeting of Blairgowrie and Rat-

1st Prize
2nd Prize £10
3rd Prize £2
5
40
Ju

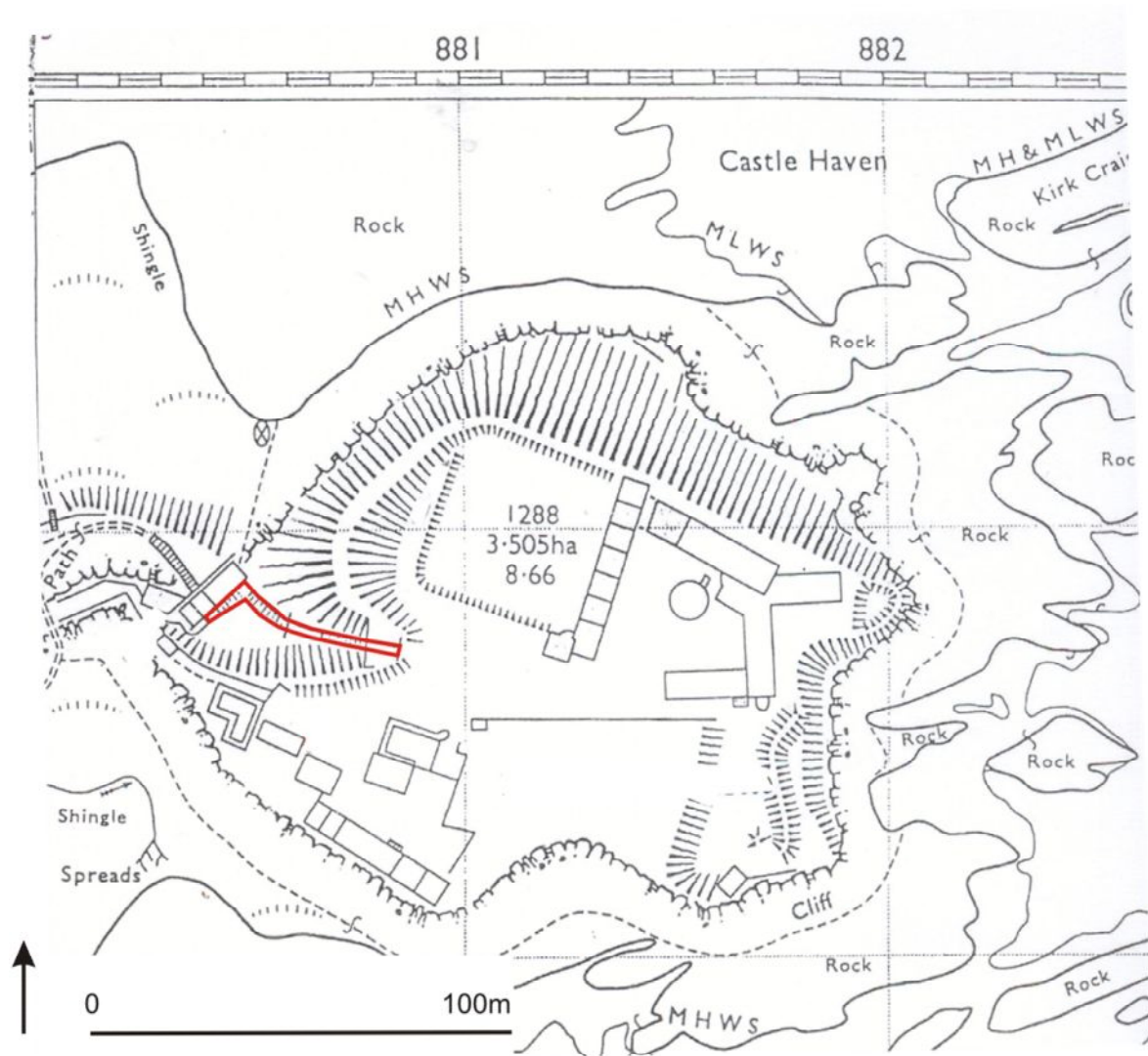
Illus 2 Dundee Courier 30 April 1925.



