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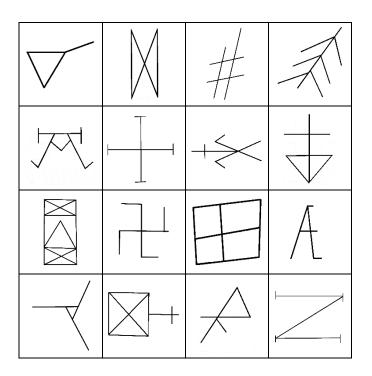
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The stonemasons' marks of selected medieval ecclesiastical and secular buildings of central and southern Scotland.

Volume 1



Iain Ross Wallace Cert HE, MA

Submitted in fulfilment of the requirements for the degree of Masters (Research) in Archaeology School of Humanities, College of Arts, University of Glasgow.

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Abstract

Our knowledge and understanding of medieval buildings in Scotland, and indeed elsewhere, is influenced by the historical record, which invariably focuses on those at the upper echelons of society who ordered their construction and then occupied the buildings.

This multi-disciplinary research has investigated the stonemasons' marks found on selected medieval stone buildings in central and southern Scotland which were begun in the 12th and 13th centuries. These marks are the main, if not the only, source of information about the individuals who were directly involved in the construction of many of Scotland's architectural masterpieces of this period. The stonemasons' marks identified have been recorded by drawing and photography and a database has been constructed to facilitate the examination of chronological and geographical distribution patterns. This has the potential to identify work patterns of individual masons. The data has also been analysed to identify how many different marks are present and, by interpretation, how many masons worked at the sites surveyed. The potential for familial connections between different marks have been explored. Consideration has been given to the origin of the symbols used as masons' marks and an investigation undertaken of references to stonemasons in charters and other contemporaneous records to identify, where possible, individual masons by name.

It is hoped that this research will expand our understanding of those who undertook the building work by enabling us to identify, at least by symbols, the individuals involved in their construction. It serves to provide a foundation for future investigation across Scotland and has the potential to expand our knowledge and understanding of the social, industrial and architectural influences affecting Scotland during the early second millennium.

Table of Contents

Volume 1:

Abstract	i
List of Figures	sv
List of Tables	viii
Acknowledge	mentsx
Dedication	xi
Chapter 1	Introduction1
1.1	What is a stonemason's mark?
1.2	Types of marks1
1.3	Marks as a method of payment and quality control
1.4	Stonemasons and freemasons4
1.5	The origins of masons' marks5
1.6	The early records
1.7	The dating of stonemasons' marks7
1.8	Previous research
Chapter 2	Research methodology17
2.1	Research questions17
2.2	Research process
2.3	Site selection
2.4	The survey recording process
Chapter 3	Site Gazetteer
3.1	Bothwell Castle
3.2	Caerlaverock Castle
3.3	Crossraguel Abbey
3.4	Dirleton Castle
3.5	Dryburgh Abbey44
3.6	Glasgow Cathedral
3.7	Glenluce Abbey
3.8	Jedburgh Abbey63
3.9	Kelso Abbey67

Volume 2: Appendices

Appendix 1 Numerical index of masons' marks
Appendix 2 Index of masons' marks by form and shape
Appendix 3 Index of masons' marks by lines per mark
Appendix 4: Index of masons' marks of possible runic origin
Appendix 5 Architectural and stonemasonry terms used in this document

Accompanying material

A CD containing the database in Microsoft Access[©] format can be found at the back of Volume 1. Images of the masons' mark are also included on the CD.

Conventions

- 1. All dates used are Current Era (CE) unless otherwise stated.
- 2. Photographs and images are copyright the author, unless stated.
- County abbreviations used are those for pre-1975 local government reorganisation counties and are taken from the Peoples of Medieval Scotland website.

Ayrshire	AYR	Berwickshire	BER
Dumfriesshire	DMF	East Lothian	ELO
Lanarkshire	LAN	Midlothian	MLO
Peeblesshire	PEB	Renfrewshire	RNF
Roxburghshire	ROX	Selkirkshire	SLK
Wigtownshire	WIG		

List of Figures

<u>Ref.</u>	Description	Page
1	Examples of some of the masons' marks found during this research	Front Cover
2	Three simple masons' marks	1
3	Mason's mark M010 – variations	3
4	Masons' marks M035 and M079	5
5	Davis' masons' marks, chart 1	10
6	Davis' masons' marks, chart 2	11
7	Masons' marks at Melrose and Dryburgh	12
8	Masons' marks at Jedburgh and other locations	12
9	Morow's commemorative tablet, photograph	14
10	Morow's commemorative tablet, drawing and text	15
11	Mark M108d at Glasgow Cathedral	18
12	Sample completed masons' marks survey recording form	22
13	Survey team at Glasgow Cathedral	23
14	Masons' marks M397 and M148	25
15	Screenshot of database entry page	28
16	Map of surveyed sites	29
17	Bothwell Castle, aerial view from NNE	30
18	Bothwell Castle, ground plan	31
19	Bothwell Castle, foundations of NW tower	31
20	Bothwell Castle, inside Donjon tower	31
21	Bothwell Castle, marks by century	32
22	Bothwell Castle, marks by number of lines	33
23	Bothwell Castle, mason's mark M028m	33
24	Bothwell Castle, mason's mark M002jjj	33
25	Caerlaverock Castle, aerial view from WNW	34
26	Caerlaverock Castle, ground plan	35
27	Caerlaverock Castle, marks by number of lines	36
28	Crossraguel Abbey, aerial view from W	37
29	Crossraguel Abbey, ground plan	38
30	Crossraguel Abbey, marks by century	40
31	Crossraguel Abbey, marks by number of lines	40

<u>Ref.</u>	Description	Page
32	Crossraguel Abbey, masons' marks from HS Guide	41
33	Crossraguel Abbey, masons' marks on Canmore	41
34	Dirleton Castle, aerial view from NW	42
35	Dirleton Castle, ground plan	43
36	Dryburgh Abbey, aerial view from SSW	44
37	Dryburgh Abbey, ground plan	45
38	Dryburgh Abbey, marks by century	46
39	Dryburgh Abbey, marks by number of lines	46
40	Dryburgh Abbey, merelles board	47
41	Dryburgh Abbey, masons' marks from Canmore	48
42	Glasgow Cathedral, aerial view from SW	49
43	Glasgow Cathedral, ground plan, nave and choir dating phases	50
44	Glasgow Cathedral, nave and choir pillar numbering	51
45	Glasgow Cathedral, lower church pillar numbering	52
46	Glasgow Cathedral, marks M007, M582 and M013	54
47	Glasgow Cathedral, marks by century	56
48	Glasgow Cathedral, marks by number of lines	56
49	Glasgow Cathedral, stone display in lower church	57
50	Glasgow Cathedral, carved stone showing mason's mark	57
51	Glasgow Cathedral, masons' marks found during excavations in 1997	58
52	Glenluce Abbey, aerial view from W	59
53	Glenluce Abbey, ground plan	60
54	Glenluce Abbey, mark M606 on stone from display in abbey museum	60
55	Glenluce Abbey, marks by century	61
56	Glenluce Abbey, marks by number of lines	62
57	Jedburgh Abbey, aerial view from NNE	63
58	Jedburgh Abbey, ground plan	64
59	Jedburgh Abbey, marks by number of lines	65
60	Jedburgh Abbey, marks on Canmore	66
61	Kelso Abbey, aerial view	67
62	Kelso Abbey, ground plan	68
63	Melrose Abbey, aerial view	69
64	Melrose Abbey, ground plan	70
65	Melrose Abbey, marks by century	71

<u>Ref.</u>	Description	Page
66	Melrose Abbey, marks by number of lines	72
67	Paisley Abbey, aerial view from NW	73
68	Paisley Abbey, ground plan	74
69	Paisley Abbey, marks by century	76
70	Paisley Abbey, marks by number of lines	76
71	Paisley Abbey drain, marks found during excavation in 2010	78
72	Older futhark	94
73	Younger futhark	95
74	Masons' mark M401	96
75	Masons' mark M583	96
76	Masons' mark M646	96
77	Marks of suggested "axe" form	96
78	Mason's mark template, 19 th century	97
79	Mason's mark template, 21 st century	98
80	Masons' marks M072 and M205	99
81	Dean's chair, Glasgow Cathedral, M120h, M431 and M120l	99
82	Marks by form and shape, all mark-forms	104
83	Smallest mark found, M430	106
84	Largest mark found, M579	106
85	Largest occurrence of mark M080	108
86	Smallest occurrence of mark M080	108
87	Comparison scale chart for all occurrences of M080	108
88	Examples of possible "incomplete" marks	109
89	Cutting a mason's marks on a block of stone	110
90	Marks by number of lines, all occurrences, all sites	114
91	Marks by number of lines, all mark-forms	114
92	Bothwell Castle, two marks on one stone, M078bbb and M356e	120
93	Melrose Abbey, M018kkk and M018lll	120
94	Dating of marks by century, all occurrences	122
95	Possible graffiti modification, M298 and M041	127
96	Examples of marks with graffiti, Glasgow Cathedral, M620 and M619	128
97	Author's mason's mark	Back cover

List of Tables

<u>Ref.</u>	Description	Page
1	Pre-existing masons' marks records in Canmore	13
2	Sites surveyed for this research	20
3	Dataset for masons' mark M443	25
4	Database input fields	26
5	Bothwell Castle, key data	32
6	Caerlaverock Castle, key data	35
7	Crossraguel Abbey, key data	39
8	Dirleton Castle, key data	43
9	Dryburgh Abbey, key data	45
10	Glasgow Cathedral, key data	53
11	Glasgow Cathedral, oldest marks found	55
12	Glenluce Abbey, key data	61
13	Jedburgh Abbey, key data	64
14	Kelso Abbey, key data	68
15	Melrose Abbey, key data	71
16	Melrose Abbey, oldest marks found	72
17	Paisley Abbey, key data	75
18	Paisley Abbey, marks found on the 20th century reconstruction	77
19	Number of mark-forms, variations and occurrences at each site	80
20	Masons' mark occurrences by century at each site	81
21	Marks by site by dating phase, all occurrences	82
22	Distribution of mark M028 at Glasgow Cathedral	83
23	Distribution of mark M020 at Melrose Abbey	84
24	Distribution of mark M261 at Glasgow Cathedral	84
25	Number of unique marks at each site	86
26	Comparison of marks with the same chronology found at different sites	87
27	Masons listed in documents on the Peoples of Medieval Scotland website	89
28	Comparison of mark-forms appearing at both ecclesiastical and secular sites	91
29	Marks of possible runic origin, by site	95
30	Examples of how marks can change with the addition of lines	101
31	Examples of possible "reversed" marks	101
32	Masons' marks by form and shape, all mark-forms	103

<u>Ref</u>	Description	Page
33	Marks that include curved lines	105
34	Crossraguel Abbey, distribution and size of occurrences of mark M080	107
35	Glasgow Cathedral, comparison of occurrences of mark M114	111
36	Examples of possible "incomplete" marks	112
37	Marks by number of lines at each site, all occurrences	113
38	Number of mark-forms by number of lines	114
39	Dating comparison of 5 sample marks with 2 lines	115
40	Dating comparison of 5 sample marks with 3 lines	115
41	Dating comparison of 6 sample marks with 11,12,13, 14 and 15 lines	116
42	Most common mark-form at each site	117
43	Most common mark-forms across all sites	118
44	Marks by century, all occurrences	122
45	Marks by dating phase, all occurrences	123
46	Marks dating to the 12 th century, all sites	124
47	Examples of possible re-use of cut stone at Paisley Abbey	126

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Errors and omissions are entirely of my own making.

Dedication

For Christine, who led me here.

Chapter 1 Introduction

"Much has been done already to record the medieval masons' marks; but there is crying need for some scholar with sufficient leisure to assimilate these scattered records and work out a full synthesis." (Coulton 1928, 143)

1.1 What is a stonemason's mark?

A stonemason's mark (mason's mark) is a symbol cut into the dressed surface of a piece of masonry. Usually evenly incised into the face of the stone, masons' marks stand out from other "graffiti" found on stone buildings as they rarely contain curved lines (Richardson 1964, 13), consisting instead of straight lines forming triangles, squares, rectangles and other geometric shapes (Champion 2015, 125). It has been argued that the marks served to ensure payment for work, as a form of quality control and also as a makers' mark, a statement of artisanship (ibid, 126). Masons' marks may indicate which mason had worked the stone, although some marks may indicate the quarry from which the stone originated, whilst others may have been instructions to the setter who positioned the stone, indicating the correct orientation of the dressed stone. Three examples of simple masons' marks, found during this research, are shown Figure 2. These are (l to r), a two-line mark (M534c), a three-line mark (M327) and a four-line mark (M576).



Figure 2: Three simple masons' marks

1.2 Types of marks

Masons' marks served three main purposes during the construction of stone buildings of the period. Listed in the order of their appearance and use during the processing of a piece of stone, these are: a. Quarry marks

Marks added to the surface of quarried stone, to identify the site to which they are to be transported (Alexander 1996, 221).

b. Bankers' marks

Marks added to the finished stone, usually on the outer face, to indicate which mason was responsible for its creation (Coulton, 1928, 143). The name refers to the banker, or bench on which masons cut and dressed stone. These are also referred to as bencher marks (Davis 1954, 45).

c. Position marks

A mark added to the finished stone, to indicate to the setter the orientation and position in which it should be placed (Alexander 1996, 219).

As would perhaps be expected, survival of quarry marks is unlikely, as they would have been cut on undressed stone and would most likely be removed whilst the stone was being cut to size on the banker.

When considering position marks, or assembly marks as they are also known, Alexander best describes their appearance and position, at least as they appear in the record in England:

"Assembly marks consist of a numeric sequence, based loosely on Roman numerals and are often cut across the joint faces of adjacent stones, showing that the piece was dry-assembled to check the fit."

(Alexander 2007, 64)

As with much to do with masons' marks, there are undoubtedly local variations to any rule to be considered and other sequences of assembly marks may also be found. There have been no obvious position marks found during this survey, at least none in the form suggested. Five arrow form marks, M010, have been identified on Pillar 1, the most NW pillar in the nave of Glasgow Cathedral (Figure 3). These could be considered as position marks if they all pointed in the same direction, however they do not, with two pointing up and three others down and none positioned "point to point" on the finished pillar.

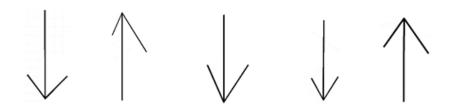


Figure 3: (l-r) M010h, M010i, M010j, M010n, M010s

Of the 28 variations of M010, across 5 sites, 16 point directly up, 6 point directly down, 3 to the left and one each diagonally upwards to the left and right. It may safely be assumed, therefore, that these are not position marks.

Bankers' marks are the most likely to survive, at least where they have been cut on the outer face of the dressed stone and remain visible. The frequency with which masons' marks are found depends on amongst other factors, the extent to which dressed stone was used in the construction of a building. It was very apparent during this research that there is a significant difference in the proportion of dressed stone to be found at different sites.

1.3 Marks as a method of payment and quality control

Bankers' marks primarily serve two purposes, viz: for quality control and as a method of ensuring payment. Masons were paid either by the job, or on a rate per day (Coulton 1928, 150). For plain wall block, payment by the measure, i.e., length of wall completed, or so many stones per day, would appear to have been the norm. In the case of more complex work, e.g., for a window or door frame, or perhaps for a more ornate piece of work such as the dean's chair in the chapter house in Glasgow Cathedral, a rate for the job was agreed (ibid). The advantage of this for a skilled mason was that the quicker he could complete the work, the sooner he could move on to another job, enhancing the amount of money he earned (ibid, 152). It would be a matter of pride for any mason to add his mark to the finished work, especially on something as important as the dean's chair. The decision to use masons' marks, however, was not one that was left to the individual mason but was specified by the master mason and this requirement would vary, even at one site, depending on the circumstances of the individual mason and the task on which he was working (Alexander 2007, 65). Masons' marks were, therefore, "a necessary formality and not intended as signatures to be seen" (Richardson 1964, 14). As stated above, these bankers' marks are the most likely to have survived and it is on these that this thesis will

focus, although consideration of form and use of position marks will be included. A mason who has newly begun work on a building may not be known to the master mason. The quality and quantity of his work will therefore also be unknown. The master mason may therefore require the new mason to mark all his work, to ensure that his output justifies the level of payment agreed. Once the mason has proved his worth, both in terms of quality and quantity, the master mason may agree a fixed rate of payment per day and no longer require the mason to add his mark to each stone. This would be payment by measure, as an alternative to payment by the day for carved stonework (Coulton 1928, 151). The question of plain wall block featuring some stones with marks and others without is explored further in Chapter 5.10.

1.4 Stonemasons and freemasons

Great care must be taken not to conflate stonemasons, their marks and the craft of stonemasonry with that of freemasons and freemasonry. Freemasonry undoubtedly has its origins, at least in part, in medieval stonemasonry and some of the term used in both are interchangeable, however, many, such as freemason, are not. In modern usage, the term freemason refers to someone who is a member of a Masonic order (Chambers English Dictionary 1988, 564). Originally, the term freemason referred to a skilled mason who was a "worker in freestone" (Coulton 1928, 123). Freestone is a type of stone, usually sandstone or limestone, that can be cut and worked freely, without breaking (Richardson 1964, 13). The first use of this term in England is dated to 1396, having been preceded by the term freestone-mason, i.e., a mason who worked freestone, rather than a mason who was employed in roughwork (i.e., cutting stone at a quarry) (Conder 1894, 56). An alternative explanation of the term is that a freemason was a skilled stonemason who had completed his apprenticeship, become a mason in his own right and was therefore free from any previous obligation to his "master", under whom he served his apprenticeship (Knoop and Jones 1949, 160). However, as Knoop and Jones state, there is little evidence for the wide-spread practice of apprenticeships in stonemasonry, at least during the twelfth and thirteenth centuries in England. Unfortunately, they make no comment on the situation in Scotland. The term lodge, from *loggia* (ibid, 58) used to refer to a building, usually temporary and made of timber, in which the masons would work and, in some cases, live if a mezzanine floor had been provided for that purpose (ibid, 56). As freemasonry evolved into the masonic organisation it is today, the term "lodge" came to be used for a building in which freemasons meet.

There is evidence to say that stonemasons operated in lodges and had a number of ways in which they kept to themselves the skills and knowledge of their craft. Much later than the period under consideration, a hierarchical society had evolved where people other than stonemasons, but often with standing in the community, were admitted to "masonic" lodges, without their necessarily being skilled stonemasons (Stevenson 2011).

1.5 The origins of masons' marks

Masons' marks are not a recent phenomenon. Marks of a similar form were noted by Evans at Knossos in 1930, which he dated to the Bronze Age (quoted in Alexander 1996, 222). Not until the growth of Christianity in the middle of the first millennium did literacy start to become more commonplace in Britain and then primarily in religious orders. A method was required for the mostly illiterate workforce to indicate their ownership of completed work and to tell those responsible for the physical placing of components of their correct positioning and alignment (Richardson 1964, 13). Different systems were developed and adopted by different skilled crafts, including carpentry and stonemasonry (ibid).

Based on the evidence of the masons' marks found on structures such as those at Rheims and Strasburg in Germany, Gould formed the opinion that each mark must have been the exclusive property of the mason who used it (1898, 804). Gould also proposed that it was entirely possible for two, three or more masons to choose to use the same mark, entirely by coincidence, and that this should not be taken to indicate the movement or migration of stonemasons from one place to another (ibid, 805). That this is a likely explanation may be surmised when it is remembered that the range of symbols would be limited.

To give an idea of the longevity of some masons' marks, two examples, found at both Glasgow Cathedral and Paisley Abbey and dating from the 13th century can also be found in the record books of the Company of Masons of the City of London, dating to the 17th century (Conder 1894, 177). The marks shown in Figure 4 are those of William Dorbar in 1630 (left) and of Richard Herridine in 1655 (right).



Figure 4: Marks M035 (l) and M079 (r)

It is impossible that the marks found at Glasgow and Paisley in the 13th century were made by the masons listed in the record book from the City of London four centuries later, confirming the adoption of the same marks by different masons at different times.

A comparison with the masons' marks found at the eleven sites included in this research with the symbols of the runic alphabet, or futhark as these are more correctly known, shows that a significant proportion of the marks found have similarities in form and shape to the runes. This would suggest that there is a link between the symbols of the runic futhark and stonemasons' marks of the 12th and 13th centuries. This is discussed more fully in Chapter 5.1.

1.6 The early records

Contemporary records of masons' marks in Scotland from the 12th and 13th centuries are non-existent. Some of the earliest records of masons' marks are contained in what are known as mark books (Stevenson 1990). Each construction project would keep a record which, in the case of a religious building, would be maintained by a clerk of works (cleric of works), a priest or monk appointed to administer the projects. The records kept would include details of costs incurred for materials such as timber, stone, glass, etc, and of the pay for those employed (ibid). Given that most people would have been illiterate in the 12th and 13th centuries, a mason would most likely draw his mark in a book or document and the clerk would write his name alongside. Unfortunately, these records are lost.

The earliest published reference to masons' marks in Scotland is in the Schaw Statutes of 1598. William Schaw was principal Master of Works to the Crown of Scotland and General Warden of the master stonemasons (Knoop and Jones 1949, 260). Stevenson (1988) claims that the Statutes represent the "origins of freemasonry in Scotland." As a consequence, this document as a source for information on stonemasons and their marks must be treated with care as contemporary records show, for example, the admission to membership of the Masons' Lodge of Edinburgh in 1600 of Laird John Boswell of Auchinleck as a "non-functioning 'stone'-mason" (Alexander 2001, 218). Later evidence from the records of the Edinburgh Lodge shows that Lord Alexander was "admitted fellow of the craft" and in 1649, Alexander Hamilton, a general of artillery, was admitted as a "fellow of the foresaid craft" (Conder 1894, 172). There is a mark book for Aberdeen, dating to around 1680, which has been analysed by Stevenson (2010, 2-15). Whilst this early record provides us with valuable information on mark books in the 17th century,

caution must be exercised as Stevenson's analysis is written from the perspective of what it can tell us about freemasonry of the period. Membership of stonemasons' lodges had changed by this time to include, in the case of Aberdeen, only eleven stonemasons out of a total of forty-nine members. The list of members of the Aberdeen lodge includes three earls, a professor and two wig makers (ibid, 7). This clearly shows that masons' lodges had ceased to be purely for stonemasons skilled in their craft but had become an early version of freemason's lodges of masonic orders as they are today. It is suggested by Chalmers (1850, 36) that freemasonry was introduced into Scotland as early as c1140, with the building of the abbey at Kilwinning. This coincides with the beginning of the construction of the great ecclesiastical buildings of Scotland from the middle of the 12th century and the arrival of the first stonemasons from continental Europe (ibid). Whether this is the case, or Chambers is associating two events without documentary evidence, remains to be proved.

1.7 The dating of stonemasons' marks

The dating of stonemasons' marks is problematic, to the extent that accurate dating of individual marks is almost impossible, at least for the 12th and 13th centuries, the period under consideration here. There are several reasons for this, the first being that marks were not unique. A finite though large number of variations exist, and it is inevitable that some masons used the same mark as others. Some marks may have been adopted on a hereditary basis, with perhaps a grandson inheriting his grandfather's mark or a modification thereof, when the latter retired. The question of the inheritance of masons' marks is discussed in greater details in Chapter 5.2. Other marks may have been repeated across the centuries, either by specific adoption or simple random selection. Great care, therefore, must be taken to when ascribing a mark to a specific date.

The dating of marks is further complicated by the inevitable re-use of stones from previous construction phases. Taking Paisley Abbey as an example, construction began in 1142 (Canmore 43139) and the most recent reconstruction phase began in 1907, when the ambulatory and choir were rebuilt, the latter having been demolished when the tower collapsed in the mid-16th century (Malden 1996, 27). In the case of those marks from the early 20th century phase at Paisley, any repetition of marks from previous phases may indicate re-use of stone from previous incarnations rather than another mason using the mark. The question of the inheritance of masons' marks is discussed in greater detail in Chapter 5.2.

More generally, the archaeological and historical record identifies repeated demolition and rebuilding of both religious and secular buildings. If the repair was carried out by unskilled or unqualified workers, e.g., the brothers in an abbey, they would perhaps not take the trouble to remove the extant masons' mark, but simply reuse the stone as-was. Even if a mason carried out the repair or rebuilding work, the extant mark might be left in-situ as a gesture of respect for a past fellow mason, especially if the mason carrying out the repairs was being paid on a day-rate basis and was therefore not required to add his own mark to ensure payment.

1.8 Previous research

Research into masons' marks, both in antiquity and in the 20th and 21st centuries, has focused primarily on England and Wales, e.g., Knoop and Jones (1949), Davis (1954), Brooks (1961) and Champion (2015). Coulton (1928) includes reference to antiquarian research carried out on masons' marks at, amongst other sites, Ely and Gloucester Cathedrals. Considerable progress has been made in the subject more recently, not least as a result of the work of Alexander (1996, 2001, 2007, 2008). These more recent approaches have influenced this research, viz., the recording and analysis of marks in single buildings, followed by systematic comparisons with records from other similar buildings of the same period.

An analysis of masons' marks for approximately 100 major buildings in England and Wales was undertaken by Davis (1954) (Figures 5&6). This collection, acknowledged by Alexander (1996, 224), as being the first scientific analysis of masons' marks, contains a significant record of marks found on mainly ecclesiastical buildings including York Minster, Westminster Palace and on some Oxford colleges. The marks were collated using an alphabetical index system, based on similarity of mark-forms (Figures 5&6). Whilst this works well with, for example, "arrow-head" forms and "full arrows" being listed separately, the selective indexing by Roman letter forms adds a complication as, for example, Davis indexed "Y" and "inverted Y" forms as "N" and "NN". The index also includes a listing, in the same table, of marks by the number of lines. It is clear from the text that Davis did not survey the buildings contained in his paper, but rather used extant surveys, mainly by Coulton, for his data (ibid, 46). The methodology used was not his own either, as he attributes the format to Rev. Herbert Poole's work before WWII (Poole and Worts 1935) (ibid). Leaving aside these issues, Davis's work is an extensive record of marks found at these sites. Amongst other, earlier, research conducted into

masons' marks at buildings in England, Rylands (1891) indexed each mark separately at each site, so that, for example, "Burscough 33" had the same mark-form as "Ormskirk 14". This inevitably led to some marks having numerous "labels".

Research into masons' marks in Scotland has been more limited. The largest comprehensive study of the buildings of Scotland, published in the late 19th century by MacGibbon and Ross, comprises three volumes of ecclesiastical buildings (volumes 1 and 2 in 1896 and volume 3 in 1897) and five volumes of castellated structures (1887 (2), 1889 (2) and 1892). These describe and compare in considerable detail the design, style and construction of hundreds of buildings. They are sadly lacking, however, in any information on stonemasons and their marks. Only in volume 5 of the castellated buildings (1892) are there any significant references to masons, and these are principally the king's master masons, who include Thomas Wallace (1504), William Wallace (1617-1631), John Mylne, (1631-1657) and his nephew Robert Mylne (c1644). No images of their masons' marks were included, possibly as they are unknown. As reported by MacGibbon and Ross (1887), these senior masons fulfilled the role of architect, rather than working stonemason, so they would have been unlikely to have cut stone during their appointment. A more detailed account of the king's master masons was published by the Reverend Robert S. Mylne in 1893.

A collection of masons' marks from Melrose, Dryburgh and Jedburgh Abbeys, amongst other locations, was published in the *Proceedings of the Society of Antiquities of Scotland* (Smith 1862, 548-551). This is the most extensive collection of Scottish masons' marks published in the 19th century. A summary of the 16 sheets of drawings of masons' marks found by Smith at sites in this survey is in Table 1 below and two examples are shown in Figures 7 and 8. These records were added to the Canmore website in 1975, from a collection held by the Society of Antiquaries of Scotland, with the accession no. 1975/12.

A search of Canmore for "masons marks" (both singular and plural, with and without the apostrophe) identified a collection of records amounting to 48 sheets of drawings, 21 rubbings and 42 photographs.

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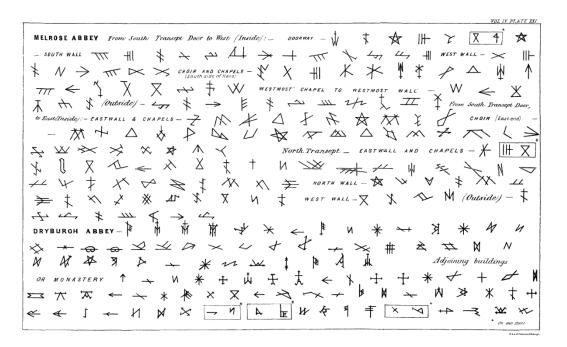


Figure 7: Masons' marks found at Melrose and Dryburgh Abbeys c1862 (Smith 1862, 553)

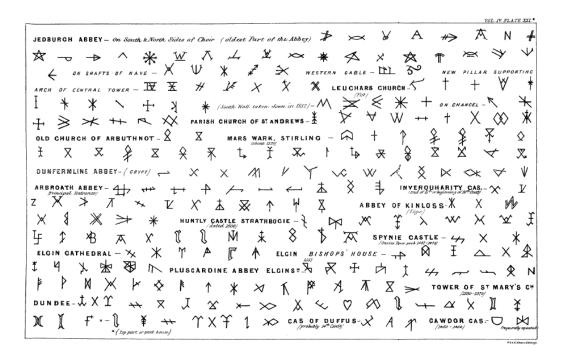


Figure 8: Marks found at Jedburgh Abbey and elsewhere c1862 (Smith 1862, 554)

Site	Canmore Site Ref.	Document ref	Date of origin	No. of Marks
Crossraguel Abbey	40830	DP 160640	1907	29
Dryburgh Abbey	55618	DP 238899	1861	46
Dryburgh Abbey	55618	DP 238900	1861	60
Jedburgh Abbey	57020	DP 238901	1857x1861	27
Jedburgh Abbey	57020	DP 238902	1857x1861	14
Melrose Abbey	55738	DP 238903	1857x1861	25
Melrose Abbey	55738	DP 238904	1857x1861	18
Melrose Abbey	55738	DP 238905	1857x1861	22
Melrose Abbey	55738	DP 238906	1857x1861	21
Melrose Abbey	55738	DP 238907	1857x1861	19
Melrose Abbey	55738	DP 238908	1857x1861	11
Melrose Abbey	55738	DP 238909	1857x1861	19
Melrose Abbey	55738	DP 238910	1857x1861	22
Melrose Abbey	55738	DP 238911	1857x1861	13
Melrose Abbey	55738	DP 238912	1857x1861	11
Melrose Abbey	55738	DP 238913	1857x1861	6

Table 1: Pre-existing masons' marks records in Canmore relating tosites in this survey

The Canmore record includes 13 photographs of the foundations of Jedburgh Abbey, recorded during excavations in 1984 (Canmore 57020). None of the masons' marks discovered at the time and listed in the captions are visible in the photographs.

The record of the excavation and investigation of Paisley Abbey drain in 2009 and 2010 includes a single drawing of 6 masons' marks and 2 photographs featuring masons' marks (Canmore 71769). See Chapter 3.13.

As with masons' marks, most of the research into stonemasons and their craft has been focussed on England and makes little or no reference to Scotland. The best known of Scotland's stonemasons from the medieval period is arguably John Morow, also known as Morrow and possibly Murray, Murdo, etc. (Chalmers 1895, 2). A commemorative tablet set into the wall of the bell tower staircase at Melrose Abbey and presumably created by Morow himself, if the use of the first person is correct, is dated to the end of the fifteenth century (ibid, 4). It is illustrated below (Figure 9), along with a sketch and translation in Figure 10. Chalmers "A Scots Medieval Architect" (1895), recounts what was known about Morow at the end of the nineteenth century and is the latest publication

to examine Morow's work in any detail. Morow is known to have worked at Melrose (1490), Paisley (exact date unknown) and at Glasgow (c1492), where he was responsible for the rood screen, which resembles that of Lincluden, sufficiently to consider that they were both designed by him (ibid). Chalmers also suggested Morow worked at several Galloway abbeys, including Sweetheart, Dundrennan and Glenluce (ibid, 32) and assigns a tenuous link between Morow and St. Andrews, without suggesting a date (ibid, 36).

All of this information is missing one key component, that of the form of Morow's mason's mark. The reason for it not being identified may lie in Morow's roles at the locations at which he worked in the latter part of his career. Chalmers refers to Morow as an "architect" (i.e. master mason), responsible for the design of buildings and their component parts. In this role Morrow would never have cut any stone for use in these buildings. His self-proclaiming tablet at Melrose would perhaps have had his mark added to it on its face if he carved it himself. Alternatively, if he commissioned a specialist letter carver, as would seem likely given the skill required, the mark of that mason may have been added to the back or side face of the block and is therefore hidden from view. Alternatively, the distinctive character of this memorial tablet may mean that no marks was considered necessary.



Figure 9: Morow's commemorative tablet at Melrose Abbey

commorode fum tymicallit : Was: pardeborn imparytte : certanly and had in keyping: alematom werk: of fantan drops: preboe kyrk: of stattan gue meleos: and pallay: of: modopto will avoi of gallap cyrm 'o nod and "aribath" i '15: T an JOHN : MOROW : SUM : TYM : CALLIT : WAS : I : AND : BORN : IN : PARYSSE : CERTAINLY : AND : HAD : IN : KEPYNG : AL : MASOUN : WERK : OF : SANTAN DROYS : YE : HYE : KYRK : OF : GLAS GW : MELROS : AND : PASLAY : OF : NYDDYSDAYLL : AND : OF : GALWAY : I : PRAY : TO : GOD : AND : MARI : BATH : AND : SWEET : S : JOHN : KEP : THIS : HALY : KYRK : FRA : SKAITH

Figure 10: Morow's commemorative tablet at Melrose Abbey (Chalmers 1895, 11)

It is clear that some antiquarian research has been lost. In the 1963 edition of the journal of the Society of Friends of Dunblane Cathedral, Cockburn refers to a catalogue of marks at Dunblane Cathedral, created in 1893 by the then Master of Works during the cathedral's restoration. Cockburn also refers to the recording of marks at St Magnus' Cathedral, Orkney and Dalmeny church (ibid). The archive location of these is unknown.

The architect T Hayter Lewis presented a paper at the Congress of British Architects in commemorative Glasgow in 1888 (Hayter Lewis 1889), in which he compared the occurrences of marks in Scotland with those found in other countries, including England, Syria and France. Unfortunately, the paper does not identify the locations at which the Scottish marks were found and is, consequently, of limited use in the present study.

More recently, in the 20th century, a study of masons' marks in buildings in Aberdeenshire was initiated by Moira Greig, formerly the County Archaeologist of Aberdeenshire (The Masons' Mark Project). This research is now focussed on Fife and the east coast of Scotland (ibid). A recent study of the churches of Markinch included a summary of the masons' marks, also by Greig (Manson 2017, 106-112).

A brief overview of recent and current research in Scotland can be found on the website of The Scottish Archaeological Research Framework (Scottish Heritage Hub). In

addition, a new project to record both masons' marks and graffiti at St Magnus' Cathedral, Orkney has recently been announced (Aberdeen Press and Journal).

This previous work combines to create a fragmented and incomplete study of masons' marks in Scotland. This present research addresses, at least in part, the fragmentary nature of previous investigations by introducing a rigorous and consistent recording methodology, enabling effective interrogation and analysis of the marks found.

Chapter 2 Research methodology

"These masons' marks are of peculiar interest, and form a special branch of study, at present but little understood." (Mylne 1893, 7)

2.1 Research questions

This research will consider the following questions:

- a. Is it possible to carry out any meaningful analysis of masons' marks found at a single building, or a group of buildings, in Scotland?
- b. Can we estimate how many masons were working on a specific building at any one time?
- c. Can we identify the size of the skilled workforce across the survey area at any point in time?
- d. Can we identify any skills progression amongst masons, e.g., the same mark appearing on plain ashlar wall-block in the lower part of the building and on more complex carved stones in upper parts of the same phase?
- e. Can we identify if masons spent their entire working life at one site?
- f. Can we identify mobility of skilled masons through the same masons' marks appearing at more than one site in the same time period?
- g. What evidence do charters of the period offer us in identifying individual masons?
- h. What, if any, differences are there between masons' marks appearing at ecclesiastical and secular sites?

