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***All That Glitters: What was the role of silver in Roman Iron Age Scotland and in the development of Early Medieval Polities?***

Stephen Miller

This thesis is submitted in fulfilment of the requirements for the degree of

Master of Philosophy in Archaeology.

School of Humanities

College of Arts

University of Glasgow

October 2024

## **Acknowledgements**

*I would like to extend my most sincere thanks to Prof Stephen Driscoll and Dr Stephen Harrison of the University of Glasgow for their support, guidance, and kindness throughout this process, without which I could not have completed this work.*

*Furthermore, I would also like to thank Dr Adrián Maldonado of the National Museum of Scotland for his time and generosity in allowing me to access the stores of the NMS on several occasions. Also, I thank Sarah Buzza of Fife Cultural Trust on behalf of Fife Council for allowing me access to artefacts in her care.*

*I would also like to extend my thanks to Dr Paul Cooney and Mrs Jacqueline Cooney, without whom I would not have begun this journey.*



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*Image 1: Roman generals and emperors from the frieze of the Great Hall of the National Portrait Gallery of Scotland by W.B. Hole, 1897 © National Galleries of Scotland.*

**All That Glitters: What was the role of silver in Roman Iron Age Scotland and in the development of Early Medieval Polities?**



**Abstract:**

This thesis will explore how emerging kingdoms in early medieval Scotland utilised Roman silver as a reusable resource to promote their ideological ambitions and power until the Viking Age. This paper will examine the arrival of Roman silver from troop payments, supplying the Roman legions and payments made, firstly, in denarii to local communities and later in silver plate.

Local communities and growing kingdoms transformed Roman silver from coin and hacksilver into valued objects that reflected their own needs and ambitions. Roman silver was first transformed into massive silver chains, indicating the large quantities of silver available to indigenous communities, while resting in the hands of limited elites. The chains had extended use-life, evidenced by the replacement of clasps in at least two cases. There was also a transformation of silver into other esteemed objects, including brooches.

The development of the brooch styles, ornamentation and decoration offers insight into the developing communities of Early Medieval Scotland. Styles merge over time becoming influenced by other communities including the Anglo-Saxon world and the growing impact of Christianity. Prior to the Viking Age there is evidence of the shortage of silver available to local people while they maintained a desire to craft objects that displayed status and position by debasing silver with other alloys.

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**(iv) List of Abbreviations:**

AC:	<i>Annals of Clonmacnoise</i>
ALI:	<i>Ancient Laws of Ireland</i>
AU:	<i>Annals of Ulster</i>
BAR:	British Archaeological Reports
BM:	British Museum
CKA:	The Chronicles of the Kings of Alba
Gildas:	<i>De Excidio Britanniae</i>
NMI:	National Museum of Ireland
NMS:	National Museums of Scotland
Proc Soc Antiq Scot:	Proceedings of the Society of Antiquaries of Scotland
RCAHMS:	Royal Commission on Ancient and Historical Monuments & Constructions of Scotland
RIB:	Roman Inscriptions of Britain
<i>Senchus:</i>	<i>Senchus fer n-Alban</i>
SHA:	<i>Scriptores Historiae Augustae</i>
TT:	Treasure Trove Scotland



## 1. Introduction: A Silver Economy

Socially transformative quantities of Roman silver arrived in Scotland during the Roman era. I will explore how local communities and individuals responded to Roman silver, transforming it into a medium for expressing their own identities. I will argue that the relationship between silver personal adornments and other Roman material culture mirrored a growing confidence as smaller polities increased in power.

Interest in studying early medieval silver from a Scottish context developed in recent years from a flurry of studies related to territories beyond the frontiers of the Roman Empire. Growing out of the developing interest in the life and experience of communities on the *periphery* of the Empire. A seminal exhibition focussed on the relationship between early medieval Ireland and the rest of Britain, *The Work of Angels: Masterpieces of Celtic Metalwork, 6th-9th Centuries AD* (Youngs 1990). The exhibition was a collaboration between the three collections found within the National Museums of Scotland (NMS), the National Museum of Ireland (NMI) and the British Museum (BM). The exhibition focussed attention on the response's communities on the periphery of the Roman Empire developed in relation to the arrival of large quantities of Roman silver (Cróinín 1990). *Scotland's Early Silver* exhibition, by the NMS, 2017/18, and its accompanying publication (Blackwell et al 2018) was prompted by the *Celts* exhibition, 2016. The 2017/2018 exhibition focussed attention on the place of Scotland and its growth, using silver as a conduit to explore the introduction of silver from Rome until the next pulse of silver arriving during the Viking Age.

Roman silver came to be found beyond the provinces of the Empire through various mechanisms. Trade and exchange prior to the arrival of Roman troops; payments made by serving forces for supplies and services; diplomatic payments or gifts of large amounts of denarii made to native communities for services rendered or to keep the peace in border territories and latterly payments made in the form of silver plate (Chapter 2). The above will demonstrate that large quantities of silver were circulating through the hands of local people. The silver was subsequently utilised by indigenous groups in various ways.

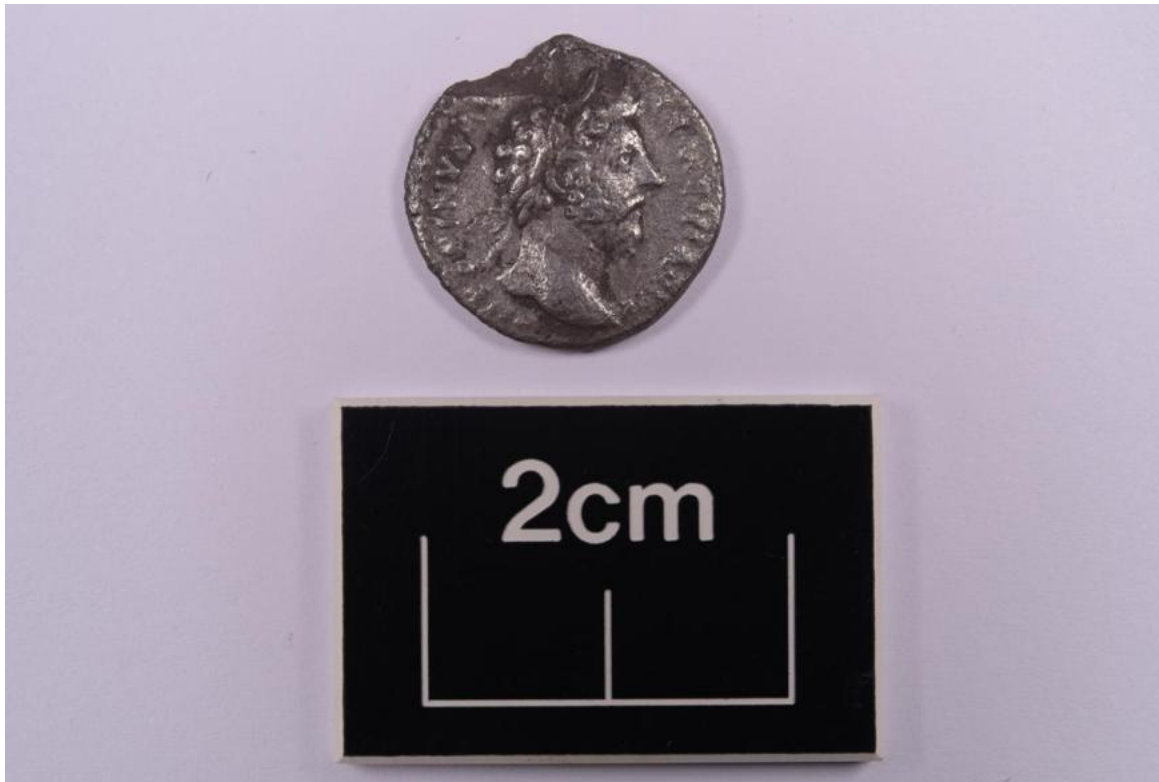
Using the term Scotland in the period of Roman Imperial activity in northern Britain is not historically correct, Scotland did not exist. However, this thesis will refer to the modern extent of Scotland, as a method of managing information.

Silver was only one of a range of goods available through the Roman Empire, creating a Roman package of material culture. Mass produced eating and drinking vessels reveal how the same objects could be adopted and adapted to suit the needs of local communities, at times offering an insight into the social structures of Scottish Iron Age (Chapter 3). There is a contrast between the smaller dining material adopted in the northeast, whereas larger coarse ware was favoured in the southern frontier zone. The selection of specific prestige goods from amongst widely available Roman material indicates local tastes at work. Communities were knowledgeable agents in their selection of Roman goods. Early medieval Scotland saw a growth in smaller kingdoms and polities, which were not a creation of the Roman Empire. From around AD 400 until the emergence of Alba as the dominant kingdom in the north, the history of Scotland may be unpacked through an examination of how social groups utilised silver.

Chapter 2 will explore the trail of Roman silver from the large number of Roman coins found within the Scottish landscape today, recognising the inherent and symbolic value placed upon the coin when it was minted, often portraying an imperial mythology in its imagery, to the coin used in everyday commerce. Through exploring the distribution of silver coins from one period to another, peaks and troughs of Roman activity and silver supply becomes evident. The quantity of coins and their density across the landscape sheds light on the amount of silver that was available to local people. The absence of Roman numismatic evidence may indicate a lull in Roman activity within a region, or a different approach by local communities towards the use of that material.

Negotiating the amounts of silver available to indigenous communities and individuals in the Roman Iron Age and early medieval periods demands an appreciation of the volume of silver coin available over the time of Roman interaction. This thesis will quantify the readily available silver coin based on the varying rates of pay to the Roman soldiery present within the landscape.

Hoardings of silver coin reflect the economic policy adopted by Rome when dealing with people beyond the Empire. The Scottish evidence may correspond to the situation in Nordic and Germanic theatres, where precious metals were used as a diplomatic tool to ‘buy’ peace (Marzinzik 2022). Inflection points may be discerned from the drop-off in coin evidence. The lack of coin evidence is indicative of moments of historical weakness within the Roman Empire (Birley 2005, 461-463; Halsall 2007, 217-218).



*Figure 2: Silver Denarius of Marcus Aurelius, AD 164-65, stray find from Dumbog Farm, Fife. (TT: 223/09, Fife Museum Number: CUPMS: 2011.0185). Photograph by author, courtesy of Fife Cultural Trust on behalf of Fife Council.*

The combination of individual finds and coin hoard data will further enhance our understanding of the Roman presence over regnal and dynastic periods. Greater numbers of specific issues indicate periods of intensive imperial activity. The last datable Roman coins may shine some light on society and the final stages of direct Imperial influence on Scotland.

Once the coins reached the indigenous people, we can see evidence for various responses to the silver. The local responses to silver may reflect various political and community strategies at play, revealing variations within indigenous communities and their social ideologies. The evidence points to regional and local responses and highlights the localised nature of communities at that time. Sites where there are obvious devotional depositional activities, such as Covesea, link these societies back into the deep past and offer a concept of continuation of practice and memory, with an intentional rooting of their societies with ancestral practice and place. Why hoards were buried in the first place, may indicate a different transactional significance of high value material in the Roman Iron Age and Medieval periods from our modern understanding, where, in these earlier periods, high status



items were considered worthy of sacrificing and separating from communal usage in a ritual act of deposition.

The examination of hoards of Roman plate identifies a change in Roman policy towards local communities. Like the Empire's approach in other 'peripheral' regions beyond the imperial borders, the plate is suggestive of an effort to circumvent the imperial mints where coins were forged. The coins were, over time, increasingly debased, while the plate maintained a higher purity silver content. The hoards of Dairsie, Traprain Law, Norrie's Law and Gaulcross are all evidence of the intentional internment of high-status Roman material by local communities within ancient landscapes.

How local communities responded to the Roman package is also a mixed bag, with communities in different proximities to Roman activities offering varying responses. The Roman package consisted of, among other things, metalwork, including silver, samian and coarse ware, glass, architectural styles and structural innovations. Some communities would embrace Roman material more fully, while others, distant from the imperial frontiers, would be more selective in what they adopted or transformed, suiting their own regional needs and practices. Within the adoption of Roman material, local communities often repurposed Roman goods to suit their own societal needs. The use and adoption of Roman material, notably silver, changed as society transformed in the northern lands (Chapter 3). Smaller groups gave way to larger polities and kingdoms, the larger groups utilised silver to express their growing dominance and their greater place in the larger political landscape.

Rome did not act as a conquering empire that merely imposed its will and customs on local communities, rather local people had independence from Rome regarding the manner of their response. Away from the northern border and the frontier zone of the Roman Empire, the impact Rome had was demonstrably dramatic. The second century tribes mentioned by Ptolemy were consolidated by the fourth century to become larger identifiable power groups (Breeze 1994, 17). The bonding of smaller polities into larger groups was further stimulated by later Viking activity and incursions (Broun 1994, 21-28).

The Roman presence brought with it, greater or lesser influence dictated by the Empire's immediate presence and actions. Locations close to large Roman infrastructure would necessarily require a deeper cooperation from individuals and groups in the immediate vicinity. Trading centres, such as the fort at Inveresk with its accompanying civilian settlement, which appears to be extensive and well established, testify to the close

relationship between some local people and Rome, at least during the Antonine occupation (Thomas 1989). While other materials were adopted and adapted by local communities, silver, a lasting commodity with an intrinsic value, can change over time, both in its monetary value and its repurposing, while remaining essentially the same, a useable material that held social and intrinsic value (Goldberg and Blackwell 2022, 396-397). Chapter 3 explores the dynamics involved in the evolution of Roman silver in the hands of local communities beginning with the creation of massive silver chains. Within the post-Roman world, silver was a desired commodity that could be bulked up, used as a diplomatic tool, a feature of ritual life and then as a transformative substance that could be used to create new status symbols such chains and elaborate brooches.