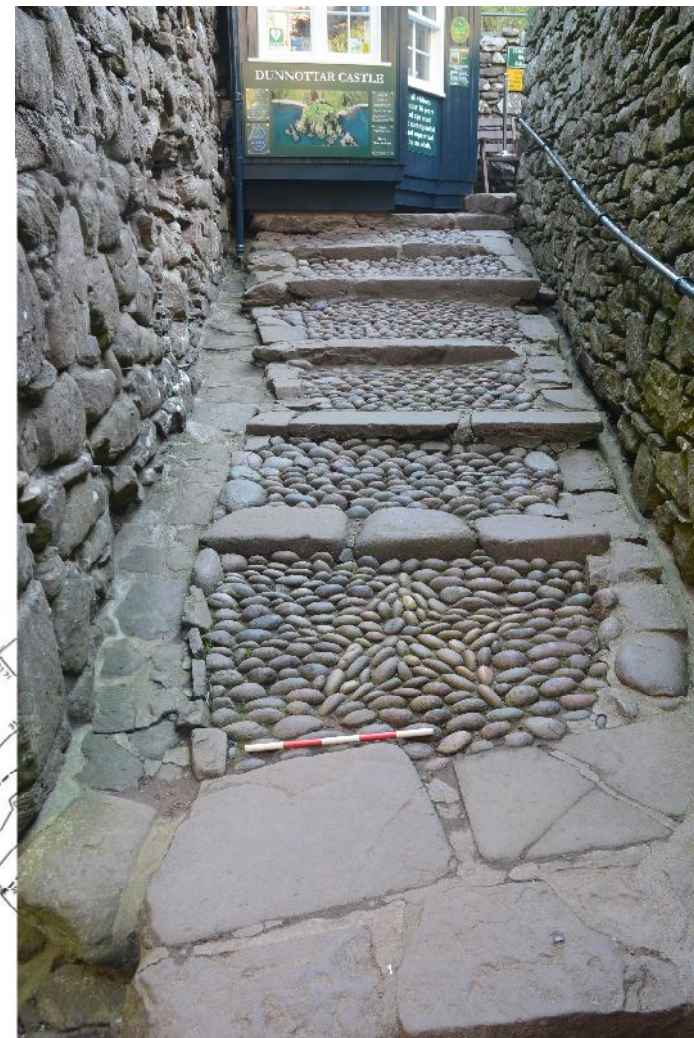
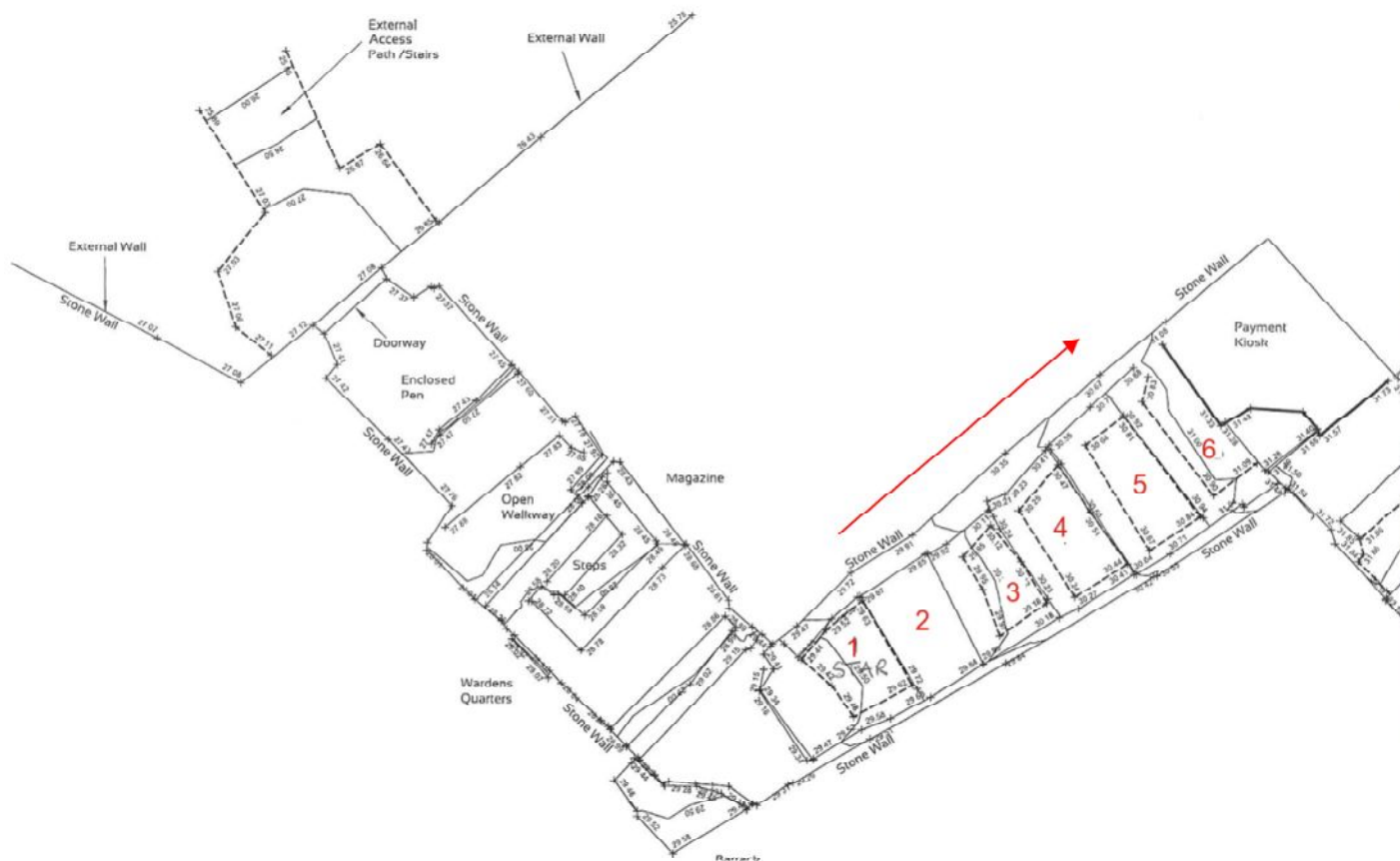
Illus 3 Aberdeen Press and Journal 16th April 1932