2.2 Research process

Several methodologies were considered. First, to survey one or two significant, large buildings, which are known to have a range of construction phases, such as Paisley Abbey and Glasgow Cathedral, and to record all marks found. This would have the potential to identify a group of masons working on one site at a loosely defined period or periods of time. Second, to survey a range of buildings in a discrete geographical area, but with a wide chronological range. This would provide a record of masons' marks in a specific area, over an extensive period of time. Third, to focus on a specific chronological period, by identifying "key" buildings originating in the early period of stone construction in Scotland which are extant and either intact or partly intact, and which have at least part of their standing remains dating to this period, i.e., the 12th and 13th centuries. This

methodology would provide greater opportunity to identify a distribution pattern of marks by individual masons over a narrower time range.

This latter, third, methodology was chosen as the most likely to provide a set of marks from a number of sites of similar chronology and was therefore best suited to answering the research questions. Regardless of which method was selected, logistical problems remained to be resolved. These problems included travel and accommodation costs, physical limitations on surveying, including access to buildings and the availability of volunteers to carry out the surveys necessary to record the marks. Funding applications to the Sue Green Bursary and The Scottish History Research Fund were successful and covered, at least in part, the costs of travel and accommodation. Access to buildings was coordinated with the relevant Works Managers at Historic Environment Scotland. Support from members Glasgow Archaeological Society, the Association of Certificated Field Archaeologists and students of the Archaeology Department at the University of Glasgow were sought and received for the survey phases at Glasgow Cathedral, Bothwell Castle and Paisley and Crossraguel Abbeys.

Regarding recording methodology, taking a rubbing of each mark, although suggested by Alexander (1996, 99), was dismissed as being inappropriate and impractical. The physical act of taking a rubbing, in the manner of brass rubbing as described on the Monumental Brass Rubbing Society website, was discounted as inappropriate, as it might cause damage to the surface of the stone work. A possible example of the damage to stonework was found at Glasgow Cathedral, where the surrounding stonework of mark M108d on the window sill in the sacristy has been discoloured, possibly as a result of previous use of the rubbing technique (Figure 11).



Figure 11: Mark M108d

Photography was discounted as the primary recording method because it would require considerable photographic competence, together with a suitable camera or cameras and adequate lighting. In addition, a photograph of the mark would give an idea of proportion but not necessarily of size. Some marks were photographed, however, to provide evidence of the physical appearance of masons' mark cut into the surface of the stone. Ultimately, it was decided to record the marks using scale drawings. The size of each mark could then be entered into the database to enable comparisons to be made.

2.3 Site selection

Sites were selected based on the following criteria:

- a. Initial construction in stone in the 12th or 13th centuries.
- b. In the care of either Historic Environment Scotland (HES) or the National Trust for Scotland (NTS), so as to facilitate access to buildings which were in a safe condition.
- c. Located within central and southern Scotland, to minimise travel and accommodation costs.
- d. Had extant masons marks visible on the fabric of the buildings
- e. Accessible for survey.

Typical of the problems of locating and identifying evidence of masons' marks on early buildings are Sweetheart Abbey and St Margaret's Chapel at Edinburgh Castle. Both were considered for inclusion however it became clear that neither building would contribute a single viable masons' mark. A site survey at Sweetheart Abbey rapidly demonstrated that it was not a viable site because it was constructed of red Nithsdale sandstone, which is extremely friable. The surviving structure has been heavily eroded by the weather and was subjected to slighting during the first wars of Scottish Independence (Richardson 2006, 27). Inspection of the structure identified only one possible surviving stonemasons' mark, and this was discounted as it was so badly eroded that its exact form could not be determined. Similarly, a visit was made to St Margaret's Chapel, at Edinburgh Castle, dating to c1130 (Ewart 2014, 23). Reportedly the only surviving structure when the castle was razed to the ground by Robert 1 in 1314 (ibid) and sitting as it does on the most exposed location at the summit of Castle Rock, it is not surprising that no marks have survived on the outside of the building, if there ever were any. Unfortunately, there are no marks to be found on the inside either. Much of the upper part of the building is

described as "Norman" (MacGibbon and Ross 1896, 226), in which case it would perhaps be reasonable to expect some marks to have survived, especially on the dressed stone of the chancel arch, or on the inside of the doorway. The chapel was restored in 1845 (Canmore 52091) and the stonework shows evidence of having been cleaned in recent years. Perhaps all traces of any marks which may have existed have disappeared. No other sites without marks were considered.

The eleven sites that were selected are listed in Table 2. A distribution/location map of the sites is at Figure 15.

Site name	Canmore Ref.	Earliest Date (Canmore)	Total no. of mark- forms	Total Occurrenc es	Total unique marks	Most common mark
Bothwell Castle	44889	1242	74	232	35	M021 (17)
Caerlaverock Castle	66100	1290	10	12	5	M411 (3)
Crossraguel Abbey	40830	1244	64	302	37	M165 (68)
Dirleton Castle	56735	1225	2	2	2	-
Dryburgh Abbey	55618	1150	21	37	6	-
Glasgow Cathedral	45002	1136	490	1482	405	M041 (57)
Glenluce Abbey	61214	1191	11	44	4	M079 (13)
Jedburgh Abbey	57020	1139	11	21	3	M465 (3)
Kelso Abbey	58418	1128	2	2	1	-
Melrose Abbey	55738	1136	63	183	30	M058 (27)
Paisley Abbey	43138	1163	119	541	66	M132 (32)

Table 2: Sites surveyed for this research

2.4 The survey recording process

2.4.1 Survey recording

Having identified which buildings were to be surveyed, a desk-based assessment of each was made, to identify construction phases, where possible, and to create a survey plan, with each part of the building (wall, pillar, etc) given a separate location code. A full list of the terminology used in this research can be found in Appendix 5.

A methodology for recording the marks was developed, as follows:

- a. Each mark was located and identified, progressing round each building in a logical sequence.
- b. The maximum dimensions of each mark were measured in millimetres.
- c. Each mark was drawn, usually at a scale of 1:1 or 1:2.(NB. All marks were drawn "as seen", i.e., orientation and proportion. The images shown in the appendices and the figures are shown reduced.
- d. The location of each mark was recorded against the appropriate location e.g., Nave, North wall; South door, jamb, RHS; Pillar 9.(NB All marks found on the outside faces of a building are marked "external" under Stone Location. All others were found on internal walls inside the respective building.)
- e. The position of the mark in relation to an identifiable feature was noted, e.g., row or course, W face of pillar, RHS of window, etc.
- f. The stone style was noted, e.g., pillar, wall block, engaged column, window etc. See Table 4.

To ensure consistency of recording the key data listed above, a form was designed as part of the preparation for the survey phase (Figure 12). This form also enabled individuals with no previous experience of any kind of surveying to participate. Training was provided for new participants at the beginning of each survey session.

Access and safety issues were identified at some sites and risk assessments were carried out for each site before surveys began. Safety briefings were also provided, in conjunction with HES staff where appropriate. For this research project, only those marks which were readily and safely accessible from a floor level of the building have been included. In the case of Glasgow Cathedral, access to the triforium and the clerestory was obtained, enabling recording to take place in parts of the building not accessible to the public. Comparison could be made, in these instances, with the marks found on the lower part of the building. Unfortunately, access to the sacristy at Crossraguel Abbey was not possible owing to the presence of scaffolding. The survey results of the sacristy will need to be added to the record at a later date.

Initially, it was planned to record the type of stone on which the mark was cut. Ultimately, all marks recorded were cut on to sandstone, albeit of different qualities, colours and

degrees of hardness. Consequently, as this was not a factor that could be influenced by the stonemasons themselves, this was excluded from the final data set.

Site Name	Gu	xsgow	CATH.	Mark No		020c
Area of bldg.	1	LWR	CAURCH	Photo re	f.	J.
Location Descr	iption	PIL	var 28		Course	
Sketch (draw the	Stone Style (tick only one)					
					Wall block	
					Corner	
			1		Carved mould	
					Door	
					Pillar	1
					Windo	w
		. Saus 1			Decor	
			X		Arch	
					Engage	
					Buttres	s
					Other:	
					Dime	Max ensions nm)
					(H) (20
					(W)	25
Scale 1:2	(eg 1:1 –		laterial (eg, sandston	e = S, marble = M, g	ranite = G)	S
Location codes	s (see site p	lan)				
tit						
Comments:	A150	01	P. Mar 10	>+24		
	Station of the states			· · · · · · · · · · · · · · · · · · ·		
Recorded by (i	nitials)	Br	AB	Date	16/M	1/16

Figure 12: Sample completed survey recording form

2.4.2 The mark recording process – the issues

A trial recording session took place at Glasgow Cathedral in August 2015, to test the recording process, including the survey recording form, and to identify any issues, using an experienced volunteer recording team, many of whom were members of the Association of Certificated Field Archaeologists. As a direct result of input from the volunteers, changes were made both to the form and to the recording process. Feedback was taken and incorporated, where appropriate, throughout the surveying process.

Changes to the form included the addition of a grid to the drawing space, making the recording of marks easier for volunteers not familiar with scale drawing. Originally, the forms were printed on both sides of an A4 sheet, however this was changed so that each page was printed only on one side. The page was also split to give two separate A5 forms for use during the recording phase. This contributed to easier processing of the data, post survey.

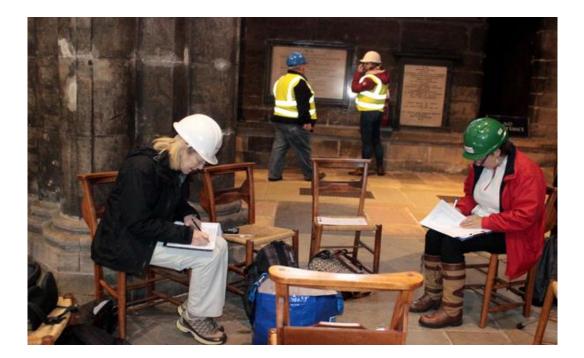


Figure 13: Surveying at Glasgow Cathedral, 6 December 2016. (l to r) M Gardiner, Author, F Reilly, C McDairmid. © Lisa Craig Photography

Identification of the form of some masons' marks was made difficult by several factors. Many had been damaged, possibly as a consequence of the Reformation, or by erosion.

Others had been partly hidden by a combination of dirt, paint, plaster, render and whitewash. Fortunately, the use of raking light often overcame these difficulties.

After each survey, the scale drawings were scanned and then cleaned using proprietary image handling software to create a clear digital record of each mark. The images were then indexed as described below.

Only those marks which were clearly visible from ground level, or floor level in the case of upper parts of buildings with access, were recorded. In most cases, selection was restricted to those marks which could be accessed to enable a measurement to be taken. The exceptions were those marks the size of which could be estimated from their surroundings (e.g., the stone on which they were cut was measurable or could be estimated by comparison with other stones in the vicinity).

2.4.3 Numbering of marks in the record

Rylands (1891, 158) allocated each mark a number, dependant on its site, so that Burscough 41 was the same as, or at least similar to, Ormskirk 6. It was considered that this created an unnecessary complication, by giving the same mark-form several different reference numbers, based on location. The method used by Davis (1954) indexed the marks using an alphabetical system, based on similarity of mark-forms (Figures 5 and 6). This had the potential to cause confusion as an **X** mark-form would be recorded as E1 and an **XX** mark-form as E2. It was decided that a straight forward numerical index would be less confusing.

Each mark-form was, therefore, allocated a unique numerical code. The allocation of a number to the masons' marks in the record is not significant but simply reflects the order of processing in the post-survey phase, beginning with M001. For example, M443, a bow tie with a line extending from the cross point, has been found at both Melrose Abbey and Bothwell Castle (Table 3). The mark has the same form in each case, so it is safe to classify each example as the same number, viz M443. Comparison of the drawings show different proportions and orientations of the marks. The single example at Melrose is straightforward. At Bothwell, there are three variations, with one of them appearing twice. The mark numbered M443, therefore, has 4 variations across 2 sites, each having one occurrence apart from M443b, which has two occurrences, giving a total of 5 occurrences. M433 differs from the others owing to its orientation, whilst M443a differs from M443b

Mark no.	M443	M443a	M443b	M443c
Mark Image	X			M
Site and location	Melrose Abbey Pillar in nave	Bothwell Castle Donjon staircase	Bothwell Castle Donjon stair	Bothwell Castle Donjon store
Variations	1	1	1	1
Occurrences	1	1	2	1

as the right-hand vertical is perpendicular in variation a, but not in b, which is slanted upwards to the left.

Table 3: Dataset for mark M443

This approach has been applied to each mark. Marks with the same form share a single classification number, regardless of site. An alphabetical suffix is added to identify variations of the 'basic' form, depending primarily on orientation and size. Where there is more than one occurrence of the same size, proportion and orientation, this will be included under each variation. This method has enabled a more detailed analysis of the marks, by comparison with each other and by comparing the same, or similar, marks found at different sites.

2.4.4 Description of marks in the record

Each mark has been classified, referencing either a geometric form or a letter of the Roman alphabet, depending on which best describes the mark. As example, M397 is described as "triangle form with legs", whilst M148 is described as "letter Y form with baseline" (Figure 14).



Figure 14: marks M397 (l) and M148 (r)

2.4.5 Database creation

The database used to record and interpret the information collected was designed specifically for this project. Advice was taken to ensure that the design of the database would enable the research questions to be answered. The decision was made to use Microsoft Access, not least because specialist support was available from University of Glasgow IT Services.

Having recorded individual marks and their associated data using the process described above, the next stage was to record the data in a way which would allow comparison using as wide a number of factors as possible. The database incorporated the fields shown in Table 4.

Criteria	Example
The Canmore code for each location was used as the site reference	55738 – Melrose Abbey
The number allocated to each mark-form	M486
The mark number and, where appropriate, the suffix indicating the mark variation	M486a, 486b, etc
The number of occurrences for each mark variation	M486b, 2
The location of each occurrence	Nave, north wall, W of N door
The height and width of each variation of a mark, in millimetres	h: 45 w: 68
A description of each mark, referencing Roman alphabet letters and/or geometric forms	Star, 6 points
The number of lines comprising the mark	6
Possible runic origin and if so, which futhark and which letter form	Y, Older Futhark, h
In the case of marks suggesting runic origins, whether they have been modified by the addition of a line or lines	Y or N
The building feature of the stone on which the mark appears	Window
The estimated century and quarter	12 th century, 1st quarter

Table 4: Database input fields

The data for each mark found was entered into the database, an example of which is shown in Figure 15. This enabled the following assessments and comparisons to be made:

- a. Total number of marks recorded
- b. Number of marks recorded at each site
- c. Number of variants of each mark, per site

- d. Number of occurrences of each variation, in total and per site
- e. Number of marks appearing at more than one site
- f. Number of marks from different dating phases appearing on the same site
- g. Number of marks unique to each site
- h. Number of marks per location within each site
- i. Number of lines per mark, per site
- j. Number of marks per site per dating phase
- k. Number of marks of possible runic origin
- 1. The potential runic letter of origin
- m. The runic futhark from which the symbol originates
- n. Whether the mark is a modified version of the symbol

As part of the survey, it had been intended to record the type of stone fabric on which each mark was cut. This proved to be unnecessary as all the marks recorded had been carved on sandstone.

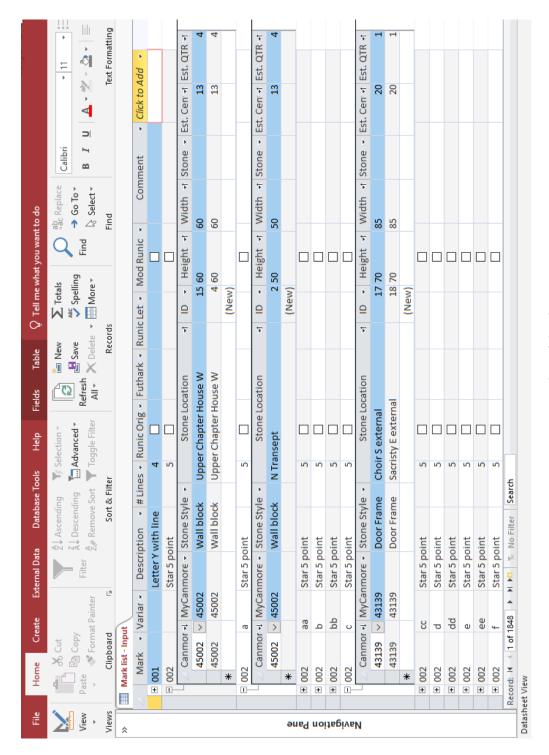
2.4.6 Dating masons' marks

The dating of masons' marks has proved to be the most problematic part of this research and will continue to be so in the future. The record of medieval buildings in Scotland is extensive, but also significantly incomplete, and therefore speculative in places, at least in relation to dating. As discussed later (Chapter 5.12), earlier cut stone could be reused in later rebuilding phases, further complicating the dating process.

A chronology was identified for the extant parts of each building to be able to date the masons' marks, at least to a general period. This was based on pre-existing research by a range of scholars which has offered dates for various sections of the buildings surveyed. The issue of reuse of stone form previous incarnations was considered for each site and, where appropriate, incorporated into the discussion of each site in Chapter 3 and in the dating phases discussion in Chapter 5. For convenience, a simple system of quarter centuries was used, e.g. 12th century, quarter 1 being 1100-1125.

2.4.7 Terminology

A full list of the terminology used in this research can be found in Appendix 5.







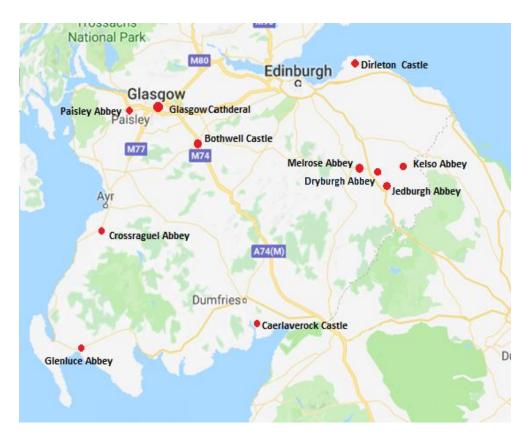


Figure 16: Location of sites included in this research

The potential scale of a comprehensive research project into the masons' marks of Scotland is almost beyond imagination. There are thousands of castles, fortified and tower houses and stately homes, to which must be added the hundreds of churches and other religious buildings, many no longer in use for their original purpose, which could be surveyed and provide data to add to the research. The sites listed in Table 2 were selected for survey to provide a start-point for this research and their locations are shown in Figure 16. A brief summary of the history of each of the sites is provided, along with a ground plan and some photographs of the building. This is followed by a summary of the marks found.

A complete list of the masons' marks found is in Appendix 1, an index of marks by form and shape is in Appendix 2 and an index by number of lines can be found in Appendix 3.

3.1 Bothwell Castle

Canmore Site Ref:	44889
Alternative names:	Valence Castle
NGR:	NS 68834 59340
County:	LAN
Earliest Date (from Canmore):	1242
Canmore weblink:	http://canmore.org.uk/site/44889

The earliest surviving record of this castle dates to 1242 (Salter 2006, 142), when an extant structure passed from the Olifard family to Walter de Moravia, (aka The Murrays). The curtain walls to the north of the structure were never built, however the foundations were constructed and remain in situ (Figure 17). The castle was rebuilt in 1336, after being taken by the English (Coventry 2006, 96) consequently, particular care must be taken when attributing dates to masons' marks, owing to rebuilding and potential re-use of stone from previous phases. The complexity of dating Bothwell Castle is discussed in detail in Simpson (1958, 11-16). Some masons' marks were located on the foundations of the unbuilt northern curtain walls and a few of these marks also appear elsewhere in the castle. A fuller architectural account of the castle can be found in MacGibbon and Ross (1882, 93 et seq).



Figure 17: Bothwell Castle aerial view from the NNE. © HES SC1686215

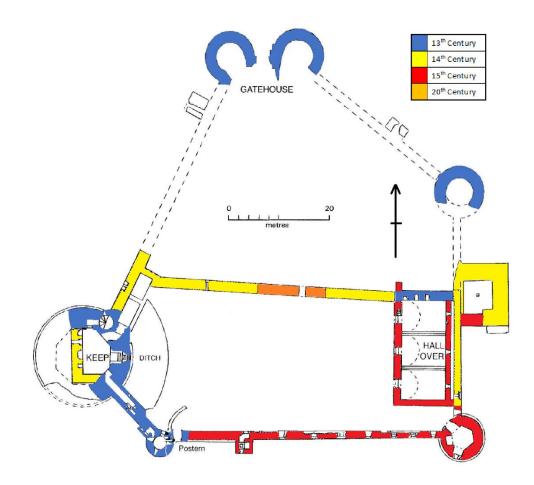


Figure 18: Bothwell Castle ground plan (After Salter 2006, 143)



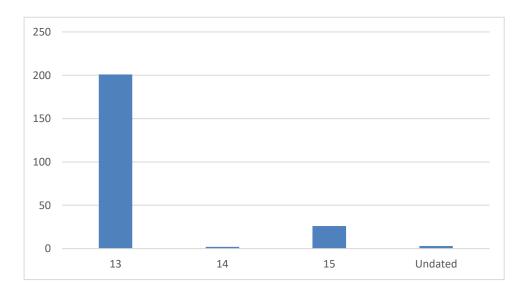
Figure 19: Foundations of NW tower at Bothwell Castle © Lisa Craig Photography

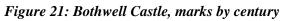


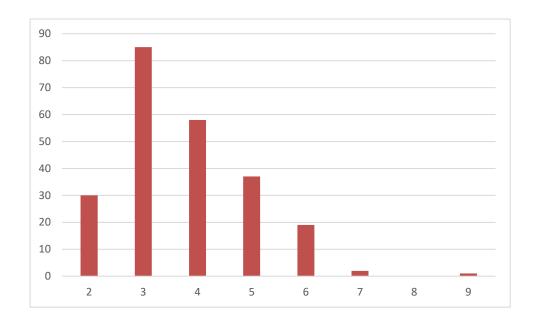
Figure 20: Inside of donjon tower at Bothwell Castle © Lisa Craig Photography

Bothwell Castle	Total	%	Comment
Total no. of mark-forms:	74	100.0	
Marks unique to site	35	47.3	
Marks of possible runic origin	6	8.1	
Un-modified possible runic marks	2	2.7	
Modified possible runic marks	4	5.4	
Total occurrences:	232	100.0	
Marks dating to the 13 th century	201	86.6	
Marks dating to the 14 th century	2	8.6	
Marks dating to the 15 th century	26	11.2	
Marks undated	3	12.9	3 display stones
Marks of 2 lines	30	12.9	Of 232 occurrences
Marks of 3 lines	85	36.6	
Marks of 4 lines	58	25.0	
Marks of 5 lines	37	15.9	
Marks of 6 lines	19	59.4	
Marks of 7 lines	2	0.8	
Marks of 8 lines	-	-	
Marks of 9 lines	1	0.4	
Most common mark:			
M021 - 9 variations, 19 occurrences			\times

Table 5: Bothwell Castle, key data







Leaving a mark on history

Figure 22: Bothwell Castle, marks by number of lines

Figure 23: (right) Mark M028m at Bothwell Castle © Lisa Craig Photography





Figure 24: (left) Mark M002jj at Bothwell Castle © Lisa Craig Photography

3.2 Caerlaverock Castle

Canmore Site Ref:	66100
Alternative names:	Carlaverock
NGR:	NY 02548 65638
County:	DUM
Earliest Date (from Canmore):	1290
Canmore weblink:	http://canmore.org.uk/site/66100

This site has been included as it has a clearly Norman influence in its style and layout, which are in some ways similar to Bothwell Castle, at least in so far as the latter was planned, with two towers flanking a gatehouse. Dating of individual masons' marks at Caerlaverock is problematic as many of the in-situ stones may have been re-used after the castle was levelled by the Bruce in 1312 and again in 1356 (Mackenzie 1927, 49). Much of the inside is of a later date, when modifications were made to make the castle more of a residence, with less focus on a purely fortified building. Consequently, it is extremely difficult to tell how much of the earlier stone has been reused in the 14th century reconstruction. It is also possible that stone from the earlier castle of the same name was reused in the first or subsequent building phases. The castle was besieged in 1640 and subsequently abandoned for the last time (Canmore 66100). This site is not to be confused with Old Caerlaverock Castle (Canmore 66101), located c200m SSE of this building.



Figure 25: Caerlaverock Castle aerial view from NNW © HES SC1156766

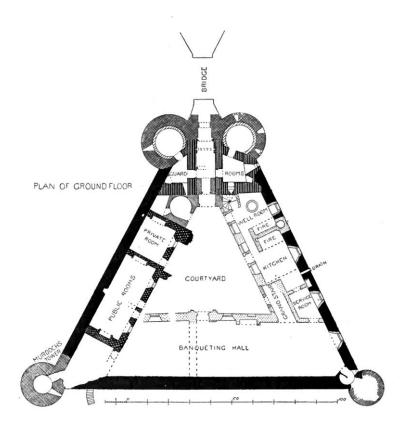


Figure 26: Caerlaverock Castle ground plan (MacGibbon and Ross, 1888, 128)

Caerlaverock Castle	Total	%	Comment
Total no. of mark-forms:	10	100.0	
Marks unique to site	5	50.0	
Marks of possible runic origin	1	10.0	
Un-modified possible runic marks	0	0.0	
Modified possible runic marks	1	10.0	
Total occurrences:	12	100.0	
Marks dating to the 13 th century	1	8.3	
Marks dating to the 15 th century	5	41.7	
Marks dating to the 17 th century	6	50.0	
Marks of 3 lines	2	16.6	Of 12 occurrences
Marks of 4 lines	3	25.0	
Marks of 5 lines	6	50.0	
Marks of 6 lines	1	8.3	
Most common mark: M411 – 1 variation, 3 occurrences			

Table 6: Caerlaverock Castle, key data

With only 12 occurrences of 10 mason's mark-forms, a chart showing the dating of marks has not been included. Suffice it to say that 6 (50%) of the marks found date to the 17th century, 5 to the 15th century and one to the 13th century.

A comparatively small number of marks makes useful analysis difficult. The graph showing marks by the number of lines (Figure 27) indicates that 4 of the 10 mark-forms have 5 lines. There is no correlation at Caerlaverock between the dating phases and the number of lines. The 5-line marks date to the $13^{\text{th}}(1)$, $15^{\text{th}}(1)$ and 17^{th} centuries (2).

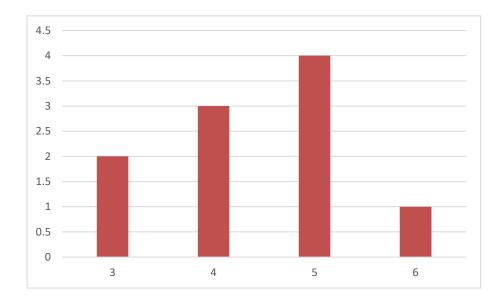


Figure 27: Caerlaverock Castle, marks by number of lines

3.3 Crossraguel Abbey

Canmore Site Ref: Alternative names: NGR: County: Earliest Date (from Canmore): Canmore weblink: 40830 Corsregal, St Mary's Abbey NS 27539 08334 AYR 1244 (founded) http://canmore.org.uk/site/40830

Lands around Crossraguel were given to Paisley Abbey by Duncan, Earl of Carrick prior to 1214-16 (Canmore 40830). The abbey was established in c1250 as a daughter house of the Cluniac Paisley Abbey (Cox 2011, 5). Rebuilding took place in 14th and 15th centuries, the latter including the rebuilding of the sacristy, chapter house and the east end of the choir, which was reconstructed with a polygonal end (ibid).



Figure 28: Crossraguel Abbey aerial view from W © HES SC1555715

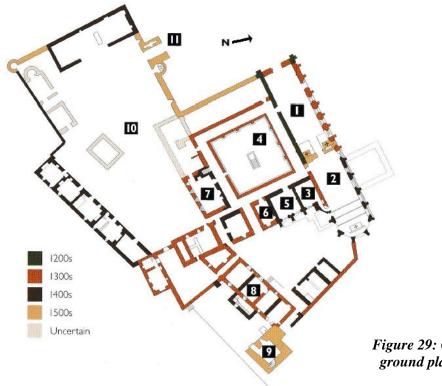


Figure 29: Crossraguel Abbey ground plan (Cox 2011, 20)

1.

2.

3.

4.

5.

6.

7.

8.

9.

Nave

Choir

Sacristy

Ambulatory

East range

South range

Chapter House

Abbot's house

Tower House

South Court
 Gatehouse

As can be seen from the ground plan in Figure 29, although a significant part of the abbey dates to the 13th century, much of what remains was rebuilt during the 15th century (Cox 2011, 7). Again, care must be taken regarding dating of the marks owing to the possible reuse of stone from earlier incarnations. Surveying of the sacristy was not possible, owing to scaffolding blocking the entrance.

Crossraguel Abbey	Total	%	Comment
TOTAL No. of mark-forms:	64	100.0	
Marks unique to site	37	57.8	
Marks of possible runic origin	6	9.4	
Un-modified possible runic marks	6	9.4	
Modified possible runic marks	0	0.0	
Total occurrences:	294	100.0	
Marks dating to the 13 th century	1	0.3	
Marks dating to the 14 th century	29	9.8	
Marks dating to the 15 th century	256	87.1	
Marks dating to the 16 th century	2	0.7	
Marks undated	5	1.7	
Marks of 2 lines	12	4.1	Of 294 occurrences
Marks of 3 lines	19	3.1	
Marks of 4 lines	34	11.5	
Marks of 5 lines	53	18.0	
Marks of 6 lines	77	26.2	
Marks of 7 lines	40	13.6	
Marks of 8 lines	58	19.7	
Marks of 9 lines	1	0.3	
Most common mark:			_
M165 – 17 variations, 69 occurrences		_	+

Table 7: Crossraguel Abbey, key data

The majority (256, or 87.1%) of the surviving stonework at Crossraguel Abbey that bears masons' marks dates to the 15th century, which is the recorded date of the rebuilding of the chapter house, sacristy and choir (ibid, 4) (Figure 30).

The marks found at Crossraguel Abbey show a higher proportion of marks with 5, 6, 7 and 8 lines (Figure 31), when compared to other sites in the survey.

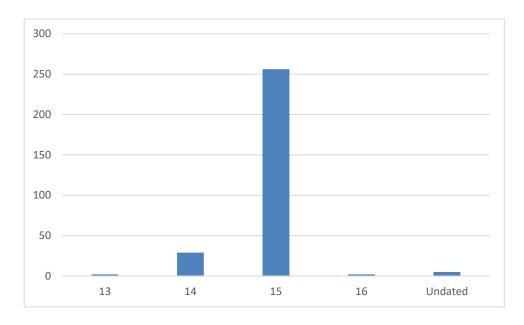


Figure 30: Crossraguel Abbey, marks per century

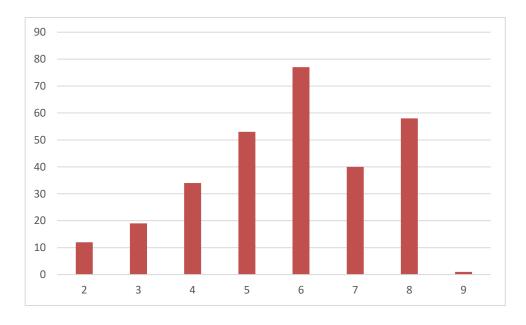


Figure 31: Crossraguel Abbey, marks by number of lines

Images of some of the masons' marks that can be found at Crossraguel appeared in a previous edition of the HES(HS) guide (Tabraham, 2002, 8) (Figure 32) and there is a photograph of a single mason's mark in the current edition (Cox 2011, 7).

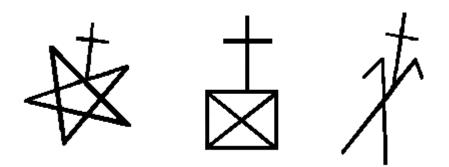


Figure 32: Masons' marks at Crossraguel Abbey, from HS guide book (Tabraham 2002, 8)

A document on Canmore (Canmore 40830), records some masons' marks found at Crossraguel in the early 20th century (Figure 33). As can be seen, they are incorporated into a drawing showing other features at the abbey and the quality of the drawings is not up to modern standards. Not all of these marks were located during the 2017 survey.

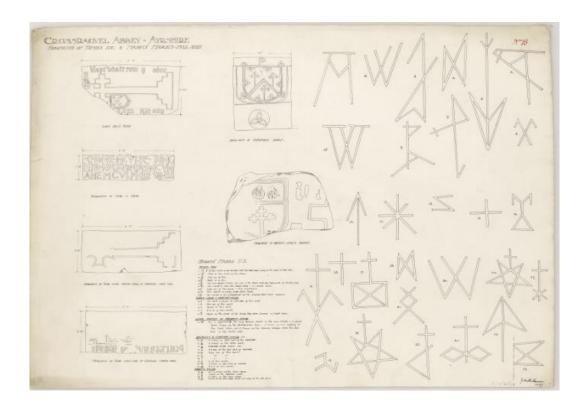


Figure 33: Crossraguel Abbey, masons' marks on Canmore © HES DP160640

3.4 Dirleton Castle

Canmore Site Ref:	56735
Alternative names:	-
NGR:	NT 51609 83929
County:	ELO
Earliest Date (from Canmore):	1225
Canmore weblink:	http://canmore.org.uk/site/56735

The first reference to a castle at Dirleton appears in 1225 (Canmore 56735). The earliest structure was created for John de Vaux, son of an Anglo-Norman family from Rouen in Normandy (ibid). The castle had 3 later building phases. In the 14th and 15th centuries, the cellars, bakery, kitchen and chapel were added by the Halyburtons and in the 16th century, the Ruthvens enclosed the inner court (ibid). Unfortunately, only two marks survive, owing to erosion exacerbated by the roofless condition of most of the structure.



Figure 34: Dirleton Castle from NW © HES SC1679927

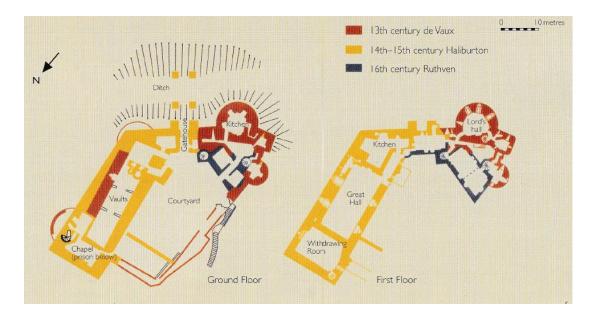


Figure 35: Dirleton Castle ground plan (HES 2016, 5)

Dirleton Castle	Total	%	Comment
Total no. of mark-forms:	2	100.0	
Marks unique to site	2	100.0	
Marks of possible runic origin	1	50.0	M651
Un-modified possible runic marks	1	50.0	
Modified possible runic marks	0	0.0	
Total occurrences:	2	100.0	
Marks dating to the 15 th century	2	100.0	
Marks of 3 lines	1	50.0	M651
Marks of 6 lines	1	50.0	M468
Most common mark: M468 - (1) - 1 occurrence M651 - (r) - 1 occurrence		/	\downarrow \downarrow

Table 8: Dirleton Castle, key data

Very little can be deduced from the two marks found at Dirleton castle. Although neither of these have been found at any of the other sites surveyed, it is possible that they may also appear on other buildings not yet surveyed.

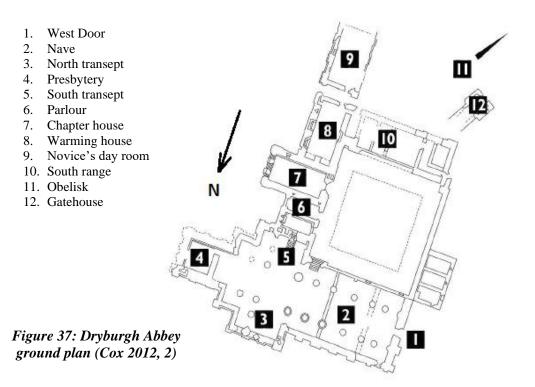
3.5 Dryburgh Abbey

Canmore Site Ref:	55618
Alternative names:	-
NGR:	NT 59158 31703
County:	BER
Earliest Date (from Canmore):	1150
Canmore weblink:	http://canmore.org.uk/site/55618

Dryburgh was founded on 10th November 1150 by Hugh de Moreville, (Canmore 55618), as the first Premonstratensian abbey in Scotland and was significantly damaged during attacks in 1322 and 1385, and by fire in 1461. It is the burial place of, amongst others, Sir Walter Scott (Cox 2012, 2).