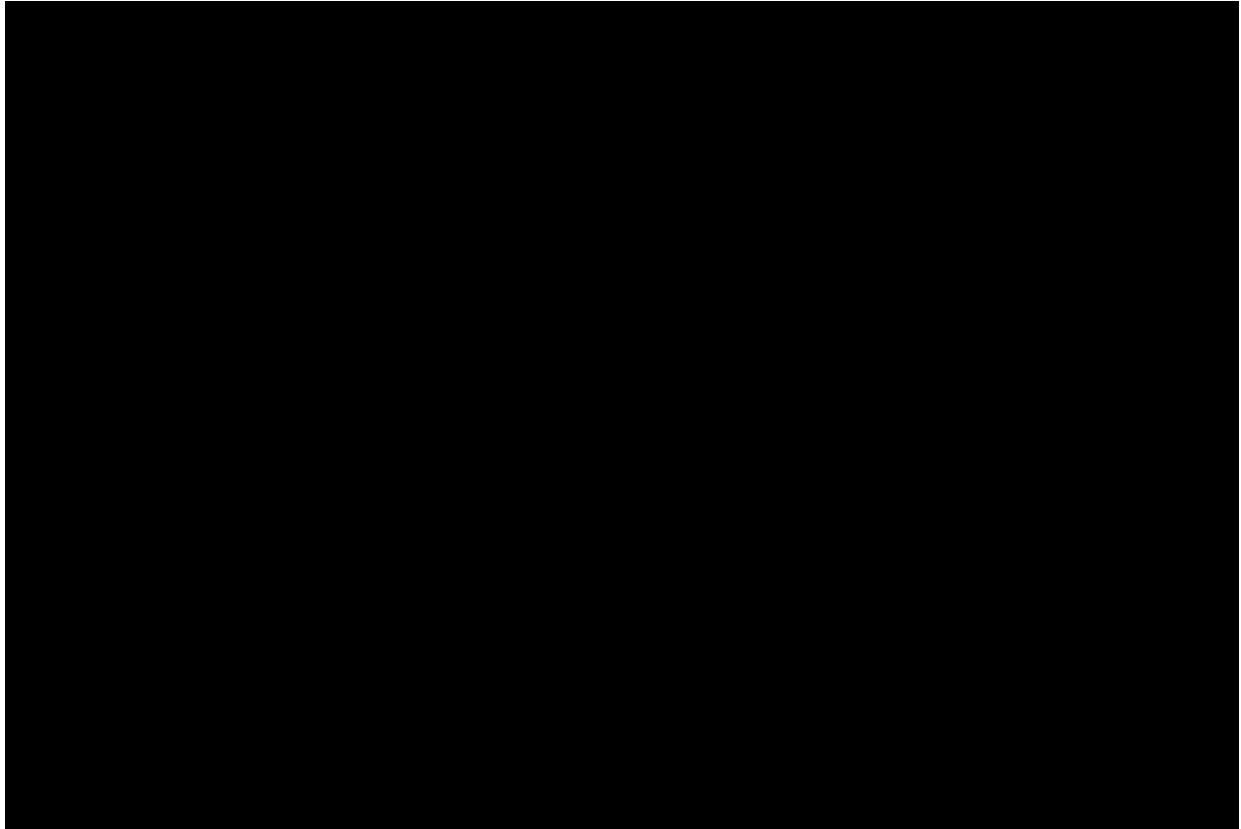
The creation of the massive silver chains early in the history of Scotland indicates a form of independence; Roman silver goods being refashioned to display indigenous tastes and ideologies that were untouched by Rome. By analysing the chains and the clasps separately the chronology of both appear to differ, the chains being fashioned some 200 years or so before the clasps, at least in two instances. Reconsidering this evidence, the chains viewed from their find location and their construction move from the later Pictish era and area and places them c.4<sup>th</sup> century AD, in line with the arrival of Roman silver plate. This, together with the readoption of the application of red enamelling, evidenced by pins from Gaulcross, the Londesborough Pin and objects from the St Ninian's Isle hoard, may reference a continuation of an earlier tradition within local communities.

Chapter 4 will explore the situation at the end of Rome's presence and how local communities utilised the available silver left in Scotland. As the sources of silver dried up, communities repurposed what they still had access to (Goldberg and Blackwell 2022, 395-396). The choices made were directed by local practices and values. It is possible that both the bullion and the social value of Roman silver was passed onto the new object, with a memory being held of what that object used to be. The use of silver in religious and sacred depositional activity indicates a sacral value afforded to silver beyond its immediate economic worth, such as depositions at Covesea (Benton 1931) and Culbin Sands (Henig 1974 and McCawley, 231-232) (Appendix 27), both sites positioned beyond the Roman frontier. The sacred value of the votive material may be discerned from the ancient location of the sites and from other depositional material accompanying the silver.

The hoards of Roman silver plate indicate a desire to ensure the quality of silver was maintained, at a time when the denarius was increasingly debased. The practice of creating measurable portions of silver from larger objects, or hacksilver (*hacksilber*) was carried out from the 2<sup>nd</sup> – 7<sup>th</sup> centuries. The hacksilver was an intentional conversion of objects into bullion, often transported beyond the boundaries of the Roman Empire for diplomatic purposes (Hunter 2022, 359; Hunter 2013). Chapter 4 identifies that there are areas of Scotland that have no evidence of hoards or significant Roman silver finds, there are no coin hoards from the highlands or the islands. The profusion of hoards come from districts closely associated with Rome's presence and activity. Absence of Roman silver must be accounted for. The absence of Roman silver from *Dál Riata*, may relate to the number of sites in Argyll that participated in high-status metallurgy (Chapter 6).

The Roman interaction with local communities and the indigenous response varied from district to district and may be explored through evidence from Traprain Law and the *Votadini*. As Roman influence lessened, so too did the security of Traprain Law, and possibly other communities, who became vulnerable to the threats of emerging local kingdoms that were growing in unity and strength.

The ancient annals and chronicles (Chapter 6) may offer some clues as to the value afforded to the new objects made from more ancient material offers some insight into the hierarchical societies of early medieval Scotland. Much of the silver available was transformed into high-status objects that denoted the rank and worth of the person wearing them, culminating in the creation of magnificent objects, such as the Hunterston Brooch (Blackwell et al. 2018, 116-117), or the Monymusk Reliquary (Figure 3) (Clarke et al. 2012, 36-42).



*Figure 3: The Monymusk Reliquary (NMS H.KE14) Last Accessed, 23<sup>rd</sup> January 2023.*

Evidence examined in Chapter 6 demonstrates the growing significance of the Christian Church. Silver was utilised in a new spiritual context to support the significant political development of society. The Church adopted the silversmith's craft into its own rhetoric, utilising silver within its ideological vocabulary. The growing significance and influence of the Christian world on Scotland was rendered in silver, in terms of design and the appropriation, or conversion, of significant secular and pre-Christian iconography and material. Many high-status objects offered a canvas to promote both a public and a personal Christian message. Ecclesiastical sites, such as Whithorn and Iona, offer evidence of Christianity participating in high-status metalworking, thus bringing this craft into other ecclesiastical artistic expressions.

As supplies of silver became scarcer, evidenced by the debasement of silver used in the creation of high-status objects silver becomes debased (Chapter 5). Silver was augmented with cheaper, more available metals, such as copper and bronze. The objects created from debased silver are afforded the same level of decoration and ornamentation as applied to high-status objects in previous years. The St Ninian's Isle hoard indicates another inflection

point, where supplies of silver were low and had to be stretched out (O'Dell et al. 1959).

Many of the brooches appear to have been made from debased silver, with evidence of wear and verdigris appearing on the surface of objects. The same hoard affords further evidence for the advancement of Christianity and the comfortable relationship the new theology had with the older world, marrying Pictish iconography with Christian motifs.

Brooches expressed social rank and status and were visible representations of the power of the individual who wore them, both for men and women, as evidenced by the image of an elite woman commemorated on the Hilton of Cadboll Stone (Chapter 5). Earlier, plainer, examples of brooches, such as those from Tummel Bridge, developed into more elaborate objects, reaching their zenith with the Hunterston Brooch, with its strong influence from the Celtic, Anglo-Saxon and Christian worlds. The brooches could be imbued with Christian ideology and iconography, transforming secular high-status objects into expressions of faith.

The creation of high-status objects is often linked to significant sites. Drawing together evidence from high-status early medieval sites highlights the various responses of different districts and groups (Chapter 6). As late as the end of the seventh and eighth centuries, there remained variations among local communities, who respond to their situations in unique ways dependent on their individual needs. The northeast offers evidence for low lying settlements, the southern lands favouring fortified elevated locations for their royal sites, Argyll, the Northern and Western Isles utilising several responses and locations, including elevated sites, crannogs and low status craft sites. Together with the secular sites, Christian craft sites offer another variation, these communities often occupied undefended locations and utilised locations removed from their central sites to engage in craft working, including silver-smithing.

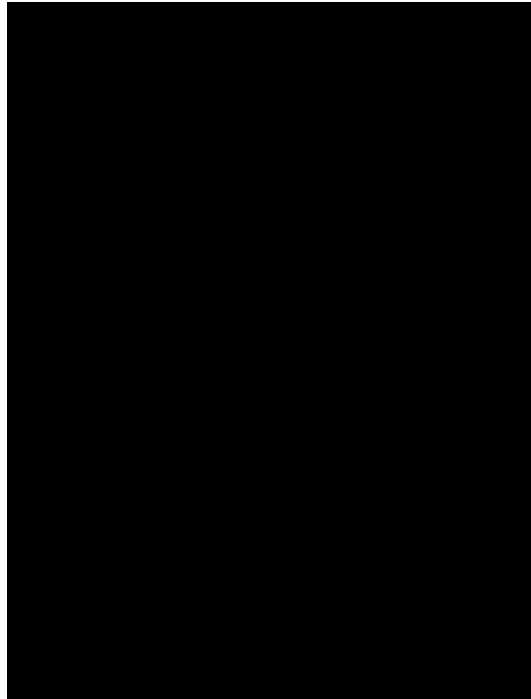
## 2: Roman Silver and its Distribution

The Roman army was the first source of silver in Iron Age Scotland (Blackwell 2018). Exploitation of local sources of silver would not appear in the historical record until almost a millennium later (Bateson 1987, 3). The original silver arrived in the form of payments for soldiers serving within the imperial army, provisioning the troops and garrisons. The army was paid in three instalments, *stipendia*, across the year in January, May and September (Speidel 2014, 53). The silver may have initially been restricted within a territorially larger non-monetised economy to the immediate confines of Roman camps and garrisons, though there may have also been direct payments in silver coin for services and provisions offered by indigenous communities, which developed to serve and supply Roman military camps, such as at Inveresk.

Evidence from coins indicate periods of fluctuation in Roman activity and where this took place. By comparing the quantities of coins that exist today with rates that circulated during the three major Roman campaigns, a pattern emerges that indicates the volume of silver coin found in Scotland and areas where these are found in considerable numbers. The comparison indicates areas of greater and lesser Roman interaction with local communities, highlighting districts where there exists significant amounts of Roman material and silver coin. It is therefore possible to appreciate the vast quantities of silver coins that could have ended up in the hands of indigenous people. The evidence proves that only a very small percentage of those coins can be accounted for today; many would have been fashioned into new objects by local communities. The distribution of coins beyond the Roman frontiers is uneven: very few being recovered from the western and northern highlands. Based on coin finds, the highpoint of currency circulation was in the Antonine period (AD 139-165) with 22 hoards recovered from this era and 101 single coins.

While Scotland was never fully integrated within the Roman Empire, it was the target of aggressive imperial activity (Breeze 1994, 13). There is little evidence for direct Roman contact with the northern tribes before Rome's military campaigns of the first century. The Iron Age communities that encountered the Roman presence rarely interacted with silver goods from this period, with only a few limited exceptions including Culbin Sands, Moray, far from Rome's frontier, where a silver ring with a cornelian intaglio was found with an engraved representation of the god *Silvanus* (Figure 4; Appendix 27) (Henig and McCawley

1974, 232). The ownership of the ring suggests that the owner was a person of high-status who dealt with people who had direct access to Roman material.



*Figure 4: Signet Ring from Culbin Sands (NMS X.BI 29463). Last Accessed, 14<sup>th</sup> May 2023.*

Only three secure finds dating from before the Flavian Invasion have been identified to date, none of the items are made from silver; a fibula brooch, a Langton Down type of the first century AD from Merlsford, Fife (Robertson 1970, 222), an Aucissa type brooch with a defined catch-plate from Dores, Highland region (Curle 1932, 395, fig. 36) and a wine amphora of the Haltern 70 type from Aikerness, Broch of Gurness, Orkney Islands (Richardson 1948). That all three finds, a limited resource, were found in the northern regions of the country, may indicate an initial imperial diplomatic intention of reaching to the furthest ends of the northern lands. There are also two pieces of early Roman silver rings recovered at Culbin Sands, Moray (Appendix 32: Miscellaneous Finds), and a votive sieve from Traprain Law, discussed below (Blackwell 2018). This limited evidence stands in direct contrast to the numerous early Roman finds recovered from sites within southern Britain such as Colchester, where pre-conquest finds are relatively plentiful (Stead 1967). No sites in southern Scotland afford any evidence of pre-conquest contact, suggesting that the speed of the Roman advance was so dramatic, that there was little chance for diplomatic and trading relationships to be established before the Flavian invasion.

The south of Scotland was occupied by Roman troops, creating a border to the greater Empire. At its peak this consisted of as many as 52 forts and fortlets, each housing between 500-1000 soldiers. Two separate worlds lived side by side: the world of the fort and surrounding settlements and the world beyond Rome's direct influence. There was both an internal, imperial centric world, which operated a coin economy and simultaneously an external world beyond the camps, where coins had a non-monetised value. In the Roman world a fully monetised economy served to pay troops, to conduct trade and to store personal wealth. Prior to the arrival of the Roman military, coinage was rare, and silver was an exotic resource within Iron Age Scotland.