5 The Steps

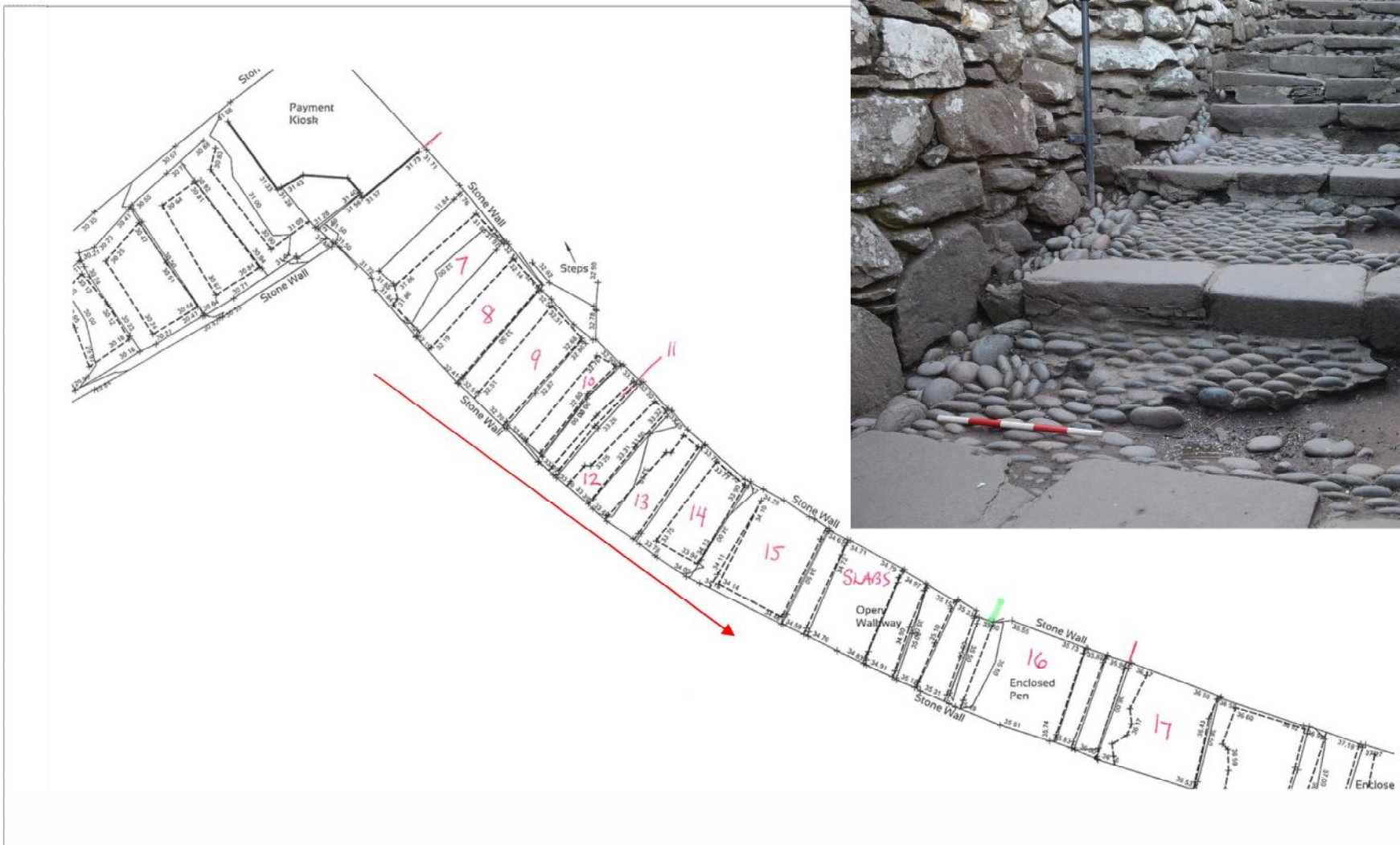
The steps lead from Step 1 to Step 6 as an open passageway between walls (Illus 4, 5), turning almost at right angles to run uphill in a slow curve from Step 7 to Step 15 as an open passageway between walls (Illus 4, 6), becoming an arched covered pend from Step 16 to Step 20 (Illus 4, 7), open again between Steps 21 to 26 (Illus 4, 7, 8) and enclosed over Steps 27 and 28 (4, 9). After Stone 28 the passage opens into the open hill top surrounded by the buildings of the castle.