Figure 36: Dryburgh Abbey aerial view from SSW © HES SC 1667947



Dryburgh Abbey		%	Comment
Total no. of mark-forms:	21	100.0	
Marks unique to site	3	14.3	
Marks of possible runic origin	6	60.0	
Un-modified possible runic marks	1	4.8	
Modified possible runic marks	4	4.8	
Total occurrences:	34	100.0	
Marks dating to the 13 th century	33	97.3	
Marks undated	1	2.7	Cellar display – M271f
Marks of 2 lines	2	5.4	Of 34 occurrences
Marks of 3 lines	11	32.4	
Marks of 4 lines	10	29.7	
Marks of 5 lines	6	18.9	
Marks of 6 lines	1	2.7	
Marks of 7 lines	2	5.4	
Marks of 8 lines	2	5.4	
Most common mark: M010 - (1) - 3 variations, 4 occurrences M043 - (c) - 3 variations, 4 occurrences M058 - (r) – 4 variations, 4 occurrences		\bigwedge	$\not\!$

Table 9: Dryburgh Abbey, key data

Of the 34 marks found at Dryburgh Abbey, all but one was dated to the 13th century (Figure 38). The undated mark, M271f, was found on a fragment of window frame on display in the cellar. Other occurrences of mark M271 have been found at Bothwell Castle and Glasgow Cathedral (both 13th century), and Paisley Abbey (14th century). One other undated occurrence was found on a carved mould in the stone display at Melrose Abbey.

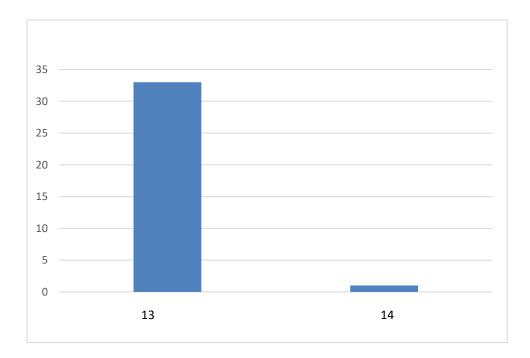
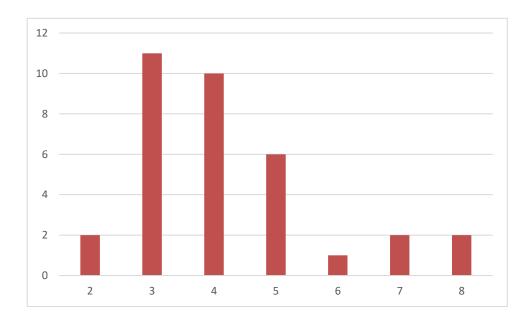
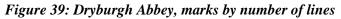


Figure 38: Dryburgh Abbey, marks by century





Scratched into a slab near the north wall of the church is a board used to play merelles, or "nine men's morris", a game for two, using counters and a board (HES Engine Shed). One of only three found in Scotland, the others being found at Jedburgh and Arbroath Abbey, they are believed to originate in the 13th century, based on the dates of the buildings (ibid). The Engine Shed website suggests the merelles board at Dryburgh (Figure 40) is cut into the surface of a foundation stone of the north wall of the nave and was used by masons working on the construction of the building. This would seem unlikely, as it would have quickly been built upon. Later removal of the wall stones would surely have damaged the surface, of which there is no sign. The boards found at both Arbroath and Jedburgh were cut on loose i.e., portable, pieces of stone which, in the case of Arbroath, had subsequently been built into a wall (ibid). Unfortunately, nothing of the lines forming the playing surface can be seen in the image.



Figure 40: Merelles board at Dryburgh Abbey © HES The Engine Shed

Dryburgh Abbey is one of the sites at which 19th century recording of masons' marks took place (Smith 1862). Two sheets of marks found at Dryburgh are shown in Figure 41 and form part of the 25 sheets in the Canmore record (Canmore 998086). No record of the specific location of each mark is available. Not all of these were identified in the latest survey.

DRYBURH . MONASTERY. < И 7 X M R DRYBURGH. ch 1 bryte CHURCH 18%

Figure 41: Marks at Dryburgh Abbey recorded in 1861 © HES DP 238900 (top) DP 238899 (bottom)

3.6 Glasgow Cathedral

Canmore Site Ref:	45002
Alternative names:	Cathedral of St Mungo, Barony Kirk; High
	Church; Metropolitan Kirk; St Mungo's
NGR:	NS 60248 65577
County:	LAN
Earliest Date (from Canmore):	1136 (consecrated)
Canmore weblink:	http://canmore.org.uk/site/45002

The building of the "new" cathedral at Glasgow during the first half of the twelfth century took place at a time when the only comparable structures in Scotland were the abbey churches of Dunfermline, Holyrood and Kelso (Barrow 1996, 7). Barrow also highlighted the problem of sourcing an adequate number of stonemasons and other skilled craftsmen to undertake the work (ibid). This suggests that the mobility of skilled artisans grew as the demand for more modern styles of architecture increased under David I (1124-1153). According to Barrow (ibid, 8) the cathedral was dedicated in 1136. An alternative date for the dedication, of 6 July 1137, carried out by Bishop Jocelin, is suggested by Durkan (1986, 4). This date seems unlikely however, as Jocelin was bishop from 1175-1199, according to the cathedral guide book (HS 2009, 18).

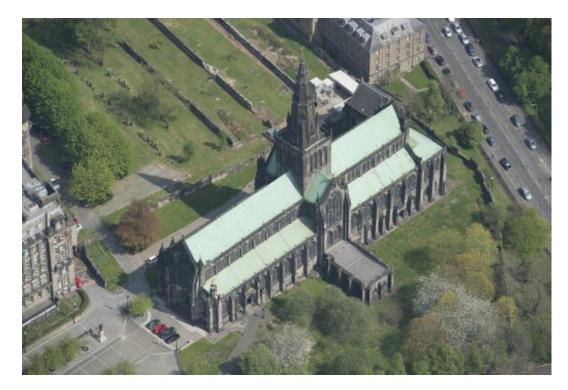
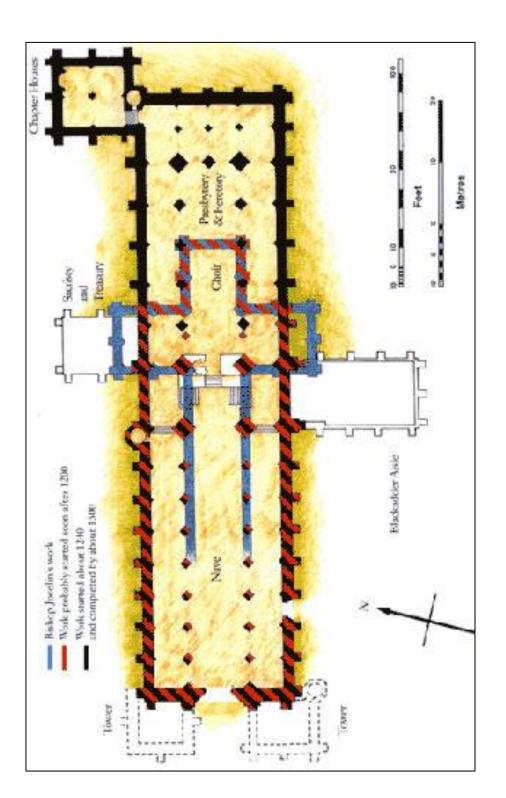
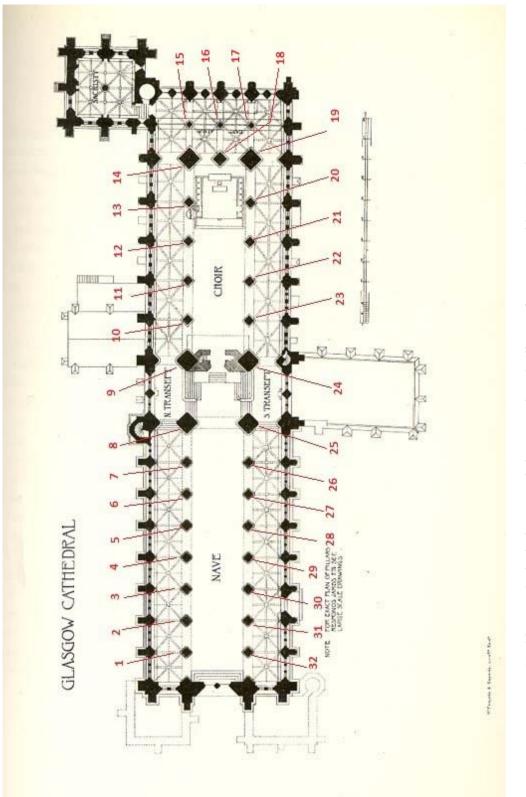


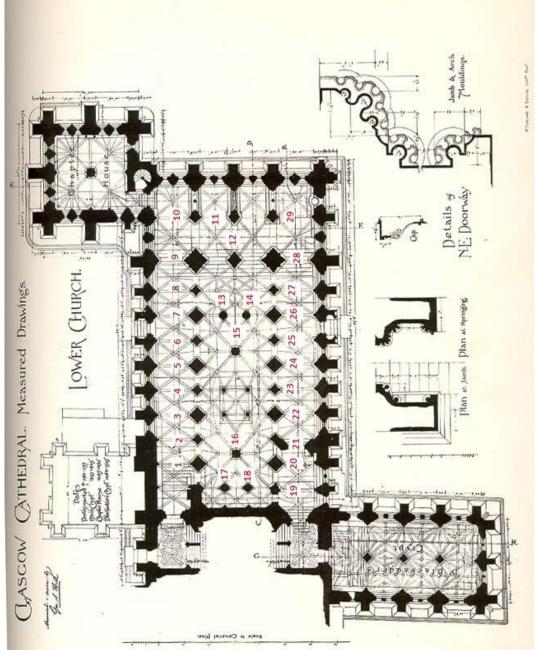
Figure 42: Glasgow Cathedral from SW © HES DP 234645











Dating of the nave and choir shows that the work at the west end started before the choir and chapter house, presumably because the lower church was being constructed at the same time as the nave (Figure 43). Detailed dating analysis can be found in Driscoll 2002.

The size of the building required a more detailed location code system to ensure the location of marks were accurately recorded. Pillars were numbered as shown in Figures 44 and 45.

Glasgow Cathedral	Total	%	Comment
Total no. of mark-forms:	490	100.0	
Marks unique to site	405	82.6	301 are single occurrence
Marks of possible runic origin	78	15.9	
Un-modified possible runic marks	16	3.3	
Modified possible runic marks	62	12.7	
Total occurrences:	1447	100.0	
Marks dating to the 12 th century	5	0.3	
Marks dating to the 13 th century	1196	82.6	
Marks dating to the 15 th century	237	16.4	
Marks dating to the 19 th century	1	-	
Undated marks	8	0.5	
Marks of 2 lines	140	9.7	Of 1447 occurrences
Marks of 3 lines	287	19.8	
Marks of 4 lines	373	25.8	
Marks of 5 lines	278	19.2	
Marks of 6 lines	139	9.6	
Marks of 7 lines	75	0.5	
Marks of 8 lines	50	3.5	
Marks of 9 lines	84	5.8	
Marks of 10 lines	13	0.9	
Marks of 11 lines	4	0.3	
Marks of 12 lines	-	-	
Marks of 13 lines	1	-	
Marks of 14 lines	2	0.1	
Marks of 15 lines	1		
Most common mark:			
M041 - (1) - 31 variations, 60 occurrences			

Table 10: Glasgow Cathedral, key data

A possible location of a masons' "lodge" at Glasgow Cathedral was identified during the 1988-1997 excavations. Driscoll (2002, 35) suggests the sand and stone chippings found on the earlier floor surface under the north-east end of the nave is the debitage from the masons' benches during the construction of the 13th century cathedral.

Three masons' marks from the cathedral are shown in Figure 46. These are (l-r) M007 (Nave N); M582 (Triforium N) and M013 (Nave N). All date to the last quarter of the 13th century. These three examples show clearly the differences in the depth of incision and the finished surface of the stones on which they have been incised.







Figure 46: (l to r) Marks M007, M582 and M013 © Lisa Craig Photography

The majority of the marks found at Glasgow Cathedral have been dated to the 13th century, which is known to be the main building period for the cathedral (Figure 43 and Table 10). The upper chapter house (currently in use as the sacristy) was rebuilt in the middle of the 15th century after a lightning strike (Historic Scotland 2009, 14).

The 5 oldest marks found at Glasgow Cathedral, dating to the 3rd quarter of the 12th century, were located on the old vaulting pillar in the lower church. A summary of the locations of these marks at Glasgow and their appearance at other sites is in Table 12.

			No. of	
Mark no.	Mark-form	Site	occurrences	Dating phase
079		Bothwell	6	13/2
		Crossraguel	1	15/1
	N	Glasgow	20	12/4 (1) 13/1 (1) 13/2 (2) 13/4 (16)
		Glenluce	13	15/4
		Jedburgh	1	13/2
		Melrose	2	15/1
		Paisley	4	13/1 (1) 14/4 (3)
107	X	A single occurrence found at Glasgow	1	12/4
152 A		Bothwell	1	13/2
	Dryburgh	1	13/1	
	Glasgow	14	12/4 (11) 13/1 (5) 13/4 (1) 15/1 (1) 15/4/ (4)	
		Jedburgh	2	13/2
	Melrose	16	15/1 (10) 15/2 (6)	
		Paisley	4	15/4
263	A	A single occurrence found at Glasgow	1	12/4

Table 11: Distribution of occurrences of the oldest marks foundat Glasgow Cathedral

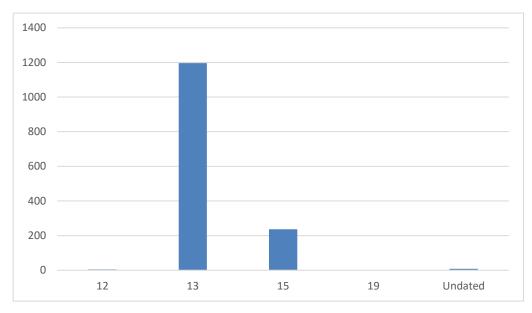


Figure 47: Glasgow Cathedral, marks by century

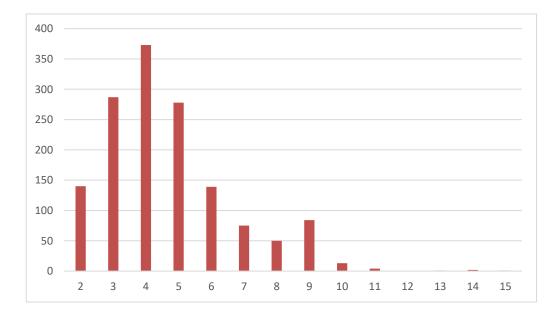


Figure 48: Glasgow Cathedral, marks by number of lines

Not all marks are displayed on the outer face of the finished stone, and in the case of more elaborate carved detail, the mark may not be visible on the outer surface. There are several carved stone pieces on display in the lower church which show marks on their flat or curved, undecorated surfaces (Figures 49 and 50).

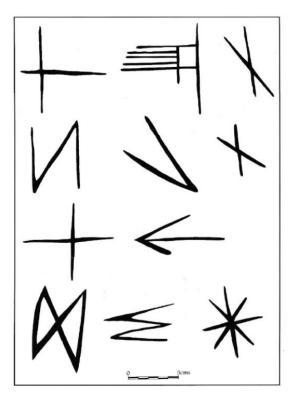


Figure 49: Glasgow Cathedral, display of carved stone in lower church © Lisa Craig Photography



Figure 50: Glasgow Cathedral, mason's mark cut into the vertical face of a carved mould on display in Glasgow Cathedral © Lisa Craig Photography

During the excavations at Glasgow Cathedral between 1988 and 1997, several masons' marks were found below the current floor level in the nave, on the foundation walls of the earlier cathedral (Driscoll 2002, 32). Of these only one, the multi-lined mark in the middle of the top row in Figure 51, was not found elsewhere during the surveys in 2015/16.



(Top row) M041, not found, M078

(Second row) M253, M534, M078

(Third row) M041, M010

(Fourth row); M018, M003, M072

Figure 51: Glasgow Cathedral masons' marks (Driscoll 2002, 32)

3.7 Glenluce Abbey

Canmore Site Ref:	61214
Alternative names:	Luce Abbey
NGR:	NX 18503 58660
County:	WIG
Earliest Date (from Canmore):	1191
Canmore weblink:	http://canmore.org.uk/site/61214

A Cistercian abbey, Glenluce is documented as being founded in 1191 by Roland, Lord of Galloway, as a daughter house of Dundrennan Abbey (Canmore 61214). The abbey is mostly ruined, having been secularised in 1602 (ibid). The chapter house, rebuilt in the late 15th century, is complete and similar in size and layout to that of Crossraguel Abbey. A section of the ambulatory has been rebuilt, covering the doorway into the chapter house.



Figure 52: Glenluce Abbey aerial view from W © HES DP261174

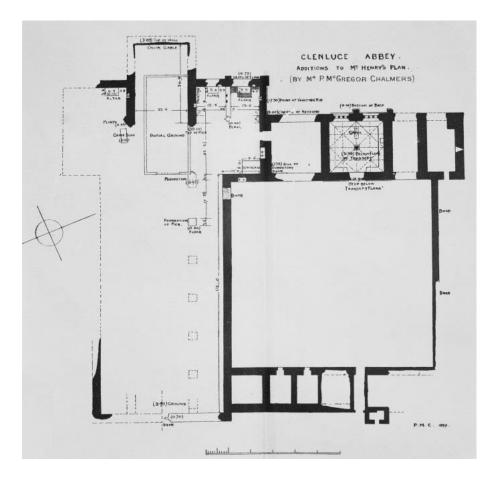


Figure 53: Glenluce Abbey ground plan © HES SC1207129

One of the marks unique to Glenluce Abbey, M616) was found on a stone on display in the museum (Figure 54).

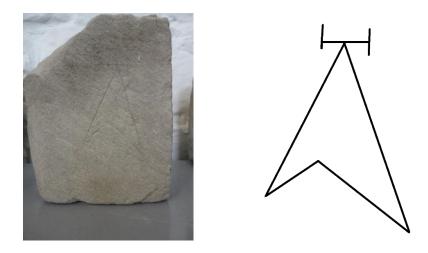


Figure 54: Mark M616, on stone display at Glenluce Abbey

Glenluce Abbey	Total	%	Comments
Total no. of mark-forms:	11	100.0	
Marks unique to site	6	54.5	
Marks of possible runic origin	0	-	
Un-modified possible runic marks	0	-	
Modified possible runic marks	0	-	
Total occurrences:	30	100.0	
Marks dating to the 15 th century	21	70.0	
Marks dating to the 16 ^h century	1	3.3	
Undated marks	8	26.7	
Marks of 3 lines	4	13.3	Of 30 occurrences
Marks of 4 lines	15	50.0	
Marks of 5 lines	3	10.0	
Marks of 6 lines	4	13.3	
Marks of 7 lines	1	3.3	
Marks of 8 lines	3	10.0	
Most common mark: M079 – (l) - 4 variations, 13 occurrences	8		

Table 12: Glenluce Abbey, key data

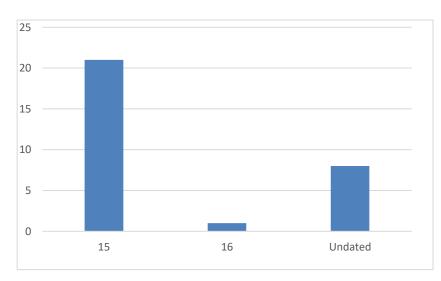


Figure 55: Glenluce Abbey, marks by century

Leaving a mark on history

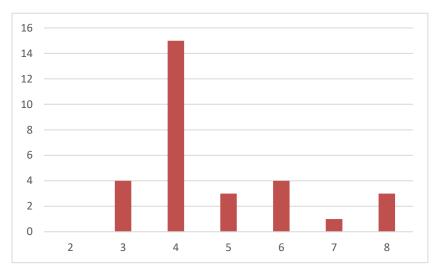


Figure 56: Glenluce Abbey, marks by number of lines

It is difficult to develop a meaningful discussion based on 30 occurrences of just 11 markforms. Suffice it to say that most of the surviving buildings at the abbey date to the 15th century, as do the masons' marks found.

3.8 Jedburgh Abbey

Canmore Site Ref:	57020
Alternative names:	Augustinian Abbey of St Mary
NGR:	NT 65038 20448
County:	ROX
Earliest Date (from Canmore):	1139
Canmore weblink:	http://canmore.org.uk/site/57020

The abbey at Jedburgh was founded by David I in 1138 (Fawcett 1994, 135). An earlier church on the site was demolished before 1174 (Canmore 57020). The abbey was complete by the middle of the 13th century, immediately after which the cloister was re-modelled (ibid).

As with the other Borders' abbeys, Jedburgh was frequently attacked by the English and consequently underwent several rebuilding phases in the late 16th century (Fawcett 1994, 135).

A new (parish) church was constructed within the west end of the nave in the later 17th century and was subsequently removed to a new site in 1875 (Canmore 57020).



Figure 57: Jedburgh Abbey, aerial view from NNE. © HES DP00253610

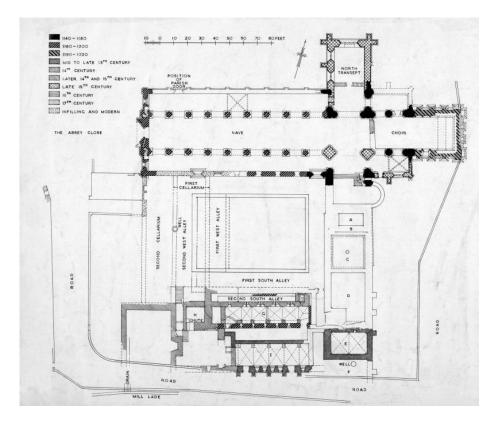


Figure 58: Jedburgh Abbey, ground plan © HES DP00094253

Jedburgh Abbey	Total	%	Comment
Total no. of mark-forms:	11	100.0	
Marks unique to site	3	27.3	
Marks of possible runic origin	0	0	
Un-modified possible runic marks	0	0	
Modified possible runic marks	0	0	
Total occurrences:	17	100.0	
Marks dating to the 13 th century	17	100.0	
Marks of 2 lines	1	5.9	Of 17 occurrences
Marks of 3 lines	6	35.3	
Marks of 4 lines	2	11.8	
Marks of 5 lines	2	11.8	
Marks of 9 lines	6	35.3	
Most common mark: M350 – 2 variations, 4 occurrences			

Table 13: Jedburgh Abbey, key data

All 17 marks found at Jedburgh were dated to the 13th century. As with Glenluce Abbey, the small number of masons' marks found makes it difficult to develop a meaningful analysis, however 3 of the mark-forms are unique to Jedburgh Abbey. More significantly, 2 of the other marks were found at 6 other sites, 1 being found at 5 other sites and 1 found at 4 other sites.

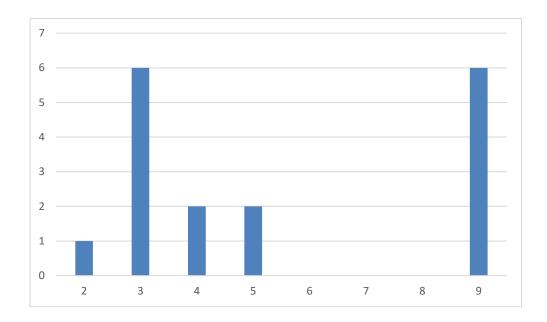


Figure 59: Jedburgh Abbey, marks by number of lines

In common with Dryburgh Abbey, previous recording of marks has taken place at Jedburgh in the 19th century (Smith 1862). The 41 mark-forms shown in Figure 60 include 9 with curved lines. Not all of these marks were found during this research.

Leaving a mark on history

On the South and North sides of the CHOIR the oldest part of the allowy. JEDBVRGH.ABBEY. On Shafes of NAVE WESTERN GABLE. NEW PILLAR supporting WESTERN ARCH of CENTRETOWER JEDBVRGH ABBEY.

Figure 60: Marks at Jedburgh Abbey recorded in the 19th century © HES DP 238901 (top) DP 238902 (bottom)

3.9 Kelso Abbey

Canmore Site Ref:	58418
Alternative names:	Monastery at Kelso
NGR:	NT 72844 33815
County:	ROX
Earliest Date (from Canmore):	1128
Canmore weblink:	http://canmore.org.uk/site/58418

Founded and endowed by David I in May 1128, the Tironensian abbey of Kelso was not completed until 1248. Little remains of this abbey, which was repeatedly attacked owing, at least in part, to its proximity to the border with England. It was destroyed in 1522 and again in 1542. An area to the southeast of the remaining structure may have been the site of the masons' lodge during the construction of the abbey (Tabraham 1984, 399).

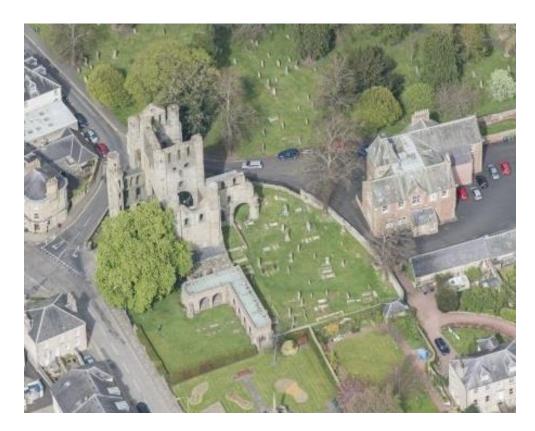


Figure 61: Kelso Abbey aerial view from SSW © HES DP00253588

Leaving a mark on history

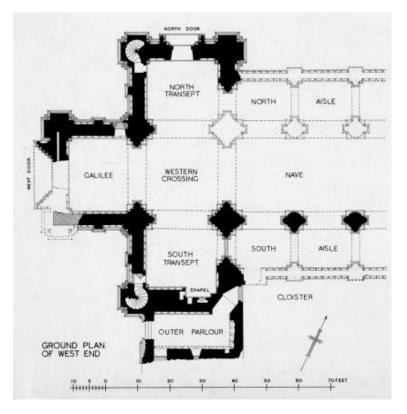


Figure 62: Kelso Abbey ground plan © HES SC01574389

Kelso Abbey	Total	%	Comment
Total no. of mark-forms:	2	100.0	
Marks unique to site	0	0.0	
Marks of possible runic origin	1	50.0	
Un-modified possible runic marks	0	0.0	
Modified possible runic marks	1	50.0	
Total occurrences:	2	100.0	
Marks dating to 12 th century	2	100.0	
Marks of 2 lines	1	50.0	
Marks of 4 lines	1	50.0	
Most common mark: M078 – 1 occurrence (right) M480 – 1 occurrence (left)			

Table 14: Kelso Abbey, key data

As with Dirleton Castle, two marks is insufficient on which to base any analysis. The marks are both dated to the 12th century, placing them amongst the earliest marks found.

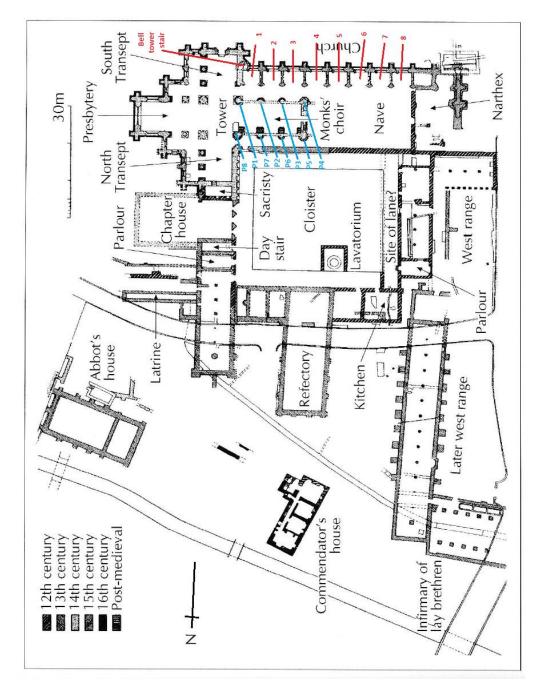
3.10 Melrose Abbey

Canmore Site Ref:	55738
Alternative names:	The Abbey of St Mary
NGR:	NT 54848 34177
County:	ROX
Earliest Date (from Canmore):	1136
Canmore weblink:	http://canmore.org.uk/site/55738

Melrose was founded as a Cistercian abbey during the reign of David I in 1137 (Fawcett and Oram 2004, 21). Dating of the marks has been taken from the building plan in this publication (ibid, 175). Destruction of the abbey was ordered by Richard II in 1385, with a major rebuild taking place in 1389 (ibid, 78). Fawcett and Oram also suggest a date for Morow's work at Melrose as being "probably into the first quarter of the fifteenth century" (ibid, 91).



Figure 63: Melrose Abbey aerial view from NNE. © HES DP00078839





Melrose Abbey	Total	% Comment		
Total no. of mark-forms:	63	100.0		
Marks unique to site	30	47.6		
Marks of possible runic origin	7	31.7		
Un-modified possible runic marks	0	0.0		
Modified possible runic marks	7	11.1		
Total occurrences:	175	100.0		
Marks dating to the 12 th century	8	4.6		
Marks dating to the 14 th century	6	3.4		
Marks dating to the 15 th century	154	88.0		
Marks dating to the 17 th century	4	2.3		
Undated marks	3	1.7		
Marks of 2 lines	1	0.6	Of 175 occurrences	
Marks of 3 lines	82	46.8		
Marks of 4 lines	67	38.3		
Marks of 5 lines	22	12.6		
Marks of 6 lines	3	1.7		
Most common mark: M058 - 4 variations, 28 occurrences				

Leaving a mark on history

Table 15: Melrose Abbey, key data

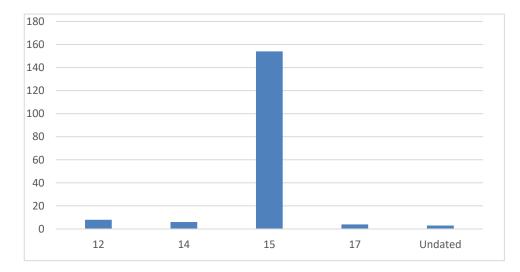


Figure 65: Melrose Abbey, marks by century

In common with Crossraguel and Glenluce Abbeys, the majority of the marks found at Melrose Abbey date to the 15th century (Figure 65). This is indicative of the extent to which all 3 sites were rebuilt or altered at this time.

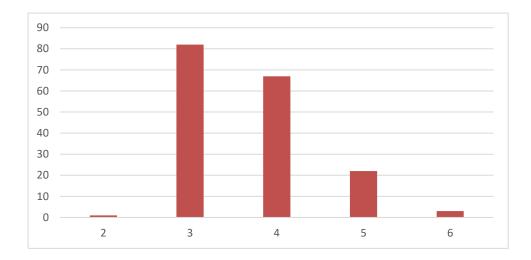


Figure 66: Melrose Abbey, marks by number of lines

The oldest marks found during this research were those located in the chapter house at Melrose, which date to the second quarter of the 12th century. 8 occurrences of 3 mark-forms were identified. The same mark also appeared elsewhere at Melrose and at 6 other sites. These marks were found on the foundations of the entrance to the chapter house and on the south wall of the chapter house, which also forms the west wall of the sacristy (Figure 64).

Mark	Mark		No. of	
no.	form	Locations	occurrences	Comment
092m		Chapter house, S wall	4	Also found at: Crossraguel – 14/2 (1), 14/4 (2) Bothwell – 13/1 (1), 13/2(1), 15/1 (1), Glasgow – 13/2 (4), 13/4 (3), Melrose – 15/1 (6) Paisley – 15/4 (1)
253d	\bigvee	Chapter house S wall Chapter house S, window	1	Also found at: Bothwell – 13/2 (8), 15/1 (6) Dryburgh – 13/1 (1), Glasgow – 13/1 (1), 13/2 (2)
652a	1	Chapter house, base of pillar at entrance	2	Also found at: Glenluce Abbey – 15/4 (1)

Table 16:	Melrose	Abbey,	oldest	marks	found
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3.11 Paisley Abbey

Canmore Site Ref:	43139
Alternative names:	St Mirin's
NGR:	NS 48559 63954
County:	RNF
Earliest Date (from Canmore):	1163 (charter)
Canmore weblink:	http://canmore.org.uk/site/43139

Founded in 1163, Paisley was established as a Cluniac abbey, supported by Cluny Abbey in France (Malden 1996, 5). The tower at Paisley collapsed after 1563 and destroyed the choir. The abbey was subject to restoration in 1862 and in 1898 and work began again in 1907 but was suspended in 1917 on the orders of the Government who ordered all non-war related works to cease (Malden, 1996, 32-33). The restored abbey was rededicated in 1928 (ibid).



Figure 67: Paisley Abbey aerial view from NW © Canmore DP032412.

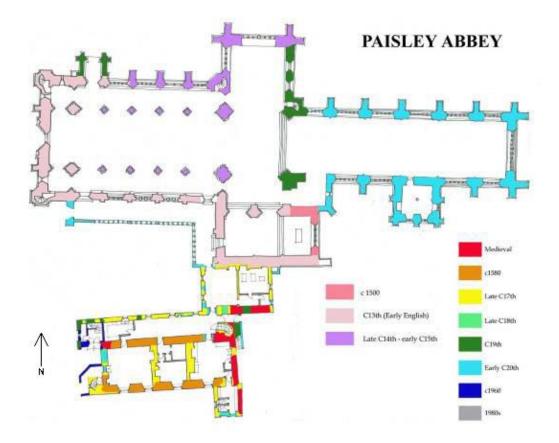
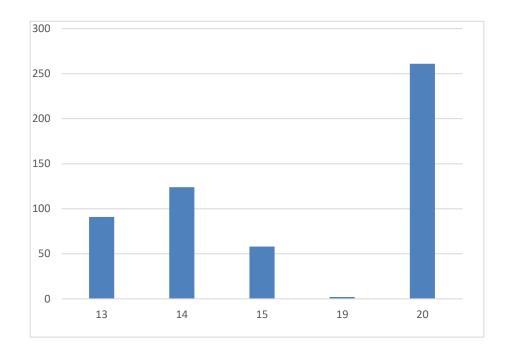


Figure 68: Paisley Abbey ground plan (Simpson and Brown 2000, 18)

Of the 119 mark-forms found at Paisley Abbey, 53 (44.5%) are on parts of the building which date to the early 20th century reconstruction (Figure 68). Of these, nine mark-forms have also been found on earlier parts of the building. This is either a simple coincidence or indicates that stone from the earlier incarnation was reused in the rebuilding. Taking mark M002w as an example, occurrences were found in the choir and sacristy, dating from the early 20th century. In addition, 10 occurrences of M002 were located on the south wall of the nave and one each on two pillars, all dating to the 14th century. This indicates a possible reuse of stonework in the 20th century rebuilding of the choir. In the case of M184, ten occurrences were found on the ambulatory wall, which was re built in the 20th century. Two marks were found on the E wall of the St Mirin Chapel dated to the 13th century and one occurrence of the same mark was found on the N wall of the same chapel, which dates to the 15th century. This could also indicate reuse of stone from the 13th century in the rebuilding of the N wall of the chapel.