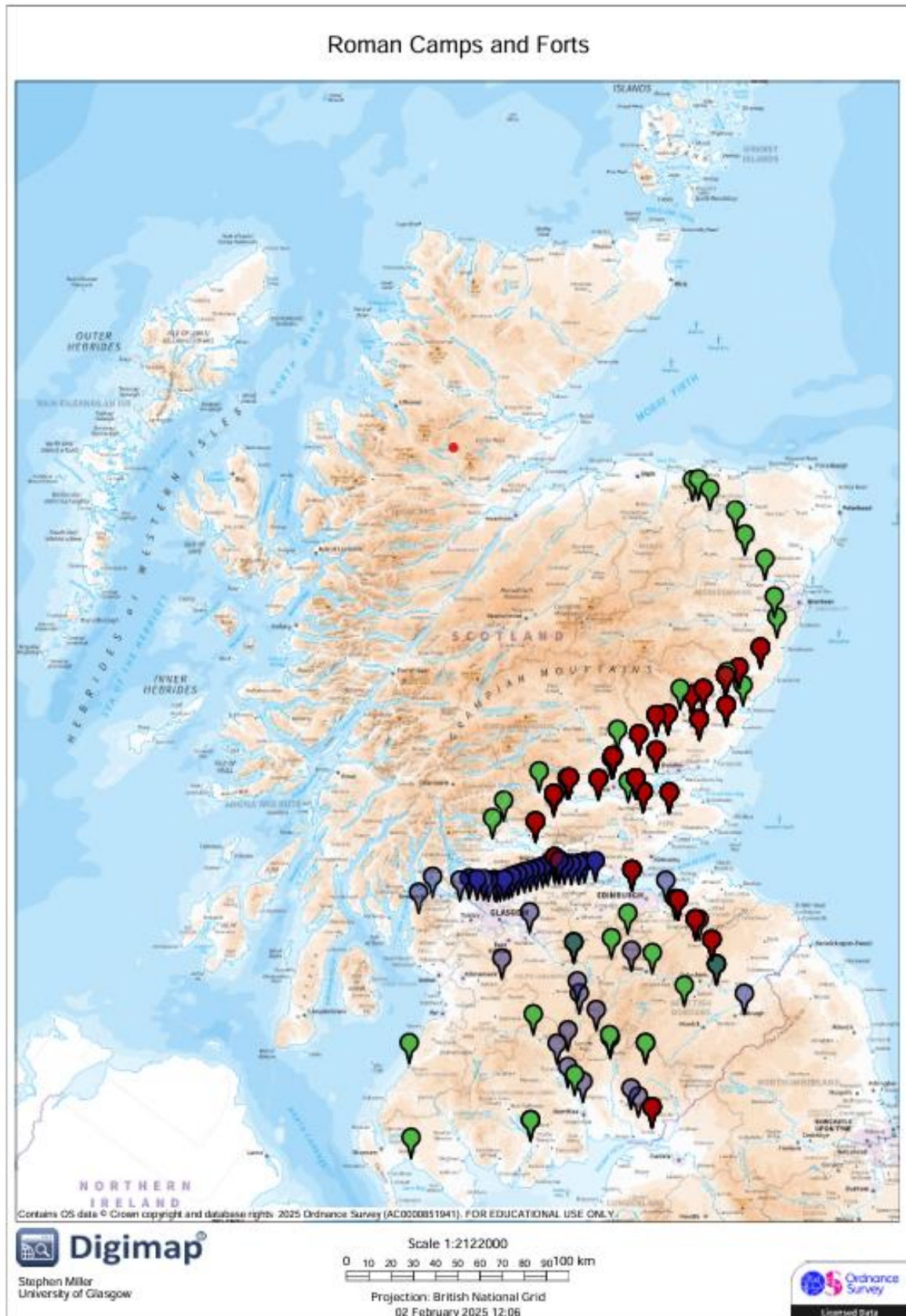


Figure 5: Map of Forts and Fortlets of the Three Roman Military Campaigns. Green: Flavian. Blue: Antonine. Red: Severan. Map generated by author with Appendices 2-6.

The three major military Roman campaigns were linked to the martial policies of the three emperors, Flavius, Antonine and Severus (Figures 1 & 5). During the Flavian campaigns (AD 77-86/90) (Appendices 2 & 3) 38 forts and fortlets were established from as far north as Auchinhove, Moray, to Glenlochar, Dumfries and Galloway in the southwest. The main troop concentration was in central Scotland around the districts of Stirling and Perth and Kinross (Figure 7).

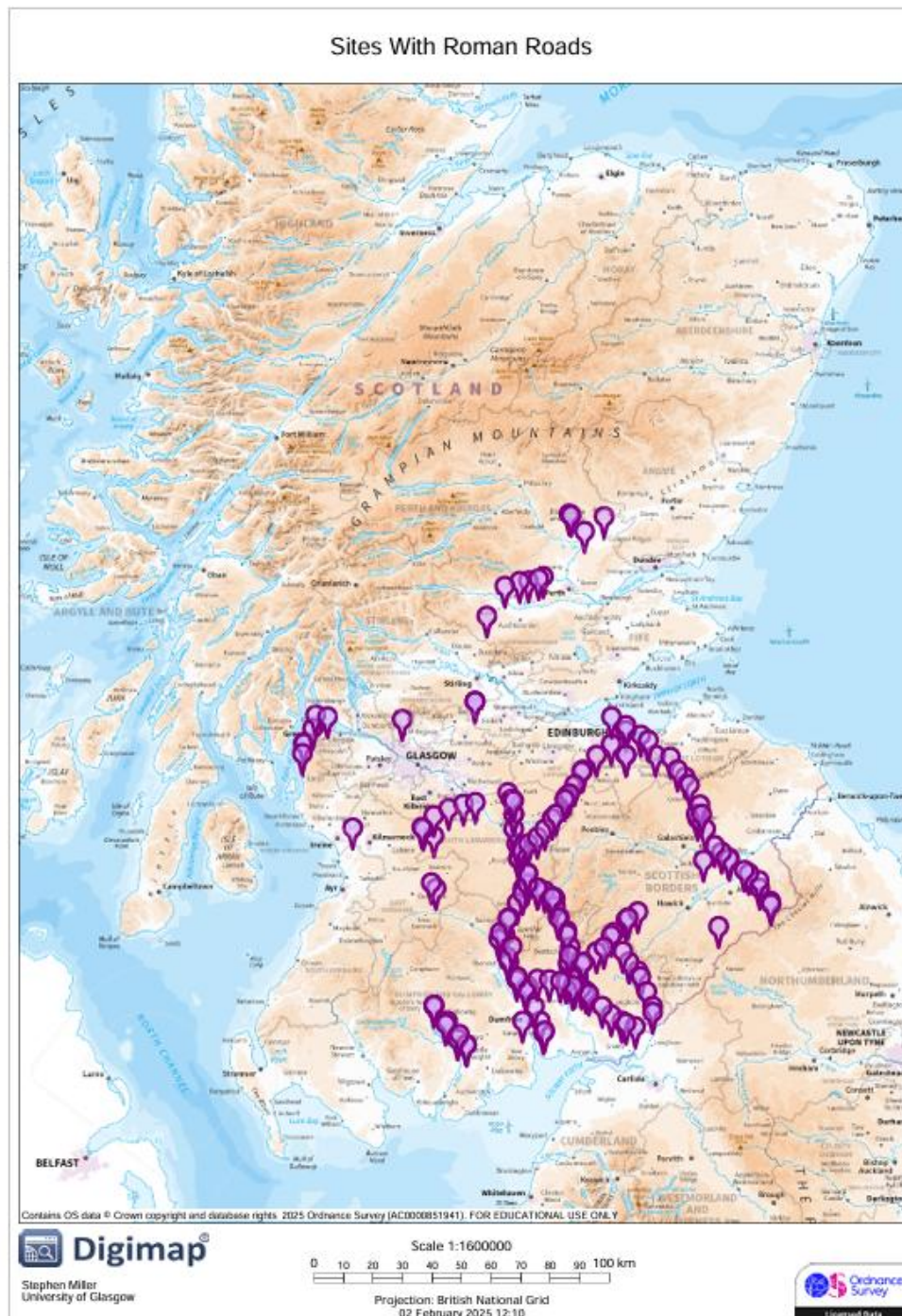


Figure 6: Sites Offering Evidence of Roman Roads. Maps generated by author.





Figure 7: Flavian Campaigns, Forts and Fortlets. Map generated by author using Appendices

The longest and most sustained occupation took place during the reign of Antoninus Pius (c.AD 138-165) (Appendices 4 & 5), there are known to have been 52 forts and fortlets (Figure 8). The fortifications stretched from Bertha, Perth and Kinross, to Birrens, Dumfries and Galloway (Figure 9), with a concentration on the Antonine Wall stretching for some 37 miles across the Forth-Clyde isthmus from West Dumbartonshire to Falkirk in the east (Figure 10).

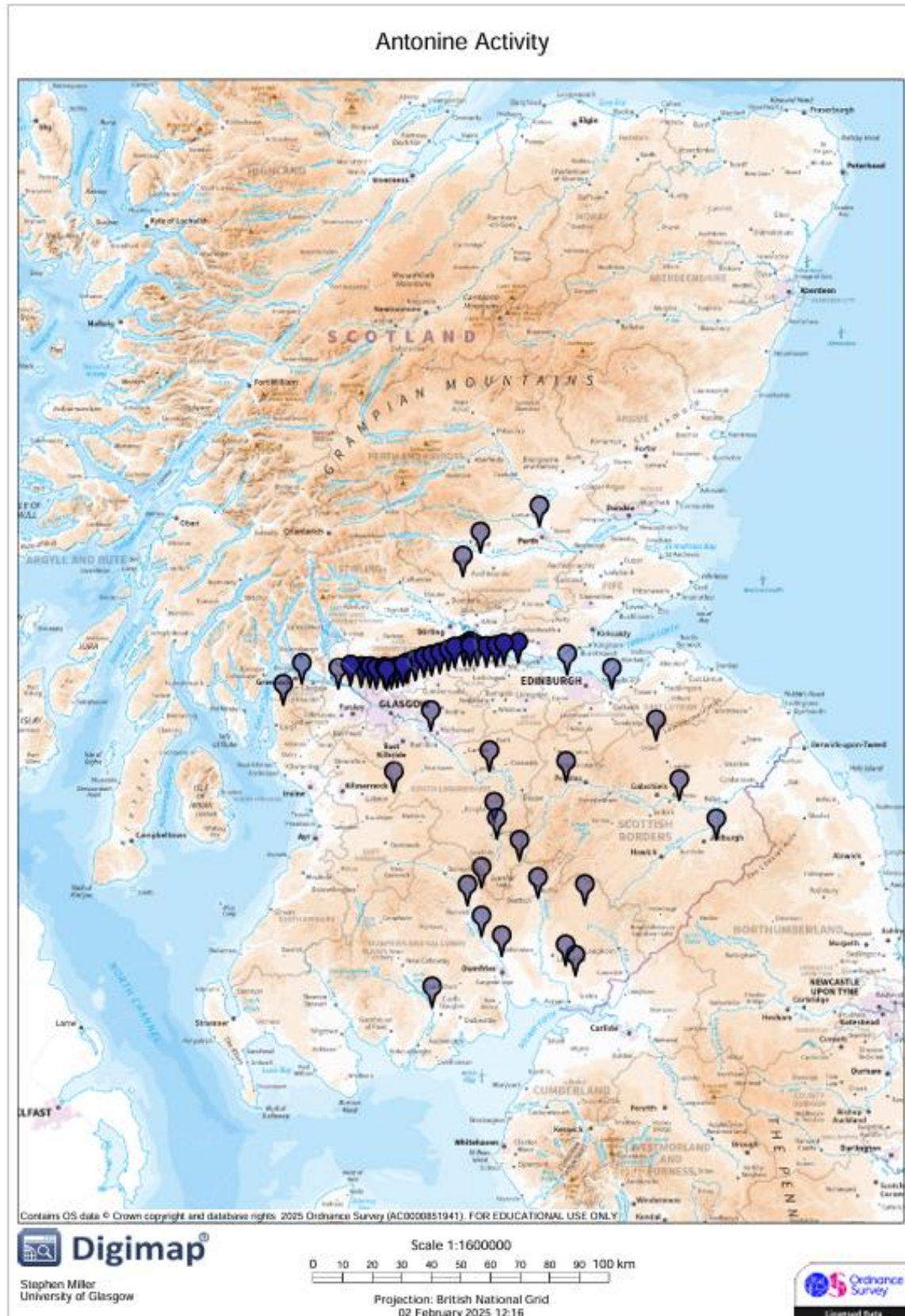


Figure 8: All Antonine Forts and Fortlets. Image generated by author using Appendices 4 & 5.





*Figure 9: Forts and Fortifications of the Antonine Campaigns Excluding the Antonine Wall. Map generated by author with Appendix 4.*



*Figure 10: Fortifications along the Antonine Wall. Map generated by author using Appendix 5.*

The third period of activity is the relatively brief campaigns of Septimius Severus (c.AD 208-211) (Appendix 6) which has evidence of 26 forts and fortlets, either reoccupied or built afresh, mostly focussed on the east coast of modern Scotland, except for Kilpatrick Fleming, Dumfries and Galloway, in the south. The Severan structures stretch from Kair House, Aberdeenshire, in the north extending south to St Leonard's Hill in the Scottish Borders (Figure 11). After the death of the Septimius Severus (AD 211), Hadrian's Wall became the frontier in Northern Britain until Rome's eventual withdrawal from Britain in AD 410/11, there is only limited evidence of Roman military presence in Scotland at that time (Appendix 1).





Figure 11: Forts and Temporary Camps Dating to the Severan Campaigns. Map generated by author using Appendix 6.



Within Scotland, most of the Roman material recovered falls within the periods incorporating the Flavian campaigns and the activities of Antoninus Pius (Appendix 8). This glut of coins may possibly be explained by the era of ‘The Five Good Emperors’ including Nerva, Trajan, Hadrian, Antoninus Pius and Marcus Aurelius, at times they are called ‘The Six Good Emperors’ including Lucius Verus. This reign of emperors is often known as the Nerva – Antonine Dynasty. Hoards arranged by Imperial reigns demonstrates that the highpoint of single hoard finds begins around AD 79 and declines at the end of AD 217, spanning the period of the Flavian invasions and ending with Caracalla and Rome’s withdrawal to Hadrian’s Wall (Appendix 9).