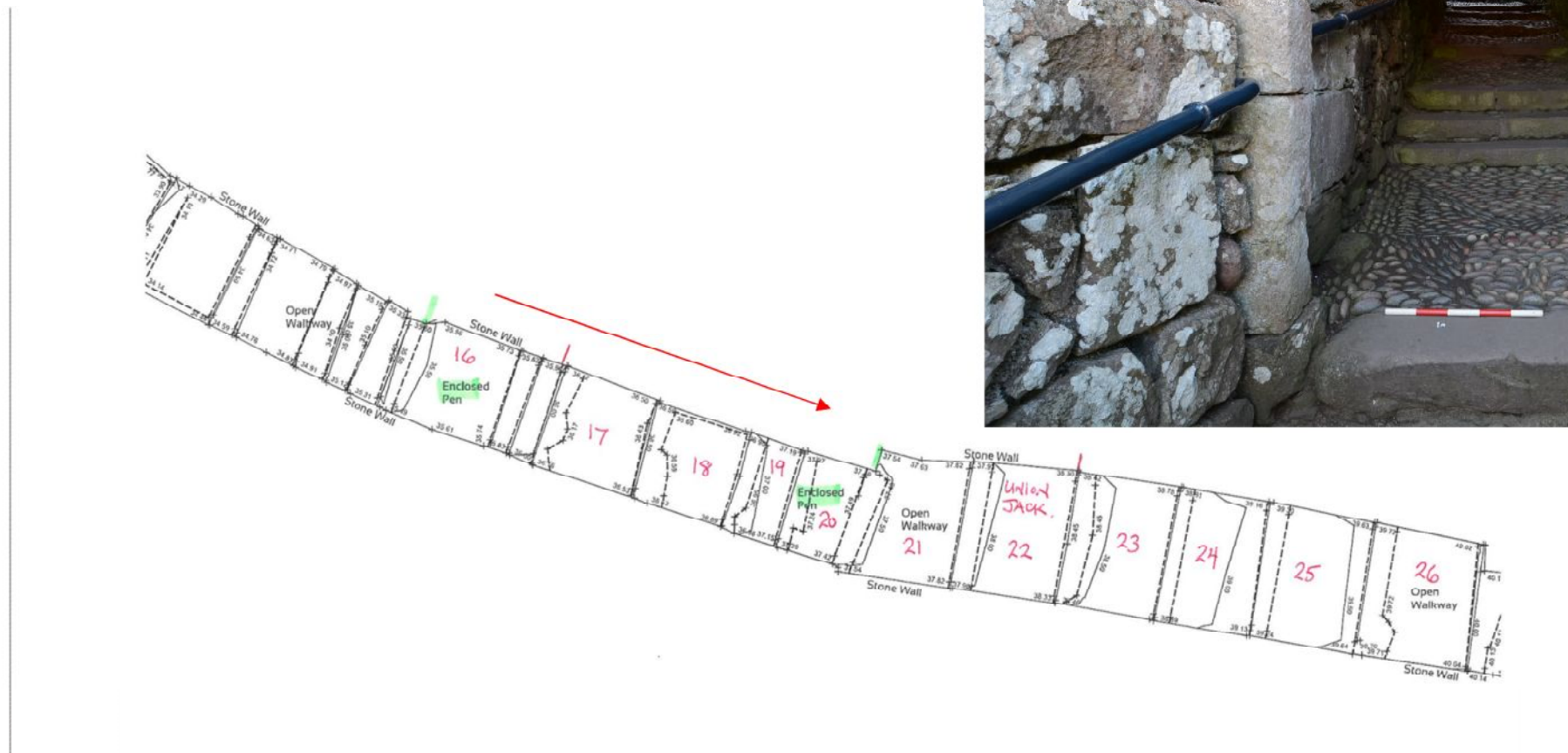
Illus 4 General location of steps marked in red.



Illus 5 Plan of Steps 1 to 6 (courtesy of Dunecht Estates). Inset looking uphill from Step 1 to Step 6 (shown by arrow)



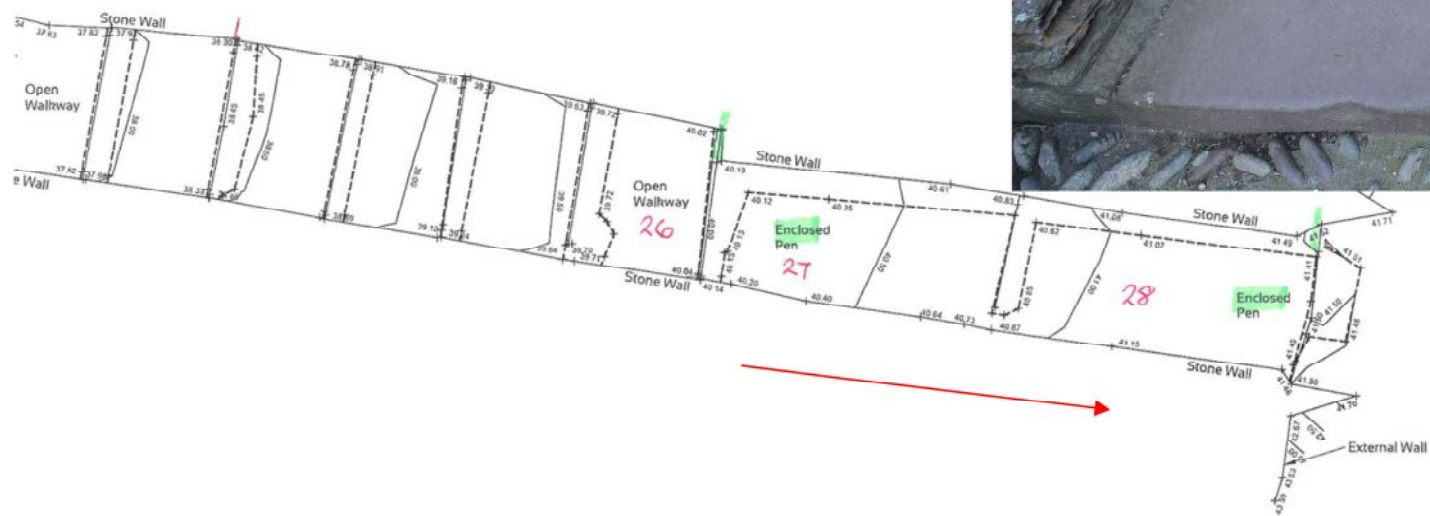
Illus 6 Plan of Steps 7-17 (courtesy of Dunecht Estates). Inset looking uphill from Step 7 to Step 15 (shown by arrow)