Paisley Abbey	aisley Abbey Total %		
Total no. of mark-forms:	119	100.0	
Marks unique to site	66	55.5	
Marks of possible runic origin	8	6.7	
Un-modified possible runic marks	2	1.7	
Modified possible runic marks	6	5.0	
Total occurrences:	541	100.0	
Marks dating to the 13 th century	91	16.8	
Marks dating to the 14 th century	124	22.9	
Marks dating to the 15 th century	58	10.7	
Marks dating to the 19th century	2	0.4	
Marks dating to the 20 th century	261	48.2	
Marks of 2 lines	42	7.8	Of 541 occurrences
Marks of 3 lines	74	13.7	
Marks of 4 lines	135	24.9	
Marks of 5 lines	90	16.6	
Marks of 6 lines	42	77.6	
Marks of 7 lines	5	0.9	
Marks of 8 lines	90	16.6	
Marks of 9 lines	49	9.0	
Marks of 10 lines	7	1.3	
Marks of 11 lines	-	-	
Marks of 12 lines	2	0.4	
Most common mark: M132 - 3 variations / 32 occurrences (20	A		

Table 17: Paisley Abbey, key data

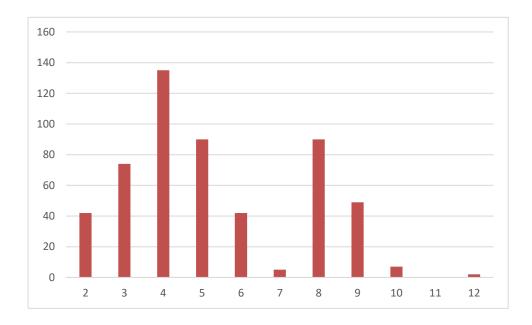


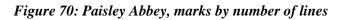
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Figure 69: Paisley Abbey, marks by century

The high proportion of marks dated to the 20th century (Figure 69) is unusual and a consequence of the rebuilding of the choir, which began in 1907. A summary of the 20th century marks found at Paisley is in Table 18.

Similarly, the preponderance of 8 and 9-line marks at Paisley (Figure 70) is also unusual when compared with the other sites.





Mark	Mark-	Lagation	Comment
Mark no. M002w	form	Location Choir S -1 Sacristy E -3	CommentNave S - 10 (13^{th} c)Nave pillar 3 - 1 (14^{th} c)Nave pillar 5 - 1 (14^{th} c)
M018o	X	Choir N - 4	13 found in St Mirin Chapel and nave (both 13 th c)
M021o	X	Choir N - 2	9 from 13 th / 14 th c, nave and St Mirin Chapel
M0411		Choir N – 1	Nave N (2) and St Mirin Chapel (1) $14^{\text{th}}/15^{\text{th}}$ c
M0660	\bigtriangleup	Choir N -1	St Mirin Chapel – 1 (13 th c), nave pillar 1-1 (13 th c) St Mirin Chapel N - 2 (15 th c)
M123	X Y	Choir S -2 Ambulatory outer wall E- W – 17 Sacristy E -1	Nave N – 7 (14 th c)
M128	Ť	Choir S – 1	Nave N – 10 (14 th c)
M184		Ambulatory outer wall E- W – 10	St Mirin Chapel E - 2 (13 th c) St Mirin Chapel N - 1 (15 th c)
M208		Choir N – 1	Nave pillar 12 -1 (13 th c)

Table 18: Paisley Abbey, marks found on 20th century reconstruction

Even based on this cursory examination, it is clear that none of the marks found on the parts of the abbey rebuilt in the 20th century are unique to this period. This suggests significant reuse of stone from earlier phases. Further investigation is needed to see if any of the marks

on the rebuilt parts of the abbey appear on new, i.e., replacement stone and not just on reused stone. If the same marks do appear on replacement stonework, this would suggest that rather than applying their own marks, the masons involved in the 20th century rebuild copied marks from the old stone that was reused. This requires further investigation.

During the survey and excavation of Paisley Abbey drain in 2010 by Guard Archaeology (Will 2010), evidence of masons' marks was found (Figure 71). These marks have not been included in this dataset as it was not possible to gain access to create a first-hand record.

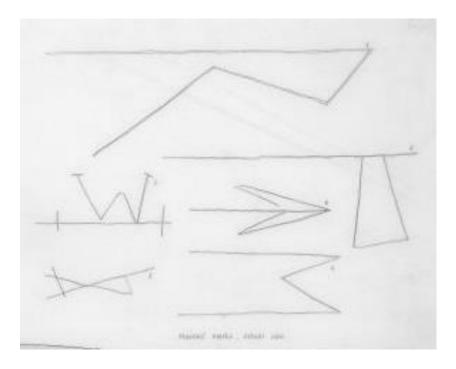


Figure 71: Marks found in the drain at Paisley Abbey © HES DP00049694

The marks found in the drain have been compared with those found elsewhere at Paisley Abbey, with the following results:

Top row:	M401 - not found elsewhere at Paisley
Middle row:	Left - similar to M467 (also in St Mirin Chapel, 15th century, 4th qtr)
	Centre - M419 – not found elsewhere at Paisley
	Right - no comparable mark found at any of the sites surveyed
Bottom row:	Left - no comparable mark found elsewhere at Paisley
	Right - M050 (not found at Paisley) and/or M271 (also found in the nave N Wall, external, 14 th century, 4 th qtr)

Chapter 4 Results: What do the marks tell us?

4.1 Key data: an incomplete set

It is impossible to identify all of the stonemasons' marks on any building. There are two main reasons for this. Firstly, many marks are not visible once the dressed stone is in position, if the mason's mark was not cut on the exposed face of the stone. In the case of those that were, many will no longer be visible due to erosion, erasure or covering over with plaster, paint or other surface coatings. Secondly, primarily to ensure the safety of the survey team, only those marks visible and accessible from a floor level were included. Many were out of reach, and no doubt many others were simply not visible. It is to be expected therefore that the total number of marks which could potentially exist at any one site may be far in excess of those included in this record, which must be considered as a representative sample.

It is, perhaps, to be expected that Glasgow Cathedral would have the most marks, and the most occurrences, given its size and that it has the most dressed stone in its original construction, which is indicative of the status of the building when it was built. The condition of the fabric of the cathedral is better than any of the other buildings surveyed, excluding Paisley Abbey which is in similar condition, principally as both buildings had roofs throughout their lives. In contrast, the abbeys of the Borders and Dumfries and Galloway, and the castles at Bothwell, Caerlaverock and Dirleton have not had roofs for several hundred years and, consequently, their fabric has been significantly weathered. There is another significant reason for the difference in the number of marks on the fabric of different buildings. An examination of the stonework of each building shows that, amongst others, Glenluce and Crossraguel Abbeys are, at least in part, constructed of rubble walls, with only the doorways, corners and windows being of dressed stone. Only the abbey church and chapter house in each have walls constructed entirely of dressed stone. It would not, therefore, have been necessary for the entire workforce to be skilled stonemasons. It is possible, in fact highly likely, that the monks and lay brethren from the orders which initiated the construction of each abbey would themselves be directly involved in its construction, as labourers and builders, under the direction of skilled masons (Richardson 1964, 15).

4.2 Addressing the research questions

Analysis of the dataset provides the following answers to the initial research questions:

a. Is it possible to carry out any meaningful analysis of masons' marks found at a group of sites in Scotland?

Yes, it is. From the 2 marks found at Dirleton Castle to the 1447 occurrences of 490 markforms at Glasgow Cathedral, a great deal can be determined about those responsible for the construction of the buildings surveyed. The total of 689 different marks-forms found give an indication of the number of different masons involved in the construction work and, for individual masons, it is possible to identify the level of activity of each. Whilst it is possible to undertake an analysis of the data from each site, care must be taken when comparing one site with another.

b. Can we estimate how many masons were working on a specific building at any one time?

A total of 689 different mark-forms were found across the 11 sites surveyed. This indicates the maximum number of masons that have worked at the sites, but without analysis of dating, this total must be treated with care. The frequency of different marks at each site and the finished stone type on which they are found is a more informative measure of the levels of activity and skills of stonemasons at each site (Table 19).

Site name	Canmore Ref.	Total no. of different mark-forms	Total variations	Total occurrences
Bothwell Castle	44889	74	132	232
Caerlaverock Castle	66100	10	10	12
Crossraguel Abbey	40830	64	156	294
Dirleton Castle	56735	2	2	2
Dryburgh Abbey	55618	21	31	34
Glasgow Cathedral	45002	490	1102	1447
Glenluce Abbey	61214	11	15	30
Jedburgh Abbey	57020	11	12	17
Kelso Abbey	58418	2	2	2
Melrose Abbey	55738	63	92	175
Paisley Abbey	43139	119	296	536
	TOTAL	867	1850	2781

 Table 19: Number of mark-forms, variations and occurrences at each site

The total number of different mark-forms found across all sites is 689. The different total (867 mark-forms) in Table 19 arises because some mark-forms have been found at more than one site. The appearance of the same mark-form at more than one site may not indicate the presence of the same mason but may be a coincidental use of the same mark-form. If this is the case, then the maximum number of masons identified is 867. If each of the mark-forms found at different sites are by the same mason, then the maximum number of masons is 689. The true figure probably lies somewhere between the two, i.e., some are coincidental use of the same marks and some are the same mason working at two or more sites. Of the 689 different mark-forms, 1850 variations were identified and a total of 2781 occurrences were recorded. The totals for each site tell us about the number of masons and their levels of activity, but totals across all sites are not meaningful and are more likely to add confusion, owing to the different dating phases of the buildings at each site.

c. Can we identify the size of the skilled workforce across the survey area at any point in time?

Dating of masons' marks is speculative at best and the data must be treated with care. It is clear however, that patterns can be observed for some of the sites, where a significant number of marks have been dated to a particular century. The total across all sites for this category is not useful, as comparatively few sites have been surveyed of the many hundreds from the period. The number of mark occurrences by century at each site gives us an approximate indicator of the level of building activity, but only based on the masons' marks that have survived (Table 20). An analysis by dating phase more accurately highlights periods of building activity at each site (Table 21).

				(Centur	y				
Site name	12 th	13 th	14 th	15 th	16 th	17 th	18 th	19 th	20 th	Undated
Bothwell		201	2	26						3
Caerlaverock		1		5		6				
Crossraguel		1	30	255	2					5
Dirleton				2						
Dryburgh		33								1
Glasgow	5	1193		238				1		9
Glenluce				21	1					8
Jedburgh		17								
Kelso	2									
Melrose	8		6	154		4				3
Paisley		91	124	58				2	261	

	1	12 th c	J			13 th c	c			14	14 th c			15 th c	c			16 th c	c		-	17 th c			19	19 th c		20 th c	Undated
Site name	1	2 3	3 4	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1 2	3	4	1	2	3	4	1	
Bothwell Castle					12	189				2			26																3
Caerlaverock Castle								1							5								9						
Crossrague1 Abbey						1		1	1	3		26	256				2												5
Dirleton Castle													2																
Dryburgh Abbey				(1)	33																								-
Glasgow Cathedral		41	5		24 5	564	14	594					191			46										1			8
Glenluce Abbey																21	1												8
Jedburgh Abbey						14		3																					
Kelso Abbey			~	2																									
Melrose Abbey		8										6	122	32							4								3
Paisley Abbey				5	91							124				58										2		261	

Table 21: Marks by site, by dating phase

Leaving a mark on history

d. Can we identify any skills progression amongst masons, e.g., the same mark appearing on plain ashlar wall-block in the lower part of a building and on more complex carved stones in upper parts of the same phase?

The complexity of the finished piece of stone on which the mark appears has the potential to offer evidence of the skills development of individual masons. If a mark appears only on wall blocks in the lower part of a building but appears later in the upper parts on more complex carved stonework, such as doorways, window frames and stairs, this may indicate that the individual had been developing his skills whilst working on that building. Three examples, taken entirely at random, are shown below.

In the first example, mark M028, found at Glasgow cathedral, it would appear that the mason worked on the lower church, on the area around the north and west doors and on the quire screen (Table 22). Dating of these parts of the building, which is based on estimates, suggests a range of between 25 and 75 years, with perhaps a working life of 40 years, between 1240 and 1280. It would appear that this mason was not exclusively undertaking more skilled work in the later period of his working life.

Site name	Glasgow Cath	edral	
Mark no.	M028		
Location	No. of occurrences	Stone style	Dating phase
Lower church N wall	1	Carved mould	13/2
Lower church pillars	7	Pillar	13/2
North door (external)	1	Ashlar wall block	13/4
North door (external)	1	Door frame	13/4
West end (external)	2	Ashlar wall block	13/4
West door (external)	1	Door frame	13/4
Triforium stair 6	1	Ashlar wall block	13/4
Quire screen (S)	1	Ashlar wall block	13/4

Table 22: Distribution of mark M028 at Glasgow Cathedral

In the second example, M020, from Melrose Abbey, earlier ashlar wall block is succeeded by stone forming engaged columns and windows, however the later period also includes ashlar wall block (Table 23). Dating here is also problematic, with construction falling between 1200 and 1250.

Leaving	a	mark	on	history
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Site name	Melrose Abbe	?у	
Mark no.	M020		\vee \vee
Location	No. of occurrences	Stone style	Dating phase
Bell tower stair	3	Ashlar wall block	15/1
Nave chapel	1	Engaged column	15/2
Nave chapel	1	Window	15/2
Nave chapel	1	Ashlar wall block	15/2
Nave N (external)	1	Ashlar wall block	15/2

Table 23: Distribution of mark M020 at Melrose Abbey

Finally, in M261 also at Glasgow Cathedral, the same date phases apply as in M028, above, with the addition of one mark from the first quarter of the 15th century. There is a similar mix of ashlar wall block and more complex carved stone forms across the date phases. The anomaly of the mark on the engaged column on the south wall of the chapter house suggests that, although this was remodelled after a lightning strike in 1406, the engaged column remained in situ or was reused from the previous incarnation (Table 24).

Site name	Glasgow Cath	nedral	
Mark No.	M261		
Location	No. of occurrences	Stone style	Dating phase
Lower Church N	1	Ashlar wall block	13/2
Lower Church Mariners' Chapel	4	Ashlar wall block	13/2
Lower Church Nurses' Chapel	2	Ashlar wall block	13/2
Lower Church pillar 9	1	Pillar	13/2
Lower Church pillar 10	1	Pillar	13/2
Lower church N	1	Window	13/2
Lower Church S	1	Window	13/2
Triforium N	4	Ashlar wall block	13/4
Triforium stair 6	1	Ashlar wall block	13/4
Sacristy S	1	Engaged Column	15/1

Table 24: Distribution of mark M261 at Glasgow Cathedral

From this limited analysis, it would appear that it is not possible to identify skills progression, based purely on the location of masons' marks on individual cut stone. Rather, it would appear that masons were simply set to work on whichever part of the building was next to be constructed. A more detailed analysis of selected marks may identify some masons who worked only on the more complex finished stonework.

e. Can we identify if masons spent their entire working life at one site?

It is highly unlikely that this can be proved, simply from surviving masons' marks. There are, however, a number of marks which are unique to each site, at least in this research, and in spite of the close geographical, chronological and, in some cases, historical connections between the buildings surveyed. If we can extrapolate the dating phases it may be possible to identify those masons working across one or two quarters of a century. This may, with caution, indicate masons who worked their entire life at one site. Having surveyed only 11 sites in Scotland, it cannot be stated with any certainty that the marks found will not be found at another location, either from the same dating phase, or any other. Before claiming any significance for the marks found at only one of the survey sites, it will be necessary to complete a survey of all surviving sites and compare the marks found and their dating phase. Based on this research, it can be suggested that marks found at only one site could indicate that a proportion of the workforce may have spent most, if not all, of their working lives at one location. Whether anything can be deduced from the ratio of unique marks to the total number of marks found at each site is debatable. It is likely, according to Coulton (1928, 147), that there was a cadre of skilled masons at each site, with the balance made up of itinerant craftsmen of varying ability.

The comparatively high ratio of unique marks found at Glasgow Cathedral is most likely a direct result of the building being constructed primarily of dressed stone, requiring higher number of skilled masons than other sites. Care should be taken when assessing this data, owing to the small number of sites included in this survey. It is possible, if not entirely likely, that many of the marks found that appear "unique" to the sites at which they were found will appear at other sites not yet surveyed (Table 25).

Site name	Total No. of different mark-forms	No of marks unique to the site	Unique marks as a % of total	No. of marks also found at other sites
Bothwell Castle	74	35	47.3	39
Caerlaverock Castle	10	5	50.0	5
Crossraguel Abbey	64	37	57.8	27
Dirleton Castle	2	2	100.0	0
Dryburgh Abbey	21	6	28.6	15
Glasgow Cathedral	490	405	82.6	85
Glenluce Abbey	11	4	36.4	7
Jedburgh Abbey	11	3	27.3	8
Kelso Abbey	2	1	50.0	1
Melrose Abbey	63	30	47.6	33
Paisley Abbey	119	66	55.4	53

 Table 25: Number of unique marks at each site

f. Can we identify mobility of skilled masons through the same masons' marks appearing at more than one site in the same time period?

One of the issues addressed in previous research is the extent to which the skilled workforce may have been mobile in the 12th and 13th centuries (Davis 1954, 49). Past thinking, at least in the 19th century, saw focus on the identification of groups of masons' marks from a range of buildings and the consequent attempt to identify the progression of masons from one building to the next (Alexander 2001, 212). More recently, analysis of masons' marks has been focussed on analysis of marks at specific sites, with comparison between sites taking lesser prominence (ibid). This has come about, not least in part, because of the acceptance that it is impossible to identify if it is the same mason that is represented by a specific mark, or two different masons using the same mark at two different sites. Furthermore, Alexander suggests that masons may not have used the same mark throughout their careers, but rather they were allocated a mark when they arrived at a site to work (ibid, 217). This assertion by Alexander may be based on the issue of marks being modified by stonemasons when they arrive at a site to start work and find they have the same mark as one already in use by another mason working on that building. See Chapter 5.2.

There are instances of the same mark appearing at more than one site in the same dating phase (Table 26). It cannot be assumed that this indicates the same mason was active at more than one site. It is more likely that two masons were using the same mark at different sites. Four masons' marks were selected for examination, based on their distribution across several sites and of similar dating phases. Mark M035 was found at three sites. The occurrence of this mark at Bothwell Castle was found on the donjon staircase and dates to the 13th century. Of the 35 occurrences at Glasgow Cathedral, 21 in the lower church date to the 2nd quarter of the 13th century and 14 marks on pillars in the nave date to the 4th quarter of the 13th century. The 4 marks at Paisley Abbey add a further complexity to the analysis of masons' marks. Two of the marks were found on the external face of the north wall of the nave and date to the 4th quarter of the 14th century. The other two were located on the internal face of the north wall of the choir. The choir at Paisley Abbey was rebuilt, at least in part, in the early 20th century (c1907). The identification of marks from this building phase may indicate re-use of stones from the demolition rubble, rather than a mark cut by a 20th century mason who, by coincidence, shared the same mark as a predecessor from six centuries earlier.

Mark No:	M035	M105	M241	M540
Mark image			\uparrow	<
Bothwell Castle	1	-	3	3
Glasgow Cathedral	35	20	2	9
Glenluce Abbey	-	4	-	-
Melrose Abbey	-	2	-	-
Paisley Abbey	4	7	1	4

Table 26: Comparison of marks with the same chronology found at different sites

Mark M105 was found at four sites. At Glasgow Cathedral, the mark was found in the sacristy (16 occurrences, dating to the 1st quarter of the 15th century), 2 in the lower church (dating to the first quarter of the 15th century) and 2 in the nave, one on a pillar and one on the staircase to the triforium, both of which date to 4th quarter of the 13th century. At Glenluce Abbey, four occurrences were found on dressed stones forming part of the museum

Leaving a mark on history

display. It has not been possible to accurately assign a date to these stones. None were found on the surviving building structure.

Mark M241 was found at 3 sites. A Bothwell Castle, 3 occurrences were located in the donjon latrine, dating to the 13th century. Two were found at Glasgow Cathedral, one on a wall block forming part of the north wall of the nave (fourth quarter of the 13th century) and the other on a window in the north wall of the lower church and dating to 2nd quarter of the 13th century. The single example found at Paisley Abbey was on the external face of the north wall of the nave, dating to the last quarter of the 14th century.

Finally, in the case of mark M540, three were found at Bothwell Castle, all on wall blocks in the donjon and dating to the 13th century. At Glasgow Cathedral, the 9 occurrences were located in three separate parts of the building. One was found in the north east clerestory, dating to the 3rd quarter of the 13th century, seven in the lower church dating to the 2nd quarter of the 13th century and a single example was found on the north face of the quire screen from the 4th quarter of the 13th century. On this basis, it is unlikely that the same marks, found at different sites in the same date phase, belong to the same mason.

The appearance of the same mark at different sites in the same dating phase may indicate the mobility of the work force, however great caution must be applied to this interpretation. Closer examination of the orientation, proportions and size of the occurrences of any particular mark appearing at different sites may allow some identification of individual ownership and therefore of mobility, however even this may not provide sufficient evidence to be certain that just one mason was responsible for the same mark-form at two or more sites. For want of evidence, the appearance of the same mark in different dating phases must be considered as coincidence and not indicative of the mobility of a particular mason.

g. What evidence do charters of the period offer us to identify individual masons?

An examination of the Peoples of Medieval Scotland (PoMS) website provides us with evidence of masons whose names have appeared on surviving charters and other documents from the period 1093-1314 (currently being expanded to 1371). There are 24 references to masons contained in the charters listed from the 12th and 13th century (Table 27).

Name	Source Document	Date(s)	Summary
Aelric Master mason	/5/8 (RRS, i, no. 112)	24 May 1153 X	Gift of land at Masterton,
		8 Apr 1156	Fife
Alan, son of Eda,	4/22/7 (ND, App., no.	25 March 1285	Transfer of land
daughter of Roger the	606)	X 24 March	
mason		1286	
Helen, wife of	3/0/0 (Abdn. Reg., i, 35-	Wednesday 30	Betrothal
Richard, master	6)	Jun. 1294	
mason			
Reginald	3/250/5 (Cold. Cart., no.	19 Oct 1219 X 2	Gift of land
	40)	Aug 1221	
Giles, master mason	5/3/0 (CDS, ii, no. 1536)	2 March 1304 X 15 May 1304	Undefined transaction
John of Bolton,	5/3/0 (CDS, iv, no.	2 Sep 1302	Undefined transaction
mason	1786)		
Stephen of Lilliesleaf	5/3/0 (CDS, iv, no. 1786)	2 Sep 1302	Undefined transaction
Robert, mason	5/3/0 (CDS, v, no. 562)	18 Feb. 1311 X	Undefined transaction
Robert, mason	5/5/0 (CDS, V, 110. 502)	24 Jun 1311	Childermed transaction
Ralph, mason of	5/3/0 (CDS, v, no. 472m)	7 Oct 1301	Undefined transaction
Edinburgh	5/5/0 (CDS, V, 110. 472111)	/ 000 1301	Childermed transaction
Walter, master mason	1/6/338 (RRS, ii, no.	-	Gift of land
water, master mason	367)	_	One of faile
Roger, mason of	3/23/9 (C.A. Chrs., no.	1217 X 1219	Gift of one mark
Forfar	19)	1217 1217	One one mark
William, mason	3/180/1 (Dunf. Reg., no.	-	Gift of land
(MLO)	172)	_	One of faile
William, Son of	3/72/2 (Arb. Lib., no. 58)	-	Confirmation of church
Roger, mason of	<i>5/72/2</i> (710: El0., 10: 50)		
Forfar			
Hugh, mason	3/23/3 (Camb. Reg., no.	13 Mar 1207 X	-
Hugh, muson	73)	Spring 1219	
Hugh, clerk, relative	(relationship) 3/23/3	13 Mar 1207 X	Gift of Abbots Deuglie
of Hugh the mason	(Camb. Reg., no. 73)	Spring 1219	(PER)
Roger Raa, mason	3/599/5 (Culross Chrs.,	1217 X 1247	Gift of land in feu (PER)
Roger Ruu, musen	71-2)	121, 11 121,	
Osbert, mason	3/599/5 (Culross Chrs.,	1217 X 1247	Gift of land in feu (PER)
Osbert, muson	71-2)	121/ 2012-1/	
Simon, mason	3/343/1 (Pais. Reg., 175-	30 Sept 1234 X	Quitclaim of rights to land
Simon, muson	6)	1250	in Lennox
Gregory, master	2/8/32 (Moray Reg., no.	10 Oct 1237	Gift of site of a mill on R.
mason	121)	10 000 1237	Lossie (MOR)
Richard, master	3/0/0 (Abdn. Reg., i, 35-	1271 X 1275	Gift of land to Aberdeen
mason	6)	12/11112/0	cathedral
Robert, mason of	6) 6/2/0 (IP, 166-7)	28 Aug 1296	Performance of fealty to
Strathaven	0,2,0 (II, 100-7)	20 Mug 1270	Edward I
William, mason	3/203/3 (Melr. Lib., no.	c14 Aug 1305	Gift of land in Peebles
(PEB)	412)	014 Aug 1303	
	+1 <i>2)</i>	L	l

 Table 27: Masons listed in documents on the Peoples of Medieval Scotland website

Leaving a mark on history

Some, such as those for *Walter, master mason*, have numerous entries in various source documents. One example from each reference is shown in Table 28. Unfortunately, none of the references identify a site where the named mason was working. Some of the records identify the geographical area, either with a suffix to the mason's name, such as *Roger, mason of Forfar*, or by naming the location of a land grant, etc, in the document. Care should be taken in ascribing a specific locale for the individual, given that many masons, especially the more senior and more skilled, may well have travelled to different sites and acted in the role of master mason / architect at numerous sites over a wide geographical area. Examination of the names of witness listed in the source documents can also be revealing, as it may give some clues to the status in society that masons held.

None of this, however, enables us to identify the master mason at a particular building. Further compounding this problem is that credit for the construction is usually attributed to, e.g., the Bishop, when really, they are responsible for ordering and providing payment for its' construction (Briggs 1927, 55). It is also possible, as suggested by Briggs (ibid, 61), that the person directing the works may not be a stonemason in his own right but may have served an apprenticeship in another skilled calling. Even if the architect or works manager, or whichever of many possible titles was given to the person in charge, was a skilled mason, he would not have been employed to cut and dress stone, so his mark would probably never appear on the finished building. Examination of the original charters or other documents may provide us with some images of mason's marks belonging to named masons, if they added their mark to the document, in lieu of a signature.

h. What, if any, differences are there in masons' marks appearing at ecclesiastical and secular sites?

Of the 11 sites surveyed, 8 are ecclesiastical and 3 are secular, the latter being castles (Table 28). To read the table, select a site name in the left column. The figure in the green box indicates the total number of mark-forms found at that site. To see how many of those mark-forms have been located at other sites, simply read the figure in the same row under each site name.

A comparison shows that, for example, marks found at Bothwell Castle have also been found at 9 ecclesiastical sites and those at Caerlaverock have been identified at 6 ecclesiastical sites. The two marks found at Dirleton Castle were not found at any other site. From this, albeit simple, assessment it appears that there is no differentiation between marks found at the ecclesiastical (shaded blue) and secular (shaded beige) sites surveyed.

Site name	Bothwell Castle	Caerlaverock Castle	Dirleton Castle	Crossraguel Abbey	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey
Bothwell Castle	74	1	0	13	8	36	3	4	1	12	21
Caerlaverock Castle	1	10	0	2	0	5	2	1	0	2	2
Dirleton Castle	0	0	2	0	0	0	0	0	0	0	0
Crossraguel Abbey	13	2	0	64	4	19	21	2	1	14	15
Dryburgh Abbey	8	0	0	4	21	15	2	3	1	6	10
Glasgow Cathedral	36	5	0	19	15	490	6	8	1	26	49
Glenluce Abbey	3	2	0	21	2	6	11	1	0	4	4
Jedburgh Abbey	4	1	0	2	3	8	1	11	1	4	6
Kelso Abbey	1	0	0	1	1	1	0	1	2	2	1
Melrose Abbey	12	2	0	14	6	26	4	4	2	63	18
Paisley Abbey	21	2	0	15	10	49	4	6	1	18	119

 Table 28: Comparison of mark-forms appearing at both

 ecclesiastical and secular sites

A detailed analysis of the shape and form of marks found at secular as opposed to religious sites is needed to reveal any differences. If, for example, there is a higher ratio of marks which include a cross-form appearing at religious sites, this could suggest that masons used a mark at those sites which incorporated a cross. It is possible, but highly unlikely that masons whose marks incorporate a cross were employed at those sites for that reason. Further investigation of the occurrence of marks containing a cross appearing at religious sites, compared to secular sites, is required to confirm if there is a pattern to their use. The recording of masons' marks at more secular sites will also be required.

Chapter 5: Discussion: Looking behind and beyond the marks

5.1 The origins of the symbols used as masons' marks

"For every runic inscription, there shall be as many interpretations as there are interpreters."

Wilson's first law of Runo-dynamics (quoted in Page 1995, ix)

The simplistic, straight line forms of the majority of masons' marks suggest that they have an origin in something familiar to the masons themselves in their everyday lives. A comparison of masons' marks with Germanic rune forms shows some significant similarities. The runic futhark, as these alphabets are correctly called, have examples which have been dated to c150-200CE (Barnes 2012, 9). They are most common in Scandinavia and Germany (ibid), although there is also evidence for Anglo Saxon runes (Page 1995).

The similarities between some masons' marks and runic letters are so significant that they cannot be considered purely as a coincidence. Furthermore, a connection can be drawn from these runic symbols through to the masons' marks in use in Scotland during the 12th and 13th centuries. Vikings voyaged far and wide on the European Atlantic seaboard. Some settled in what is now northern France and became the "Norsemen" or Normans (Hannah 1934, 51). Although much has been written more recently of the Viking influence across the western seaboard of Europe in general and Scotland in particular, Hannah's "Story of Scotland in Stone" explores in some detail the influences that led to the introduction of Norman architectural style in Scotland between 1067 and 1179 (ibid, 50-64). The Norman invasion of England saw the introduction of many of their cultural and social styles, including architecture. Norman architecture spread to Scotland before and during the reign of David I, who had been brought up in a Norman-influenced English court before becoming King of Scotland in 1124 (Oram 2011, 69). Many of the Borders' abbeys show clear signs of Norman style in their design (ibid, 72). The easiest way to create a building in the "Norman" style would be to employ builders who had previous experience of architectural design and construction in this style. Master masons with the necessary experience would be recruited to the task and would bring with them known

and trusted craftsmen of all trades (ibid, 21 et seq.). By the end of David's reign in 1153, there would have been a contingent of stonemasons and other craftsmen working in Scotland, whose experience was firmly rooted in Norman architectural style which they applied equally to both religious and secular buildings. Cruden (1963, 70) also recounts evidence for the movement of skilled stonemasons and other craftsmen from England into Scotland at the end of the 13th century, bringing with them a strong influence which was then applied to Scottish architecture. One of the best examples of secular Norman-influenced architecture is Dirleton Castle (c1225), built by, or more correctly built for, John De Vaux (Canmore 56735). The style of Dirleton demonstrates clear Norman influence, described by MacGibbon and Ross as "having all the characteristics of the French castles of the thirteenth century" (1897, 64).

Analysis of the marks which demonstrate their potential origins in futhark is highly problematic. Great care must be taken, as whilst there are many academic sources available, there are many others that are far less rigorous and based on new age interpretations of runes as having a mystic meaning. Any consideration of a connection between masons' marks and futhark is complicated by the mythology that has attached itself to the whole subject of runes.

There are a number of runic futhark, differing not only geographically, but also chronologically, as orthography developed and changed (Barnes 2012, 37). Whether these runic-origin marks came to England with the Normans, or predated that event in the late Anglo-Saxon period, as the architectural practices and styles spread from the continent, is considered by Alexander (2007, 65), who concludes that bankers marks, at least, were in use prior to the Norman Conquest (ibid, 77), suggesting that some construction practices from the continent were present before 1066. Identifying a single source amongst the many runic futhark from which masons' marks may have evolved risks omitting many others with equal validity as to origin. Elliott (1959), offers 6 different futhark with which to make comparisons. The older and younger futhark (Barnes 2012, 5,6) have been selected as the runic symbol sets against which to compare the masons' marks identified (Figures 72 and 73). Care must be taken as comparison with a different futhark, such as "short-twig" or later "medieval" runes (Werner 2004), will produce a different set of results. In the two futhark shown in Figures 72 and 73, the equivalent Roman letter form is noted below each Rune, with a sequential number below that. It is worth noting that no consideration of stonemasons' marks having their origins

Leaving a mark on history

in futhark is considered by Barnes, although he does reference stonemasons in the late Viking Age as being rune-carvers "as a side-line" (2012, 175).

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	1	2		3	4	2	5	6	7	,	8	9	-	10	11	1	2	13	14	1	15	16	

Figure 73: Younger futhark (Barnes 2012, 6)

In making a comparison, those marks which are the same as symbols from the runic futhark have been identified. Marks that show a clear runic origin in their shape and form, but with the addition of no more than two lines, have also been identified as a separate group. This is likely to be more subjective than would perhaps otherwise be acceptable, but it has the potential to identify some wider origins of masons' marks in Runes, i.e., some more complex marks may also have their origins in the futhark. Marks have not been included if they are mirror images of the original Runes or where there is a line missing from the original runic form, although these are also possible components in the development of masons' marks.

The similarity of masons' marks to runic futhark symbols suggests a potential origin for at least some of the mark-forms found. Some 93 out of a total of 689 mark-forms (13.4%) show some resemblance to runic symbols, based on the criteria above. The figure for unmodified marks i.e., those to which no additional lines have been added, is 18 of 689, or 2.6%. A summary of the masons' marks of possible runic origin found at the sites surveyed is in Table 29. Note that some of the marks of possible runic origin appear at more than one site, so the total of "possible runic origin" shown here is greater than the 93 marks listed in Appendix 4, which contains a detailed summary of masons' marks of possible runic origin.

Site Name	Total mark- forms	No. of possible runic origin	Possible runic marks as % of total	% of unmodified marks of runic origin	% of modified marks of runic origin	Most common runic mark (no. of occurrences in brackets)
Bothwell	74	6	8.1	0.0	100.0	M021 (17)
Caerlaverock	10	1	10.0	0.0	100.0	M063 (1)
Crossraguel	64	6	9.4	0.0	100.0	M261 (4)
Dirleton	2	1	50.0	0.0	100.0	M651 (1)
Dryburgh	21	1	4.7	0.0	100.0	M499 (1)
Glasgow	490	76	15.5	21.0	79.0	M078 (54)
Glenluce	11	0	-	-	-	-
Jedburgh	11	0	-	-	-	-
Kelso	2	1	50.0	0.0	100.0	M078 (1)
Melrose	63	7	11.1	0.0	100.0	M152 (16)
Paisley	119	8	6.7	25.0	75.0	M078 (31)

Table 29: Marks of possible runic origin, by site

That the written administration of works, especially at ecclesiastical sites, would have been carried out initially in Latin and later in English, using the Roman alphabet, raises another question. Why did stonemasons not begin to use the Roman alphabet, in place of their existing symbols? It is suggested that levels of literacy amongst the workforce played a part in this. More significantly, the tradition of using runic symbols, perhaps not widely known outside the craft skills of stonemasonry and carpentry, may have been one of the methods by which masons and carpenters retained greater control of their skills within the craft. Added to this is the practical problem of the Roman alphabet having more letters containing curved lines, 15 of 26, compared with 1 of 24 in the Older futhark and 3 of 16 in the Younger futhark. All runic symbols in the Younger Futhark include at least one vertical line, as do 17 of 24 symbols in the Older futhark, making a useful "baseline" when cutting a mason's mark.

Although not included in the analysis above, there are some examples of possible mirror images of futhark letters, including M401 (Figure 74), which is a reverse of both the Older and Younger futhark letter "r". Similarly, M583 (Figure 75) is a mirror image of the Older

futhark "h". Consideration should also be given to these being examples of modified marks, which is discussed in Chapter 5.2. Mark M646 (Figure 76) is a combination of \uparrow two runic letters – "g" from the Older futhark **X** and "l" from both the Older and Younger futhark albeit with the "l" inverted, at least as it appears in the example found at Glasgow Cathedral. This inversion is likely to be incidental, although the mark has not been found with the "l" at the top. It is reasonable to suggest that it this masons' mark could have belonged to a mason with the initials GL or LG.

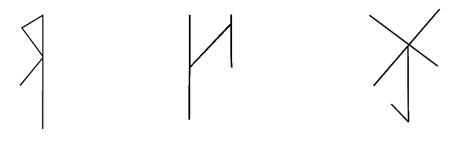


Figure 74: M401

Figure 75: M583

Figure 76: M646

This proposed potential origin stands in opposition to the views of Rylands (1891, 128), who dismissed any runic origin for stonemasons' marks as "a very unsatisfactory theory". That he also dismissed any connection between masons' marks and freemasonry (ibid) must also be considered when assessing his curt dismissal of this proposed origin of masons' marks. Rylands was, however, quite correct in asserting that there can be no single origin or source ascribed to all mason' marks (ibid). The lack of any provable connection is also argued by Champion, (2015, 125), who highlights instead a triangle form with a line attached as being similar to a stonemason's axe, as an example of marks representing masons' tools. Some marks found during this survey, (Figure 77), may well be candidates for this interpretation, however they are relatively few when compared not only to the 141 marks with a triangle form, but to the 689 mark-forms identified.