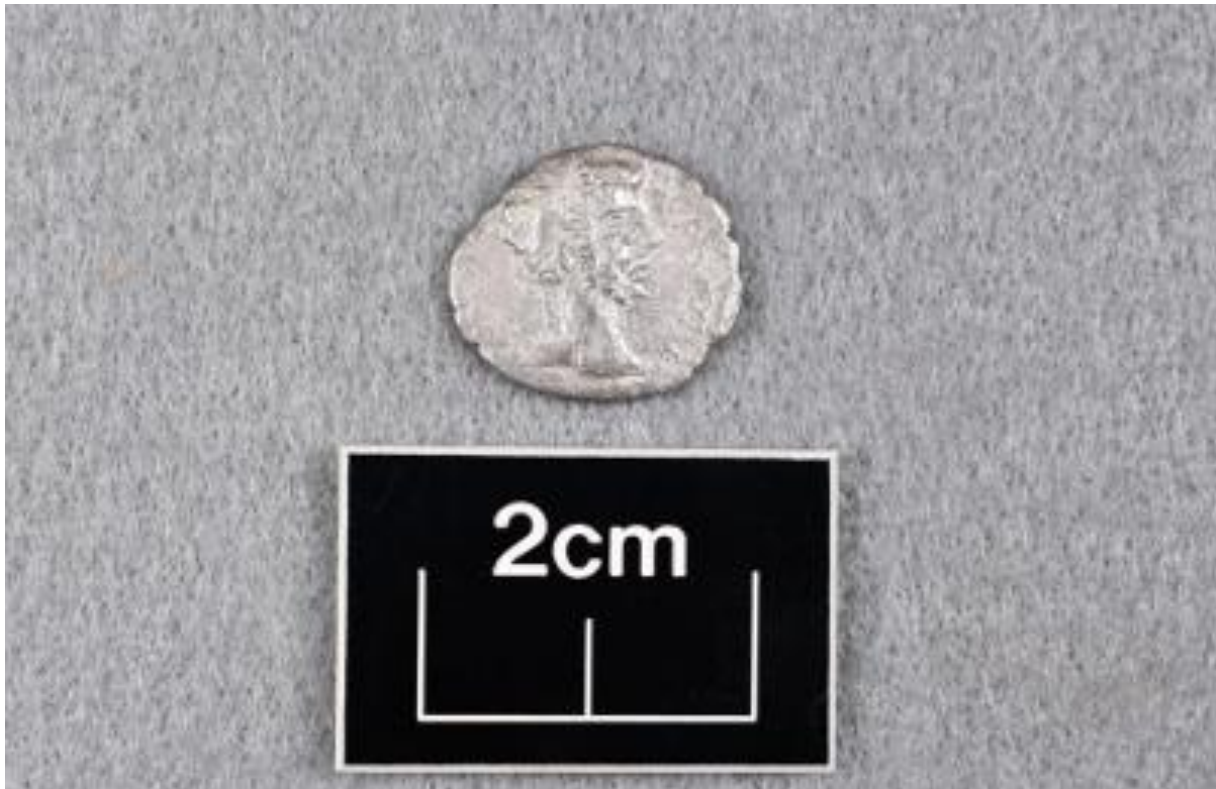
## Significance of Finds and Sites

Each find contributes to the larger story of Roman silver in Scotland, be they from Roman or indigenous sites, including unprovenanced finds (Figure 12). A comparison of single coin finds with hoards dated by Imperial issue indicates that there is a similar distribution pattern in both cases (Figures 13, 14 & Table 5). Coins that are later arrivals contribute to the circulation statistics but do not significantly skew the distribution pattern of individual coin finds. Figure 12 is a coin from a private collection from someone who arrived in Scotland during World War II, fleeing from the occupation of Lithuania by the Nazi regime. They brought with them the possessions they were able to carry, including a collection of seven coins from the Roman era, five from Czarist Russia and a number from Lithuania, their homeland. These coins, and others like them, are not ancient losses in the Scottish landscape and should be approached with a level of caution. The presence of later coin arrivals must be recognised, adding to the overall pattern of distribution. The presence of a great many other non-provenanced coins must also be acknowledged. The overall pattern of other non-provenanced material may cause some confusion and offer a false indication of interactions between Rome and local communities, even with communities far from the Roman frontiers and military activity. The pattern discerned from Figures 13-14 demonstrates that the combined evidence from single coin finds reliably shines some light on the activities of Rome, the Roman presence and interaction with local communities, this is not significantly altered by the presence of some later additions. Individual coins must be approached with caution, especially those without secure provenance. Single coin finds may be the result of much later losses arising from displacement from their original location, or they are possibly tourist tokens brought back from the Grand Tours of the 17<sup>th</sup> and 18<sup>th</sup> centuries, they may indeed have found their way to Scotland as trophies of war, collected during military campaigns abroad, most notably by soldiers serving in the North African Campaigns of World War 2. Alternatively, single coins may be the result of losses and theft from more recent collections and assemblages (Hunter 2007, 12). While Hunter makes several important points when considering an analysis of single coin find data, the shape of the results suggests that the overall picture is not too dissimilar compared to the end Imperial issue date of hoards (Appendices 10 & 11). Finds from indigenous sites speak to the presence of Rome, whether that was as an aggressive force or a trading partner, or a network of trade and exchange beginning from within the fort. The existence of coins on native sites

relates to interaction directly or indirectly with the Roman world (Hanson 1980, 141). Many non-secure finds, such as a recent find in 2022 from Barns of Airlie, Angus, where a fragmentary Roman plate brooch was recovered while metal detecting, or the *denarius* of Antoninus Pius discovered at Torfoot, South Lanarkshire in 1980, Torfoot was also the site of a discovery of a hoard of 400 *denarii* in 1803 (Macdonald 1918, 260-261; Robertson 1984, 418) (Appendix 10) do provide some indication of Iron Age interaction with the Roman world. The brooch from Barns of Airlie has a diameter of 19mm, with a depth of 4mm, there is a central indentation for possibly hosting an inlay. The edge is gilded, designed with transverse grooves, dating from the late 2<sup>nd</sup> or early 3<sup>rd</sup> century. The find may relate to a souterrain that was reported to have existed on this site, though the souterrain is now destroyed (SAFAP 2022, 87/22, Hunter 2022; Wainright 1963, 158).

The distribution of coin hoards shows that there was a great quantity of silver across lowland Scotland indicating the reach of Roman material (Figure 15). The geographical spread of the coinage, reinforced by the presence of silver plate, paints a picture of Rome's activities and political intentions. It reveals the persistence of silver arriving in Scotland after Rome had retreated to Hadrian's Wall in the third century. This suggests that local communities sought out and acquired Roman silver and other goods after the military withdrawal.

### Single Coins:



*Figure 12: Unprovenanced Coin of Marcus Aurelius, siliqua, from a private collection.  
Photograph by author, August 2023.*

The distribution of all silver coin finds from Scotland reveals the circulation areas of silver currency and the density levels of silver coins (Figures 13 and 14). Single silver coin finds come from around 30 sites from secure Roman contexts, not including hoards of three coins or more, however, these coins were not initially destined to reach the hands of indigenous people and did not appear to circulate outside the Roman world (Figure 14). Most of the single coin finds come from Roman forts and fortlets, but others from indigenous sites or casual losses give a truer indication of where silver could be found. It is predominantly confined to the Lowlands of Scotland, particularly around the Southwest, with only a few coins from the Highlands and Islands.

The majority of finds from indigenous sites are to be found predominantly in parts of the country that match those from a Roman context, such as a fort or fortlet (Figure 13). The areas immediately to the north and south of the Antonine Wall are revealed as the main

locations of single coin finds in both cases. Account must be given that current population density in these areas for so many of the finds may have caused a discovery imbalance.



Many coins have been discovered within a recognisable Roman context (Figure 14). The *denarii* and one *antoninianus* discovered at different times in Cramond (Appendix 15. 3A), where a civil settlement also served the fort. With the 41 *denarii* recovered and two gold coins of the third century, there are coins covering the whole timeline of Roman activity in Scotland. There is an early *denarius* of Vespasian (AD 69-79) a worn *denarius* of Severus (AD 193-211) minted in Rome, discovered in 1977, and the finds recovered from the excavations of NM Holmes of 1983, of a worn *denarius* of Sabina, wife of Hadrian (AD 117-138) and a worn *denarius* of Severus and an *antoninianus* of Tetricus II (AD 273-274). The coins are suggestive of genuine ancient losses found within a Roman context, pointing to different phases of the Empire's activity in Scotland and reuse of sites over the three main military campaigns, recognising the numerous coins recovered from the excavations from 1954-1966 (Rae et al 1974, 190-193).

Finds recovered from secure locations, closely connected with Roman activity, can be understood as single ancient losses by Roman occupiers and agents or as accrued losses over time, such as at Cramond. There are three distinct groups when it comes to the single finds: secure Roman sites, sites closely associated with the supply and provision of Roman camps and garrisons and lastly, sites with no obvious or direct local connection to Roman activity.

Most Roman soldiers would have been paid their *stipendia* three times a year (Speidel 2014). Legionaries were paid 250 *denarii* per annum in c.AD 70, by AD 200 this salary had risen to around 500 *denarii*. (Table 1: Roman Army Rates of Pay) (Blackwell, et al. 2018, 12). Four bronze sesterces were equivalent to one silver *denarii*. Payments to the military created localised monetised economic zones beyond the walls of military camps, where coin could be used in exchange for goods and services, introducing silver to local communities and allowing it to circulate beyond the Roman frontiers (Blackwell 2018; Aitchison 1988, 277-278).

## Garrisoning Scotland

The cost of garrisoning northern Britain in the early stages of the Flavian campaigns with auxiliary infantry and legionary infantry, excluding cavalry, is estimated to be over five and a half million *denarii* per annum, based on camps and not the invasion force (Campbell 1994, 20). Admittedly some of their pay would be paid at the end of their service in shorter campaigns, though more permanent settled forces would generate greater local spending power (Table 2). How do we reconcile the vast amounts of wealth available to the Roman garrisons and small amounts of silver coins from the archaeological record.

There are a few examples of how these local monetised economic zones worked within settlements that served Roman sites, such as Cramond, Edinburgh, which was occupied at all three stages of Roman campaigns. *Denarii* have been recovered from the site ranging from Vespasian (AD 69-79) to Tetricus II (AD 273-274), in total 41 *denarii* have been discovered along with two gold coins from one each from the reigns of Geta (AD 209-211) and Caracalla (AD 211-217) (Appendix 15:3A). At Cramond post-Roman occupation of the fort site seems to have been extended into the fourth century AD (Rae and Rae 1974; Robertson 1984). This civilian settlement, *vicus*, and others like it, such as at Inveresk, East Lothian (Thomas 1989; Bishop 2004, 133-150) seems to have operated a dual economy, bartering and trading in the local custom amongst themselves and other indigenous people, while accepting coin from Roman officials for trade and services rendered. Romans who staffed the fort, or port, would have been paid in Roman coin, at times in silver coin.

The coin could have been valued as an Imperial token, possibly as a sort of talisman, and, initially, as a type of portable wealth with a stable value guaranteed by the amount and quality of the silver used to mint the coin. The value of *denarii* would recognisably change due to the various debasements of the imperial coin over time (Appendix 12). As highlighted by Appendix 12, the quality of silver used for minting coins did vary over time as the imperial economy struggled with other factors including availability of raw resources, military campaigns and inflationary impacts on the value of a *denarius* which would impact on the cost of garrisoning Scotland in the three military campaigns (Table 1) (Bransbourg 2020; Swayles 1997). Despite the variable purity of *denarii*, this portable wealth became a stable economic exchangeable resource, valued for its exotic roots and for its inherent silver value. The Roman coin became a commodity desired by people further from the heart of



Roman activity, explaining the number of single coins found on indigenous sites with no direct connection to Roman activity, or to their three military campaigns.

Silver was a prestige metal reserved mostly for coinage and not frequently used for ornamentation by the rank and file of the Roman world, silver objects, such as plate, were mostly the preserve of elites within Roman society and were a mark of a person's high status within the community (Blackwell et al. 2018, 12). Gold was even more restrictive in the Roman world and gold coins are relatively rare to Scotland and appear to have been a resource handled mostly by the Roman elites themselves, rarely entering the hands of the local population (Appendices 1 & 13). Gold was so limited that it would, in time, be mostly used for gilding and ornamentation of silver objects rather than being fashioned into gold items themselves (Blackwell 2018).

**Table 1: Roman Army Rates of Pay in Denarii per Annum.**

Emperor	Legionary Infantry	Auxiliary Infantry <i>Miles cohortis</i>	Auxiliary Cavalry <i>Eques cohortis</i>	Cavalry of Legion <i>Eques legionis</i>
Augustus 27 BC-AD 14	225	187	225	262
Domitian AD 81-96	250	250	300	350
Septimius Severus AD 208-211	500	500	600	700
Caracalla AD 212-217	750	750	900	1,050
Maximinus AD 235-238	1,500	1,500	1,800	2,100

Table prepared by author based on data from Campbell 1994, 20.

The above figures suggest that there was a vast source of silver that appeared within the Scottish landscape, in terms of payment of troops stationed in the northern frontier. The earliest period of Roman activity demanded an approximate cost of 5,570, 000 *denarii* per annum for infantry alone (Table 2: Cost of Garrisons). This figure fell to around 2,475,000 *denarii* during the Severan campaigns, based on an estimate of troops present. The total coinage in circulation would be greatly increased by bribes and diplomatic payments made from Rome directly to local people and tribes, as will be demonstrated later.

**Table 2: Estimated Roman Garrisons in Scotland and the Costs in Denarii.**

Period	Date	Garrison	Expense
Flavian	AD 69 – 96	22,280	5,570,000
Antonine	AD 139 – 165	21,040	5,260,000
Severan	AD 208 – 211	3,300	2,475,000

*Table prepared by author based on Hanson 2003, 204.*

*Calculated on maximum extent of occupation, where fort size is unknown an assumption of a medium fort is used. Cavalry have been excluded in this figure and a mean figure for infantry and auxiliaries has been calculated in order to reach a manageable sum. Antonine I and II have been combined based on arguments by Hodgson 1995.*

Allowing for some financial transactions taking place between the military and indigenous communities, paying for services and commodities provided by local people, at a conservative estimate of only one percent of the total amount available. This would mean that over the three military campaigns, a total of 2,760,100 denarii could have potentially entered the hands of the local population and circulated in local economic zones and forts (Table 3: Estimated Cost for Infantry). A single denarius weighed 3.85 grams, on average, meaning the total weight of silver available to the local communities would be around 106,264 kilogrammes. A vast amount of silver and possible raw material was therefore available for later use by the communities in the north of Britain.

**Table 3: Estimated Cost of Infantry Over the Three Campaigns.**

Period	Cost Per Annum	Years Campaigning	Total Denarii
Flavian	5,570,000	26	144,820,000
Antonine	5,260,000	24	126,240,000
Severan	2,475,000	2	4,950,000
		<b>Total Cost in Denarii:</b>	<b>276,010,000</b>

*Table prepared by author using information above. Full years of the three campaigns have been calculated, understanding there may have been peaks and troughs, subtracting one year from each campaign allowing for the notional maximum costs for infantry and auxiliaries, creating a mean figure to reach a manageable sum.*

Notwithstanding the above, the actual amount of silver recovered from the Scottish landscape comes nowhere close to this estimated expected total, in terms of denarii. Where there is an expectation of some 2,700,000 *denarii* available to local people, so far only a tiny percentage of that figure has been recovered, 3,753 denarii in total, which is 0.001% of what could be reasonably expected (Table 4: Total Denarii Recovered from Scottish Contexts). It is possible that many of the missing coins are yet to be discovered or they may have been repurposed into new material valued by emerging powerful communities.