Illus 7 Plan of Steps 16-26 (courtesy of Dunecht Estates). Inset looking up from Step 16 to Step 20 (shown by arrow)



Illus 8 From Stone 21 to Stone 22



Illus 9 Plan of Step 26-28 (courtesy of Dunecht Estates). Inset looking uphill from Step 27 to Step 28 (shown by arrow)

Step 1



Illus 10 Step 1

Width across path	<1.6m
Depth along path	<1.85m
Rise from previous step	170mm

Description Small cobbles set on edge, with white stones used to form a central ‘star’ pattern c. 780mm across. The step is fronted by a double row of slabs, the inner line is of worn dressed stones and may be one of the occasional steps noted by MacGibbon and Ross in 1887, the outer line is of less worn stones and appears to be a repair. LHS Flat stones set in concrete form a rough drain with a rough infill of cobbles on this side. RHS a large waterworn pebble and two squared stones set in concrete form a rough edge.

Step 2



Illus 11 Step 2

Width across path	1.70m
Depth along path	1.02m
Rise from previous step	800-900mm

Description Small cobbles set on edge with the exception of a few larger pebbles at sides which may be repairs. The step is fronted by three large flat waterworn stones. LHS Flat stones set in concrete form a rough drain with a rough infill of cobbles on this side. RHS a two squared stones set in concrete form a rough edge.

Step 3



Illus 12 Step 3

Width across path	1.75m
Depth along path	1.15m
Rise from previous step	100mm

Description

Small cobbles set on edge with some attempt to stabilize them with concrete and a few larger pebbles which may be repairs. LHS flat stones set in concrete form a rough drain with a edging of angular stones on this side. RHS a three squared stones set in concrete form a rough edge.

Step 4



Illus 13 Step 4

Width across path	2.02m
Depth along path	1.25m
Rise from previous step	130mm

Description

The back of the step is surfaced with small cobbles set on edge, with some attempt having been made to stabilize them with cement. The front cobbles appear more varied and may include repairs. LHS Flat stones set in concrete form a rough drain with a rough edging of flat stones on this side; these may post-date the 1920s cobbles as there appears to be infilling on this side. On the RHS squared stones set in concrete form a rough edge.

Step 5



Illus 14 Step 5

Width across path	2.28m
Depth along path	1.11m
Rise from previous step	150mm

Description

Surface of varied cobbles with no patterning and evidence of repairs. Front of tread formed by three fairly worn dressed stones. LHS Flat stones set in concrete form a rough drain with a rough edging of flat stones on this side. RHS Flat stones set in concrete form a rough edge.

Step 6



Illus 15 Step 6

Width across path	2.39m
Depth along path	1.10m
Rise from previous step	140mm

Description

Surface of varied cobbles with no patterning and evidence of repairs with concrete at back. Front of tread formed by three fairly worn irregular flat stones. LHS Flat stones set in concrete form a rough drain with a rough edging of flat stones on this side. RHS Flat stones set in concrete form a rough edge.

An additional step lies below the ticket kiosk between Steps 6 and 7.

Step 7



Illus 16 Step 7

Width across path	1.71m
Depth along path	1.17m
Rise from previous step	210mm

Description

Small cobbles set on edge but many missing on upper RHS and some repairs with cement. Front of tread formed by three worn dressed stones. Along LHS larger pebbles used to form a drain. On RHS flat stones forming part of the edge appear to project below the wall on RHS.

Step 8



Illus 17 Step 8

Width across path	1.97m
Depth along path	0.95m
Rise from previous step	160mm

Description

Small cobbles set on edge but no obvious surviving pattern. A large patch of cobbles is missing and some attempt has been made to stabilize them with cement. The front of tread is formed by three worn dressed stones. On LHS rows of cobbles laid parallel with wall may have assisted drainage. There is a similar but rougher arrangement of cobbles beside RHS wall.

Step 9



Illus 18 Step 9

Width across path	2.00m
Depth along path	1.10m
Rise from previous step	140mm

Description

A mixture of small cobbles set on edge and larger pebbles used to fill in. There is a bare patch in the centre of the back of the step and some cement. No pattern is visible. The LHS is bordered by larger pebbles parallel to the LHS wall with smaller cobbles parallel to the wall forming a drain. The front of the tread is formed of four worn dressed stones.

Step 10



Illus 19 Step 10

Width across path	1.87m
Depth along path	0.69m
Rise from previous step	250mm

Description

The cobbles are almost completely missing. The front of the tread is formed of three worn flat dressed stones. The RHS stone has an almost circular hole in its upper surface and may have been re-used from elsewhere, possibly having had a shutter or door swivelling in the hole.

Step 11



Illus 20 Step 11

Width across path	2.12m
Depth along path	0.43m
Rise from previous step	210mm

Description

This is a very narrow step with few cobbles. The front of the tread is formed of four worn flat dressed stones.

Step 12



Illus 21 Step 12

Width across path	2.15m
Depth along path	0.75m
Rise from previous step	200mm

Description

Surface formed of small cobbles set on edge. The front of the tread comprises four fairly irregular flat stones.

Step 13



Illus 22 Step 13

Width across path	2.03m
Depth along path	0.83m
Rise from previous step	150mm

Description

Surface formed of small cobbles set on edge but with no visible pattern. The front of the tread is formed of three worn flat dressed slabs. On RHS the lowest stone of bounding wall projects into the step in line with projecting foundation stones at edge of Steps 14 and 15.