Figure 77: Marks of suggested "axe" form, (l-r) M023, M070, M143, M210

This must be considered as nothing more than a cursory examination of the potential for a runic futhark origin for (some) masons' marks. Marks in use in the 12th and 13th centuries may well have evolved significantly since the introduction of architecture of Norman influence in Scotland. Based on a simple 25 years per generation phasing, 6 generations had passed between the Norman invasion of England and the end of the 12th century. We simply cannot tell the extent to which masons' marks evolved generation by generation, although the impact of "modified" marks, either as a consequence of duplication or familial inheritance cannot be discounted. Add to this the growing use of the English language in its written form, using an alphabet incorporating letters with far more curved lines, and we can see a growing diversity, with marks taking a much wider range of forms and shapes than their predecessors.

5.2 Allocation, acquisition and modification of masons' marks

The acquisition of masons' marks is explored by Rylands (1891, 164) who proposes that a template based on a circle with intersecting internal lines was used by masons to design their mark (Figure 78). A more recent methodology has been provided by David Poiron, a modern-day French stonemason, with his template and description of how he designed his mark (Figure 79). He describes his mark as "An 'alpha' for Angevin (my province in France), a compass, a square, a plumb line and a trowel; in the trowel there is the symbol of the axis in the form of chrism ..." (personal communication, 12 January 2019). This is a total of 15 lines, two of which are curved. This is equivalent to the number of lines in the most complex mark-form found during this research, M310. The complexity of Poiron's mark suggests, in modern practice, the creation by masons of specifically designed marks based on their own ideas.

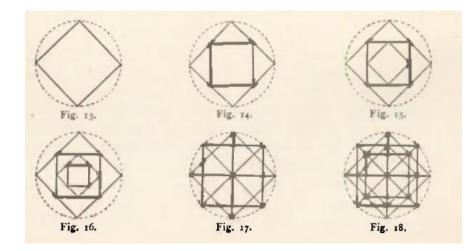


Figure 78: Template for design of masons' marks (Rylands 1891, 164)

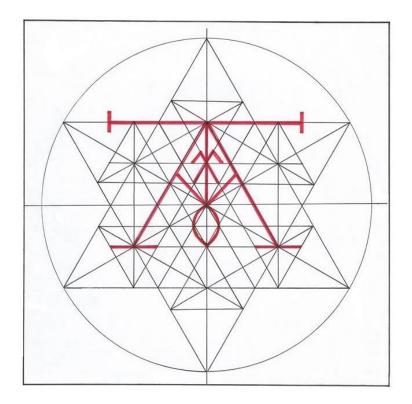


Figure 79: Mark template showing mason's mark of David Poiron © D Poiron

In both descriptions above, it is clear that the mason "choses" his own mark, rather than having one allocated to him, which is an alternative method suggested by Alexander (2001, 217). In selecting a masons' mark, a number of factors would influence a mason. It is suggested by Rylands that, in the 17th century, some workmen would choose their own marks and he proposed that the same process may have prevailed in earlier times (1891, 130). The mason might wish to use a mark similar to that of his father or grandfather, as a form of tribute. Alternatively, he may wish to use a mark formed from a symbol which has some meaning to him. The question of inheritance of marks is, however, problematic. If a son follows in the footsteps of his father, it would not be practicable for the son to adopt his father's mark when he became a qualified mason, as that mark was already in use.

This introduces the concept of the modification of existing marks. Chalmers (1850, 33), suggests that where two masons working on the same site had the same mark, then the new arrival would be required to modify his mark, usually by adding a line to differentiate one from the other. This is referred to as a "modifier" (ibid). This relates to a period much later that the 12th and 13th centuries, however it is reasonable to consider that the same

problem would have arisen earlier and that some form of differentiation would be needed. An example of this possible modification is shown in Figure 80. Both marks are from Paisley Abbey, where only one occurrence of each mark-form shown has been found. Where a mark appears in both unmodified and modified form, this could indicate that two masons had the same mark and one of them had been required to modify their mark by the addition of a line or lines, either for use on the building in which they have been found, or as a permanent modification. This resolves the problem of the same mark being used by two masons, particularly where masons are being paid on a piecework basis. Control of quality and quantity of output would be compromised if two masons were using the same mark, so the addition of a single line as a modifier would be one way of resolving this issue.

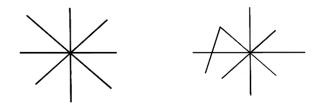


Figure 80: Marks M072 (l) and M205 (r)

A possible example of the familial progression of masons' marks may be seen on the dean's chair in the lower chapter house in Glasgow Cathedral, the right-hand vertical outer face of which shows 3 marks on the same piece of stone (Figure 81). The dean's chair is arguably one of the most important pieces of carved stone in any cathedral and would have been decorated in considerable detail. As such, the important task of carving it would have been given to a mason or masons of considerable skill and expertise.



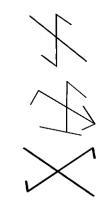


Figure 81: Dean's chair, Glasgow Cathedral. M120h (t), M431(m), M120l(b)

Undoubtedly, the masons involved would have been proud to have been chosen to create the chair, however, the question then arises as to why it was necessary or appropriate to place the marks on the same stone? It may have been felt that placing their marks together allowed them to be seen clearly, demonstrating and acknowledging the skill of the masons concerned. The answer may also lie in the form of the three marks. Examination of the marks shows a possible familial progression. Firstly, at the top, is M120h is a simple "**X**" form with two "tails" added to the ends of one of the lines forming the X. Secondly M431 has the same "**X**" form but with the addition of an arrowhead and a tail to the other line forming the **X**. There is a further modification with a line across the end of one of the lines forming the **X**, rather than a tail. Finally, the lowest of the three marks, M120l, shows a similarity to M120h, but with the lines of the **X** crossing more or less at right angles. The similarity of the three marks suggests that they may have been connected in some way, possibly three members of the same family, working together on one of the most important carved stone items in the cathedral. It may, however, be nothing more than a simple coincidence.

The inheritance of marks by a new generation, with each adding, subtracting or relocating a line on an existing mark, would create many similar sequences of marks. This is, perhaps, more common than might first be assumed, as each mason would take great pride in their work and, consequently, be very protective of their mark, so it would be perhaps be a motivation for the son or grandson to emulate their predecessor(s) by using a similar mark. The number of possible permutations is far too numerous to demonstrate, but the examples shown in Table 30 give some idea of how a masons' marks can change form and shape with the addition or subtraction of a few lines.

As described above, some very similar marks appear to have been cut as mirror images. This may simply be a case of the mark being cut in reverse, leaving us to consider that its "handedness", to use the term preferred by Alexander (2001, 219), may not be significant. Examples of these can be seen in Table 31. It also suggests the possibility that some of these marks were made not by the mason but perhaps by his apprentice or labourer, on stone which they themselves had prepared.

A further question, yet to be answered, is whether the mason, on cutting his mark into the stone, is cutting the initial of his first name, or if the symbol is intended to be taken to represent his name, so that the mason's mark is effectively his signature (Coulton 1928,

143). It is suggested that the mark represents the (full) name and not only the first letter of the person's name, i.e., a symbol for the name, rather than symbol for the first letter of the name, given that individuals may have been unable to write their full name.

	1 st change	2 nd change	3 rd change	4 th change	5 th change
Image	\times	\neq		+><	++~~
Mark no.	M078	M466	M261	M165	M505
Site	Crossraguel, Paisley, Bothwell, Glasgow, Dryburgh, Kelso	Glasgow, Melrose	Crossraguel, Glasgow, Bothwell, Caerlaverock, and Melrose	Crossraguel	Crossraguel
Image	\bigwedge		\bigwedge		<u> </u>
Mark no.	M534	M182	M413	M512	M351
Site	Glasgow, Crossraguel, Paisley and Bothwell	Glasgow, Paisley and Bothwell	Paisley	Paisley	Glasgow

Table 30: Examples of how marks can change with the addition of lines

Original mark no.	Original mark image	"Reverse" mark no.	"Reverse" mark image	Comment
M039	A	M077		Both Glasgow Cathedral
M094	7	M583		Both Glasgow Cathedral
M053		M055		Both Glasgow Cathedral
M562		M581	\checkmark	Both Glasgow Cathedral

Table 31: Examples of possible "reversed" marks

There remains the issue of whether a mason uses the same mark for all his working life, having chosen his mark when becoming a qualified mason or, alternatively, having a mark allocated by the master mason when a new mason arrives at a site to begin work. (Alexander 2001, 217).

The appearance of the same marks at two or more buildings contemporaneously may be a coincidence, however, the question of it being a "maker's mark" is worthy of consideration. If stone was cut at a quarry supplying more than one site, it is possible that dressed stone may be cut to size there and the mason's mark applied. This is slightly different to the quarry marks described in Chapter 1.2, as these marks indicate a "completed" stone, which is then transported to the construction site (Alexander 1996, 221). If this was the case, then it is suggested that this method could only apply to ashlar block on a mass-production basis, whilst control of the more detailed stonework such as doors and window, and decorated quoins etc., would be more likely to take place on site. No reference has been found, in previous research reviewed, of evidence for this being the case and given the geographical distribution of the sites in this research, it would seem unlikely as a general rule. The Borders' Abbeys may, however, be close enough for a system like this to operate. An analysis of the stone material, the tooling marks, that is the surface dressing of the finished stone etc. and masons' marks found at more than one site may reveal a pattern and help us identify if this could have been the method used.

5.3 The shape and form of masons' marks

Masons' marks take a number of different shapes and forms. The simple addition or repositioning of a single line can change a mark and make it look very different. There can be little doubt that many of the marks found had evolved and changed over time and may well have continued to change with later generations.

Allocation of masons' marks to a category based on shape and form is, of necessity, subjective, with some exhibiting, for example, both triangular and diamond forms, or being both an arrow and a letter form. Each of the 689 mark-forms has been categorised using their most obvious feature, summarised in Table 32 and Figure 82. A full list of marks by form and shape can be found in Appendix 2.

	Leaving a	mark on histo	vry
Descriptor	No. of different mark-forms	% of total mark-forms (689)	Comment
Letter A forms	10	1.5	Some possibly V form
Letter B forms	3	0.4	
Letter H forms	9	1.3	Some possibly ladder form
Letter M forms	8	1.2	Some possibly W form
Letter N forms	21	3.0	
Letter R forms	2	0.3	
Letter S forms	6	0.9	
Letter T forms	29	4.2	
Letter U forms	2	0.3	
Letter V forms	63	9.1	Some possibly A form
Letter W forms	26	3.7	Some possibly M form
Letter X forms	83	12.1	Some possibly cross form
Letter Y forms	18	2.6	
Letter Z forms	6	0.8	
Arrow forms	70	10.2	

54

1

31

1

6

73

7

4

12

4

140

689

7.9

0.1

4.5

0.1

0.9

10.6

1.1

0.6

1.7

0.6

20.3

100.0

Some possibly X form

Some possibly H form

Some possibly triangle form

Cross forms

Cup forms

Diamond forms

Hashtag forms

Ladder forms

Miscellaneous forms

Rectangle forms

Square forms

Swastika forms

Triangle forms

Star forms

TOTAL

Table 32: Masons' marks by form and shape, counting all mark-forms

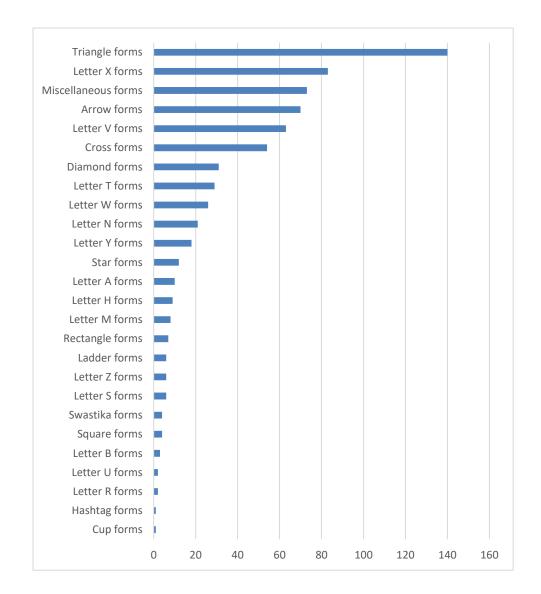


Figure 82: Masons' marks by form and shape, all mark-forms

Another issue connected to shape and form is the inclusion of curved lines in a mark, in addition to straight lines. Some potential mark-forms found have been excluded if they consisted of, or included, curved lines, and appeared more likely to be graffiti. Of the 689 mark-forms included, only 7 (1.0%) include curved lines (Table 33). Of the seven, 3 have single occurrences and 4 have 2 occurrences. That there are two or more occurrences of the same mark-form does suggest they are less likely to be graffiti. A version of M608, with the same curved lines at the end of the shaft, has been found at Lincoln Cathedral (Alexander 1996, 220), suggesting that it is more likely to be a mason's mark.

Mark No.	Mark- form	Occurrences	Site	Location	Comment
M068		2	Glasgow Cathedral	Nave N wall block, Nave S wall block	
M250		2	Glasgow Cathedral	Lower church, pillars 2 and 21	
M309	•	1	Glasgow Cathedral	Lower church, pillar 18	See M608 below
M317		2	Glasgow Cathedral	Lower church, pillars 18 and 21	
M445		2	Glasgow Cathedral	Lower church W, wall block	
M492	$\left\langle \right\rangle$	1	Bothwell Castle	Store Room RH door jamb	
M608	$\stackrel{\bigcirc}{\rightarrow}$	1	Glasgow Cathedral	Lower church pillar 18	See M309 above

Table 33:	Marks	that	include	curved lines
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5.4 The physical size of masons' marks

The size of masons' marks varies significantly, not only when comparing different marks, but even within the same mark-forms at the same sites. The size of marks varies from the smallest, at 15mm high by 10mm wide (M430, Glasgow Cathedral, sacristy) to the largest, 410mm high by 200mm wide (M579, Glasgow Cathedral, NW triforium). Both appear on ashlar block of similar dimensions (Figures 83 & 84).

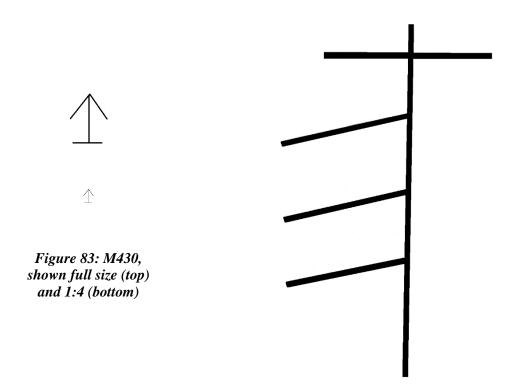


Figure 84: M579, show at 1:4 scale

There is one other occurrence of M430 at Glasgow Cathedral which is 65mm high by 45mm wide. Three other occurrences of M579 were found, also at Glasgow Cathedral. Two were 110mm high and 60mm wide and the other 110mm high and 30mm wide.

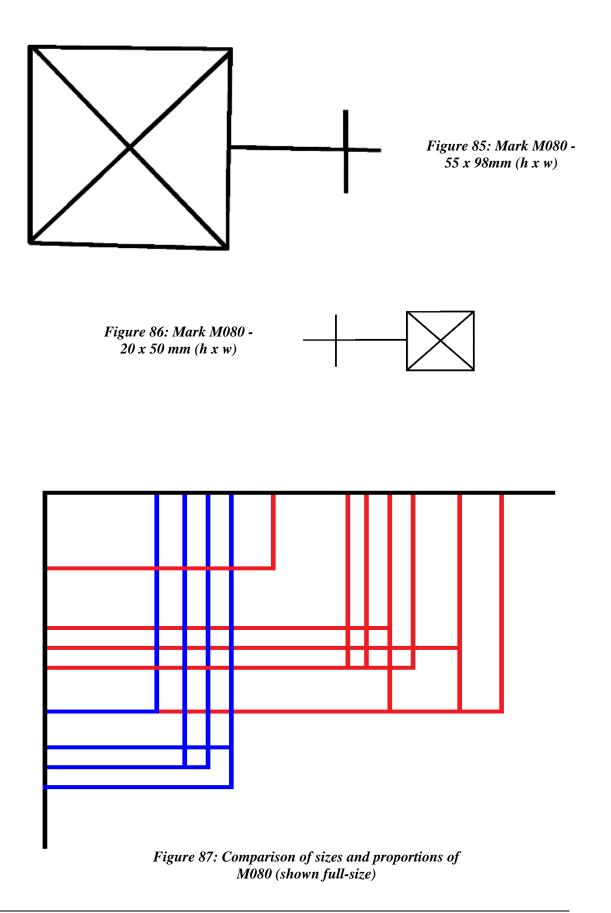
It appears that the size of an individual mason's mark was not consistent, nor would there appear to be any correlation between the size of the mark and the size of the stone on which it is cut. This would appear to be at odds with the suggestion by Rylands (1891, 143) who proposes that masons varied the size of their marks deliberately, based on where the finished stone would be positioned, i.e., if they were to be higher up on a wall surface, or on an overhead vaulted beam, then the marks would be larger.

An analysis of the 52 occurrences of mark M080 at Crossraguel Abbey (Table 34), shows the range of sizes, from the largest at 55 x 98 mm to the smallest at 20 x 50mm, shown full size in Figures 85 and 86. The orientation of this mark-form varies, with 9 showing the cross upright, 1 showing the cross down, 13 to the left and 27 with the cross to the right. A representation of the various sizes and proportions of mark M080 is shown in

Figure 87. Each rectangle shown represents the size of a mark. Blue lines represent marks with long vertical axes and red lines those with long horizontal axes. There would appear to be no relation between size and orientation; nor is orientation related to the stone type, with all four orientations appearing on wall blocks.

Mark no.	Location	Stone type	Orientation	No. of occurrences	h x w (mm)
M080	Ambulatory E	Wall block	Cross right	1	40 x 75
M080a	Ambulatory E	Wall block	Cross left	1	40 x 90
M080b	Ambulatory E	Wall block	Cross right	2	55 x 98
M080c	Ambulatory E	Wall block	Cross left	4	35 x 75
M080d	Chapter House	Wall block	Cross down	1	55 x 25
M080e	Chapter House	Wall block	Cross up	3	70 x 35
M080f	Chapter House	Wall block	Cross left	1	50 x 80
M080g	Chapter House	Wall block	Cross right	4	40 x 75
M080h	Chapter House	Wall block	Cross left	1	45 x 90
M080i	Chapter House	Wall block	Cross right	1	45 x 77
M080j	Chapter House	Wall block	Cross left	3	40 x 70
M080j	Chapter House	Door frame	Cross left	1	40 x 70
M080k	Chapter House	Carved mould	Cross up	1	40 x 65
M0801	Chapter House	Wall block	Cross right	8	55 x 75
M080m	Chapter House	Door frame	Cross up	1	70 x 30
M080m	Chapter House	Wall block	Cross up	2	70 x 30
M080n	Chapter House	Door frame	Cross up	1	75 x 40
M080o	Chapter House	Wall block	Cross up	1	65 x 40
M080p	Chapter House	Wall block	Cross left	3	45 x 70
M080q	Chapter House	Wall block	Cross right	1	40 x 80
M080r	Stone display	Carved mould	Cross left	1	20 x 50
M080s	Chapter House	Corner	Cross right	2	40 x 90
M080s	Chapter House	Door frame	Cross right	2	40 x 90
M080s	Chapter House	Wall block	Cross right	5	40 x 90
M080t	Choir External S	Wall block	Cross right	1	45 x 80

Table 34: Size and distribution of mark M080 at Crossraguel Abbey



One factor which may affect the size of the mark is whether it was cut by the mason himself or by his labourer or apprentice. Of course we have no way of knowing that this is the case, however, a few randomly sized marks, which are clearly different from the majority of the occurrences of the same mark, may offer a clue, added to which if the mark is imperfect, e.g., when the lines do not join, or the proportions are different to others of the same form, this may indicate that it has not been cut by the mason himself. There are several examples of imperfect marks, such as M432 with one occurrence at Melrose Abbey, and M607 and M682 each of which have one occurrence at Glasgow Cathedral (Figure 88). These may be imperfect versions of M002, which was found at Glasgow Cathedral, but not at Melrose Abbey.

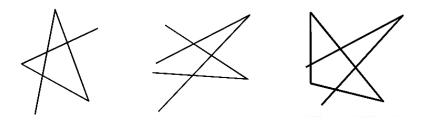


Figure 88: Possible imperfect marks, M432, M607 and M682

5.5 Similarities and differences

It has been observed that even within one site, the same mark can vary between occurrences. The primary reason for this is simply that marks were cut freehand, using the edge of a chisel. Whether or not the mark was first drawn onto the surface of the stone is unknown for the 12th and 13th centuries, however current practice is cut the mark freehand, as a mason used to cutting his mark will be unlikely to need to draw or scribe his mark first freehand (Johnnie Clark, pers. comm, January 2019). In Figure 89, apprentice mason Corey Reid, from the HES works team at Glasgow Cathedral, demonstrates cutting a mason's mark (oversized) on the flat face of a sandstone block. Note that the flat blade of the chisel is used to cut sections of the line which, in this case, has been sketched on the surface before cutting, for demonstration purposes.

Leaving a mark on history



Figure 89: A mason demonstrates cutting a mason's mark

Taking M114 as an example, 6 occurrences of this mark were found at Glasgow Cathedral (Table 35). All date to the 13th century, 4 to the 2nd quarter and 2 to the 4th quarter. There are similarities and differences in their appearance, with regard to the orientation, size and proportion of the marks. M114b is the only mark with horizontal lines, M114c and M114e each have one vertical line and the other 3 are more random.

There is a further possible explanation for the variances. It has already been suggested above that not all masons' marks were inscribed by the mason to whom they belonged. Some masons would perhaps have a labourer and/or an apprentice working with him. The employment and pay of this individual were the responsibility of the mason for whom they worked (Knoop and Jones 1932, 355). It is not unreasonable to surmise that similar rules regarding employment and pay would apply in Scotland during the 12th and 13th centuries, although the extent of apprenticeships is unknown. These individuals could well have created an imperfect representation of their master's mark, at least in the earlier part of their employment.

Mark no.	Mark image	Size (h x w)	Dating phase	Location
M114	1	55 x 35	13/2	Lower church N
M114a	\bigwedge	45 x 34	13/4	Triforium SE stair to clerestory
M114b	\square	40 x 60	13/2	Lower church, pillar 19
M114c		40 x 40	13/2	Lower church, pillar 18
M114d		60 x 15	13/4	Choir, pillar 11
M114e	$\mathcal{A}_{\mathcal{A}}$	35 x 20	13/2	Lower church. pillar 18

Table 35: Comparison of occurrences of mark M114 at Glasgow Cathedral

The apprentice would start his training with low-skilled tasks such as fetching and carrying, mixing mortar and helping with setting dressed stonework. As the apprentice's skills developed, and he was able to complete, for example, a dressed ashlar wall block, the mason would have the apprentice cut his master's mark on the finished stone. This was done so that the mason would get paid, particularly where the mason is on piecework (Alexander 2001, 217). The lack of experience of the apprentice would invariably lead to some diverse occurrences of the same mark, particularly if he tried to cut it free-hand, thereby emulating his master. More than 40 occurrences have been identified where occurrences are "imperfect" or demonstrate a distorted shape when compared to other occurrences of the same mark. Four examples are shown in Table 37, all from Glasgow Cathedral.

Mark no.	"Perfect" Image	Mark no.	"Imperfect" image	Comment
M002		M002g		Distorted image, with ends not joining up
M002	X	M607	\neq	Incomplete, possible missing line to left
M010	\bigwedge	M010i		Incomplete line to left
M035	\mathbb{X}	M035e		Distorted image, lines not joined

Table 36: Examples of possible "incomplete" marks

Where parts of the building can be said with some certainty to be 50 years apart, then it is perhaps safer to think that two masons were involved, using a similar mark, rather than occurrences of the same mark by the same craftsman. Two marks on the same building, which appear similar, but which are inverted, may be by the same mason, provided the dating of those parts of the buildings are sufficiently close. This may not always be the case, however, and care must be taken here too, to ensure it is not two masons with marks which are the inverse of each other, although this is deemed unlikely owing to the marks being so similar.

5.6 The number of lines in a masons' mark

There is an extensive repertoire of masons' marks in use on the buildings surveyed. Masons being paid on a piece-work basis would need to identify their work by cutting their mark on every stone (however, see Chapter 5.10 below) and it would therefore seem logical that they would select a mark that is both simple to cut and has the minimum number of lines.

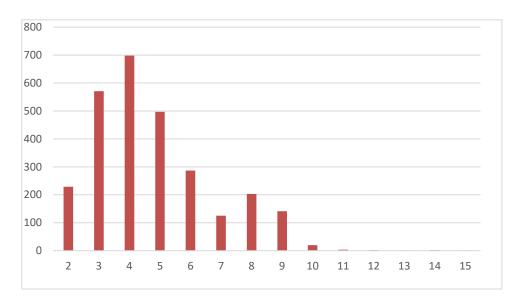
Given that there would appear to be a connection between the letter forms in the futhark and masons' marks (see Chapter 5.1 above) and that each of the letters in the futhark is formed by no more than 5 lines, it is considered possible that the earlier marks may have fewer lines than later ones.

Smith (1862, 549) asserts that marks found by him at Melrose can be split into two categories, viz, those with an odd number of lines belonging to apprentices and those with an even number the marks to the "fellow-craft" or passed masons. No evidence is presented to support this idea. The idea of apprentices using their own mark runs counter to the suggestion above, that apprentices would use the mark of their master, so that the master got paid for the work the apprentice had done, given that payment of the apprentice was the responsibility of the mason and not the master mason in charge of the site (Knoop and Jones 1932, 355).

A summary of the number of mark occurrences by number of lines is in Table 37. Figure 90 shows that marks with 3,4,5 and 6 lines are the most common when counting all occurrences and that there are more marks with 4 lines than any other configuration, 1369 or 25.1 % of the total of 2781 mark occurrences found.

No. of Lines	Bothwell	Caerlaverock	Crossraguel	Dirleton	Dryburgh	Glasgow	Glenluce	Jedburgh	Kelso	Melrose	Paisley	All sites
2	30	0	12	0	2	140	0	1	1	1	42	229
3	85	2	19	1	11	287	4	6	0	82	74	571
4	58	3	34	0	10	373	15	2	1	67	135	698
5	37	6	53	0	6	278	3	2	0	22	90	497
6	19	1	77	1	1	139	4	0	0	3	42	287
7	2	0	40	0	2	75	1	0	0	0	5	125
8	0	0	58	0	2	50	3	0	0	0	90	203
9	1	0	1	0	0	84	0	6	0	0	49	141
10	0	0	0	0	0	13	0	0	0	0	7	20
11	0	0	0	0	0	4	0	0	0	0	0	4
12	0	0	0	0	0	0	0	0	0	0	2	2
13	0	0	0	0	0	1	0	0	0	0	0	1
14	0	0	0	0	0	2	0	0	0	0	0	2
15	0	0	0	0	0	1	0	0	0	0	0	1

Table 37: Marks by number of lines at each site, all occurrences



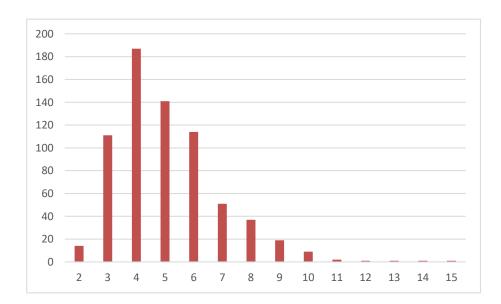
Leaving a mark on history

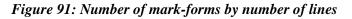
Figure 90: Number of marks by number of lines, all occurrences, all sites

A comparison of the number of lines per mark, counting each mark-form only once, provides a broadly similar pattern, confirming that marks with 3, 4, 5 or 6 lines are the most common (Table 38 and Figure 91).

No. of Lines	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No. of mark- forms	14	111	187	141	114	51	37	19	9	2	1	1	1	1
% of total	2.0	16.1	27.2	20.5	16.6	7.4	5.5	2.7	1.3	0.3	0.1	0.1	0.1	0.1

Table 38: Number of mark-forms by number of lines





From analysis of the data of 5 examples of 2-line marks, taken at random, we discover that there would appear to be no direct connection between the number of lines in a mark and the dating phase to which it belongs (Table 39). A comparison has also made of a similar sample of marks with 3 lines (Table 40).

		Date	No. of	
Mark no.	Site	phase	occurrences	Comment
M057	Glasgow	13/4	2	
M078	Crossraguel	14/4	1	
"	"	15/1	2	
"	"	undated	1	Display stone
"	Paisley	13/1	14	
"	"	14/4	12	
"	"	15/4	4	
"	Bothwell	13/1	3	
"	"	13/2	7	
"	"	14/2	1	
"	Glasgow	13/2	5	
"	"	13/4	19	
"	"	15/1	20	
"	"	15/4	8	
"	Dryburgh	13/1	2	
"	Kelso	12/4	1	
M111	Glasgow	13/1	1	
M236	Glasgow	13/4	2	
M284	Bothwell	13/2	1	

Table 39: Dating comparison of a random sample of 5 mark-forms with 2 lines

Mark no.	Site	Date phase	No of occurrences	Location
M051	Bothwell	13/1	1	Valence stair, RHS
M051	"	13/2	1	Donjon entrance, RHS
M051	Glasgow	13/2	1	Lower church pillar 24
M051	"	13/4	2	Nave pillar 1
M166	Glasgow	13/2	2	Lower church pillar 5
"	"	13/4	2	Triforium
M302	Glasgow	13/2	1	Lower church pillar 15
M498	Bothwell	14/4	1	Donjon entrance LHS
"	Crossraguel	13/2	1	Nave, N external
M631	Glasgow	13/4	1	Clerestory

Table 40: Dating comparison of a random sample of 5 mark-forms with 3 lines

An analysis of the marks with 11, 12, 13, 14 and 15 lines was made to confirm if the evidence provided by 2 and 3-line marks also applied to marks with more numerous lines (Table 41).

No. of lines	Mark no.	Site	Date phase	No. of occurrences	Location	
11	M076	Glasgow	15/4	1	Quire screen N	
11	M613	Glasgow	13/4	1	Nave S, external	
12	M124	Paisley	20/1	4	Ambulatory (3) Sacristy (1)	
13	M183	Glasgow	13/4	1	N door, external	
14	M311	Glasgow	13/2	2	Lower church, pillar 18	
15	M310	Glasgow	13/2	1	Lower church, pillar 18	

Table 41: Dating comparison of the 6 mark-forms with 11, 12, 13,14, and 15 lines

Comparison of the number of lines and the century from which they originate does not produce a clear pattern. There are more 3 and 4-line marks at Bothwell, Glasgow and Dryburgh, which may indicate some correlation. However, Crossraguel has predominantly 6-line marks, the majority of which date from the 15th century. Further analysis is required.

It would appear from this brief examination that no direct connection can be drawn between the number of lines and the date of the mark, either for the simplest or the most complex mark-forms.

5.7 Most common mark at each site

The data for the most common marks at each site gives us an indication of the level of activity of the mason responsible for the most dressed stone at each site. Where there are fewer than 10 masons' marks from the most active mason at any one site, these have not been included in this table. The figure for the most common mark found at each site (Table 42) is helpful in analysing several factors, including the level of activity and perhaps therefore the length of the working life at the location for an individual mason. Secondly, the stone types on which the most common marks are frequently found may tell us about the skills progression of that mason (see Chapter 4.2, d).

Site name	Most common mark	Mark image	No. of occurrences	Dating phase(s)
Bothwell Castle	M021	$\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{$	17	13/2
Caerlaverock Castle	-	Insufficient data	-	-
Crossraguel Abbey	M165	+	68	15/1
Dirleton Castle	-	Insufficient data	-	-
Dryburgh Abbey	-	Insufficient data	-	-
Glasgow Cathedral	M041		57	13/2 and 13/4; 15/1
Glenluce Abbey	M079	\mathbf{X}	13	15/4
Jedburgh Abbey -		Insufficient data	-	-
Kelso Abbey	-	Insufficient data	-	-
Melrose Abbey	M058		27	15/1
Paisley Abbey	M132	A	32	20/1

 Table 42: Most common mark-form at each site

Comparison of the most common marks found across all sites tells us only about the frequency of the marks themselves, as the range of dates when they were cut indicates that they are unlikely to have been cut by the same mason (Table 43). Again, a more detailed analysis is required to identify, if possible, how many individual masons were involved.

Leaving a mark on history

Mark no.	Mark Image	Total no. of occurrences	No. of sites	Site with most occurrences and dating phase
M078	X	103	6	Glasgow (54) 13 th c (50) 15 th c (4)
M020	\sim	85	7	Glasgow (46) 13 th c (13) 15 th c (33)
M018	X	84	7	Glasgow (39) 13 th c (37) 15 th c (2)
M002		82	6	Crossraguel (35) 15 th c (35)
M041		78	5	Glasgow (57) 13 th c (51) 15 th c (6)
M165	+	68	1	Crossraguel (68) 15 th c (68)
M066		54	6	Glasgow (33) 13 th c (33)
M010	$\square \frown$	52	5	Glasgow (24) 13 th c (24)
M080		52	1	Crossraguel (52) 15 th c (52)
M058		49	5	Melrose (28) 14 th c (1) 15 th c (27)

Table 43: Most common mark-forms across all sites

5.8 Number of marks appearing only once

Of the 689 mark-forms found, 440 (63.9%) appear only once. The majority of these, 405, were found at Glasgow Cathedral. This is probably the most unexpected outcome of the data analysis, as it would be reasonable to expect that numerous occurrences of each mark

would be found. The cause of this high proportion of "once only" marks is not clear. However, it is suggested that it is simply that the mark appears elsewhere on the buildings on which they were found, in places which were not surveyed owing to lack of accessibility. Comparison of the most common marks found across all sites tells us only about the frequency of the marks themselves, as the range of dates from which they originate indicates that some are unlikely to have been cut by the same mason (Table 43). In the case of sites with significant demolition, the marks may have appeared on the now missing parts of the buildings. The remaining 249 mark-forms appear multiple times, 155 at only one site, with the other 94 appearing at multiple sites.

5.9 Two marks, one stone

The occurrence of two marks on a single stone arises, according to Davis (1954, 45), when one mark belongs to the banker mason who cut the stone and the other to the setter, responsible for its positioning. If this were the case, there would be far more occurrences than have been identified. This double handling of stones would perhaps be far more common than first thought, as setting a stone could be undertaken by others with that particular skill, whilst the banker mason was working on the next stone at his bench (Shelby 1964, 402). Given the apparent rarity of the occurrence of a second mark it is suggested that it is limited to instances where the setting mason needed to re-cut or modify the stone to fit, rather than simply set it in place. Four occurrences have been identified, one at Bothwell Castle, one at Melrose Abbey and two at Glasgow Cathedral. At Bothwell, marks M078bbb and M356e have been found on a wall block in the donjon lower staircase (Figure 92).

At Glasgow Cathedral, the dean's chair (Figure 81) presents, uniquely, 3 marks on the same stone. Also at Glasgow Cathedral, on the external door-jambes of the north door, two marks have been found on the same stone (Figure 96). Is it possible that the masons who placed their marks on the door frame of the north door at Glasgow Cathedral or on wall blocks in its vicinity, were signifying their contribution to the whole of the building?

Cockburn (1959, 67) identified several cases of a single stone bearing more than one mark. He reports three instances at Melrose and two at Dryburgh, although no examples are given, nor were these identified during the surveying for this project, although it is possible that the double occurrence of M018 on a single stone at Melrose Abbey (Figure 93) was one of the examples identified by Cockburn.

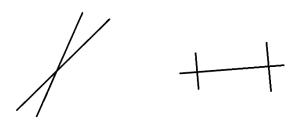


Figure 92: Two marks found on one stone at Bothwell castle. M078bbb (l) and M356e (r)

Unique to any of the sites surveyed, two occurrences of the same mark - M018kkk and M018lll - appear on one stone, forming part of a pillar in the nave of Melrose Abbey (Figure 93). If the marks had been different, then it could be an example of a re-worked stone incorporated into the 1618 alterations to the abbey. However, the marks are the same form that appear in the Bell Tower stair and in St Paul's Chapel at Melrose, dating to the 1st quarter of the 15th century.