**Table 4: Total Number of Denarii Recovered from a Scottish Context.**

Sites:	Total Number of Coins:
Single Coin Finds	177
Hoards from Roman Sites	1,931
Hoards from Indigenous Sites	1,659
<b>TOTAL</b>	<b>3,767</b>

*Totals include reports from antiquarian records where the whereabouts of coins is unknown. Table prepared by author.*

The significance placed on silver by Rome when dealing with its northern frontier in Britannia was replicated by the indigenous people who encountered silver, via trade, conflict

or through diplomacy. The hoarding of large quantities of denarii by local people and the transformation of bullion into high-status objects offer insight into the value placed on silver by local communities (Blackwell 2018). Silver was adopted by the local population as a prestige exotic item favoured by indigenous elites and leaders and came to be a symbol of rank and status. Roman soldiery may have placed a greater value on silver than the face value of its commercial worth, calling to mind as they do, the concept of empire, unity, strength and power. Evidence from a potential collector's hoards buried in the foundations of the headquarters building, *principia*, of a Roman fort from Flavian's expedition into Scotland c.AD 70-80, excavated at Elginhaugh, Dalkeith, in 1986-1989 (Hanson 2003, 207; Hanson 2007, 11), offers a tantalising glimpse at the religious significance afforded to these coins by Roman troops. The Elginhaugh Fort, probably protecting a ford used on Dere Street, was discovered by aerial reconnaissance in 1979 and is the most completely excavated timber built auxiliary fort in the Roman Empire. The hoard of 45 *denarii* unearthed was intentionally buried in the foundation trench of the building that would house the company standards and the treasury, as an offering to the gods, possibly a votive offering affording protection to the fort and its occupants positioned in such a peripheral landscape of the Empire (Hanson 2007, 29, 263). The dateable evidence points to a TPQ of AD 77-78, though this date has been more recently debated as 21 coins were discovered as a stacked deposit, only one unstacked coin points to the later date, the others offering a date no later than AD 71, placing the site within the reign of Vespasian (Appendix 15, 2B Elginhaugh). The coins recovered are the largest group of Flavian coins found in Scotland to date, affording a glimpse at a more significant use of silver coinage by the occupying forces than may have been expected (Hanson 2007, 263).

## Denarii and Diplomacy

With growing tensions in other parts of the Roman Empire, the political attempt to subdue northern Britain by force was abandoned, with the withdrawal from the Antonine Wall around AD 188, in favour of a policy of bribery and payment in an attempt to create a buffer zone between Hadrian's Wall and northern aggressors (Hunter 2009, 234-237; Blackwell 2018). Most of the hoards discovered in Scotland date between AD 160 with the Roman retreat to Hadrian's Wall and the final military campaign of Severus in AD 208-211 (Hunter 2001, 17). The Antonine Wall was reoccupied c.AD 197 for a short while in the reign of Septimus Severus (AD 193 – 211) after he was victorious in the War of Succession (Birley 1971, 89-138).

Silver in Scotland would come to be more desired than gold (Blackwell et al. 2018, xiii-xvi). The precious metal would often be stored for one reason or another in hoards, some of which were of significant quantities of silver coins (Appendices 14, 15 & 16).

Payments of silver coins may have been made to local power groups attempting to buy their allegiance, support or service (Hunter 2001, 17). Large quantities of silver coin ended up in the hands of Iron Age people north of Hadrian's Wall, such as the hoards discovered at Birnie, Moray, both with a TPQ of AD 192-211 (Appendices 16 3D & 3E) (Holmes 2018; Hunter 2003, 22-24), the 85 *denarii* from the indigenous site of Clarkly Hill, Moray, TPQ AD 180-192 (Appendix 16: 2C), the hoard from Perth and Kinross, including the hoard of 180 *denarii* from Briglands, TPQ AD 180-192 (Appendix 15: 2F), and the 104 *denarii* recovered from Kirkness, TPQ AD 193-211, (Appendix 15: 3C), and the hoard of 134 *denarii* Newstead, Scottish Borders, TPQ AD 180-192 (Appendix 15: 2V), all point to large amounts of silver coin being paid by Rome to local communities after the end of the Antonine Dynasty and after the three military campaigns were ended.

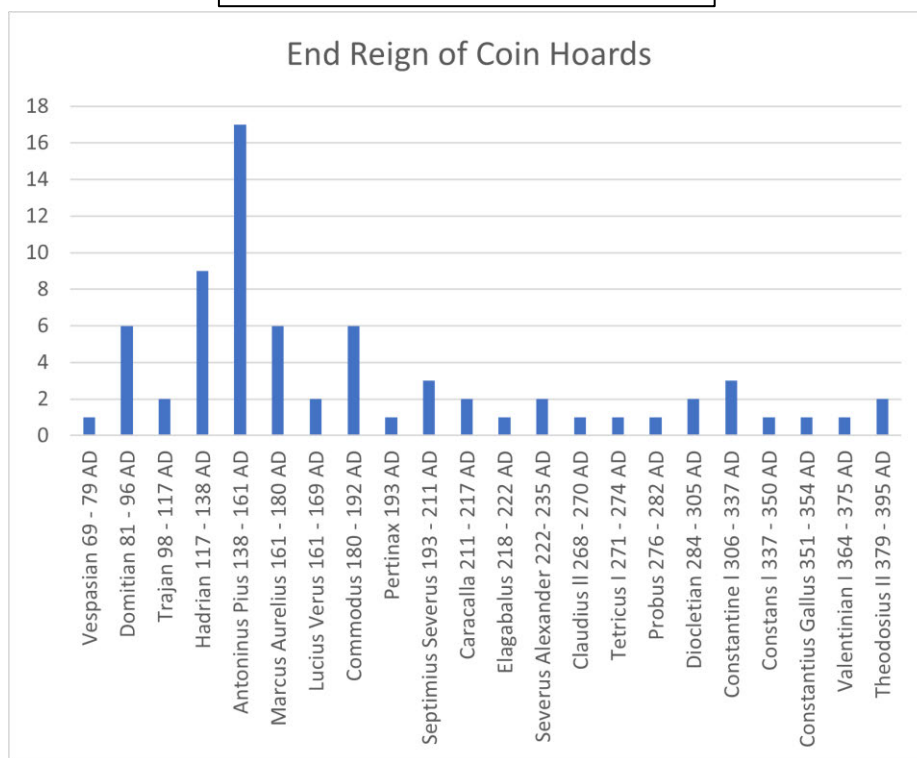
The many hoards recovered within the Scottish landscape are a mixed bag with various degrees and quality of recording being carried out. Many antiquarian discoveries, such as the hoard from Nairn, Highland Region, recovered in 1780, (Robertson 1978, 207; MacDonald 1918, 271) or Silverburn, Aberdeenshire (Robertson 1978, 206-207) both are among those that have been poorly recorded and have been lost to the archaeological record. Difficulty also arises with a find at Green Cairn, Angus, which identifies only one coin of Galba, without recording all the others, described them only as, '*great Quantities of Roman Medals*

*of Silver*'. Some coins, now no longer available, appear to have been misidentified in the past, such as the coins from Fort Augustus, Highland, where the description of the coins as all being of Diocletian has more recently been called into question (Robertson 2000, 237). Other finds may well have been made in the past, but their fate was never recorded as they may have immediately reached the silversmith's melting pot, as Graham-Campbell pointed out in relation to Viking hoards from Croy and Talnotrie (Graham-Campbell 1978).

### The Ebb and Flow of the Circulation of Silver Coin

Substantial influxes of Roman silver may be seen to ebb and flow as the Roman political intentions changed towards northern Britain (Table 5). The earliest hoards recovered from Scotland begin in the Flavian campaigns and date to the reign of the emperor Vespasian (AD 69 – 79) peaking in this first period with six hoards ending with coins from Domitian (AD 81 – 96).

**Table 5: End Reign of Coin Hoards.**



*Coin Hoards Arranged by Imperial Regnal Dates. Table compiled by author.*

The early hoards plotted in Table 5 indicate a decline in Roman activity with only two hoards being found from this period ending with the reign of Trajan (AD 98 – 117) before a massive influx of silver in the reign of Hadrian (AD 117 – 138) and reaching an all-time high with the military activities of Antoninus Pius (AD 138 – 161) with a total of 17 hoards found in the Scottish landscape. Beyond the time of Pius there appears to be a steady decline in coin hoards, with only two periods reaching the total of six hoards, the same amount as those left



earlier by Domitian: Marcus Aurelius (AD 161 – 180) and Commodus (AD 180 – 192). For a period of about a century there appears to have been a massive influx of Roman silver coin straddling the campaigns of Flavius and Antoninus Pius with 49 hoards found from this period alone. Over the following two centuries only 22 hoards are known. Possibly the increase in coin hoards, and indeed single coins, in the Antonine period, may be explained in terms of the Five Good Emperors, a period in Roman history that experienced the greatest prolonged stability and relative peace. The '*Pax Romana*' lasted for around two centuries and is often viewed as the Golden Age of the Roman Empire. The true highpoint of the *Pax Romana* was arguably during 23 years of stability in the reign of Antoninus Pius, despite his military campaigns in northern Britain, a reign marked by a prolonged period of peace (Bury 1893). There appears to be a concentration of single coin finds from the Nerva-Antonine period with a focus either side of the Antonine Wall, a construction built mainly from turf, acting as a defensive barrier (Mann and Penman 1985, 41) (Figure 8: Coin Hoards from Across Scotland; Appendix 9). From the evidence of silver coin hoards, the impact of the Severan campaigns appears to have been rather minimal within the Scottish context, with only three hoards discovered from his reign and a further two from the reign of his son Caracalla, who withdrew the Roman troops from their northern bases back to Hadrian's Wall in AD 213 (Hanson 2003, 198). This may be an indication that supports the idea that the aggressive campaigns were a temporary imperial policy of punitive military repression, rather than an intention to maintain a military presence north of Hadrian's Wall. The cost of maintaining and provisioning a complete military presence in a landscape that offered little in return was prohibitive, it was a better policy to move to more fertile lands in the south (Boyd 1984; Spring 2015, 75).

**Table 6: Single Silver Coin Finds.**

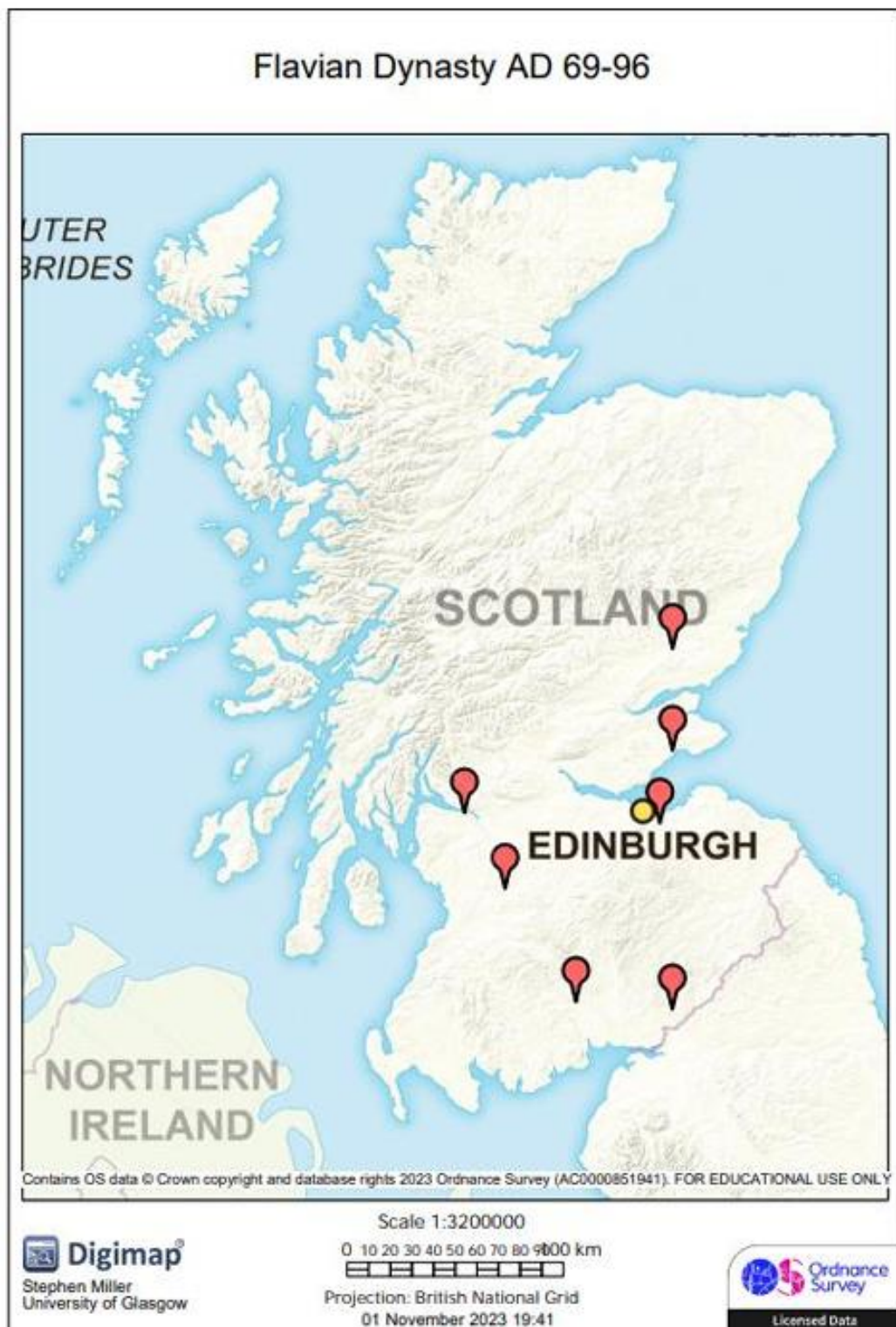
Placing together Roman silver coin hoards (Table 5) with the material from single and stray silver coin finds (Table 6), a similar pattern emerges that tends to confirm the overall direction of Roman activity in Iron Age Scotland. From the beginning of the Flavian Dynasty (AD 69) there is a rise of coin evidence both in terms of single finds and the ending regnal date for hoards reaching its zenith with the reign of Antoninus Pius and continuing until the reign of Commodus (AD 177-192). There is a further rise around the time of the military activities of the emperor Severus and the withdrawal by Caracalla (AD 198-217) from the Antonine Wall, ending with a final flurry around the time of Severus Alexander (AD 222 – 235).

The geographical spread (Figure 15) also paints a picture of Rome's interactions within the Scottish landscape. Appendix 18 demonstrates key districts during the Roman occupation with a focus on Dumfries and Galloway, Perth and Kinross, the Scottish Borders, Moray, Fife and Aberdeenshire. Perhaps, unsurprisingly the area immediately north of Roman activity is an area of intense and prolonged activity affording the most numerous finds within the Scottish landscape. The areas of Perth and Kinross, Moray, Fife and Aberdeenshire all require closer consideration, but their arable land may play some significant factor here. However, the overall view gained from the total amount of coin hoards does not allow for a nuanced consideration of the evidence providing, as it does, only a snapshot of 400 years of history. Breaking down the evidence into dynastic groups (Appendices: 15.1-15.3, 16.1-16.4) allows for closer scrutiny of the evidence available.