Step 14



Illus 23 Step 14

Width across path	1.74m
Depth along path	1.13m
Rise from previous step	170mm

Description

Small cobbles set on edge with worn patch and missing stones at LHS. Front of tread formed by three worn flat dressed stones. The foundation of RHS bounding wall projects on to the line of the step.

Step 15



Illus 24 Step 15

Width across path	1.79m
Depth along path	1.59m
Rise from previous step	180mm

Description

Small cobbles set on edge and generally in good condition. The front of tread is formed by two flat dressed stones with a third stone at RHS at right angles, which appears to be in line with projecting foundation of this wall visible at Steps 13 and 14.

Step 16



Illus 25 Step 16

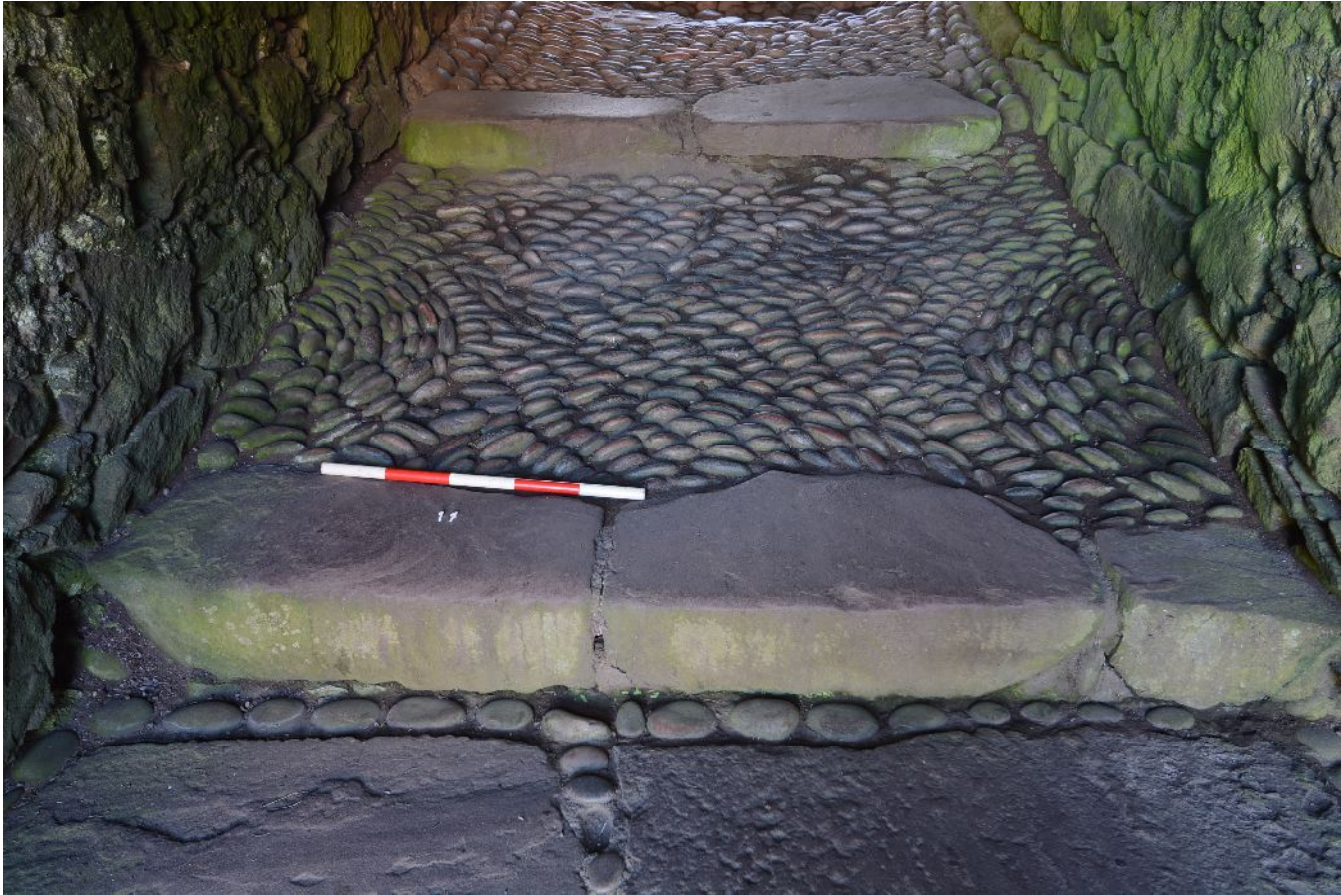
Width across path	1.70m
Depth along path	1.93m
Rise from previous step	200mm

Description

There are flagstones between Steps 15 and 16. Step 16 forms the doorway into the first covered pend and the front of the tread is a single large slab which essentially formed the sill of the doorway which shut off this lower end of this part of the passage.

Step 16 was formed of small cobbles set on edge, with different coloured stones used to emphasise the pattern. The front is disturbed but there are clear triangular patterns almost forming a letter M in the back part of the step. On both RHS and LHS four to five rows of cobbles have been set parallel to the walls forming a border.

Step 17



Illus 26 Step 17

Width across path	1.63m
Depth along path	1.66m
Rise from previous step	170mm

Description

Small cobbles set on edge form four arcs, each facing towards a different side of the step.

The front of the tread is formed of three worn dressed stones.