Figure 93: M018kkk (l) and M018lll (r)

The same mark-form also appears at Crossraguel (2), Paisley (19), Bothwell (15), Glasgow (39), Dryburgh (2) and Glenluce (2), a total of 84 occurrences.

5.10 Stones without marks

It is significant that whilst many stones bear a mason's mark, others do not, even in the same part of a building. Richardson (1964, 14) suggests that stones without marks were completed by apprentices "towards the end of their term". Given that apprenticeships were not widespread, at least in England at this time (Knoop and Jones 1949, 160) then this seems unlikely. It is also likely that there would be far fewer stones without masons' marks if the apprentice-origin is correct. Taking the walls in the nave of Glasgow Cathedral as an example, the ratio is approximately 1 marked in every 10, although this

estimation is skewed by the presence of so many memorial panels mounted on the walls, potentially obscuring masons' marks. There may well be a simple reason for this absence of marks. As described in Chapter 1, masons were generally paid on a day rate or on piece work. Masons on day rate would not have been required to mark each stone, as their performance, in both quality and quantity, was known to the master mason (Coulton 1928, 151 et seq). It is suggested that masons working on a section of plain walling, who were being paid on the basis of work done, i.e., piece-work, would simply mark the last stone laid in a course of blocks they set each day. At the end of each working day, the clerk of works would check to see how many stones had been completed by each mason and this would then be recorded to ensure payment. The following day, the mason began work and again, placed his mark on the last stone set on that course. The clerk of works then counted the number of stones backwards from the last stone, to the one after the stone with the mark on it from the previous day, thus identifying the total number of stones completed. A similar method could be applied to pillars, counting vertical courses. This, of course, assumes that the marks were placed on a visible surface of the finished stone. This may not always have been the case, however it seems logical that the marks would be visible at the end of each day, to allow for quality control and output of individual masons. A further consideration must be given to the possibility of the mark being that of the setter, rather than the mason who cut the stone on the bench, although it is impossible to identify these as a separate sub-set of the marks found.

5.11 Dating of masons' marks

There is, in Scotland, as in England, no evidence of any central register of masons' marks in use (Alexander 2001, 216). This makes identification of ownership of marks an impossible task, at least for the period under consideration.

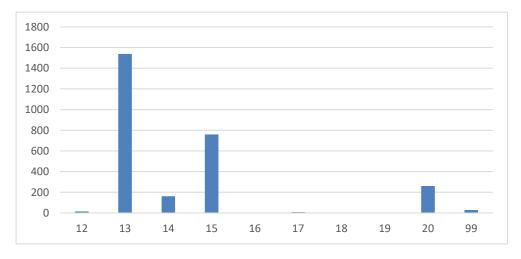
The mark book at Aberdeen dates only to the 1670s (Stevenson 2001, 286) and that of St. Ninian's Lodge in Brechin to the early 18th century (Chalmers 1850, 34). The Brechin mark book included a law that required every mason to "register his mark in a book" (ibid). This may, given the date, refer to freemasons in the modern sense. For want of evidence from any earlier period, we can only surmise that the same, or at least a similar, system applied. Unfortunately, no documentary evidence survives, if it ever existed, to support this assumption, which is understandable given the rarity of literacy in the period under consideration. The problem of accurate dating is further complicated by the re-use of stones from earlier incarnations when rebuilding takes place as this would see marks

Century	No. of occurrences	%	Comment
12 th	15	0.5	Kelso (20), Melrose (8), Glasgow (5)
13 th	1539	55.4	
14 th	162	5.8	
15 th	759	27.3	
16 th	3	0.1	Crossraguel (2), Glenluce (1)
17 th	9	0.3	Caerlaverock (6), Melrose (4)
18 th	0	0.0	
19 th	3	0.1	Paisley (2), Glasgow (1)
20 th	261	9.4	Paisley – all
Undated	28	1.0	Display stones, various sites

on stonework from earlier incarnations appearing amongst new stones. Examples of this re-use from Paisley Abbey are explored below.

Table 44: Marks by century, all occurrences

An analysis of dating by century is shown in Table 44 and in Figure 94. Note that no marks were found from the 18th century. The data can also be broken down into dating phases, allowing for further analysis of dating phases (Table 46). This is most meaningful if each site is assessed separately as, for instance, the 20th century masons' marks found at Paisley Abbey would skew the outcome when comparing all sites together. A more detailed dating may also be possible when other aspects are considered, such as architectural practices, tooling marks, etc., on each of the buildings.





Century	Date Phase	No. of occurrences	Comment
12 th	2	8	All at Melrose Abbey
12 th	3	5	All at Glasgow Cathedral
12 th	4	2	All at Kelso Abbey
13 th	1	160	
13 th	2	767	
13 th	3	14	
13 th	4	598	
14 th	1	1	Crossraguel Abbey
14 th	2	5	
14 th	3	-	
14 th	4	156	
15 th	1	597	
15 th	2	32	
15 th	3	5	
15 th	4	125	
16 th	1	3	Glenluce (1), Crossraguel (2)
17 th	1	4	All at Melrose Abbey
17 th	4	5	All at Caerlaverock Castle
19 th	3	3	Glasgow (1), Paisley (2)
20 th	1	261	All at Paisley Abbey
Undated	-	28	Display stones, various sites

Leaving a mark on history

Table 45: Marks by dating phase, all occurrences

An analysis was undertaken of the oldest marks found, i.e., those dating from the 12th century. A total of 15 occurrences of 10 mark-forms were found (Table 46).

The oldest are 3 mark-forms, with 8 occurrences, dating to the 2nd quarter of the 12th century and were located on the foundations of the doorway to the chapter house at Melrose Abbey. Five marks dating to the 4th quarter of the 12th century were found in the lower church at Glasgow Cathedral. All 5 were located on the old vaulting shaft, on the south wall of the lower church, dating to 1197 and the only part of the building from that time still in its original position (Morris 2000, 30). Finally, 2 marks were found at Kelso Abbey dating to the 4th quarter of the 12th century. Located on the external wall of the chapel to the east of the south transept, one is on an ashlar block and one a carved mould.

Site	Dating phase	Mark no.	Mark image	No. of occurren ces	Location(s)	Stone style
Melrose	12/2	M092m		4	Chapter House	Wall block
		M253d	\leq	2	Chapter House	Wall block (1) window (1)
		M652a	1	2	Chapter House	Door middle pillar
Glasgow	12/4	M079b	A	1	Lwr church, old vaulting shaft	Engaged column
		M107	X	1	Lwr church, old vaulting shaft	Engaged column
	"	M152k	Ą	1	Lwr church, old vaulting shaft	Engaged column
	"	M152e	X	1	Lwr church, old vaulting shaft	Engaged column
"		M263	A	1	Lwr church, old vaulting shaft	Engaged column
Kelso	12/4	M078www		1	Chapel E of S transept, external	Ashlar block
		M480		1	Chapel E of S transept, external	Carved mould

There can be no absolute certainty that the marks that have been allocated specific dates are in their original position and that the dates are certain. The 12th century marks at Melrose are on the foundations of the doorway to the chapter house and those at Glasgow are on the old vaulting pillar, which is recorded as incorporated into the newer building. It is reasonable in these cases to conclude that they are in their original positions and do date to the 12th century.

The dates assigned to different phases of building at each of the sites has been taken from extant records, mainly those listed on Canmore. It is possible that some stones incorporated into rebuilds have come from earlier construction phases and bear the masons' marks from those phases. A more detailed analysis taking the architectural detail into account will be necessary to confirm dating.

5.12 Reuse of stone in later building/rebuilding

Examination of the marks found at Paisley Abbey suggests there is some evidence for reuse of stone from early construction phases in later rebuilding.

Of the 119 mark-forms found at Paisley Abbey, 53 are on parts of the building which date to the early 20th century reconstruction. Of these 53, the 9 marks in Table 47 have also been found on earlier parts of the building. If there were only a few occurrences, it could be reasonable to suggest that the repetition was a coincidence. However, given the number of marks involved, it would seem clear that stone from earlier incarnations was incorporated into the rebuilding.

Mark no.	Mark image	Location and no. of 20 th c mark(s)	Locations of mark from other dating phases		
M002w	A	Choir S -1 Sacristy E -3	Nave S - 10 (13^{th} c) Nave pillar 3 - 1 (14^{th} c) Nave pillar 5 - 1 (14^{th} c)		
M018o	\bigwedge	Choir N – 4	Nave and St Mirin Chapel - 13 (13 th c)		
M0210	×	Choir N – 2	Nave and St Mirin Chapel - 9 (13 th /14 th c)		
M0411		Choir N – 1	Nave N - 2 (14 th c), St Mirin Chapel - 1 (15 th c)		
M0660	\bigtriangleup	Choir N -1	St Mirin Chapel - 1 (13 th c), Nave pillar - 1 (13 th c), St Mirin Chapel N - 2 (15 th c)		
M123	X	Choir S -2 Ambulatory outer wall E-W - 17 Sacristy E -1	Nave N - 7 (14 th c)		
M128	×× (Choir S – 1	Nave N - 10 (14 th c)		
M184		Ambulatory outer wall E-W - 10	St Mirin Chapel E - 2 (13 th c) St Mirin Chapel N - 1 (15 th c)		
M208		Choir N – 1	Nave pillar 12 -1 (13 th c)		

Table 47: Examples of possible re-use of cut stone at Paisley Abbey

5.13 Graffiti

Modern graffiti is often viewed as being an act of vandalism and a blight on our modern lives, however, it was not always so. Historically, graffiti was added to stone church buildings, usually incised into stonework, or pews and benches etc., for a number of

reasons, chief amongst which was either a form of memorial, or as a protection mark (Champion 2015, 25). In addition to acting as a reminder of a deceased relative, other graffiti acknowledges the commemoration of a new ship; a protection against witchcraft; compass designs, perhaps to offer protection for a journey or pilgrimage; and animals of many kinds (ibid, 63). Research into medieval graffiti in England has been undertaken in recent years, chief amongst which is the work of the Norfolk Medieval Graffiti Survey, which has included masons' marks as a subset of the graffiti marks found.

Examples of graffiti, both medieval and more modern, have been found at all of the sites surveyed for this research project. Any symbols found during this research which were considered to be graffiti, and not to have originated as masons' marks, have been excluded from this record. This has involved a degree of subjectivity, with the start-point for excluding symbols considered to be graffiti being that they consisted of initials or a symbol, often in conjunction with a date, or included curved lines. There are several exceptions to the exclusion of graffiti or marks incorporating curved lines, namely the 7 marks shown in Table 34, which have been included for comparison.

It is possible that some symbols included as masons' marks are in fact graffiti, or originated as masons' marks to which additions have been added later as an act of remembrance, such as M298 (Figure 95). This mark may have its origin as a standard cross-form, such as M041, with someone adding the "filled-in" terminals to each arm, perhaps as a form of memento mori (Champion 2015, 27). Champion proposes that much of the graffiti in churches are pilgrim marks and that in England, they are found near the (public) entrance to the church, i.e. the south door (ibid, 64). It is also possible that some may be consecration marks. No evidence of such marks was found near the doors at Glasgow Cathedral or Paisley Abbey, where the stone frames of the south doors are extant.



Figure 95: Possible graffiti modification – M041 (l) and M298 (r)

The simple cross mark, M041 has been found at Bothwell Castle, Glasgow Cathedral, and at Crossraguel, Melrose and Paisley Abbeys. Its presence at Bothwell Castle suggests that there is no fixed rule about it being a pilgrim mark, although its presence here may be a mark to record a prayer before battle, although this would be unlikely if it was chisel-cut. Analysis of the distribution of this mark at Glasgow Cathedral would confirm that its appearance is not always as a pilgrim mark, given that, of 60 appearances in the cathedral, 27 are in the triforium, 3 in the clerestory and one in the lower chapter house, parts of the building that would not have been accessible to the laity in the middle ages.

Many other examples of graffiti consist of letters or initials incised into the stone. Some, like that shown in Figure 96, have been added adjacent to pre-existing masons' marks. At the north door of Glasgow Cathedral there are ten marks carved into the door jambs and adjacent ashlar blocks. This includes M620 and M619, which are both cut into the same ashlar block. A piece of graffiti, consisting of the letters "JMW" has been added next to M620.

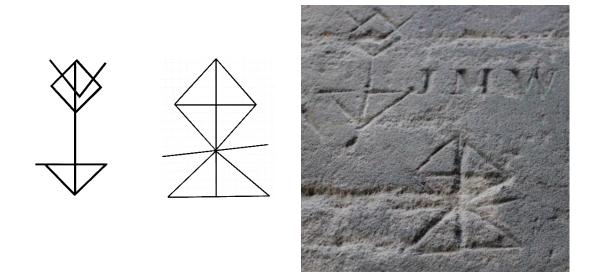


Figure 96: Glasgow Cathedral, M620 (l) and M619 (c) north door and (r), with graffiti Photograph © Lisa Craig Photography

Some duplicate marks may also be graffiti. There is a possibility that an extant mason's mark has simply been copied onto an adjacent stone, in an act of vandalism. It must also be remembered that the aging of the fabric of the building may well mask the comparative newness of a piece of graffiti.

5.14 Current practices in stonemasonry in Scotland

From observation of recent stonework repairs at the sites surveyed, no evidence of masons' marks has been found. It would appear that it is current practice for stonemasons working on HES sites not to mark the stones on which they have worked, at least not on the exposed faces (J Clark, pers comm). This, it is suggested, is contributing to a flawed record. Whilst documentary records that are being kept now are much more detailed than ever (J Clark, pers comm), the absence of visible masons' marks is, it is suggested, erroneous as this hides part of the record. There is a clear case to be made for the mark to be placed on the outer face of the finished stone, especially in the case of a building where this has been the practice in the past. Without this, it will not be possible to record masons' marks in the future, nor to add to this research project, simply by examination of the fabric of the building. The identification of Paisley Abbey's 20th century repairs and reinstatements to the choir and ambulatory were made possible by virtue of the evidence provided by masons' marks, which were all applied on exposed faces of the finished stonework.

Chapter 6 Summary, recommendations and conclusion

6.1 Summary

The first research question was whether anything could be identified from a survey of stonemasons' marks in Scotland. From the data collected and the analysis undertaken, the answer is clearly yes. We can identify much about the size of the skilled workforce at each site, albeit as part of an incomplete record. We can also identify some data on the number of marks per dating phase, together with an analysis of the number of lines per mark, again broken down by dating phases. The premise that earlier marks have fewer lines has been disproved, suggesting that the selection by a mason of a specific mark-form was influenced by other factors. The presence of the same mark at more than one site could either indicate a mobile workforce, or several masons using the same mark, however this is not clear and the same may rule may not apply in each case. The continued use of similar marks may indicate adherence to a tradition of using only a limited number of symbols, with some incorporating additional lines as a form of modification, either to differentiate from markforms already in use, as a way of acknowledging previous generations or to differentiate the work of one mason from another already using the same mark-form. Some information can also be extracted about the possible origins of the marks and their relation to futhark symbols, although this study is only in its early stages and requires further examination.

This research has proved that we cannot rely solely upon masons' marks to contribute anything of precise value to the accurate dating of the buildings surveyed. It would be reasonable to extend this caution to apply to all buildings with surviving masons' marks, where the marks themselves cannot be used as the sole source of dating evidence. A visual examination of charters may provide evidence of masons' marks as a form of signature which can then be compared with those found on specific buildings.

The interest in and study of masons' marks in Scotland is in its infancy. The data contained in this research is taken from a small number of sites, and therefore only a fraction of the evidence available. It represents, however, the first systematic study of masons' marks in Scotland and is, therefore, a valuable a starting point for future research.

6.2 Potential future research

It is proposed that future research be undertaken, to further develop our understanding of masons' marks, building on this research.

- a. It is proposed that a nationwide project, The Scottish Stonemasons Marks Research Project, be established to build on the research already undertaken.
- b. The project would record, using a standardised methodology, the visible stonemasons' marks at all (accessible) historic buildings in Scotland. This would include buildings in the care of the National Trust for Scotland and Historic Environment Scotland, together with those buildings in private ownership but open to the public, e.g., Rosslyn Chapel.

This project can be managed centrally but should be designed to allow anyone with an interest in old buildings, including members of the community local to each site, together with archaeological and historical societies etc., similar to the Scottish Graveyard Survey (Archaeology Scotland). This would create a significant community and public archaeology project across the country and serve not only to create a record of the activities of masons' marks across Scotland but to encourage people to engage with historic buildings in their communities.

- c. More detailed analysis of sections of ashlar at, e.g., Glasgow Cathedral and Paisley Abbey, could be undertaken to identify the ratios of marked and unmarked stones. This may lead us to identifying the number of masons working on a discrete part of a building.
- d. Further examination be undertaken of stone fragments in storage or display at sites to provide further evidence of marks which would enable dating by comparison with other marks elsewhere on the buildings, particularly in the case of fragments that can be dated on architectural grounds.
- e. Further examination of a larger and more complete database of marks may enable a more informed analysis of:
 - i. the proportion of lines per mark by dating phase
 - ii. the ratios of marks of runic origin in the early buildings
 - iii. the introduction of masons' marks based on the Roman alphabet.
 - iv. a comparison with records for buildings in England may help to identify marks in common with those found in Scotland and those that are unique to Scotland, using Davis' records as a baseline

f. Consideration should be given to adding this and future data to the records held in Canmore and/or the Archaeological Data Service, to allow public access to the information.

6.3 Conclusion

For a subject of the extent and complexity of masons' marks, a research project of this size cannot hope to do it full justice, especially when considering the evidence from only a small number of buildings. In fact, the 689 unique mark-forms found so far is only a small proportion of the total awaiting discovery and recording. What has become clear is that a much more extensive analysis of the marks recorded so far, plus data from other stone-built buildings from the 12th and 13th centuries and later, can provide us with a great deal of information about the activities of the stonemasons of Scotland.

There is yet to be created a work which meets the expectations of Coulton's "full synthesis", however, it is hoped that this research will add to the record and provide impetus for further research into the surviving masons' marks in Scotland.

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Index

Aberdeen, 6, 7, 123 Aberdeen Press and Journal, 16 Alexander, Derek, x Anglo Saxon runes, 94 Anglo-Norman, 43, 95 Anglo-Saxon, 95 apprentice, 102, 111, 112, 113, 115, 122 Arbroath Abbey, 48 Archaeology Scotland, 132 architect, 9, 14, 15, 92 assembly marks. See position marks Association of Certificated Field Archaeologists, x, 23 banker, 121 bankers' marks, 2 BBC News, 16 bencher marks, 2 **Bishop Jocelin**, 50 Borders, The, 81 Borders' abbeys, 64, 94 Bothwell Castle, 25, 31, 33, 35, 47, 73, 81, 89, 90, 92, 121, 129 brass rubbing, 18 Brechin mark book, 123 Burscough, 9, 25 Caerlaverock Castle, 35, 36, 81, 92 Canmore, 9, 13, 20, 131, 132 Christianity, 5 Cistercian, 70 Clark J, HES works manager, x Cluniac, 75

Cluny Abbey, 75 Company of Masons of the City of London, 5 Congress of British Architects, 15 Crossraguel Abbey, 21, 38, 40, 73, 75, 81, 108, 129 Dalmeny church, 15 David I, 50, 68, 70, 94 De Vaux, John, 95 Denmark, 130 Dirleton Castle, 43, 44, 81, 92, 95 Driscoll, Professor Stephen, x Dryburgh Abbey, 9, 45, 46, 47, 48, 73, 122 Dumfries and Galloway, 81 Dunblane Cathedral, 15 Duncan, Earl of Carrick, 38 Dundrennan Abbey, 14, 60 Dunfermline Abbey, 50 Earl of Huntingdon, 94 ecclesiastical, 17, 92 Edinburgh Castle, 19 Ely Cathedral, 8 Engine Shed, The, 48 England, 2, 4, 8, 9, 13, 15, 68, 94, 95, 99, 122, 123, 128, 132 Fife, 15 France, 15, 75, 95 freemason, 4, 7 freemasonry, 4, 7, 98 Galloway abbeys, 14

Germany, 5, 94 Glasgow Archaeological Society, x Glasgow Cathedral, x, 2, 3, 5, 17, 18, 21, 23, 47, 50, 54, 55, 57, 59, 73, 81, 85, 87, 88, 89, 90, 98, 101, 107, 108, 111, 112, 113, 120, 121, 122, 126, 128, 129, 132 Glenluce Abbey, 14, 60, 62, 66, 73, 81, 90 Gloucester Cathedral, 8 graffiti, 1, 16, 106, 127, 128, 129 Greig, Moira, 15 Guard Archaeology, 80 Halyburton, 43 Harrison, Dr Stephen, x Historic Environment Scotland, x, 19, 132 Holyrood, 50 Hugh de Moreville, 45 Jamie, Professor Kathleen, x Jedburgh Abbey, 9, 13, 48, 64, 65 Kelso Abbey, 50, 68, 69, 126 Kilwinning Abbey, 7 king's master masons, 9 Langside Community Heritage, x Lincluden Abbey, 14 Lincoln Cathedral, 106 lodge, 4, 7, 55, 68 mark books, 6, 121, 123 Markinch, 15 marks appearing only once, 120 Masons' Lodge of Edinburgh, 6 master mason, 3, 92, 94, 115, 122

Melrose Abbey, 9, 13, 14, 25, 47, 70, 72, 86, 111, 115, 122, 126, 129 merelles, 48 method of payment, 4 Monumental Brass Rubbing Society, 18 Morow, John, 13, 14, 70 most common marks, 118 National Trust for Scotland, x, 19, 132 Norfolk Medieval Graffiti Survey, 128 Norman, 20, 35, 94, 99 Norman Conquest, 95 Old Caerlaverock Castle, 35 Older futhark, 97, 98 Ormskirk, 9, 25 Oxford colleges, 8 Paisley Abbey, 5, 7, 17, 38, 47, 73, 75, 76, 77, 79, 81, 89, 90, 94, 123, 126, 128, 129, 130, 132 Paisley Abbey drain, 13, 80 Peoples of Medieval Scotland website, iv, 90 Poiron, David, x, 99 position marks, 2, 3 Premonstratensian, 45 Proceedings of the Society of Antiquities of Scotland, 9 quality control, 3 quarry, 1, 4 quarry mark, 1, 2 Reformation, 24 Richard II, 70 Robert 1, 19 Roland, Lord of Galloway, 60

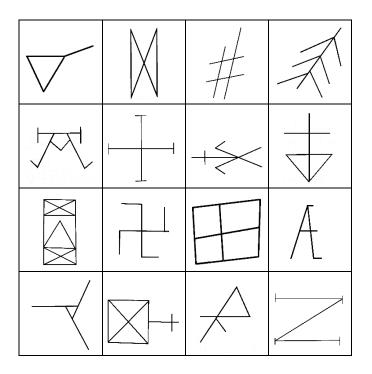
Roman alphabet, 26, 97, 132 Rosslyn Chapel, 132 rune-carvers, 95 runic futhark, 5, 6, 27, 94, 95, 96, 99, 114, 131 Ruthven, 43 Scandinavia, 94 Schaw Statutes, 6 Scotland, i, viii, x, 4, 6, 7, 9, 13, 15, 16, 17, 19, 29, 30, 45, 48, 50, 81, 82, 87, 94, 99, 113, 123, 130, 131, 132, 133, 135, 136 Scottish Archaeological Research Framework, 15 secular, 17, 92 setter, 121 Sir Walter Scott, 45 size of masons' marks, 107 Society of Antiquaries of Scotland, 9 St Magnus' Cathedral, 15, 16 St Margaret's Chapel, 19

St Mirin Chapel, 76 St. Andrews, 14 St. Ninian's Lodge in Brechin, 123 Stell, Geoffrey, x Stirling University, x stonemasonry, 4, 5 stones without marks, 122 Sweetheart Abbey, 14, 19 Syria, 15 The Bruce, 35 Tironensian, 68 two marks on a single stone, 121 University of Glasgow, x, 26 Vikings, 94, 95 Wales, 8 Walter de Moravia, 31 Westminster Palace, 8 Wilson's first law of Runo-dynamics, 94 York Minster, 8 Younger futhark, 97, 98



The stonemasons' marks of selected medieval ecclesiastical and secular buildings of central and southern Scotland.

Volume 2: Appendices



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Volume 2: Appendices

- Appendix 1 Numerical index of masons' marks
- Appendix 2 Index of masons' marks by form and shape
- Appendix 3 Index of masons' marks by lines per mark
- Appendix 4 Index of masons' marks of possible Runic origin
- Appendix 5 Architectural and stonemasonry terms used in this document

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
001	\bigvee	3		1	5						5						See M060 and M148
002		5		37	83	9		35		1	20	1				16	See M682
003		4		23	23	2		1			12					8	See M375 and M432
004	\bigvee	4		1	1						1						
005	Д	4		1	1						1						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
006	\langle	4		1	1						1						
007	\bigoplus	6		2	8						1					7	See M184
008		7		2	3						1					2	
009		4		1	1						1						See M383, M253, M275, M325, M417, M418, M464
010	\bigwedge	3	Y	28	52	4				4	24		1			19	See M063, M110, M187, M213, M241, M313, M328, M392, M398, M399, etc

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
011		7		1	1						1						
012		4		1	1						1						
013		7		1	1						1						
014	\bigwedge	4		1	1						1						May be a version of M020
015		5	Y	1	1						1						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
016	+	4		1	1						1						See M021, M072, M205
017	$\overbrace{}$	4	Y	1	1						1						
018	\square	4	Υ	71	84	15		2		2	39	2			5	19	See M035, M075, M314, M443, M599, M605
019		7		1	1						1						
020	\bigwedge	4		76	85	2	1	8			46		2		7	19	See M014, may be a version

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
021	\times	3	Y	32	44	17					14				2	11	Most common mark at Bothwell Castle. See M016, M072, M205
022	M	9		3	3						3						
023	\bigwedge	4		1	1						1						
024	\triangle	6		9	11						11						
025	\bigwedge	7		1	1						1						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
026	\sum	5		5	7						7						See M046 - reverse
027	H	4		1	1						1						
028	\searrow	3		14	24	9					15						See M389, M493, M600
029	\langle	6		2	2			2									See M029, M064, M108, M214
030	\bigwedge	4		1	3						3						See M132

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
031		7		1	4						4						
032		9		1	1						1						See M036
033	+	3	Y	3	4						1		1		2		See M395, M532
034		4		2	2						2						See M383, M416
035	k	5	Y	30	40	1					35					4	See M018, M075, M314, M443, M599

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
036		10		4	4						4						See M032
037		3		2	2					1	1						See M038, reverse
038	/	3		4	6						6						See M037, reverse
039	X	5		1	2						2						See M077, M126
040	\bigwedge	8		3	3						3						See M 124

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
041		2		45	79	11		5			58				1	4	Most common mark at Glasgow Cathedral.
042		5		1	1										1		See M140
043	++	4		6	8	1				4	3						
044	X	5		1	4						4						See M002
045		5	Y	4	5						5						See M026 - reverse

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
046	\mathbf{X}	4		2	3						3						See M242
047		6		1	1						1						
048		8		1	1						1						See M613
049	\bigwedge	4		1	1						1						
050		4		1	1						1						May be an incomplete version of M271, M338 or M683

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
051	Ý	3	Y	6	6	2					3					1	See M253
052	X	6		7	7						7						
053	$\left \right $	4		1	1						1						See M055, M127, M275, M344, M417
054	_M	7		1	1										1		
055		4		1	1						1						See M053, M127, M275, M344, M417

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
056		3		1	1						1						
057		2	Y	2	2						2						See M101, M181, M201, M215, M612
058	\mathbb{V}	3		21	54			1		4	18	1			28	2	Most common mark at Melrose Abbey
059	\bigwedge	6		1	1						1						See M090, M174, M263, M641
060	X	7		1	1						1						See M001 and M148

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
061	$\left\langle \right\rangle$	4		4	6						4				2		May be version of M018
062		7		1	1						1						
063	\times	5	Y	16	33		1				32						See M010, M110, M187, M213, M241, M313, M328, M392, M398, M399, etc
064	\rightarrow	5		1	1						1						See M029, M064, M108, M214
065	\succ	3		2	2						2						Possible modified version of M078

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
066		3		37	54	8		6			33				2	5	
067		5		1	1						1						See M264 (reverse), M576
068		4		2	2						2						
069	\searrow	2		4	4	1					2					1	
070		3		1	1						1						See M146, M173

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
071	$+ \rightarrow$	5		2	2			2									See M133, M187, M323, M331, M578, M681
072	\rightarrow	4		12	13					1	11					1	See M021, M205
073		7		1	1						1						See M097, M149, M220, M278, M348, M350, M351, M352, M412, M413, M423, M446, M640
074		7		1	1						1						See M277, M447
075		6	Y	2	2			2									See M035, M061, M164, M443

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
076	The second secon	11		1	1						1						
077		5		1	1						1						See M077, M126
078	\times	2	Y	83	103	11		4		2	54			1		31	Most common mark found across all sites and most common at Paisley Abbey.
079	$\sum_{i=1}^{n}$	4		29	47	6		1			20	13	1		2	4	Most common mark found at Glenluce Abbey.
080		8		21	52			52									

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
081	$> \langle$	4		1	1						1						May be a mis-formed mark.
082	\mathbf{X}	5		1	1						1						See M317, M319, M419
083	X	4		1	1										1		
084	4	4	Y	1	1										1		
085		3		1	1						1						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
086	$\bigoplus_{i=1}^{n}$	7		1	1						1						See M128, M272
087		4		1	1										1		
088	K	4		1	1						1						
089		3		2	2						2						See M041
090	\times	4		2	2						1				1		See M059, M174, M263, M641

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
091	\bigstar	5		1	1						1						
092		3	Y	14	26	3		3			7				10	3	See M092, M120, M228, M289
093	\bigwedge	3	Y	1	1						1						
094		3	Y	2	2						2						See M129, M231, M583
095		9		2	2						2						See M450

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
096	\sum	9		1	1						1						
097	+	6		1	1	1											See M073, M099, M149, M220, M278, M348, M350, M351, M352, M412, M413, M423, M446, M640
098	\mathbf{X}	3	Y	1	1						1						See M065, M078, M156, M631
099		6		1	1						1						See M073, M097, M149, M220, M278, M348, M350, M351, M352, M412, M413, M423, M446, M640
100		8		2	2						2						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
101	\bigwedge	2	Y	7	7	1		2			4						See M057, M181, M201, M215, M612
102	$\overline{\mathbf{X}}$	3	Y	1	1						1						See M078, M152, M159
103	${\swarrow}$	9		1	1						1						
104	${\swarrow}$	5	Y	1	1						1						See M010, M063
105		6		17	33						20	4			2	7	See M190, M255, M258

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
106		3		9	12	1					10					1	See M001, M051, M142, M433, M469, M485, M522
107	X	4		1	1						1						See M354
108	\rightarrow	7		15	35			2			33						See M029, M064, M214
109	+	3		4	5					2	3						See M037, M038, M191, M227, M395
110	\int	5	Y	1	1						1						See M010, M063, M187, M213, M241, M313, M328, M392, M398, M399, etc

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
111		2	Y	1	1						1						See M112, M190
112		3	Y	1	1						1						See M111, M190
113	<i>№</i> +	4		1	1										1		
114	1	3	Y	6	7						7						See M092 (reverse), M385,
115	$\langle - / - \rangle$	5		1	1											1	See M120, M134, M268, M439

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
116		3		1	1						1						
117	4	4		1	1											1	
118	+++	4	Y	18	18						12					6	See M186
119		5		1	1						1						See M145, M218, M281
120	4	4	Y	13	16						10				2	4	See M092, M228

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
121	\bigcirc	5		3	8											8	See M040
122	$\sum_{i=1}^{n}$	8		2	4											4	See M008, M177
123	XX	9		3	29											29	
124	X	12		2	4											4	See M040
125	>+	5		1	1			1									See M141, M165, M379, M501

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
126	X	5		1	1					1							See M039, M077
127	\sum	5		1	2						2						See M053, M055, M275, M325, M344, M417
128	\sim	6		2	11											11	See M086, M482, M510
129	//	4	Y	3	30											30	See M094, M231, M240
130		4		1	1	1											

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
131		4		3	9											9	
132	A	5		3	32											32	Most common mark at Paisley Abbey. See M030
133	\Rightarrow	6		2	3						1					2	See M071, M187, M331, M578, M681
134		6		3	30											30	See M115, M268, M439
135		8		2	2											2	

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
136	+	3		2	3						2					1	See M037, M038, M109
137	\sum	5		6	10			10									
138	$\bigcirc +$	8		1	1						1						
139	$\left(\begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	9		1	1						1						
140	\bigcirc	4		9	9			1							2	6	See M042, M214

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
141	$+ \not \sim$	6		1	1			1									See M125, M165, M370, M379, M405
142	\rightarrow	5		3	3						1					2	See M106
143	\langle	3		1	1						1						See M070, M173, M209
144		4		2	2											2	See M196, M444
145	┝━╀━┥	4		1	1						1						See M119, M179, M218, M281

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
146	\sum	3		4	4						2				1	1	See M070, M173,
147		6		1	1						1						See M162
148	M	6		1	1					1							See M001, M060, M433
149		5		1	1					1							See M278, M348, M350, M351, M352
150	X	4	Y	1	1					1							

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
151		4		1	1						1						
152	\searrow	3	Y	28	39	2				1	14		2		16	4	See M090, M459
153	X	4		1	1						1						
154		6		1	10						10						See M180, M200, M269
155	+->	6		4	4			2								2	See M293

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
156	\searrow	3	Y	4	5						2				2	1	See M065, M078, M631
157		4		1	1						1						One of only 6 marks with curved lines.
158		6		1	1						1						
159	\sum	3	Y	1	1						1						
160		4	Y	1	1						1						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
161	2	4		1	1			1									
162	\mathbb{N}	5		1	2	1					1						See M003
163		9		1	1						1						
164	\searrow -	5		1	1			1									See M018, M443
165	+	6		17	68			68									Most common mark at Crossraguel. See M125, M370, M501

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
166		3		4	4						4						
167	++++	6		1	1						1						
168		5		1	1						1						Possible example of "apprentice" version of M
169		4		1	1	1											
170	Δ	6		12	12						1					11	

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
171	\sim	6		1	1						1						
172	4	4		1	1						1						
173	X	3		3	3		1				1					1	See M070, M146, M209
174		6		1	6	6											See M059, M263
175		5		8	8						3					5	See M003, M467

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
176		5		1	2						2						
177	XX XX	8		3	10											10	
178	$\vdash \prec$	6		1	1						1						
179	[]	7		1	4						4						See M119, M218
180		5		1	1						1						See M154, M200, M269

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
181		3		1	1						1						See M056, M057, M101, M612
182	\bigwedge	4		12	12	1					8					1	See M348, M350, M351, M352, M413, M488, M512, M640
183		13		1	1						1						
184		6		6	15			1			1					13	See M007
185	$\diamond + \diamond$	8		1	19											19	

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
186		5		1	1											1	
187		4		1	1											1	See M430, M479
188		6		1	1						1						See M182, M348, M350, M351, M352, M413, M488, M512, M640
189	$\left \right\rangle$	3		5	5						3					3	
190	\langle	3		2	2											2	See M078, M105, M255, M258, M266, M315, M466, M499

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
191	$\left(\begin{array}{c} \\ \\ \end{array} \right)$	3		8	9											9	See M038, M109
192	+	4		1	1	1											See M285, M327, M381
193	TAT .	8		1	1											1	See M348, M350, M351, M413,
194	Å	3		1	1											1	See M274, M329
195	X	6		1	1											1	

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
196	Z	4	Y	3	3										2	1	See M144, M444
197	ΗXH	9		2	17											17	
198	\bigvee	5		1	1											1	See M672
199	+///+	6		1	1						1						See M556
200		5		1	1						1						See M154, M180, M269

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
201		2		1	1						1						
202	\searrow	5		1	1						1						
203	1	3		2	2						2						See M215, M270, M347, M480
204	+	3		1	1						1						See M037, M227
205		5		1	1											1	See M072