Figure 15: Coin Hoards from Across Scotland. Yellow: Indigenous Sites. Red: Roman Sites. Map generated by author using Appendices 15 and 16.

The seven hoards from the Flavian dynasty (Figure 9, Appendix 15.1 & 16.1) are well spread in the landscape with a focus on central Scotland and one hoard from Green Cairn, Angus, in the north-east (Figure 16). These hoards include the coins from Elginhaugh, Midlothian, (Appendix 15.1C) with its previously discussed potential foundational deposit (Blackwell, et al. 2018, 15). Of the 44 coins, 28 were recovered by a metal detectorist which were accompanied by two Roman brooches (Hunter 1999, 63). The coins range from Republican to the era of Vespasian (AD 69-79). Some caution must be observed when considering the hoards from Green Cairn, Angus (Robertson 1978, 207) which was discovered in 1707 (Appendix 21: 1B), also with Broomholm, Dumfries and Galloway (Robertson 1978, 197) which was recorded in 1782 (Appendix 16.1A) and the Leven hoard, Fife, recovered in 1519 (Macdonald 1918, 265-6) (Appendix 16.1C). The early discoveries may have been subjected to less rigorous recording than more recent finds and the dating of coins may have relied on less widely available knowledge. The hoard of nine silver denarii from Dalswinton, a Roman fort in Dumfries and Galloway, (Appendix 15.1A) is less likely a hoard in truest sense and probably more an assemblage of scattered coins, however it is early within the Scottish context (Hunter 2018, 63). The hoard from Loudon Hill, East Ayrshire, (Table 2) (Appendix 15: 1B) consists of one *denarius* of Augustine and two of Domitian, there are nine coins ranging from the era of the Republic and offering a TPQ of AD 81-96. Dalswinton, Whitemoss and Loudon Hill are also Roman sites, the finds may therefore be the result of occasional losses rather than intentional hoards (Aitchison 1988). The limited number of coins from the Flavian era indicates that the Imperial campaigns were more martial than commercial or diplomatic in nature.



*Figure 16: Coin Hoards Ending with the Flavian Dynasty. Map generated by author using Appendices 15.1A-1C and 16.1A-1C.*

After the Flavian activity, excluding the regions of the Highlands and Islands there was a dramatic rise in the quantity of coins within the Scottish landscape, within the Antonine period. The expansion of material is testified to by the large quantity of hoards recovered from this era, 51 in total (Figure 17). The spread of Antonine era hoards touches most of the Scottish landscape with a concentration on Dumfries and Galloway and Perth and Kinross, similar to the single coin finds, there is also a concentration of evidence around the Antonine Wall. The explosion of site evidence ties in with historical sources and highlights the heightened Roman activity of the period reaching its zenith with the imperial campaigns under Antoninus Pius, including the construction of the Antonine Wall, AD 140 – 148 (Hanson 2003; Mann and Penman 1985, 41).



Figure 17: Antonine Era Coin Hoards. Map generated by author using Appendices 15.2 and 16.2.



The Antonine period has left a wealth of evidence covering much of the Scottish landscape in terms of constructions and material culture, pointing to this phase being dominant in the history of Rome's presence in northern Britain (Figure 18). The strength of Roman presence appears to have continued under Marcus Aurelius, AD 161-180, with 12 single coins from his reign, marking the end of the highpoint of Antonine interaction with Scotland, only three single coins have recorded dating from the death of Aurelius in AD 180 until the beginning of the next stage of campaigns with the actions of Severus in AD 193 (Appendix 1). Dio Cassius reported that 5,500 cavalry were sent to Britain by the order of Marcus Aurelius (Ireland 1996, 95). The large number of cavalry who were sent to reinforce the British garrisons would demand the payment and provisioning of the cohort demanding a vast sum of money. The *eques cohortis* would be paid the sum of 300 denarii per annum while the *eques legionis* would receive 350 denarii per annum. Estimating that the majority of troops would be the less expensive *equis cohortis*, at 4,000 men and horses, with the more specialised *eques legionis* numbering around 1,500, the total cost, only in terms of payment to troops, would have been 1,725,000 *denarii*. However, due to growing trouble with local people and tribes in the north and the threats to other theatres within the imperial world, the Roman frontier was withdrawn to Hadrian's Wall c.AD 188 while Commodus was emperor (Breeze 1982, 118 – 124). Dio Cassius, while speaking of several perils facing the Empire, mentions that the place of greatest instability and threat was the frontier of northern Britain (Ireland 1996, 96). The withdrawal of Commodus and continued trouble caused by the people north of Hadrian's Wall, may explain a dearth in coin finds from this era, AD 180 – 193, with only one single coin find of Pertinax, AD 193 (Appendix 1).

Moving from a low-point, there is an increase in Roman campaigns north of Hadrian's Wall, with the Emperor Septimus Severus, AD 193 – 211. In AD 197 Severus, due to preoccupations with a rebellion elsewhere in the Empire, was forced to buy peace from the *Maeatae* for 'a large sum' (Ireland 1996, 107). A large payment was not sufficient to stop the troubles in the north, Severus was forced to travel to the north of Britain to personally oversee the handling of these warbands (Ireland 1996, 108). As part of his plan to subdue Britain, Severus invaded Caledonia but found the elements and landscape to be a major obstacle (Ireland 1996, 110). The efforts of the emperor appear to have strengthened local resolve against the occupying force and may have bonded local enemies into an alliance against Rome, the Caledonians and the *Maeatae* joined together in revolt. With the death of Severus, internal imperial politics soon became more important to his sons than northern

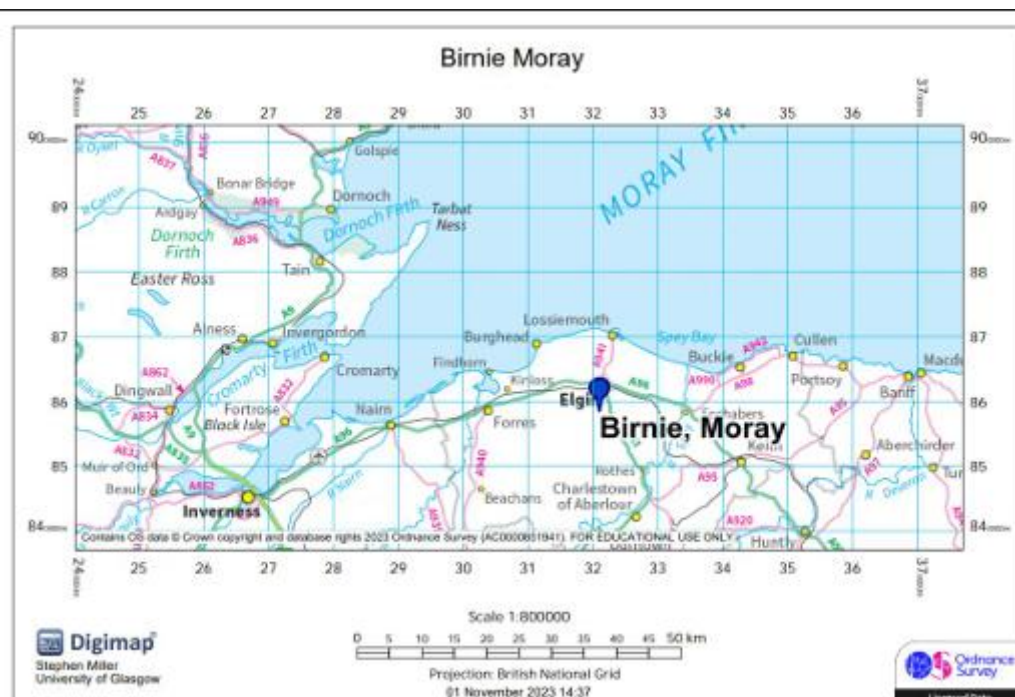


Britain. *Caracalla Antoninus* was de facto emperor and made peace with the local tribes, he abandoned the northern campaigns and territories north of Hadrian's Wall to return to Rome and secure his power there, 'He made treaties with the enemy, evacuated their territory, and abandoned the forts' (Ireland 1996, 114-115; Mann and Penman 1985, 40; Hanson 2003, 198).

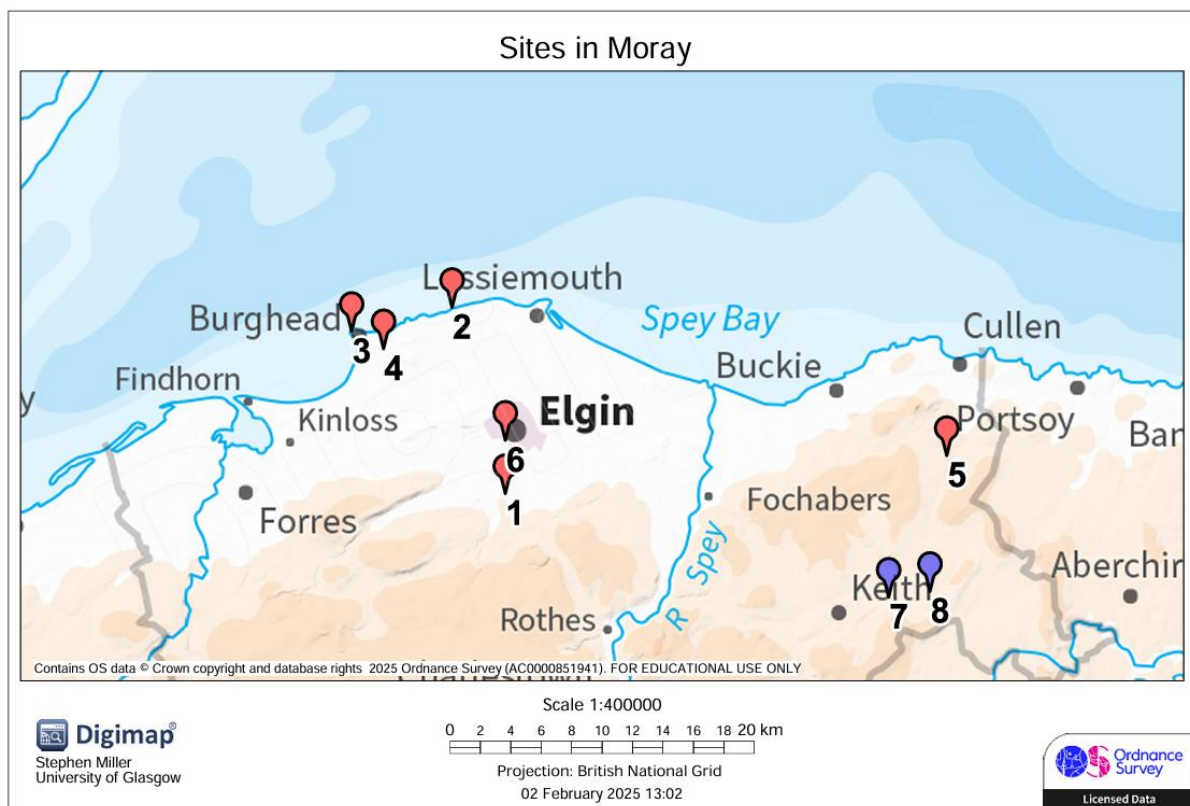


Figure 18: Coin Hoards of the Severan Dynasty. Map generated by author using Appendices 15.3 and 16.3.

The 18 hoards from the Severan Dynasty, AD 193 – 295, (Figure 18), by reflecting on the geographical spread of Severan hoards the maps there is an obvious anomaly of two coin hoards from Birnie, Moray, (Holmes 2006). Moray is a region never reached by Rome during the Severan campaigns, yet this district has an irregular amount of Roman material dating to the reign of Severus, suggesting close connections with the Roman world and an intentional imperial diplomatic policy of targeting Moray (Figure 19). The Birnie hoards may well have been the result of a bribe or payment to a local community to cement loyalty or peace, though these payments were ultimately unsuccessful (Hunter 2001, 17-19). Herodian records that after the death of Severus, AD 211, his son Caracalla (AD 198-217) ‘*came to terms with the barbarians*’ (Ireland 1986, 117).



one of several sites in Moray that highlight a different strategy was in operation regarding Roman relations with local communities (Figure 20).



*Figure 20: Sites in Moray. Red: Indigenous Sites. Blue: Roman Temporary Camps.*

*1. Birnie. 2. Sculptors Cave. 3. Burghead Fort. 4. Clarkly Hill. 5. Deskford. 6. Elgin. 7. Auchinhove. 8. Muiryford.*

*Map generated by author.*

The settlement at Birnie consists of at least six roundhouses enclosed within a curvilinear palisade, the occupants were of a high-status and had direct contact with the Roman world (Hunter 2002, 3, 7-8). The latest coin from the hoard dates to AD 196-197, suggesting that this is an early Severan hoard buried at a time contemporaneous to the roundhouses and settlement just prior to the launch of the Severan military campaigns. The Birnie 1 hoard was contained within an Iron Age pot, layered with bracken to protect the coins, it had remnants of a leather strap, possibly from a pouch that has degraded (Hunter 2001, 15). The pot had lost its lid due to ploughing. Birnie 1 has 314 *denarii* ranging from the earliest, two *denarii* of Nero (AD 54-68) reaching their peak with 46 of Hadrian (AD 117-138), 61 of Antoninus Pius (AD 138-161) and 51 of Marcus Aurelius (AD 161-169), the hoard ends with seven *denarii* from the reign of Septimus Severus (AD 193-211) (Holmes 2006). One forgery is also contained within the hoard, made with a veneer of silver around a baser metal.

The Birnie 2 hoard was contained within an undisturbed context within a pot, a typical Iron Age globular jar, the coins had been covered by leather to protect them. The discovery of Birnie 2 was made during excavations carried out in 2001, only ten meters away from the Birnie 1 hoard (Hunter 2002, 18-19). Like Birnie 1, Birnie 2 was discovered next to an isolated post, potentially markers indicating their presence, or as a type of sacral structure commemorating the votive offerings. Birnie 2 consists of 310 *denarii*, beginning with three *denarii* of Nero (AD 54-68), reaching its peak with 43 *denarii* of Hadrian, 75 *denarii* of Antoninus Pius (AD 138-161) and 39 of Marcus Aurelius (AD 161-169) ending with a single *denarius* of Pertinax (AD 193). The pattern of the flow of coins within the hoards is consistent with single coin evidence and coin hoard Imperial issue patterns, mirroring the periods of the three military campaigns. There is a peak of coins from the Antonine era with only a few from the Flavian and the Severan eras, suggesting the period of greatest impact by Rome in Scotland was the Antonine period. The other two campaigns were less impactful, as they were directed towards specific and immediate military aims, without a lasting presence being felt within local districts.

The presence of two hoards at the one site is very rare and may point to a series of payments being made by Rome to a local chief rather than one payment that was separated at the time of deposition.