Step 18



Illus 27 Step 18

Width across path	1.64m
Depth along path	1.60m
Rise from previous step	100mm

Description

Small cobbles set on edge with only a slight indication of a pattern surviving. Both sides are bordered by two rows of larger pebbles laid parallel to the walls. The front of the tread is formed of two flat worn slabs.

Step 19



Illus 28 Step 19

Width across path	1.68m
Depth along path	0.97m
Rise from previous step	110mm

Description

Small cobbles set on edge with some disturbance and replacement at the back of the step. Both sides bordered by two rows of larger pebbles set parallel to walls. The front of the tread is edges by flat irregular slabs.

Step 20



Illus 29 Step 20

Width across path	1.60m
Depth along path	1.01m
Rise from previous step	120mm

Description

Small cobbles set on edge with no obvious pattern. Larger pebbles had been used on both RHS and LHS to form a border running parallel with the walls. The front of the tread is edged by flat irregular slabs.

Step 21



Illus 30 Step 21

Width across path	1.98m
Depth along path	1.76m
Rise from previous step	150mm

The cobbles in this section between Step 21 and 26 include a number of patterns and give an almost carpet-like impression.

Description

Small cobbles set on edge forming a pattern of five circular discs, three at the uphill end of the step and two in front. Both the RHS and LHS of the step are bordered by four to five lines of cobbles running parallel to the walls. The front of the tread comprises two large dressed slabs with a groove along the upper faces; these form the sill of another door at this point.

Step 22



Illus 31 Step 22

Width across path	2.14m
Depth along path	1.73m
Rise from previous step	150mm

Description

Small cobbles set on edge to form superimposed cross and St Andrew's cross. The stones have been chosen by colour and this is normally interpreted as representing the Union Jack flag. This is one of the most undamaged steps.

Both the RHS and LHS of the step are bordered by four lines of cobbles running parallel to the walls. The front of the tread is formed of four flat dressed stones.

Step 23



Illus 32 Step 23

Width across path	2.14m
Depth along path	1.66m
Rise from previous step	170mm

Description

Small cobbles set on edge to form a pattern with curved and lozenge patterns, possibly around a central shield shape. However the back RHS of the cobbling has been damaged and the pattern is confused as a result.

Both the RHS and LHS of the step are bordered by four lines of cobbles running parallel to the walls. The front of the tread is formed of four flat dressed stones.

Step 24



Illus 33 Step 24

Width across path	2.17m
Depth along path	1.55m
Rise from previous step	100mm

Description

Small cobbles set on edge with a pattern of lines forming three diamond shapes across the width of the step.

Both the RHS and LHS of the step are bordered by four lines of cobbles running parallel to the walls. The front of the tread is formed of four flat dressed stones.

Step 25



Illus 34 Step 25

Width across path	2.18m
Depth along path	1.72m
Rise from previous step	200mm

Description

Small cobbles set on edge to form a pattern but damage to the centre and the back of the step makes the design hard to interpret.

Both the RHS and LHS of the step are bordered by four to five lines of cobbles running parallel to the walls. The front of the tread is formed of three flat dressed stones.

Step 26



Illus 35 Step 26

Width across path	2.10m
Depth along path	1.84m
Rise from previous step	170mm

Description

Small cobbles set on edge to form a herringbone pattern. Although completely level, the design gives a strong impression of gullies. This is another of the more undamaged steps with only slight damage at the back of the step.

Both the RHS and LHS of the step are bordered by three to four lines of cobbles running parallel to the walls. The front of the tread is formed of four flat dressed stones.

Step 27



Illus 36 Step 27

Width across path	1.77m
Depth along path	4.09m
Rise from previous step	100mm

Steps 27 and 28 lie in another covered pend.

Description

Large cobbles set in a random arrangement with large irregular slabs along the LHS edge.

The front of the tread is formed of three flat dressed slabs.

Step 28



Illus 37 Step 28

Width across path	1.78m
Depth along path	4.22m
Rise from previous step	700mm

Description

Large cobbles set in a random arrangement with large irregular slabs along the LHS edge.

The front of the tread is formed of three flat dressed slabs.

6 Discussion

Historical significance of the steps

The fronting stones. MacGibbon and Ross (1887) is the only authority found to date which describes the ground surfacing of the passages prior to the restoration works. They clearly describe steps from the entrance archway to the first turn, but after that (from what is now the position of Step 1) the pathway was described as steep with only occasional

steps. As it is extremely unlikely that any works would have been done in the passageways in the derelict state of the castle in the late 19th century or during the years of the 1st World War, it must be assumed that the present steps and the cobbling date to the renovations of the 1920s. A possible exception might be the inner double line of fronting stones at Step 1 which are far more worn than the outer step and may have been one of the occasional steps recorded by MacGibbon and Ross. The other probable exceptions would be those stones which may more properly be regarded as door sills (Steps 16 and 21, and probably Step 27).

The intention is to retain the fronting stones of the treads and it should be stressed that this should include instances such as Step 1, where a double line of fronting stones may include steps that pre-date the 1920s restoration.

When the cobbles are removed it will be important not only to record what surfaces survive below the sub-base for the cobbles but also to attempt to relate any such surfaces with the possible 'original' steps and door sills (Steps 1, 16, 21).