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
206		5		1	2						2						
207		4		1	1						1						
208		3	Y	5	5			1			1				1	2	See M655
209	\bigtriangledown	3		4	4			1			3						See M143, M146, M173
210		4		1	1						1						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
211		3		2	2						2						See M218
212	\bigwedge	5		1	1						1						See M542, M551
213	\bigwedge	7		1	1						1						
214		6		2	2						1					1	See M029
215		3	Y	1	1						1						See M270, M347

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
216	\checkmark	5		1	1			1									
217	Ą	5		1	1						1						See M061, M217
218		3		2	2						2						See M119, M145, M179, M281
219	\searrow	3	Y	1	1						1						See M292
220		5		1	1						1						See M412, M423

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
221	N	4	Y	1	1						1						See M056, M057, M520
222		4		1	5	5											See M169
223	4	4		1	1						1						See M261
224	$\sum_{i=1}^{n}$	8		1	1						1						See M457
225	\bigwedge	5		1	1											1	See M317, M319, M419, M670

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
226	\bigwedge	3	Y	4	5						1				4		See M065, M156, M223, M261, M478, M631
227		4		1	1						1						See M037, M038, M109
228	X	4	Y	2	2						2						See M092, M120, M289
229		5		1	1						1						See M362, M366
230	\checkmark	4		1	1	1											See M207

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
231		3		1	2	2											See M094, M129
232		5		1	1						1						
233		5		1	1						1						See M256, M259, M311, M665
234	\bigwedge	5		1	1											1	
235	×	6		1	1						1						See M051

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
236		2		2	2						2						See M201, M345,
237	\$	6		1	1						1						See M365
238	1-7	8		1	1						1						
239		5		1	2	2											
240	1111	6	Y	1	1						1						See M094, M129

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
241	Ţ	5	Y	6	6	3					2					1	See M010, M110, M339
242	X	8		1	1						1						See M035, M046,
243		4	Y	1	1	1											See M299
244	\square	6		1	1						1						
245	K	4	Y	1	1						1						See M401

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
246		6		1	1						1						See M368
247		6		1	1						1						See M346
248		5		1	1						1						See M566
249		6		1	1						1						
250		4		2	2						2						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
251	N +	5		1	5										5		
252	$\left(\mathcal{V} \right)$	6		2	2						2						See M003, M357
253		3	Y	9	20	14				1	3				2		See M275, M325, M383, M417, M418
254		4		1	1						1						
255	H H	5		3	5	1					4						See M258, M589

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
256	+++++	6		1	4						4						See M233, M259, M665
257	+	10		1	3						3						
258	\searrow	5		2	7						7						See M255, M589
259	F	6		10	16						16						See M233, M256, M665
260	\times	3	Y	1	1						1						See M065, M156, M226

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
261	$\sum_{i=1}^{n}$	4	Y	18	26	2	1	4			17				2		See M255, M258, M466
262	\downarrow	5		1	1						1						See M106, M128
263	A	6		1	1						1						M052, M174
264		5		1	1						1						See M067, M264
265		6		2	2						2						See M067, M265

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
266	\mathbf{X}	4	Y	3	3										3		See M261
267		8		1	1						1						
268		6		1	1						1						See M115, M134, M439
269		4		4	4						4						See M154, M425
270		3	Y	3	3	1					2						See M394

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
271		4	Y	10	10	1				1	6				1	1	See M050, M271, M683
272	\bigotimes_{k}	8		1	1						1						See M367, M482
273	\bigwedge	6		1	5	5											
274	Y	4		1	1						1						See M194
275	1//	6		1	1						1						See M344, M417

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
276	$\overset{*}{\searrow}$	4	Y	2	2						2						See M371, M679, M680
277	¥	7		1	1						1						See M074, M293, M447
278	$\overline{\bigwedge}$	7		1	1						1						See M097, M149, M220, M348, M350, M351, M352, M412, M413, M423, M446, M640
279	\rightarrow	3		3	3						3						See M060
280	$\overset{\frown}{\times}$	7		1	1						1						See M621

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
281	\swarrow	2		3	3	1					2						See M145, M218, M219, M292, M561, M562, M668
282	$\forall \forall$	5		1	1						1						
283	X	3		1	1	1											See M028
284		2		1	1	1											See M189, M203, M361, M686
285	+	4		1	1						1						See M192, M327, M381

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
286		5		1	1						1						
287		5	Y	3	4					1	1				1	1	See M050, M287
288	×	5		1	1						1						See M063
289	\leq	4		1	1						1						See M120, M449
290	\times	4		1	1						1						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
291	\approx	9		1	1						1						See M103, M519
292		3		1	1						1						See M145, M218, M219, M281, M561, M562, M668
293		5		12	14	1					12					1	
294	\sim	4		2	2						1					1	See M304, M320
295		5		1	1			1									See M496, M598

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
296	\bigwedge	7		1	1						1						See M010, M313
297	\bigwedge	5		1	1						1						
298		2		1	1						1						Possible graffiti or modified mark, with terminals added.
299	\checkmark	3	Y	1	1						1						
300		9		1	1						1						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
301	\bigwedge	5		4	6						6						See M303, M326, M527, M551, M636
302		3		1	1						1						See M033
303	Ŧ	5		1	1						1						See M301, M326
304	$\widehat{}$	6		2	3						3						See M294, M320
305		3		1	1						1						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
306	\Diamond	4		1	1						1						
307		7		1	1						1						
308	× -	7		1	3						3						
309	•••	8		1	1						1						One of only 6 marks with curved lines. Possibly altered by addition of curved lines. See M317.
310	$^{}$	15		1	1						1						See M298

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
311		14		1	2						2						See M233, M256, M259, M311
312		6		1	4						4						
313	\checkmark	5	Y	2	4						4						See M010
314		6		1	1						1						See M018, M035
315	X	4	Y	1	2						2						See M105, M255, M258, M261, M466, M499

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
316	×	8		1	1						1						
317		10		1	2						2						One of XX with curved lines. See M309.
318		10		1	2						2						
319		6		1	1	1											See M151, M419
320	\bigstar	5		1	1						1						See M294, M304

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
321	+ /-	4	Y	1	1						1						See M118
322	\bigvee	4		9	10						10						See M090, M542
323	$\stackrel{\bigcirc}{\leftarrow}$	7		1	1						1						
324	+ +	5		1	1						1						See M211
325		7		5	6						6						See M055, M127, M275, M344, M417

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
326	\checkmark	5		2	2						2						See M301, M303
327	ŧ	3		2	3						3						See M136, M192, M285,
328	<i>← ∭</i> +	7		1	1						1						See M399, M436
329	\bigwedge	3		1	2						2						See M194, M427, M497
330		4		1	1						1						See M002, M423 Possible incomplete

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
331		7		1	1						1						See M133, M681
332	\rightarrow	5		1	1	1											See M261, M379, M386
333	A	5		1	1						1						
334	\swarrow	4	Y	1	1						1						See M021, M072, M205
335	\bigwedge	6		6	7						7						See M515, M521

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
336	Xk	6		1	1						1						
337	\times	4		2	3						3						
338	\sim	6		1	1						1						See M018
339	- >	3		3	3						2	1					See M110, M241, M524
340	$\overline{\uparrow}$	4		2	2	1					1						See M133, M323, M681

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
341	\bigvee	5		1	2						2						See M182, M348, M352, M413, M495, M512
342		5		1	1			1									
343		4		2	8						8						
344	\bigwedge	7		2	2						2						See M055, M127, M275, M325,
345		2		1	1						1						See M101, M201, M236,

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
346	\sim	4	Y	1	1	1											See M499
347	M	4		2	3	3											See M480, M517
348	\searrow	7		4	4					2	2						See M149, M278, M350, M351, M352, M412, M413
349	$\bigvee \land$	4		1	1	1											See M374
350		9		9	12						7		4			1	See M149, M278, M348, M351, M352, M412, M413

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
351	X	9		10	28						28						See M149, M278, M348, M350, M351, M352, M412, M413
352		8		1	1						1						See M149, M278, M348, M350, M351, M412, M413
353	\mathbb{N}	4		1	1						1						See M402, M562
354	\swarrow	3		1	1						1						See M107
355		5		2	2										2		

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
356		3		6	9	8					1						See M633
357		5		1	2	2											See M376
358		5		1	1						1						See M359 (reverse)
359	M	5		1	1						1						See M358 (reverse)
360	T	6		1	2						2						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
361		3		2	3						1		2				See M081
362	\bigwedge	4		4	5						5						See M229, M366
363	X	5		1	2										2		See M638
364	A	4		1	2										2		
365	X_{\sim}	4		1	1						1						See M160 (reverse), M466

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
366	$\bigvee \land$	6		1	1						1						See M362
367	\bigoplus_{\pm}	7		1	1						1						See M138, M272
368	Ţ.	8		1	1						1						See M246, M369, M540
369	\downarrow	6		7	7			1			4					2	See M246, M368, M540
370	+->>	7		2	7			7									See M410, M411

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
371	$\overset{\times\times}{\rightarrowtail}$	5		1	1						1						See M276, M679, M680
372	<u></u> <u> </u>	8		1	1			1									See M293
373		6		2	2						2						
374		6		2	2						2						See M453, M465, M555, M563, M568
375	X	7		17	39			31			8						See M002, M432, M607

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
376	Ŵ	5		2	3	2					1						See M357
377		3	Y	1	1	1											See M534
378		10		1	1						1						
379	$+ \times$	4	Y	3	3			3									See M125, M165, M386, M405, M422
380		3	Y	2	2										2		

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
381	+->	3	Y	1	1			1									See M260, M479
382		4		1	1						1						See M071, M331, M681
383		4		1	1										1		See M034, M416
384	A.	8		1	1						1						See M621
385		3		4	4						4						See M144, M444

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
386	~~	3	Y	3	3			2							1		See M125, M141, M165, M405, M422
387		5		1	1						1						See M218, M281, M292
388	\downarrow	3	Y	1	1						1						M395
389		4		1	1	1											See M028, M493
390		7		1	1											1	See M397

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
391	+	4		1	1						1						See M233, M256, M259, M311, M665
392	V	4	Y	1	1						1						See M010, M528. Possible modified mark, or vertical line cut in error.
393	\bigvee	5		1	1	1					1						
394		3		1	1										1		See M203, M270
395	+	3	Y	1	1										1		See M033, M532

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
396	\bigwedge	6		1	1						1						See M182, M278, M348, M350, M351, M352 M413, M488, M495 M512
397	$\bigwedge_{\longleftarrow}$	6		2	2						1				1		See M323
398	$\int_{-\infty}^{-\infty}$	5	Y	1	1						1						See M110, M430, M528
399		6		1	1						1						See M010
400	1	5		3	8						8						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
401	>	4		5	5						5						See M245 (reverse)
402	1	3		6	29	1					28						See M498, M562 (reverse), M581, M630
403	+	6		1	1						1						See M293
404	+	5		1	1						1						
405	X	4		1	1										1		See M125, M165, M379, M422

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
406	Δ	5		1	1		1										See M411
407		8		1	1						1						
408	\bigwedge	5		1	1	1											
409	+	4	Y	1	1						1						
410		6		4	7						3					4	See M277

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
411	R	5		3	5		4				1						See M406, M685
412	\sum	7		1	1						1						See M099, M149, M278, M423,
413	\bigwedge	6		1	2										2		See M182, M278, M348
414	$\langle \rangle$	6		1	1				1								See M261
415	\swarrow	4		2	5										5		

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
416	\checkmark	5		1	1										1		See M128, M272, M482
417	X	4		1	1										1		See M009, M055
418	$[\bigwedge]$	8		1	1						1						
419	\bigwedge	5		14	19	7		1			11						See M225, M317, M319, M342
420		5		1	1						1						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
421		6		1	1						1						See M339, M524
422	+	4		1	1						1						See M125, M141, M165, M370, M379, M386, M405
423		7		2	2	1					1						See M099, M412, M446
424	\times	4		2	4						4						See M079
425	\wedge	4		1	1						1						See M154, M180, M269

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
426		5	Y	1	1						1						See M035, M443
427	\bigwedge	4		1	1										1		See M396, M660
428	\bigvee	5	Y	10	13						8				4	1	See M001, M106, M148, M530
429	\bigvee	4		1	1										1		
430	\bigwedge	4	Y	2	2						2						See M010, M110

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
431		7		1	1						1						See M105, M255, M258 M273
432	A	4		1	1										1		See M002, M607, M682
433	$\overline{\mathbf{x}}$	4		2	2						1	1					See M148, M469, M485, M522
434		4		3	12										12		See M218, M281, M487
435		5		1	1						1						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
436	\int	4	Y	1	1						1						See M010, M063, M399
437	+	8		1	3						3						
438	\bigwedge	4		1	1										1		
439	7	5		1	1										1		See M115, M134, M268
440	\checkmark	4		1	1										1		

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
441	\square	5		1	1										1		
442		5		2	2										2		
443	X	5	Y	4	5	4									1		See M018, M035, M075, M314
444		4		2	2						1					1	See M144, M385
445		6		1	1						1						One of only 6 marks with curved lines. 2 iterations, so probable mark.

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
446	$\sum_{i=1}^{n}$	4		1	1						1						See M099, M419, M412, M423
447	$\bigvee_{i=1}^{i}$	5		1	1										1		See M050, M074, M277, M293, M410
448	$+ \checkmark \checkmark$	4		1	1										1		
449		4		1	1						1						See M134, M268 M439
450	$\langle \!$	5		1	1						1						See M095, M519

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
451	<u>~~~~</u>	6		1	1			1									See M543
452		4		1	1										1		
453	\mathbf{M}	6		1	1	1											See M337
454	+ 1	3		1	1			1									See M281
455		6		1	1						1						See M018, M035, M075, M314, M615, M619

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
456		6		1	1	1											
457	\bigvee	6		1	1			1									See M261, M273, M406, M411
458		5		1	1								1				
459	\mathbf{X}	4		1	1	1											See M598
460		9		1	1								1				

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
461	$A_{\mathcal{V}}$	5		4	4						4						See M217 (reverse)
462		6		1	1						1						
463	M	4		1	1						1						
464		7		1	1						1						See M275, M325, M344
465	\mathbf{M}	9		1	3								3				See M555

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
466	\neq	3	Y	4	4						2				2		M065, M105, M156, M190, M226, M255, M258, M261, M315,
467		7		1	1											1	See M175, M473, M481
468	\mathbf{x}	6		1	1				1								
469	\downarrow	4		2	2	1										1	See M106, M433, M485, M522
470	\bigotimes	6		1	1						1						See M476, M477

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
471		4		1	2						2						See M240 29, M231
472	IХ	6		1	1			1									See M375
473		8		1	2					2							See M175, M467, M481
474		8		1	2											2	
475		3		1	1						1						See M487

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
476	\bigotimes	6		1	1						1						M470, M477
477	$\langle \langle \rangle$	6		1	1						1						M470, M476
478	\searrow	3		2	2			1			1						See M226
479	${\longleftrightarrow}$	4	Y	1	1						1						See M010, M187
480	///	4	Y	1	1									1			See M347 (reverse), M517, M574,

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
481		8		1	1											1	See M175, M467, M473
482	\Diamond	5		1	1											1	See M128, M416, M643
483	\vdash	4		1	1			1									See M173, M440
484		10		1	1											1	
485	¥	5		2	3											3	See M433, M469, M522

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
486	\mathbb{M}	5		1	1							1					See M359
487		3		2	2											2	See M218, M281, M434
488		6		1	1											1	See M278, M348, M350, M351, M352, M413, M495, M512, M640
489	+	10		2	3											3	See M100, M519
490	\bigvee	5		1	1											1	

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
491	M	5		1	1											1	
492	\searrow	3		1	1	1											One of only 6 with curved lines. Possible graffiti.
493	X	4		1	1											1	See M028, M390
494	$\left\{ \begin{array}{c} \\ \\ \end{array} \right\}$	5		1	1						1						
495	M	5		17	17					2	11		2			2	See M182, M278, M348, M350, M351, M352, M413, M488, M512, M640

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
496	\bigtriangledown	4		1	1			1									See M500
497	\bigwedge	3		1	1											1	
498	\backslash	3	Y	2	2	1		1									See M402, M562, M581, M630
499	$\sum_{i=1}^{n}$	4	Y	3	4					1	3						M105, M255, M261, M315, M466,
500	X	6		1	1											1	See M496

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
501	\bigvee	4	Y	1	1			1									See M125, M165, M405, M501
502	+	6		1	1											1	
503	${\triangleleft}\times{\succ}$	9		1	2											2	
504	$\triangleleft \diamondsuit$	7		1	1											1	
505	++~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	6		1	1			1									See M379, M386, M405,

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
506		4	Y	1	1											1	See M553
507		4		1	1											1	
508	\mathcal{M}	6		1	1						1						
509	-t-	3		1	1			1									
510		6		1	1						1						See M128

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
511	\checkmark	5		1	1											1	
512		6		1	1											1	M182, M278, M348, M350, M351, M352, M413, M488, M495, M640
513		8		1	1											1	See M308
514		6		1	1	1											
515	\mathcal{A}	5		1	1											1	See M521

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
516		8		1	1						1						
517	//	4		1	1											1	See M347, M480, M574
518	$\langle - \rangle$	4	Y	1	2	1		1									See M010, M313
519	¥	5		1	1											1	See M100
520	1	4	Y	1	1						1						See M271, M612

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
521	\mathcal{A}	6		1	1											1	See M515
522	+	4		3	3						1					2	See M469
523	$\overset{\times}{\succeq}$	6		1	1						1						See M618
524		4		1	1											1	See M281, M339
525	\times	4		1	1											1	See M021

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
526	\swarrow	4		2	2			1							1		See M554
527	\bigtriangledown	4		2	3	1					2						
528		6		1	1											1	
529	X	4	Y	1	1											1	See M586
530	$\langle \langle \rangle$	6		3	3	1					1				1		

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
531	4	4		1	1											1	
532	+	3	Y	1	1											1	See M033, M395
533	\times	4		1	1						1						
534		2		24	29	7		2			12					8	
535	T	5		1	1			1									

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
536	×	3	Y	1	1											1	
537		4		1	1						1						
538	\checkmark	3		1	1											1	See M562, M581, M630
539	\nearrow	3		1	1											1	
540	\bigvee	5		16	16	3					9					4	See M246, M368

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
541		5		1	1						1						
542	\checkmark	4		1	2						2						See M212, M551
543	¥	7		1	1			1									See M419, M541
544	\mathbb{W}	5		1	1		1										See M175, M467, M473, M481
545	$\overset{\texttt{M}}{\vdash}$	9		1	1						1						See M103, M519

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
546		7		1	1						1						See M331
547		6		1	1						1						
548		5		1	1						1						
549	4	4		1	1						1						See M552
550	\times	3	Y	2	2						2						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
551	\bigtriangledown	4		3	3						3						See M429, M527, M542, M569
552	4	4		1	1						1						See M549
553	A	3		1	1						1						See M506
554	\uparrow	3		1	1						1						See M526, M586, M647
555	\varkappa	5		1	2						2						See M374, M453

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
556		6		1	5						5						See M119, M579
557		7		2	2						2						See M588
558	Z	4		1	1						1						
559	X	6		1	1						1						
560	\bigotimes	6		1	1						1						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
561	T	3		1	1						1						See M576, M594
562		3		3	3	1					2						See M402 (reverse), M498, M581, M630
563	\searrow	5		2	3						3						See M374, M465, M568
564		4		1	1						1						
565	_ _	3		1	1						1						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
566		6		1	1					1							
567	(γN^{+})	8		1	1					1							See M577
568	\mathcal{X}	4		1	2					2							See M374, M453, M465, M555, M563
569		6		1	1	1											
570		5	Y	1	1					1							M110, M241, M436, M588, M617

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
571	ŧ	4		9	18	10					5				3		See M203, M270, M347, M394, M480, M517
572	\square	5		1	1						1						
573	$\times \times$	4		1	1											1	See M079, M563
574	\bigwedge	4		1	3						3						See M039, M126, M347
575		9		1	1						1						See M503, M620

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
576		4		1	2						2						See M067, M264, M561
577		6		1	1						1						See M635, M662
578	\bigvee	4	Y	1	1			1									See M071, M187, M479
579	+//-	5		3	5						5						199, M556
580	T	4		1	1						1						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
581	\checkmark	3		1	1						1						See M498, M562 (reverse), M630
582	$\langle \rangle$	5		3	5						5						See M570, M588, M617
583		3		1	1						1						See M094 (reverse), M129 (reverse)
584	X	3		1	1			1									See M192, M327
585		3		1	1						1						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
586	\nearrow	4		1	1						1						See M023, M173, M209, M526, M554, M647
587	A	8		1	1	1											
588	$ \rightarrow \rightarrow$	7		1	1						1						See M557, M567
589	X	5		1	1						1						See M226, M255, M261, M266, M315, M466, M499,
590		8		1	1			1									

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
591	<u>₹</u>	8		1	1						1						
592		6		1	1						1						
593	~ ~ +	6		1	1						1						
594		4		1	1			1									See M404, M561
595		3		1	1						1						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
596	F	4		1	2						2						See M281, M561, M576, M668
597	\square	4		1	1			1									
598		5		1	1						1						See M296, M603
599	\sum	4		1	1						1						See M018
600		3		1	2							2					See M028, M389, M493

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
601	M	5		1	1						1						See M127, M275
602	L.	4		1	8						8						
603	\mathbf{X}	4	Y	1	4						4						See M296, M598
604	\sum	4		1	1						1						
605		4		1	1						1						See M018, M035

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
606		3		5	12	10					2						See M253, M626
607	\neq	4		1	1						1						See M002, M432, M682
608	$\stackrel{\bigcirc}{\searrow}$	5		1	1						1						One of only 6 marks with curved liens. Possible graffiti modification by addition of curved line. See M010.
609	4	4		1	1						1						
610	\prod	3		1	1						1						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
611	\bigotimes	8		1	3							3					
612		3	Y	2	2						2						See M057, M686
613		11		1	1						1						See M048
614	$\overset{\clubsuit}{\searrow}$	7		1	1						1						See M659
615		7		1	2						2						See M619

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
616	K	6		1	1							1					
617		4	Y	1	1						1						See M436, M570, M588, M635
618		6		1	1						1						See M523
619		8		1	1						1						See M615
620	${\circledast}$	10		1	1						1						See M575

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
621		8		2	3						3						
622	\downarrow	5		1	1						1						See M128, M416, M482, M510
623		5		1	1						1						See M003
624	A	4		1	1						1						
625	\bigvee	5		1	1						1						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
626		3		2	2						2						See M626
627	+	3		2	2						2						
628	+Z/	6		1	1						1						
629		7		1	1						1						
630		4		1	1						1						See M498, M562 (reverse), M581

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
631		3		1	1						1						M065, M226, M499,
632		5		1	1						1						See M287
633		3	Y	4	8						2				6		See M356
634	X	3		1	1		1										See M279, M283
635	11 >>	6		1	1						1						See M436, M570, M588, M617

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
636	$\forall \forall$	5		1	1						1						See M303, M326, M527, M542, M551
637	+	6		1	1						1						See M267, M278, M348, M350, M351, M352, M413, M488, M495, M512, M539, M640
638		5		1	1						1						See M363
639		4		1	2						2						
640		7		1	1						1						See M267, M278, M348, M350, M351, M352, M413, M488, M495, M512, M539, M637

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
641	\bigwedge	6		1	2						2						See M052, M059, M174
642		4		1	1						1						
643	\bigwedge^{1}	6		1	1		1										See M416, M482
644		3		3	3						3						See M194, M329
645		6		1	1						1						

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
646	\mathbf{i}	4		1	1						1						See M125, M165, M379, M386, M405, M422
647	\nearrow	4		1	1		1										See M023, M173, M209, M526, M554, M586
648		6		1	1						1						
649	Ŧ	5		1	1					1							
650		4		1	1						1						See M002

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
651	+	3	Y	1	1						1						
652	\mathcal{N}	3		2	3	1									2		See M415, M534
653		6		1	1	1											
654	K	4		1	1			1									
655		4		1	2						2						See M208

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
656	$\bigwedge_{i \in \mathcal{I}}$	7		1	1						1						See M246, M368
657	X	6		1	1			1									See M125, M165, M379, M386, M405, M422, M505
658		9		1	1						1						See M182, M348, M350, M351, M352, M413, M512, M640
659	${}$	7		1	1						1						See M613
660	A	6		1	1						1						See M427

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
661	$\mathbf{\mathbf{x}}$	5		1	1						1						See M079, M424
662		6		1	1						1						See M067, M264
663	Ŧ	5		1	1						1						
664		4		1	1						1						See M676
665	++++	6		1	1	1											See M233, M256, M259, M311, M667

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
666		7		2	2						2						See M577, M582, M588
667		6		1	1						1						See M233, M256, M259, M311, M665
668		3	Y	1	1						1						See M281, M561
669		4		1	1						1						See M675
670		4		4	4			2			1				1		

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
671		6		1	1						1						See M149, M412, M423, M446
672	$\bigwedge \!$	5		1	1						1						See M003, M162, M198, M508
673		10		1	1						1						
674		4		1	1						1						See M439
675		5		1	1						1						See M669

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
676	\bigvee	5		1	1						1						
677	+	6		1	1						1						See M149, M412, M446
678	\square	4		1	1						1						
679	X	5		1	1						1						See M276, M371, M680
680	\mathbf{x}	4		1	3						3						See M276, M371, M679

Appendix 1

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
681	$\stackrel{\wedge}{+}$	5		3	5			1							4		See M133, M331
682	X	5		1	1						1						See M002, M432, M607
683	X	4	Υ	1	1	1											See M050, M271
684	X	7		1	1						1						
685	$\sum_{i=1}^{n}$	8		1	1			1									See M411

Appendix 1

Numerical index of masons' marks

Mark No.	Mark form	No. of lines	Mark of possible Runic origin?	Total No. of variations	Total No. of occurrences	Bothwell Castle	Caerlaverock Castle	Crossraguel Abbey	Dirleton Castle	Dryburgh Abbey	Glasgow Cathedral	Glenluce Abbey	Jedburgh Abbey	Kelso Abbey	Melrose Abbey	Paisley Abbey	Comment
686		2	Y	1	1						1						See M056, M057, M181, M612
687	\checkmark	3	Y	1	1						1						See M218, M281, M454
688	\square	6		1	2						2						
689	$\stackrel{-}{}$	7		1	1						1						

TOTAL MARK FORMS: 689

Appendix 2

Index of marks by form and shape

Marks have been indexed by form and shape, based on their similarity to letters of the Roman alphabet, or geometric shapes. Their categorisation is based on the shape to which they are most similar. This is, potentially, subjective; for example, M271, included as a Letter M form, may also be a Letter W form, depending on orientation. Marks are shown in proportion, but not to scale.

Letter A forms	\bigwedge	X	A	Å	Å	\swarrow		A	\land	$\left \bigwedge \right $	
	M030	M107	M132	M194	M329	M354	M396	M427	M497	M660	
Letter B forms		X									
	M045	M068	M250								
Letter H forms		/ /									
	M094	M129	M169	M222	M231	M240	M356	M583	M633		
							· · · · · · · · · · · · · · · · · · ·				

Letter M forms	M	M					M					
	M022	M060	M271	M287	M293	M403	M428	M632				
	I					Γ	Γ	T		1		
Letter N forms		\searrow			\sum	\square	1/		\bigwedge		M	
	M009	M034	M053	M055	M127	M253	M275	M325	M344	M358	M359	M383
						1	1		1	1		
Letter N forms (continued)	K	M	$\left \right\rangle \\$				11					
	M417	M418	M420	M452	M464	M486	M601	M606	M626			
								-		-		
Letter R forms	$\left\{ \right.$											
	M245	M401										

Appendix 2

Letter S forms		1		\leq								
	M092	M120	M228	M289	M449	M604						
Letter T forms			\rightarrow		-	ļ			\square			Ţ
	M067	M074	M104	M119	M145	M179	M218	M219	M247	M264	M265	M277
Letter T forms (continued)	\bigwedge				7-1			M	+-1	T		
	M281	 M292	M363			M410	 M434	M447	нарана М454	T M561	M576	M594
	M281	 M292	M363				 M434		н М454	Т М561	M576	M594
	M281	 M292	M363				 M434		M454	Т M561	M576	M594
(continued)	M281	M292	M363				 M434		M454	Т М561	M576	M594

Letter U forms												
	M208	M655										
Letter V forms			\bigwedge		><		+					
	M012	M014	M020	M073	M081	M085	M097	M099	M130	M149	M154	M180
Letter V forms (continued)		X	t t							\forall		
	M182	M189	M193	M200	M206	M220	M229	M267	M269	M274	M278	M286
Letter V forms (continued)		$\widehat{}$			\bigvee		$\overline{\mathbf{A}}$					
	M294	M304	M320	M337	M341	M348	M349	M350	M351	M352	M362	M366

Letter V forms (continued)		K		\sum	\bigwedge	$\langle \rangle$		\wedge		$+ \checkmark$	\mathcal{M}	X
	M374	M376	M377	M412	M413	M415	M423	M425	M446	M448	M453	M465
		1		<i>k</i> (N	_				1	<u> </u>
Letter V forms (continued)		\checkmark	A		\times		\mathbb{V}	$ $ \times	\mathcal{M}			
	M488	M490	M495	M512	M533	M534	M544	M555	M563	M568	M602	M640
								I		1		
Letter V forms (continued)	\mathcal{N}		$\sum_{i=1}^{n}$									
	M652	M658	M671									
Letter W forms	\mathbb{N}		\bigvee							\searrow		\square
	M003	M050	M100	M103	M147	M157	M162	M168	M175	M198	M246	M252

Letter W forms (continued)			\downarrow	<u></u> ≩_+<		X		M	¥	₹—	M	\bigwedge
	M357	M368	M369	M372	M467	M473	M481	M508	M519	M540	M545	M672
	,											
Letter W forms (continued)		\boxtimes										
	M623	M683										
Letter X forms	${}$		\succ	\prec	\times	\times			$\overline{\mathbf{X}}$			
	M013	M046	M065	M078	M079	M091	M095	M098	M102	M105	M111	M112
			Γ				Γ	Γ		Γ		1
Letter X forms (continued)	\swarrow	\succ +	$+ \times$		\searrow	\searrow	+><	\sim	1	X	чХH	4
	M123	M125	M141	M150	M156	M160	M165	M171	M190	M195	M197	M223

Letter X forms (continued)		λ		X		H H	\ge	$\sum_{i=1}^{n}$	$\left \right\rangle$	$\langle \rangle$	$\overset{\times}{\searrow}$	$\underbrace{}_{}$
	M224	M226	M237	M242	M243	M255	M258	M261	M266	M273	M276	M290
Letter X forms (continued)		\mathcal{N}	×	\rightarrow	\swarrow	\mathbf{x}	\mathbb{N}	X	+->>	$\overset{\times}{\succ}$	$+ \times$	
	M299	M315	M316	M332	M334	M346	M353	M365	M370	M371	M379	M380
					-							
Letter X forms (continued)	\prec	$\left \right\rangle$	X	\sum		$\langle \rangle \langle \rangle$	+	$\times\!\!\!\times$		$ \checkmark \!\!\!/$		1
	M386	M400	M405	M406	M411	M414	M422	M424	M431	M450	M457	M466
	T					I	I		I	I	I	
Letter X forms (continued)	$\left \right>$	\sum	$\mathbf{\mathbf{k}}$	$+ \rightarrow$	A	\times	×		\times	X		£
	M478	M499	M501	M505	M509	M525	M536	M537	M573	M589	M605	M609

Letter X forms (continued)	\mathbf{X}		$\left \right\rangle$	+	X		X	\times	$\sum_{i=1}^{n}$	\mathbf{X}		
	M611	M631	M646	M651	M657	M661	M679	M680	M685	M687	M689	
								1				
Letter Y forms	\bigvee	$ \uparrow\rangle$	Y	\searrow		Ĭ	M		×	\checkmark	\approx	$\sum_{i=1}^{n}$
	M001	M017	M051	M069	M106	M142	M148	M166	M235	M262	M291	M308
Letter Y forms (continued)	$\sum_{i=1}^{n}$	X	¥ +	\bigvee_{\pm}	\bigvee	\downarrow						
	M393	M433	M469	M485	M513	M522						
Letter Z forms	X	1		7								
	M083	M114	M144	M196	M385	M444						

Arrow forms	$\left \uparrow \right $		\mathbb{V}	\times	+	\mathbb{X}			\downarrow		1	
	M010	M048	M058	M063	M071	M082	M110	M116	M133	M151	M176	M187
								[Φ			
Arrow forms (continued)	$\bigwedge_{\mathbb{A}}$	\bigwedge	R	$\bigwedge \downarrow$	+	×	\wedge	L L				
	M213	M225	M238	M241	M257	M288	M296	M300	M309	M313	M317	M319
	1	1					1			1	1	
Arrow forms (continued)		+///>		->	$\bigcap_{i=1}^{n}$	\bigwedge		\forall	\int		\longrightarrow	
	M323	M328	M331	M339	M340	M342	M382	M392	M398	M399	M419	M421
	1	1	[]		r		T	I		T	T	
Arrow forms (continued)	$\left \begin{array}{c} \uparrow \\ \uparrow \end{array} \right $	Ţ	~~~>	$\bigwedge \bigvee$	VT	\mathbf{A}		$\langle \rangle$			↓ ↓	A +
	M430	M436	M451	M462	M463	M468	M479	M518	M524	M528	M543	M546

Arrow forms (continued)	$\langle \langle \langle \langle \rangle \rangle$	TNT)	\downarrow		\rightarrow	$\langle \rangle$	\mathbf{x}		\bigcirc		\bigwedge	
	M557	M567	M570	M577	M578	M582	M587	M588	M608	M613	M614	M617
Arrow forms (continued)			TT 7	$\overbrace{}$		\bigwedge	${\longleftrightarrow}$	$\leftarrow \times \leftarrow$				
	M622	M625	M635	M645	M648	M656	M659	M666	M670	M681		
		l .					[
Cross forms					_M			N			+	$\geq \mid _$
	_ 	1		I	+	1						
	M033	Л M037	M038	M041	+ M054	۲ M089	M109	M113	M117	—— M136	M155	 M161
		M037	M038	M041	'	۲ M089	M109	M113	M117	 M136		M161
Cross forms (continued)	+ M033	✓ M037	M038	M041	'	1 M089	M109	M113	M117			M161
		Ŷ	M038	M041	M054	1 M089	M109	M113		M136		M161

Cross forms (continued)	+					+	+	+->	T	H-	1	+
	M285	M298	M302	M310	M311	M321	M327	M381	M388	M391	M395	M409
	1					[
Cross forms (continued)				$\widetilde{+}$	$\overline{\mathbf{A}}$			┍╶╁╴			$\left \right\rangle$	< 2+
	M437	M475	M487	M489	M507	M532	M556	M564	M565	M579	M584	M593
	T			Γ		Γ	ſ	Γ	T	T	T	
Cross forms (continued)			$\langle \uparrow$	+]+	<u> </u>							
	M595	M639	M642	M665	M667	M674						
	1			Γ		Γ	r	Γ	1	I	1	
Cup forms	\triangleleft											
	M492											

Diamond forms	A	\bigotimes		\bigwedge	\rightarrow	¢	\rightarrow		$\begin{array}{c} & & \\ & & \\ & \pm \end{array}$	\bigcirc		$\vdash $
	M019	M029	M042	M049	M064	M086	M108	M128	M138	M140	M183	M188
Diamond forms (continued)		\bigwedge	\mathbf{A}	\Diamond	\swarrow	\bigoplus_{\pm}		\checkmark	₽-�-	\bigotimes	\Diamond	\bigtriangledown
	M214	M234	M272	M306	M312	M367	M407	M416	M460	M470	M476	M477
									1		1	
Diamond forms	\diamond	\triangleleft	\times	\Diamond	\bigcirc	1	\diamond					
(continued)		\diamond		$\langle \rangle$	\searrow	\diamond						
	M482	M504	 M510	M530	M560	M643	M673					
	M482		 M510	M530	M560	M643	*					
	M482		 M510	M530	M560	M643	*					
(continued)	M482		 M510	M530	M560	M643	*					

Appendix 2

Ladder forms			+++	Ť.								
	M032	M036	M118	M167	M186	M471						
	1		Γ	I		1		r	r		r	1
Miscellaneous forms	\bigvee	H		A						4		N
	M004	M027	M031	M039	M047	M056	M057	M062	M077	M084	M087	M088
			1					1			1	
Miscellaneous forms (continued)	\land	×4	2				\searrow	1			N	
	M101	M126	M137	M158	M181	M201	M202	M203	M211	M215	M221	M232
			1									
Miscellaneous forms (continued)											Ŵ	
	M236	M244	M270	M284	M305	M318	M324	M338	M343	M345	M347	M355

Miscellaneous forms (continued)	T-A-		A			1	K		H.		//	
	M360	M361	M364	M373	M378	M394	M438	M445	M456	M480	M517	M520
Miscellaneous forms (continued)		$\overline{\mathcal{M}}$			X	$\left \right\rangle$	7	ŧ	1	A	T	, \ \ /
	M535	M539	M541	M547	M548	M550	M558	M571	M572	M574	M580	M591
Miscellaneous forms (continued)	\bigtriangledown		I	A	+	2/	+	Ŧ	K	Ŧ	K	
	M597	M612	M616	M624	M627	M628	M637	M649	M654	M663	M684	M686
	•	Г										
Miscellaneous forms (continued)	M688											

Rectangle forms	\bigwedge											
	M040	M124	M131	M163	M248	M566	M653					
Square forms	\bigoplus		\bigcirc									
	M007	M080	M121	M184								
	•											
Star forms		+	\prec	\rightarrow		\sum	A		×	A	$\not>$	\bigvee
Star forms	M002	M016	M021	M072	M076	M135	M170	M205	M375	M432	M607	M682
Star forms	M002	M016	M021	M072		M135	M170	M205	M375	M432	M607	M682
Star forms	M002	M016	M021	M072		M135	M170	M205	M375	M432	M607	M682
		M016	M021	M072		M135	M170	M205	M375	M432	M607	M682

Triangle forms	\square								X	\sum	$\left \begin{array}{c} \\ \end{array} \right $	
	M005	M006	M008	M011	M015	M018	M023	M024	M025	M026	M028	M035
		,										
Triangle forms (continued)	×	X	\bigwedge					$\left \right\rangle$		\mathcal{A}	×	
	M044	M052	M059	M061	M066	M070	M075	M090	M093	M096	M122	M139
	I	I	1		I	I	I	1	I	1	1	
Triangle forms (continued)		A	\mathbf{X}	\bigtriangledown	λ		4-	$\neg \bigtriangledown$		× ↓		\bigtriangledown
	M143	M146	M152	M153	M159	M164	M172	M173	M174	M177	M207	M209
	1	1			1	1	1		1			
Triangle forms (continued)		\bigwedge	\checkmark	Ą	\bigtriangledown	\mathbf{X}			A			$\forall \top$
	M210	M212	M216	M217	M230	M239	M249	M254	M263	M279	M280	M282

Triangle forms (continued)	X		\swarrow	\mathbb{A}	Ŧ				\bigvee	X	A	\bigwedge
	M283	M295	M297	M301	M303	M307	M314	M322	M326	M330	M333	M335
Triangle forms (continued)	X	4	\mathbf{F}		\bigwedge_{\bigwedge}	Δ	\bigwedge			Δ	√-↓-	\bigvee
	M336	M384	M389	M390	M397	M402	M408	M426	M429	M435	M440	M441
Triangle forms (continued)		X	$\left \right\rangle$		\bigwedge	4	\mathbb{A}	X	\vdash		A	×
	M442	M443	M455	M458	M459	M461	M472	M474	M483	M484	M491	M493
Triangle forms (continued)	$\left\{ \right\}$	\bigtriangledown		X		$\overset{\frown}{\times}\overset{\times}{\triangleright}$	2	\checkmark	X	\mathcal{A}		\mathcal{A}
	M494	M496	M498	M500	M502	M503	M506	M511	M514	M515	M516	M521

Index of marks by form and shape

Triangle forms (continued)	$\sum_{i=1}^{n}$	\swarrow	\bigtriangledown	K	-4	\triangleleft	\bigtriangledown	4	\bigtriangledown	4	À	$\left \right\rangle$
	M523	M526	M527	M529	M531	M538	M542	M549	M551	M552	M553	M554
		[[
Triangle forms (continued)	Ŕ				\searrow		\nearrow		$\langle \rangle$	\mathbf{X}	\square	
	M559	M562	M569	M575	M581	M585	M586	M590	M592	M598	M599	M600
		1	1				I	I		I	1	
Triangle forms (continued)	\mathbf{X}	$\sum_{i=1}^{n}$	\sum		${}}{}{}{}{}{}{}{}{}{}{}{}{}{}}{}{}}{}{}}{}{}{}}{}{}{}}{}{}}{}{}{}}{}{}{}{}{}{}{}{}}{\overset$				X	$\overline{\checkmark}$	\mathbb{A}	
	M603	M615	M618	M619	M620	M621	M629	M630	M634	M636	M641	M644
		Γ				I	Γ	Γ		Γ	Γ	
Triangle forms (continued)	\nearrow											
	M647	M650	M664	M669	M675	M676	M677	M678				

TOTAL IMAGES: 689

Appendix 3

Index of marks by line per mark

Marks have been indexed by the number of lines. Marks are shown in proportion, but not to scale.