The Birnie hoards indicate that it was a high-status site in the Roman Iron Age, but like many others in Moray, there is no evidence of large enclosures or substantial defensive structures, not unusual for the north-east of Scotland. However, this is distinctly different from southern Scotland, where defensive structures are often indicators of sites of high-status, suggesting a different social structure was in place in both regions. The social structure of the north-east may have been more strictly localised and less hierarchical than southern communities (Hunter 2001, 20). Birnie would suffer the same fate as Traprain Law, both being abandoned shortly after Rome's withdrawal, pointing to a pattern of regionalised instability caused by Rome's political and diplomatic activities.





Figure 21: Post Severan Hoards. Map generated by author using Appendix 16.4.

Post Severan hoards derive from the decline of Rome's presence Britain from the withdrawal from its northern frontier until the end of the imperial province c.AD 410 (Figure 21). These illustrate the new relationship between Roman Britain and the people north of Hadrian's Wall (Blackwell, et al. 2018, 20).

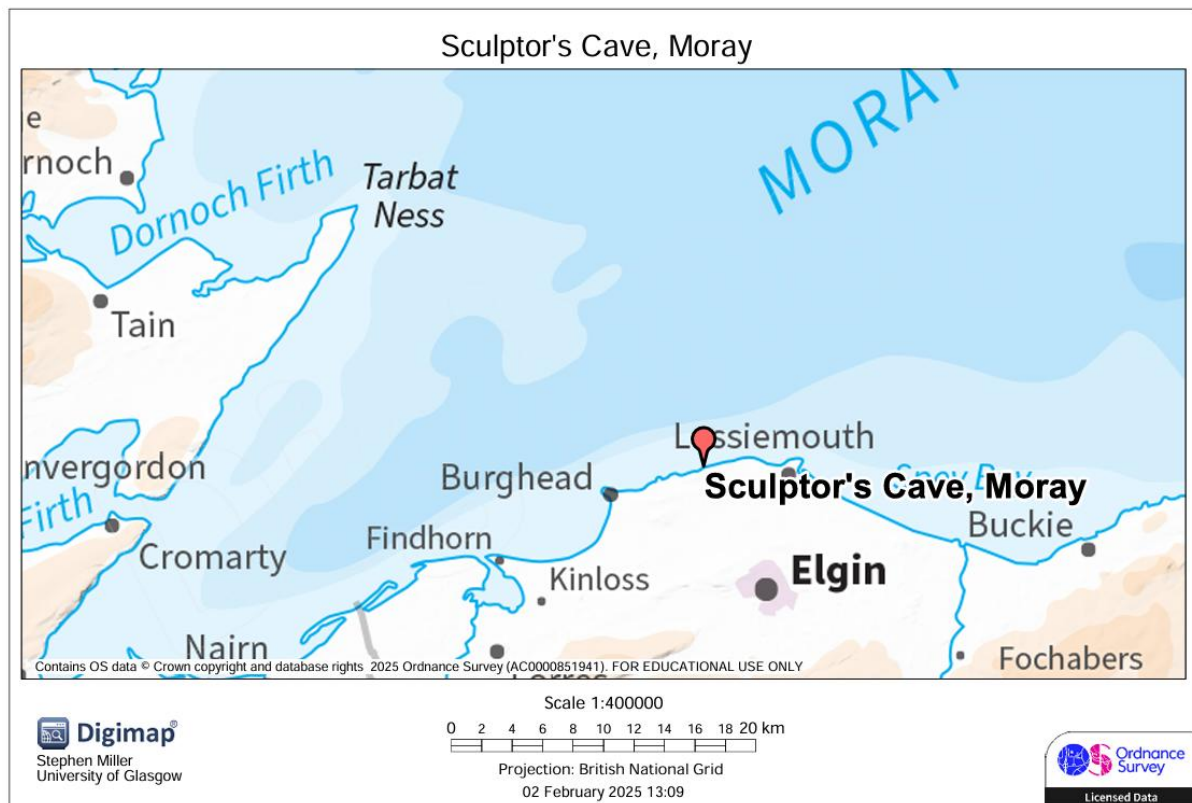


Figure 22: Sculptor's Cave, Covesea, Moray. Map generated by author.

The most striking example of this new relationship is seen at the Sculptor's Cave, Covesea, Moray, (Figure 22) (Robertson 1978, 210-211). Covesea sits between Burghead and Lossiemouth, it is situated 12.2 miles from Birnie and highlights a relationship between the Pictish people and the Roman material world. Most late Roman material would be found in southern Scotland, where the communities interfaced directly with the Roman frontier. Sculptor's Cave is a sea cave at the foot of a sandstone cliff on the Moray Firth which is inaccessible at high tide (Figure 23). Roman artefacts were mixed with indigenous material culture and was the site of late Bronze Age human burial, religious practices and depositions and carvings of Pictish symbols, from whom the cave received its name (Armit & Büster 2020, 32; Hunter 1997, 119). The site was in use from around 1100 BC, where human bodies were laid, often the remains of children, at least six decapitations took place (Armit and

Büster 2020, 39). The excavations carried out by Armit recovered Roman Iron Age pottery from the site that produced a radiocarbon date of cal. AD 140-390 (Armit and Büster 2020, 55). Fragments from four or five pieces of Roman pottery were discovered all originating from Gaul and date to the Antonine period Roman (Armit & Büster 2020, 98). Iron Age pots were recovered with everted rims like one used for the deposition of a coin hoard at Birnie (Armit & Büster 2020, 92; Holmes 2006, 236).

Of the 72 non-ferrous metal objects recovered, two are silver items were found within the assemblage, a pair of tweezers and a projecting-headed pin, which are possibly indigenous prestige goods. The tweezers display Roman design influences while the pin is of an indigenous design. Thirteen other objects were found to be constructed from silver mixed with copper alloy with various amounts of tin, zinc and lead (Hunter 2020, 131). These 13 objects appear to be created from debased silver rather than being encased in a thin layer of silver. The objects are a pin of indigenous design, a belt fastening, seven necklace components and a spoon all of which are of Roman origin, two Roman inspired picks and an undiagnosed fastener. The other 46 items are made from various metals and are dominated by items of personal items (Hunter 2020, 131). Hunter indicates that the material from Sculptor's Cave is representative of three different depositional practices. Firstly, the deposition of several intact examples of the same type of object, such as the twelve pins, suggesting either a group deposit or repeated depositions in the same spot. Some objects were intentionally broken, possibly ceremonially, including a pick, two pins, a tweezer, a spiral finger ring. The Roman spoon was broken as were the two bracelets and the necklace. Several of the objects have female gendered associations including the necklace and bangles (Hunter 2020, 138).





Figure 23: Major Power Centres in Early Medieval Scotland. Map generated by author using Appendix 18.



Metalworking, crucibles and slag detritus retrieved from Sculptor's Cave may indicate craftworking taking place at the site, or they may have been deliberately deposited within a historically significant sacred site.

The 230 *nummi*, made from copper alloy, from Sculptor's Cave fall within an unusually restricted time frame, with all, bar one, dating to AD 330 – 364, the outlier dating to AD 320-341, suggesting that this is indeed a hoard in the strictest sense and represents a late Roman hoard (Moorhead 2020, 149). The coin hoard consists of nine genuine Roman issues and about 220 contemporary copies. 148 coins survive in the archaeological record and have been examined the presence of a late Roman hoard so far north of Hadrian's Wall is unusual, but this hoard together with those from Birnie and other parts of Moray suggest this district had direct contact with Rome in the later part of Rome's presence in Britain. The coins may have arrived by sea from the east Yorkshire region, possibly because of trade or raiding in the south by the Picts of the northeast (Wallace 2008). Nine of the coins from the cave were pierced and may have been intended for personal ornamentation. Pierced coins are rare in Scotland, though they are more common in both England and Wales. The nine coins may have been modified in southern Britain before their arrival in Moray. These coins may have played some part in a depositional religious ritual, the pierced examples possibly being talismans, though coins worn as jewellery were more often female adornments for the period. However, pierced coins play some role in devotional activity, 20 pierced coins were reportedly recovered from Wiltshire (Moorhead 2020, 156). The coins may have gained a further ritual significance related to a Pictish victory and relate to the ritually deposited hoards found at Birnie, Moray, only around twelve miles away from Covesea (Aitchison 1988, 274-277; Holmes 2006). Iron Age pottery from Sculptor's Cave, Fabric F vessels (V16-20) are shared with similar vessels used to house the Birnie Hoards, the pots date to the late second century AD (Armit and Büster 2020, 92).

The coin hoards consist of stored portable wealth, material with an inherent value and for the creation of high-status objects, ritual offerings, security of treaties, guarantees of marriage contracts (Aitchison 1988). The imperial coin may have been used as a form of guarantor of contract, with the image of the emperor acting as a surety for alliance and perhaps marriage contracts, which may explain the number of bronze coins that were also hoarded (Aitchison

1988, 274). Unpacking the geographic distribution of coin hoards and single stray finds together will enlighten our understanding of the waxing and waning of Roman influence throughout northern Britain.

Payments to local elites and polities, first made in silver coins were replaced in the third century by hacksilver, potentially indicating a failure of the imperial state to fully resource itself and speaks to difficulties faced by the Empire in other regions. The Dairsie Hoard, Fife, was discovered while metal detecting and may be one of the first examples of Roman plate replacing coin, it is the earliest hoard of hacksilver found anywhere from beyond the frontiers of the Empire. The hoard was placed in a much more ancient landscape between two standing stones the reuse of an ancient landscape was an intentional policy of local communities for linking themselves and their actions to the deep past, as a reminder of the deposition or as a sacred act of internment. The Dairsie Hoard is from the third century and represents the earliest such hoard discovered from anywhere in Europe beyond the imperial frontiers. The hoard may provide early evidence for the use of hacksilver as a form of payment or bribe being adopted as an imperial strategy. The hoard consists of more than 408 silver fragments which came from at least four vessels that had been intentionally cut up for use as hacksilver (Hunter 2018).

Cassius Dio records that the Caledonians failed to honour their treaty with Rome and aided the *Maeatae* instead, forcing the Roman governor, Lupus, to ‘buy peace’ from the *Maeatae* for ‘a large sum’ (Ireland 1996, 107). The policy of ‘buying off’ local militant groups around the Roman frontier lands is well testified as a diplomatic solution to a local problem (Blackwell et al 2018, 19-31). Bribery by the Roman occupiers may have led to local frictions and animosity between those in receipt of the Roman diplomatic gifts and those who were excluded from these transactions, potentially an intentional situation encouraged by the occupying forces (Hunter 2007, 23-31). The withdrawal of the Roman legions in the third century led to a demise in the availability of Roman silver and may have been the catalyst for social unrest among the local peoples of this period (Hunter 2007, 50-53).

The period of greatest interaction between Rome and the local communities may be mapped by the surviving silver material including coin hoards, individual silver coins, silver hoards and artefacts. As recognised above, the Antonine era has left the greatest number of individual coin-finds and coin hoards within the Scottish landscape. The dominant focus of single coin finds follows, roughly, the areas of Antonine forts and fortlets. The profusion of

coin hoards is much more widely spread, moving far beyond sites directly related to Antonine activity outside the arena of Antonine activity though focused on the east of the country. Possibly suggesting that the eastern seaboard and the land of the Picts were significant in the spread and distribution of the outlying hoards.

Each coin contributes to the formation of a greater pattern, whether they are single finds or part of larger hoards. Examining coins that have been discovered across the landscape, considering the caveats of later introductions, allows for an understanding of the depth and breadth of imperial activity within the Roman Iron Age. The zenith of Roman numismatic activity is found within the Antonine period, the era of the *Six Good Emperors*. The total amount of silver coin available to indigenous people was vast, even at a conservative estimate, however, only a fraction of the coins available have been recovered or recorded today. The evidence points to absence of Roman activity in the Highlands and Islands with a focus on the east and southern districts of the country and profusion of evidence from either side of the Antonine Wall.

The distribution patterns indicate a density in the rich lands of the east and north-east, from where the Pictish kingdoms emerged. The presence of large amounts of Roman silver coin in the landscape is evident, however, what local people did with that silver raises another question. Did they adopt silver wholesale as part of a larger Roman package? Were indigenous people selective in how they related to Roman material and culture, adopting some aspects of the package while rejecting others?

### **3: The Roman Package**

Through an examination of aspects of the Roman Package there is evidence that indigenous people adopted a selective approach towards Roman material culture. Silver was one commodity universally sought after by local groups (Blackwell et al 2018, XIII), while interest in different materials such as glass, Samian ware, coarse ware, other metals and building styles was more varied. Some Roman objects were adopted and adapted, such as silver and Samian ware, whereas coarse ware in the northeast was less popular than it was in southern communities (Campbell 2018, 78-80). Roman material was repurposed to serve a local function suited to the needs of indigenous people, including the repurposing of silver into 'massive chains' serving the needs of growing kingdoms and elites. The massive chains date to around the time of hoards of Roman silver plate arriving within the landscape. The quality of silver used for fashioning the chains matches the quality of silver plate found in hoards from Traprain Law, Dairsie, Gaulcross and Norrie's Law, indicating a similar date range (Troalan 2018, 7). The use of red enamelling may point to a societal rejection of the Roman package, returning to more ancient, indigenous, decorative styles that pre-date the arrival of Rome and Roman fashions.

The communities of northern Britain may have been selective in their adoption of Roman material, and the selectivity demonstrates regional and cultural differences within the various communities that existed at the time. There was a greater adoption much of the Roman package in areas that were closely allied with Roman activity, while more distant groups responded differently to Roman material and the Roman presence (Campbell 2018, 83-83).