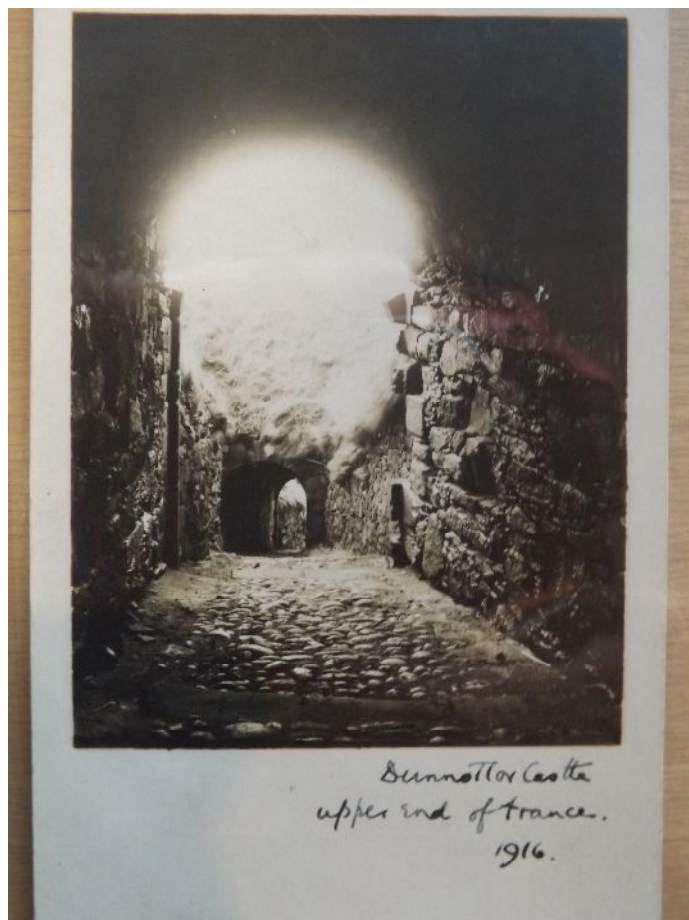
The Cobbles.

All the cobbles are rounded beach pebbles, almost certainly from the beach below the castle. However there is a distinct difference between the small cobbles used in steps 1 to 26, including the patterned steps (1,16-17, 18 (?), 21-26) and the larger cobbles used in secondary repairs and in steps 27 and 28.

The smaller cobbles appear to have been chosen in a range of colours (pink, grey, white) to emphasise the patterns and were set on edge. Although the patterned cobbles were probably set in place c. 1925 they have a value and a story in their own right. They reflect a considerable degree of skill and artistic flair – presumably from a now unknown workman perhaps from Stonehaven. The choice of the Union Jack (introduced 1606) among the patterns possibly reflects the frequent Royal visits to the site in the early 20th century. Unless there is any possibility of retaining one or more of the steps with these decorated cobbles in situ it is suggested that an attempt should be made to use interpretation to show what they had been like- and at the same time introducing visitors to the story of the conservation and restoration of the castle.

Later repairs appear to have used larger pebbles, generally laid flat, with no regard to the earlier patterns.

Steps 27 and 28 also have larger cobbles but a photograph dated to 1916 (HES 1916-5) (Illus 38) appears to show these large, randomly placed cobbles were in place prior to the 1925 works. It is likely that individual stones may have been replaced or re-bedded as necessary over the years but it should be noted that the edging stones and the slab drains along the wall lines were in place at that time and should be retained.



Illus 38 1916 photograph of Step 27 and detail of cobbles (HES Dunnottar file 1916-5)

Monitoring The recording of the steps indicates a number of strategies that should be undertaken during the monitoring of the works.

1. The proposal indicates that all the fronting stones will be retained. If any are to be re-bedded they should be removed by hand and the underlying surface cleaned by and recorded. The edges and under surfaces of the stones should be observed to note and record any evidence of the re-use of medieval/post-medieval architectural stones during the 1920s works.
2. The cobbles that are to be removed should be removed by hand and the underlying bedding material also removed by hand, before manual cleaning and recording of the underlying surface. Particular attention is required to note the relationship of any underlying layers with the fronting stones (especially the possible early steps 1, 16, 21).
3. Special attention should be paid to the relationship of any underlying layers with the stones on the RHS (going up) of Steps, 7, 13 and 14 where the side edging appears to project below the foundation of the buttressing side wall. Any such foundations should be recorded and retained.



Illus 39 Steps 20 and 21

7 References

Guide Book . Burnet, A 2017 *Dunnottar Castle: The official guide*. Jarrold Publishing: Peterborough.

Simpson, W D 1941 'The Development of Dunnottar Castle', *Archaeol Journal*, 98, 87-98

8 Archive

A full set of photographs will be supplied to the Aberdeenshire SMR and to the HES archive.

Photo number	Content
1	Steps 1-6
2	Step 1
3-4	Step 2
5-6	Step 3
7-8	Step 4
9-10	Step 5
11-12	Step 6
13	Step 7-15
14-15	Step 7
16-17	Step 8
18-19	Step 9
20-21	Step 10
22-23	Step 11
24-25	Step 12
26-27	Step 13
28-29	Step 14
30-31	Step 15
32	Looking up passage from Step 16
33-34	Step 16
35-37	Step 17
38-39	Step 18
40-41	Step 19
42-43	Step 20
44-46	Step 21
47-48	Step 22
49-50	Step 23
51-52	Step 24
53-54	Step 25
55-56	Step 26
57-58	Step 27
59-61	Step 28