2 lines			\searrow	\times	\bigwedge							
	M041	M057	M069	M078	M101	M111	M201	M236	M281	M284	M298	M345
	,		Γ	1		ſ	Γ				Γ	
2 lines (continued)	$\left \right\rangle$											
	M534	M686										
3 lines	\uparrow	\bigwedge	$\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{$			+	+	Ý		$\mathbf{n}_{\mathbf{n}}$	\times	
	M001	M010	M021	M028	M033	M037	M038	M051	M056	M058	M065	M066

Appendix 3

M070 M085 M089 M092 M093 M094 M098 M102 M106 M109 M112 M114 3 lines (continued) I	3 lines (continued)		\bigvee				Ν		\overline{X}				1
$(continued) \downarrow \downarrow$		M070	M085	M089	M092	M093	M094	M098	M102	M106	M109	M112	M114
$(continued) \downarrow \downarrow$						1	1	1	1				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			+	$\overline{\mathbf{A}}$	A	\mathbf{X}	\searrow	λ		\prec		\rightarrow	\swarrow
(continued) + A A F V F A F V F A F V F A F V F A F V F A F V F A F V F A F V F A F V F A F V F V		M116	M136	M143	M146	M152	M156	M159	M166	M173	M181	M189	M190
(continued) + A A F V F A F V F A F V F A F V F A F V F A F V F A F V F A F V F A F V F A F V F V						1	1	1	1				
		1	Å				\bigtriangledown		\bigwedge			\bigwedge	
3 lines (continued)		M191	M194	M203	M204	M208	M209	M211	M215	M218	M219	M226	M231
3 lines (continued)						1	1	1	1				
M253 M260 M270 M279 M283 M292 M299 M302 M305 M327 M329 M339			\times	//	\rightarrow	X					+	\bigwedge	_ >
		M253	M260	M270	M279	M283	M292	M299	M302	M305	M327	M329	M339

3 lines (continued)	\swarrow					+->			T	7	\mathbf{x}	1
	M354	M356	M361	M377	M380	M381	M385	M386	M388	M394	M395	M402
3 lines (continued)	+-1	1		$\Big\rangle$		\mathbb{R}	\bigwedge	<u> </u>	A	+	X	\triangleleft
	M454	M466	M475	M478	M487	M492	M497	M498	M509	M532	M536	M538
			r			r		1	Г	Г		1
3 lines (continued)	\nearrow	\rightarrow	A	$\left \right $	T			\checkmark		\times	Ň	
	M539	M550	M553	M554	M561	M562	M565	M581	M583	M584	M585	M595
			Γ			Γ		I	Γ	Γ		1
3 lines (continued)	A					+			X		+	$\left \right\rangle \right\rangle$
	M600	M606	M610	M612	M626	M627	M631	M631	M634	M644	M651	M652

3 lines (continued)		X										
	M668	M687										
4 lines			4	<			$\forall $		\bigwedge		H	\bigwedge
	M003	M004	M005	M006	M012	M014	M017	M018	M020	M023	M027	M030
,			1			1	1					1
4 lines (continued)		$\frac{1}{1}$	\mathbf{X}	\bigwedge		\geq		$ \downarrow $	\sum	+		\succ
	M034	M043	M046	M049	M050	M053	M055	M061	M068	M072	M079	M081
			1			1	1					1
4 lines (continued)	X	4	Ĺ		\times	X			4		4	
	M083	M084	M087	M088	M090	M107	M110	M113	M117	M118	M120	M129
·												

4 lines (continued)			\Diamond			X		\triangleleft		\times		
	M130	M131	M140	M144	M145	M150	M151	M153	M157	M160	M161	M169
			1					r	I	r		
4 lines (continued)	4-				7				N		4	Ł
	M172	M182	M187	M192	M196	M205	M207	M210	M221	M222	M223	M227
			ſ				Γ	ſ	ſ	ſ	ſ	
4 lines (continued)	1	\bigtriangledown		R			$\sum_{i=1}^{n}$	$\left \right\rangle$			H	
	M228	M230	M243	M245	M250	M254	M261	M266	M269	M271	M274	M275
			Ι				Γ				Γ	
4 lines (continued)	$\overset{*}{\searrow}$	+	\leq	\rightarrow	\sim	\Diamond	\mathbf{X}	+ /-,	1	X	\swarrow	\times
	M276	M285	M289	M290	M294	M306	M315	M321	M322	M330	M334	M337

4 lines (continued)	$\bigcap_{i=1}^{n}$			\sim	Ŵ	$\bigcirc \bigcirc$	\mathbb{N}	\bigwedge	K	λ	$+\times$	
	M340	M343	M344	M346	M347	M349	M353	M362	M364	M365	M379	M382
										1		1
4 lines (continued)				V		X	\downarrow		X	*	$\times\!\!\!\times$	\bigwedge
	M383	M389	M391	M392	M401	M405	M409	M415	M417	M422	M424	M425
					1			1		1	I	
4 lines (continued)	A		\bigvee	\triangle	Ţ			$\left \right\rangle$	\checkmark		$\left \right\rangle$	
	M427	M428	M429	M430	M433	M434	M436	M438	M440	M444	M446	M448
				T	ſ			T		1	Γ	
4 lines (continued)			\searrow	\downarrow		+		$\vdash \!$	X	\bigtriangledown	$\sum_{i=1}^{n}$	$\mathbf{\mathbf{k}}$
	M449	M452	M459	M469	M471	M479	M480	M483	M493	M496	M499	M501

4 lines (continued)	2	$\overline{\mathbf{A}}$	//	\leftarrow	1	+	Ý	\times		\bigtriangledown	X	4-
	M506	M507	M517	M518	M520	M522	M524	M525	M526	M527	M529	M531
								1	1			
4 lines (continued)	\times		\bigtriangledown	4	\bigtriangledown	4	77	┍᠆ᆂ᠆	X	I	$\times \times$	Ŕ
	M533	M537	M542	M549	M551	M552	M558	M564	M568	M571	M573	M574
							1				I	
4 lines (continued)		\uparrow	\nearrow		V			$\left \right\rangle$	J.	\sum	\sum	
	M576	M578	M586	M594	M596	M597	M598	M599	M602	M603	M604	M605
							1				I	
4 lines (continued)	\neq	H		A			$\overline{1}$	\mathbf{i}	\nearrow		F	
	M607	M609	M617	M624	M630	M639	M642	M646	M647	M650	M654	M655

Appendix 3

4 lines (continued)					\triangleright	\times	X					
	M664	M669	M670	M674	M678	M680	M683					
			T				_					
5 lines				\sum		A		×	R	\mathbf{X}	\rightarrow	
	M002	M015	M016	M026	M035	M039	M042	M044	M045	M063	M064	M067
								-		-		
5 lines (continued)	$+ \rightarrow$		\mathbf{X}	\times	\bigvee	$\left(\int \right)$		\bigcirc	>+	<u>A</u>	\mathbb{N}	A
	M071	M077	M082	M091	M104	M115	M119	M121	M125	M126	M127	M132
				1							1	
5 lines (continued)	2									4	\searrow	
	M137	M142	M149	M162	M164	M168	M175	M176	M180	M186	M198	M200

5 lines (continued)	\searrow			\bigtriangledown	A		\bigwedge		\searrow			
	M202	M206	M212	M216	M217	M220	M225	M229	M232	M233	M234	M239
5 lines (continued)	\bigwedge			N +	Y.	\rightarrow	\checkmark					\bigwedge
	M241	M248	M249	M251	M255	M258	M262	M264	M282	M286	M287	M288
			1									
5 lines (continued)			\rightarrow	\bigcirc	Ŧ	\checkmark	\bigvee			\bigtriangledown	\rightarrow	I
	M293	M295	M297	M301	M303	M313	M319	M320	M324	M326	M332	M333
			1	1				1				
5 lines (continued)	\bigvee	\bigwedge				M		$\overset{\times}{\searrow}$	Ŵ		\bigvee	\bigvee
	M341	M342	M355	M357	M358	M359	M363	M371	M376	M387	M393	M398

5 lines (continued)	\mathbf{k}	7-1	\square	Á	R	$\left\langle \right\rangle$	A	MX		Ā	T	\square
	M400	M404	M406	M408	M411	M416	M419	M420	M426	M435	M439	M441
		[[[[
5 lines (continued)		X	M	\forall		4	\diamond	$ $ $\stackrel{\vee}{\pm}$	\mathcal{M}	\bigvee	KA.	$\left \begin{array}{c} \\ \end{array} \right $
	M442	M443	M447	M450	M458	M461	M482	M485	M486	M490	M491	M494
		1	I			I	1	1	1		1	
5 lines (continued)	M	\checkmark	\mathcal{A}	¥		<		\mathbb{V}			XX	\int
	M495	M511	M515	M519	M535	M540	M541	M544	M548	M555	M563	M570
		1	I			I	1	1	ſ		1	
5 lines (continued)	$\overline{\mathbf{A}}$		F	$\langle \rangle$	X	\mathcal{M}				\bigvee		
	M572	M579	M580	M582	M589	M601	M608	M622	M625	M625	M632	M636

Appendix 3

5 lines (continued)		Ŧ	\rightarrow	\bigwedge			TX X	$\stackrel{\wedge}{\vdash}$				
	M638	M649	M661	M672	M675	M676	M679	M681	M682			
6 lines	\bigoplus	\bigwedge	$\hat{\mathbf{x}}$	X	X		+	+		$\sum_{i=1}^{n}$	×	Ţ
	M007	M024	M029	M047	M052	M059	M075	M097	M099	M105	M128	M133
			1			1	1	1				
6 lines (continued)		+	\sum	M		+>		+	4	A	\sim	A
	M134	M141	M147	M148	M154	M155	M158	M165	M167	M170	M171	M174
6 lines (continued)	\downarrow			×	+/77+	$\langle \! \rangle \! \rangle$	×			\square		\square
	M178	M184	M188	M195	M199	M214	M235	M237	M240	M244	M246	M247

6 lines (continued)	[K)	+++++++++++++++++++++++++++++++++++++++	F	A			\bigwedge	$\widehat{}$	${}{}{}{}{}{}{}{$		$\bigwedge^{}$	XX
	M252	M256	M259	M263	M265	M268	M273	M304	M312	M314	M335	M336
6 lines (continued)		A		\downarrow				\bigwedge	(_]]			\bigwedge
	M338	M360	M366	M369	M373	M374	M396	M397	M399	M403	M410	M413
			Γ	Γ			Γ	Γ	Γ	1		1
6 lines (continued)	$\langle \rangle$			~~~>	\mathcal{M}	$\left \right\rangle$		$\left \right\rangle$		VT	1	\bigotimes
	M414	M421	M445	M451	M453	M455	M456	M457	M462	M463	M468	M470
			Γ	Γ			Γ	Γ	Γ	1		
6 lines (continued)		$\langle \rangle$	\bigtriangledown		\mathbf{x}		++~~~	\mathcal{M}	$\overset{\times}{\sqsubseteq}$		X	\mathcal{A}
	M472	M476	M477	M488	M500	M502	M505	M508	M510	M512	M514	M521

Appendix 3

6 lines (continued)	${\nearrow}$		$\langle \! \langle \! \rangle \! \rangle$	H/		Ŕ	\bigotimes					
	M523	M528	M530	M547	M556	M559	M560	M566	M569	M577	M592	M593
6 lines (continued)	H		×Z/-	K-11	+	\land	\uparrow	Å			X	$ \mathcal{A} $
	M616	M618	M628	M635	M637	M641	M642	M645	M648	M653	M657	M660
		Γ		Γ			Γ	Γ	Γ	Γ	Γ	
6 lines (continued)		Ħ	+++++		$\sum_{i=1}^{n}$		\square					
	M662	M663	M665	M667	M671	M677	M688					
7 lines					A	M						
	M008	M009	M011	M013	M019	M025	M031	M054	M060	M062	M073	M074

Index of marks by line per mark

7 lines (continued)	$\left\langle \right\rangle$	\rightarrow		\bigwedge_{\bigwedge}	Ĭ		$\overset{\bigcirc}{\times}$	\bigwedge				
	M086	M108	M179	M213	M277	M278	M280	M296	M307	M308	M323	M325
					1			T	Γ			
7 lines (continued)	+///			$\bigoplus_{i=1}^{n}$	+->>	\bigwedge^+		\sum			A	
	M328	M331	M348	M367	M370	M375	M390	M412	M423	M431	M432	M464
									1			
7 lines (continued)		$\overset{\triangleleft}{\searrow}$	₩			$\left\langle \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	$\overset{\clubsuit}{\searrow}$	\bigwedge	Y		\bigwedge	
	M467	M504	M543	M546	M557	M588	M614	M615	M629	M640	M656	M659
			1						1			
7 lines (continued)	$\leftarrow \prec \leftarrow$	$\checkmark_{\!$	$\overset{-}{\boxtimes}$									
	M666	M684	M689									

Index of marks by line per mark

8 lines	\bigwedge	V			\ X	\sum	$\stackrel{\bigcirc}{\pm}$	×	\diamond	TH	$\sum_{i=1}^{n}$	R
	M040	M048	M080	M100	M122	M135	M138	M177	M185	M193	M224	M238
		[1	[Γ	[
8 lines (continued)			$\left \begin{array}{c} \left\langle \right\rangle \\ \left\langle \right$	•	×	Ì.↓		<u></u> ≩_+<	4		M	
	M242	M267	M272	M309	M316	M352	M368	M372	M384	M407	M418	M437
			1				1					
8 lines (continued)	X	X		γ		(1N^{+})	××		×1	\mathbf{X}		
	M473	M474	M481	M513	M516	M567	M587	M590	M591	M611	M619	M621
			1				1					
8 lines (continued)	$\sum_{i=1}^{n}$											
	M685											

Leaving a mark on history

Appendix 3

Index of marks by line per mark

Appendix 3: Page 16 of 16

9 lines	M			$\sum_{i=1}^{n}$	\prec	XX			E X L	\approx		M
	M022	M032	M095	M096	M103	M123	M139	M163	M197	M291	M300	M350
							1					
9 lines (continued)	No.	∃↔	X	×	Σ	${\downarrow}$						
	M351	M460	M465	M503	M545	M575	M658					
								I		I		
10 lines		+					$\left \begin{array}{c} & & \\ & & \\ & & \\ & & \\ & & \\ \end{array} \right $	\downarrow				
	M036	M257	M317	M318	M378	M484	M489	M620	M673			
11 lines	THE REAL		12 lines		13 lines		14 _{lines}		15 _{lines}	$\left \underbrace{\longleftrightarrow}_{\downarrow} \right\rangle$		
	M076	M613		M124		M183		M311		M310		
τοται ιΜ	AGES: 689											

Older futhark symbol	Younger futhark symbol	Older or Younger futhark origin?	Modified ? Y/N	Roman alphabet equivalent	Mark No.	No. of lines	Mark form	Bothwell	Caerlaverock	Crossraguel	Dirleton	Dryburgh	Glasgow	Glenluce	Jedburgh	Kelso	Melrose	Paisley
N	N	Both	No	u	208	3				1			1				1	2
-	ł	Younger	Y	а	033	3	+						1		1		2	
-	ł	Younger	Yes	а	118	4	+++						12					6
-	ł	Younger	Yes	а	388	3	T						1					
1	-	Older	Yes	a	498	3	<u> </u>	1										

Older futhark symbol	Younger futhark symbol	Older or Younger futhark origin?	Modified ? Y/N	Roman alphabet equivalent	Mark No.	No. of lines	Mark form	Bothwell	Caerlaverock	Crossraguel	Dirleton	Dryburgh	Glasgow	Glenluce	Jedburgh	Kelso	Melrose	Paisley
-	-11-	Younger	No	ã	270	3							2					
R	R	Both	No	r	245	4	$\left[\right]$						1					
Х	-	Older	Yes	g	021	3		17					14				2	11
Х	-	Older	No	g	078	2	X	11		4		2	54			1		31
Х	-	Older	Yes	g	098	3							1					

Older futhark symbol	Younger futhark symbol	Older or Younger futhark origin?	Modified ? Y/N	Roman alphabet equivalent	Mark No.	No. of lines	Mark form	Bothwell	Caerlaverock	Crossraguel	Dirleton	Dryburgh	Glasgow	Glenluce	Jedburgh	Kelso	Melrose	Paisley
Х	-	Older	Yes	g	102	3	$\overline{\mathbf{X}}$						1					
Х	-	Older	Yes	g	152	3	\times	1				1	14		2		16	4
Х	-	Older	Yes	g	156	3	\searrow						2				2	1
Х	-	Older	Yes	g	159	3	$\boldsymbol{\lambda}$						1					
Х	-	Older	Yes	g	160	4	\mathbf{X}						1					

Older futhark symbol	Younger futhark symbol	Older or Younger futhark origin?	Modified ? Y/N	Roman alphabet equivalent	Mark No.	No. of lines	Mark form	Bothwell	Caerlaverock	Crossraguel	Dirleton	Dryburgh	Glasgow	Glenluce	Jedburgh	Kelso	Melrose	Paisley
Х	-	Older	Yes	g	226	3	\bigwedge						1				4	
Х	-	Older	Yes	g	260	3	\times						1					
Х	-	Older	Yes	g	261	4	\searrow		1	4			17				2	
Х	-	Older	Yes	g	266	4	\mathbf{X}										3	
Х	-	Older	Yes	g	276	4	$\overset{*}{\searrow}$						2					

Older futhark symbol	Younger futhark symbol	Older or Younger futhark origin?	Modified ? Y/N	Roman alphabet equivalent	Mark No.	No. of lines	Mark form	Bothwell	Caerlaverock	Crossraguel	Dirleton	Dryburgh	Glasgow	Glenluce	Jedburgh	Kelso	Melrose	Paisley
Х	-	Older	Yes	g	334	4	\swarrow						1					
Х	-	Older	Yes	g	346	4	\mathbf{x}	1										
Х	-	Older	Yes	g	379	4	$+ \times$			3								
Х	-	Older	Yes	g	380	3	1										2	
Х	-	Older	Yes	g	386	3				2								1

Older futhark symbol	Younger futhark symbol	Older or Younger futhark origin?	Modified ? Y/N	Roman alphabet equivalent	Mark No.	No. of lines	Mark form	Bothwell	Caerlaverock	Crossraguel	Dirleton	Dryburgh	Glasgow	Glenluce	Jedburgh	Kelso	Melrose	Paisley
Х	-	Older	Yes	g	466	3	\neq						2					
Х	-	Older	Yes	g	499	4	\mathbf{x}					1	3					
Х	-	Older	Yes	g	603	4	\times						4					
Х	-	Older	Yes	g	687	3	X						1					
X 1	-	Older	Yes	g / ae	315	4	\mathcal{X}						2					

Older futhark symbol	Younger futhark symbol	Older or Younger futhark origin?	Modified ? Y/N	Roman alphabet equivalent	Mark No.	No. of lines	Mark form	Bothwell	Caerlaverock	Crossraguel	Dirleton	Dryburgh	Glasgow	Glenluce	Jedburgh	Kelso	Melrose	Paisley
X +	-	Older	Yes	g / n	299	3	$\overline{}$						1					
X +	ł	Both	Yes	Older - g/n Younger - n	150	4	X					1						
Н	-	Older	No	h	094	3	7						2					
Н		Older	Yes	h	129	4	//											30
Н	-	Older	Yes	h	240	6							1					

Leaving a mark on history

Appendix 4

Older futhark symbol	Younger futhark symbol	Older or Younger futhark origin?	Modified ? Y/N	Roman alphabet equivalent	Mark No.	No. of lines	Mark form	Bothwell	Caerlaverock	Crossraguel	Dirleton	Dryburgh	Glasgow	Glenluce	Jedburgh	Kelso	Melrose	Paisley
+	ł	Both	No	n	111	2							1					
ł	ł	Both	No	n	112	3							1					
+	+	Both	Yes	n	321	4	$\rightarrow \rightarrow \rightarrow$						1					
+	+	Both	Yes	n	395	3	+>										1	
+	+	Both	Yes	n	550	3	1						2					

Older futhark symbol	Younger futhark symbol	Older or Younger futhark origin?	Modified ? Y/N	Roman alphabet equivalent	Mark No.	No. of lines	Mark form	Bothwell	Caerlaverock	Crossraguel	Dirleton	Dryburgh	Glasgow	Glenluce	Jedburgh	Kelso	Melrose	Paisley
+	-	Older	Yes	n	633	3							2				6	
+	+	Both	Yes	n	651	3	\neq				1							
+	+	Both	Yes	n	668	3							1					
1	-	Older	No	ae	114	3	1						6					
1	-	Older	Yes	ae	196	4	7										2	1

Older futhark symbol	Younger futhark symbol	Older or Younger futhark origin?	Modified ? Y/N	Roman alphabet equivalent	Mark No.	No. of lines	Mark form	Bothwell	Caerlaverock	Crossraguel	Dirleton	Dryburgh	Glasgow	Glenluce	Jedburgh	Kelso	Melrose	Paisley
1	-	Older	Yes	ae	506	4	2											1
1	-	Older	Yes	ae	520	4							1					
1	-	Older	No	ae	612	3							2					
۴	-	Older	Yes	z	409	4	+						1					
۴	Ψ	Both	No	Older - z Younger - m	051	3	Ý	2					3					1

Older futhark symbol	Younger futhark symbol	Older or Younger futhark origin?	Modified ? Y/N	Roman alphabet equivalent	Mark No.	No. of lines	Mark form	Bothwell	Caerlaverock	Crossraguel	Dirleton	Dryburgh	Glasgow	Glenluce	Jedburgh	Kelso	Melrose	Paisley
۲	Ψ	Both	Yes	Older – z Younger- m	017	4	\bigvee						1					
-	ጘ	Younger	Yes	S	120	4	4						10				2	4
-	۲	Younger	No	S	253	3		14				1	3				2	
î	Ť	Both	No	t	010	3	\wedge	4				4	24		1			19
ſ	î	Both	Yes	t	063	5	\times		1				29					

Older futhark symbol	Younger futhark symbol	Older or Younger futhark origin?	Modified ? Y/N	Roman alphabet equivalent	Mark No.	No. of lines	Mark form	Bothwell	Caerlaverock	Crossraguel	Dirleton	Dryburgh	Glasgow	Glenluce	Jedburgh	Kelso	Melrose	Paisley
î	ſ	Both	Yes	t	104	5	${\searrow}$						1					
î	î	Both	Yes	t	110	5	\leftarrow						1					
1	ſ	Both	Yes	t	241	5	Ţ	3					2					1
ſ	î	Both	Yes	t	243	4		1										
î	1	Both	Yes	t	313	5	\bigwedge						4					

Older futhark symbol	Younger futhark symbol	Older or Younger futhark origin?	Modified ? Y/N	Roman alphabet equivalent	Mark No.	No. of lines	Mark form	Bothwell	Caerlaverock	Crossraguel	Dirleton	Dryburgh	Glasgow	Glenluce	Jedburgh	Kelso	Melrose	Paisley
î	1	Both	Yes	t	392	4	\bigvee						1					
î	ſ	Both	Yes	t	398	5	$\overline{\mathbf{V}}$						1					
î	ſ	Both	Yes	t	430	4	\bigwedge						2					
î	1	Both	Yes	t	436	4							1					
Î	1	Both	Yes	t	479	4	+						1					

Older futhark symbol	Younger futhark symbol	Older or Younger futhark origin?	Modified ? Y/N	Roman alphabet equivalent	Mark No.	No. of lines	Mark form	Bothwell	Caerlaverock	Crossraguel	Dirleton	Dryburgh	Glasgow	Glenluce	Jedburgh	Kelso	Melrose	Paisley
î	ſ	Both	Yes	t	518	4	$\langle \rangle$	1		1								
î	ſ	Both	Yes	t	570	5							1					
î	î	Both	Yes	t	578	4	\downarrow			1								
î	î	Both	Yes	t	617	4							1					
₿	В	Both	Yes	b	015	5							1					

Older futhark symbol	Younger futhark symbol	Older or Younger futhark origin?	Modified ? Y/N	Roman alphabet equivalent	Mark No.	No. of lines	Mark form	Bothwell	Caerlaverock	Crossraguel	Dirleton	Dryburgh	Glasgow	Glenluce	Jedburgh	Kelso	Melrose	Paisley
B	В	Both	No	b	045	5							5					
Μ	-	Older	No	e	271	4		1				1	6				1	1
Μ	-	Older	Yes	e	287	5						1	1				1	1
Μ	-	Older	Yes	e	428	5	\bigvee						4				1	
Μ	-	Older	No	e	683	4	X	1										

Older futhark symbol	Younger futhark symbol	Older or Younger futhark origin?	Modified ? Y/N	Roman alphabet equivalent	Mark No.	No. of lines	Mark form	Bothwell	Caerlaverock	Crossraguel	Dirleton	Dryburgh	Glasgow	Glenluce	Jedburgh	Kelso	Melrose	Paisley
1	1	Both	No	I	057	2							2					
1	1	Both	Yes	I	084	4	4										1	
1	1	Both	Yes	Ι	092	3	<u> </u>	3		3			7				10	3
1	1	Both	Yes	I	093	3	<u> </u>						1					
1	1	Both	No	I	101	2	\bigwedge	1		2			4					

Older futhark symbol	Younger futhark symbol	Older or Younger futhark origin?	Modified ? Y/N	Roman alphabet equivalent	Mark No.	No. of lines	Mark form	Bothwell	Caerlaverock	Crossraguel	Dirleton	Dryburgh	Glasgow	Glenluce	Jedburgh	Kelso	Melrose	Paisley
1	1	Both	Yes	I	215	3							1					
1	1	Both	Yes	I	219	3	>						1					
1	1	Both	Yes	I	221	4							1					
1	1	Both	Yes	I	228	4	$\mathbf{x}_{\mathbf{x}}$						2					
1	1	Both	Yes	I	377	3		1										

Older futhark symbol	Younger futhark symbol	Older or Younger futhark origin?	Modified ? Y/N	Roman alphabet equivalent	Mark No.	No. of lines	Mark form	Bothwell	Caerlaverock	Crossraguel	Dirleton	Dryburgh	Glasgow	Glenluce	Jedburgh	Kelso	Melrose	Paisley
1	1	Both	Yes	I	381	3	+			1								
1	1	Both	Yes	I	480	4										1		
1	1	Both	Yes	I	686	2	/						1					
M	-	Older	No	d	018	4	$\left \right\rangle$	15		2		2	39	2			5	19
M	-	Older	Yes	d	035	5	$\left \right\rangle$						35					4

Index of marks of possible Runic origin

Older futhark symbol	Younger futhark symbol	Older or Younger futhark origin?	Modified ? Y/N	Roman alphabet equivalent	Mark No.	No. of lines	Mark form	Bothwell	Caerlaverock	Crossraguel	Dirleton	Dryburgh	Glasgow	Glenluce	Jedburgh	Kelso	Melrose	Paisley
M	-	Older	Yes	d	075	6	+			2								
M	-	Older	Yes	d	426	5							1					
M	-	Older	Yes	d	443	5	X	4									1	

TOTAL MARK FORMS: 93

Appendix 5Architectural and stonemasonry terms used in this reportTermDescription

All definitions are taken from the Penguin Dictionary of Architecture, 4th edn, 1991.

Abbey	a group of buildings including a church, <i>cloister</i> and supporting facilities, that form a monastery, led by an abbot
Aisle	division of space at the sides of a church, parallel to the <i>nave</i> and divided from it by piers or arcades
Ambulatory	covered walk way around a space, usually square, with a wall on one side and <i>columns</i> on the other
Anglo-Norman style	Romanesque (Norman) architecture, developed in England after the Norman Conquest, and introduced to Scotland by David I
Arch	a curved architectural support spanning an opening
Ashlar	squared, even-faced stone, cut to a rectangular block, forming part of a plain wall
Aumbry	a small recess or cupboard in the wall of a church, used for the storage of sacred vessels
Banker	Bench, usually of timber, on which stone is shaped for use in the construction of the building
Bed	the top or bottom of a joint, or natural surface of the stone parallel to its stratification
Buttress	a reinforced, projecting mass, of stone or brick, projecting from a wall, designed to give additional strength, usually to outer walls
Carved mould	a decorative, recessed or relieved piece of stone
Chapel	a small area used for worship
Chapter house	a large room in which the chapter (the canons or members of the religious order) hold meetings to discuss the business of the order; in monasteries and convents it is usually accessed from the cloister
Choir or Quire	the part of a cathedral or large church between the high altar and the nave, used by the choir and clergy, from where services are sung
Clerestory	an upper storey of the <i>nave, choir</i> or <i>transept</i> of a church, provided with windows to admit light to the building
Cloister	An enclosed space surrounded by an ambulatory
Column	see pillar

Appendix 5	Architectural and stonemasonry terms used in this report
<u>Term</u>	Description
Crossing	the space in a church where <i>nave, chancel, and transepts</i> meet
Curtain wall	outer wall of castle joining towers and gate-house
Donjon	also called the keep, the principal stronghold in a medieval castle, also used as a residence
Engaged column	a <i>column</i> set into a wall, i.e., not freestanding
Face	the exposed portion of a stone
Freestone	a stone that may be cut freely in any direction without fracture or splitting
Gothic architecture	a development of the Romanesque style, originating in France in the 12 th Century, featuring vaulted ribs and buttresses and introduced into Scotland from the 13 th century
Jamb	the vertical side of a doorway, supporting the <i>lintel</i>
Keystone	the last wedge-shaped stone, or <i>voussoir</i> , placed in the crown of an <i>arch</i>
Lintel	horizontal beam above a door or window
Lodge	a building, usually temporary, provided for as a workshop and sometimes accommodation for early stonemasons
Mason	a skilled person who dresses and cuts stone
Masonry	stonework, usually dressed or partly dressed, used in the construction of a building
Masons' mark	a symbol, monogram or initial incised in stonework by the mason responsible for execution of the building
Master Mason	a skilled and senior mason. Sometimes the master mason is also the architect
Mortar	building material made from lime, sand, plaster of Paris, and / or fibrous materials mixed with water, used to join two blocks of stone
Mullion	a <i>pillar</i> dividing the opening in a window or space
Nave	main body of a church, leading from the entrance to the altar, usually flanked by rows of columns or piers
Pier	rectangular pillar, or similar structure, that supports an arch, wall or roof
Pillar	vertical architectural element with support function
Quoin	a wedge-shaped piece of stone, the keystone of an <i>arch</i>

<u>Term</u>	Description
Rib	a design element, usually a moulded band, to support the cells of a <i>vault</i> or a dome
Ribbed vault	a cross-vault with arched ribs across the sides and diagonals of the bay that support, or seem to support, the infilling
Romanesque style	style of architecture that lasted from 1000 to 1150 in France and to the 13th century in the rest of Europe; characterized by massive vaults and rounded arches
Rood screen	screen separating the nave and choir in a church
Rosette	circular ornamental stonework, shaped like a formalized rose, often used to decorate a <i>quoin</i>
Sill	shelf or slab of stone at the foot of a window opening
Springer	a stone supporting the arc of an <i>arch</i>
Stonemasons' mark	a mark carved into a piece of worked stone to indicate the person who worked it
Transept	either of the two parts forming the arms of the cross shape, projecting at right angles from the <i>nave</i>
Triforium	a gallery or arcade above the <i>arches</i> of the <i>nave</i> , below the <i>clerestory</i>
Vault	architectural roof or ceiling based on the principle of the arch
Voussoir	A wedge shaped brick or stone, forming part of an arch

Appendix 5 Architectural and stonemasonry terms used in this report