Silver is only one part of a much greater package introduced to Iron Age Scotland from the Roman world. There were also a small number of gold coins, 19 in total from across Scotland (Appendix 13). Local tastes led to a selective adoption on indigenous sites of only certain goods, such as an emphasis from sites northeast of the River Forth on fine Samian tableware, over the less frequently found coarse ware and work-a-day pottery, which dominate assemblages from Roman military sites and indigenous sites from southern Scotland. The agency of local people and communities is clear from this process of selection, opposing the view that the Roman Empire imposed its tastes, styles and political objectives upon local people. The adoption of smaller Samian ware goods and the repurposing of larger objects to smaller locally desirable cups and bowls, suggests an emphasis on dining and

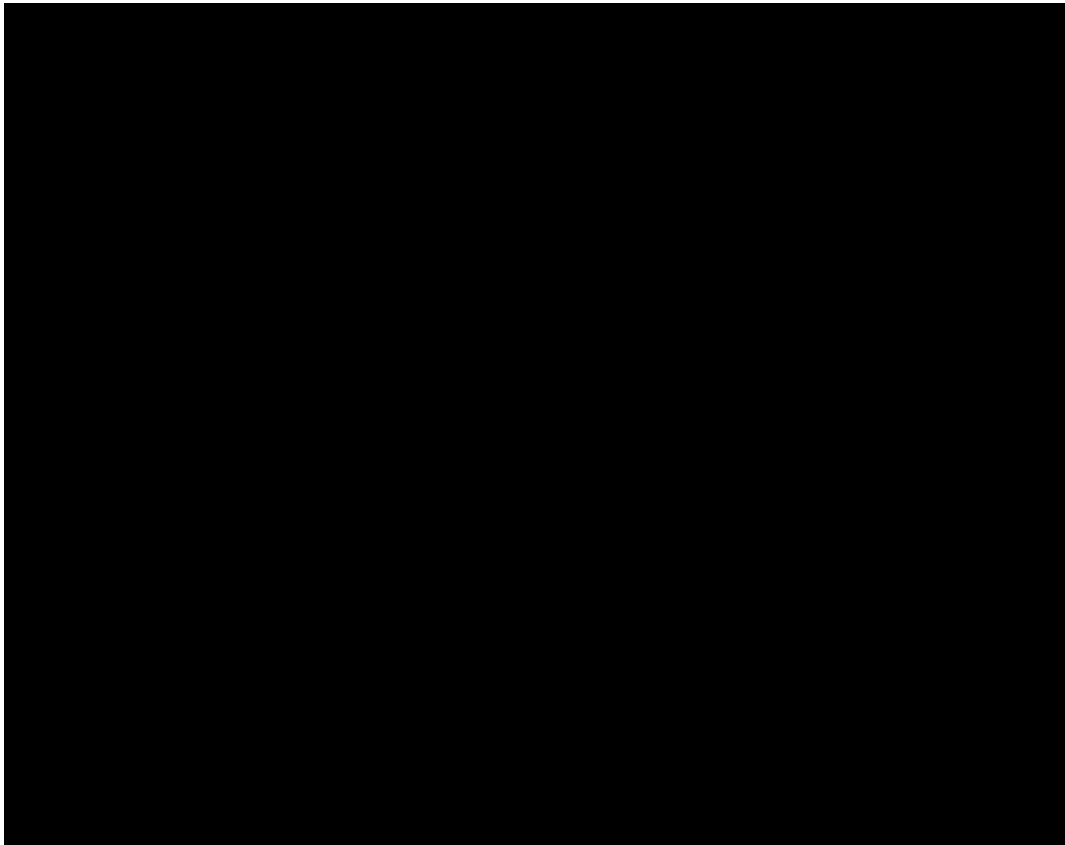
small-scale gathering within the local societies as opposed to large scale feasting, evidenced by the earlier Iron Age of northern Britain (Hunter 2007, 37-38). North-east Scottish society interacted differently with Roman material than southern Scotland, the evidence expressing a less hierarchical community in the north-east than its southern neighbours (MacKie 2007, 306-311; Hunter 2007, 16). Roman coarse ware is more commonly found in frontier sites south of the River Forth. There is an obvious distribution and availability issue, being further from the Roman frontier would lead to less Roman material being available locally, however the material did reach these sites, the local communities used it in a way that suited their needs. This is a move away from the traditional large-scale feasting traditions, present within northern Britain before the Roman arrival (Hunter 2007, 16). Pottery deteriorates and often breaks over time, leaving sherds as evidence of its presence. A shard today, was once a sizeable and often high-status object. In its later life, that shard was broken and separated from the greater object and became a different type of object, yet still appreciated, adapted and used within the local context, such as Samian ware pots being repurposed as polishers and smoothers found at Hurly Hawkin, where six shards of Samian ware were recovered displaying evidence of being worked as polishing tools. From this same site was recovered a later local copy of a Roman beaker (MacKie 2007). From the vast array of goods and fashions introduced by the Roman world, indigenous people were selective in what they adopted and fused what they chose into their own society and their immediate needs (Alcock 1963; Alcock and Alcock 1990, 115-116).

Roman glassware appears on many Roman and indigenous sites across the Scottish landscape. There are many types and styles of glassware, often related to drinking and the consumption of alcohol (Ingemark 2014). The largest single identifiable typology of drinking vessel are the cylindrical cups with fire-rounded rims and base rings. These cups have been identified as being used for the consumption of wine, pointing to an adoption of Roman material and fashion (Ingemark 2014, 60-70). Eleven sites from Scotland have produced cylindrical cups, both plain and painted, dating c.AD 128-142. Between 13 and 15 cups have been recovered so far. Some are only fragmentary cylindrical cups and have been found on indigenous sites north of Hadrian's Wall. These smaller glass vessels, measuring between 70 to 140mm in diameter and between 60 to 100mm in height, are the most common type found in the north of Britain (Appendix 17).

Unlike pottery or glassware, silver does not deteriorate in the same manner. The material can be transformed from a vessel or collection of coins into a completely different object, without

losing its inherent value or significance, or the bullion value of the metal. Smaller copper alloy jewellery had been part of the material culture of the indigenous people before the arrival of Rome in the form of pins, bangles and necklaces. An innovation from the Continental world was the introduction of brooches. Prior to the arrival of the Rome, Iron Age Scotland mostly favoured the use of pins for clothing fasteners (Hunter 2007, 16).

***Table 7: Brooch Types from non-Roman Sites Displayed in Percentages (Hunter 1996).***



The adoption of brooches and manipulation of their style reflected local tastes and traditions, maintaining the indigenous fashion for smaller and more subtle objects. High-quality items were adopted and used by local people as markers of status, with trumpet, headstud and knee brooches being the most frequently recovered personal adornment artefacts from non-Roman sites (Table 5) (Hunter 1996, 122; Robertson 1970, 200). The choice of smaller objects may reflect the nature of communities of the time. They opted for smaller high-quality material, over larger objects, the smaller material more closely fitted their needs and social choices, like cups for wine drinking discussed above. A large, gilded brooch may be ideal within a large social gathering, allowing for the most important person to stand out from the crowd.

However, in a small environment with a limited group of people, smaller, more discrete personal ornaments may be more suited to the needs of the community, just as the smaller bowls suited small-scale dining. This may be suggestive of a less hierarchical society existing in the north-east territories than in the south within the Roman Iron Age.

### **Rejection of Aspects of the Roman Package**

The continued building of traditional round houses in opposition to the Roman styles is a significant indicator that indigenous people rejected certain elements of Roman life and taste (Hanson 2004, 139; Hanson 2002, 836; Hingley 1997). If there was an intentional adoption of certain Roman material and a concomitant rejection of other Roman material culture, the absence of widely available Roman objects from hoards found in northeast Scotland might be more clearly understood (Hunter 1997, 111-112). There are more than 200 indigenous Iron Age sites across Scotland that contain Roman artefacts, 40 of which afford evidence of Roman material used within a votive context (Hunter 2007, 12-13). Adoption and the desire for the exotica that Rome brought to northern Britain is without doubt.

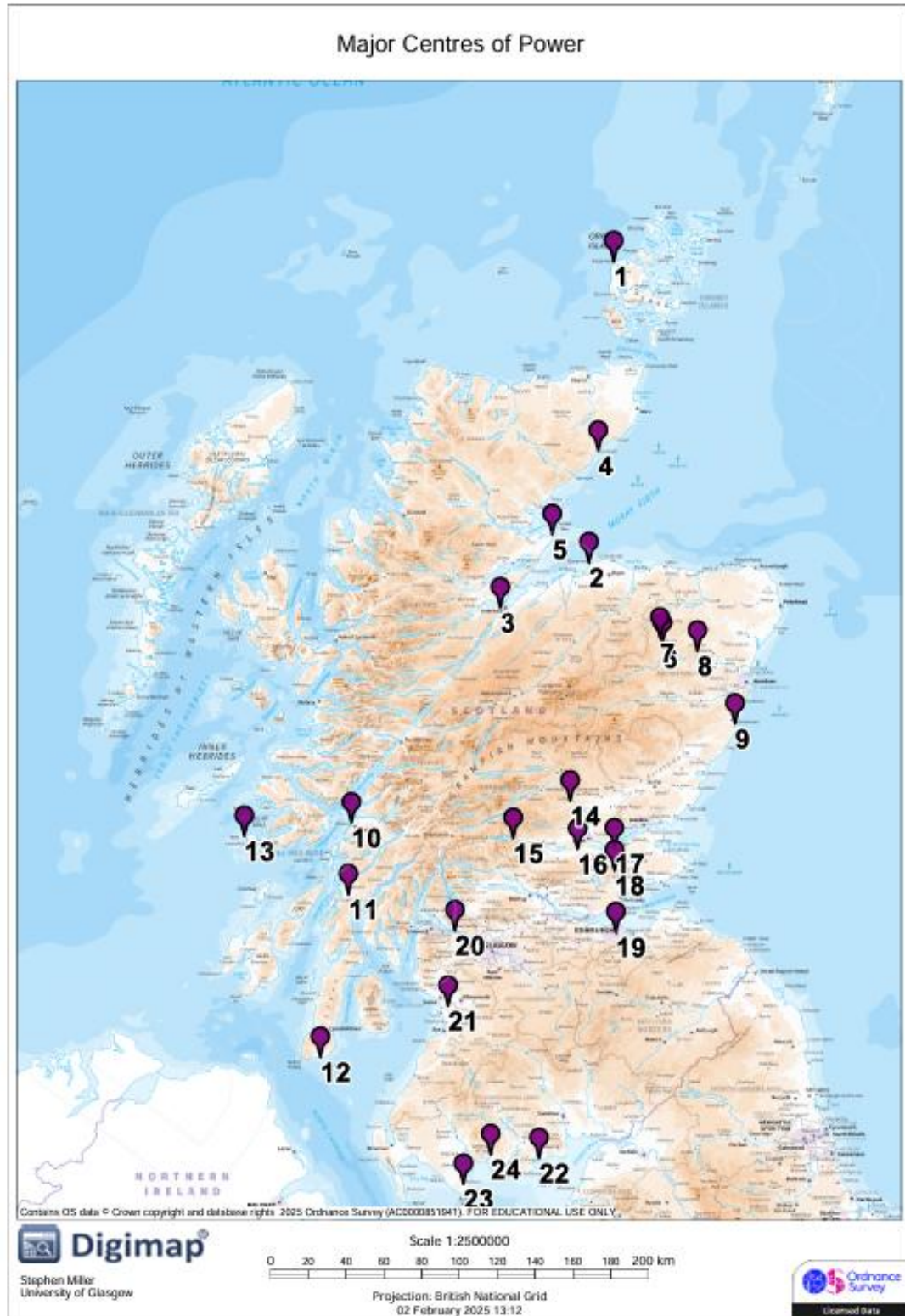


Figure 23: Major Power Centres in Early Medieval Scotland. Map generated by author using Appendix 18.



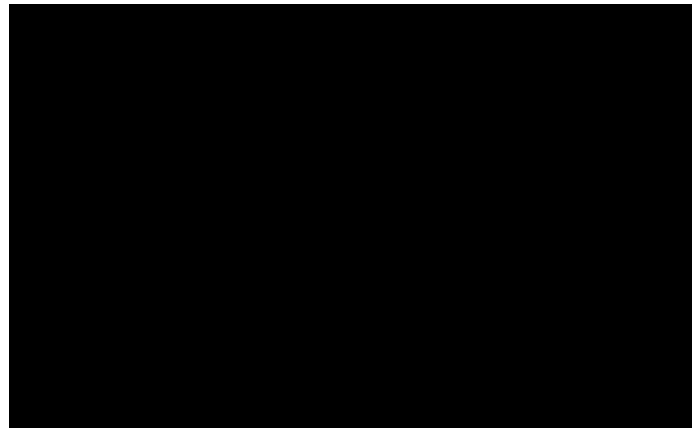
Those closer to Roman activity may have more eagerly adopted Roman material in significant amounts based on the availability of objects and their direct interactions with imperial sites and military units. However, the evidence from the south and east of Scotland suggest a focus on fewer and more controlled sites, positing the possibility of a greater hierarchy existing there than in the north. Sites further away from Roman activity may have had less opportunity to encounter material from the Roman world, explaining the comparatively small number of Roman objects recovered from Argyll and the northwest regions when compared to southern districts. This may have been a form of passive resistance to the foreign invaders, though the profusion of metalworking sites in Dál Riata opens an alternative interpretation, discussed later (Hanson 2004, 139-140).

### **The Transformation of Roman Silver**

As time passes and society changes so too does the appreciation and use of material. Many sites across Scotland hold evidence of the repurposing of older objects to meet a new purpose and function. Samian ware shards are seen in their later life to be used as scrapers or polishers or ground down to be used for making pigments or as part of a ritual deposit (Hartley 1972; Wallace 2008). Roman material may have been part of a prestige package desired and hoarded by elites in northern Britain, as part of the exotica of power reaching out to the wider world related to the prestige of the Imperial world (Robertson 1970, 37; MacInnes 1984; Hunter 1997, 121). There are local variations apparent within the northern landscape, where different communities responded to and reacted uniquely to Roman material, showing a ‘one size fits all’ approach does not tell the full story of northern Britain, local communities were active agents in terms of their relationship with the Empire.

With the arrival of the Roman Empire, silver became an increasingly major feature of life for the indigenous people, especially for elite individuals and communities. Silver would be adapted by local people to express their own identity and the culture of their communities. They would reuse some of the silver left to them by Rome and repurpose much of it to reflect of their own needs. The ‘massive chains’ are a notable example of a unique response and use of Roman silver. Of all the metalwork produced in the Early Medieval Period, the massive silver chains are striking creations. They display the copious amount of Roman silver available in the northern landscape of Britain and may go some way in explaining the absence of substantial numbers of *denarii* today. Arguably, at least some of the chains may

have been crafted from earlier, less debased, *denarii*. The use of enigmatic Pictish symbols on the clasps of two of the chains reflect other Pictish material culture, including, other silver objects as well as inscriptions appearing on so called Pictish Symbol Stones, marking the Pictish artisans and craftspeople of this era adopting a distinctive style different from other regional Celtic artisans. The symbols have long been recognised as a distinctive feature of Pictish culture and society (Henderson and Henderson 2004, 87-88; Forsyth 1995).



*Figure 24: Massive Silver Chain, Traprain Law (NMS: X.FC 248). Last Accessed 11<sup>th</sup> December 2022.*

The ‘massive silver chains’ represent Early Medieval Scotland’s most conspicuous use of Roman silver for any single item (Blackwell, et al. 2018, 95; Stevenson 1956). The silver used for the creation of the massive silver chains was not sourced from indigenous supplies and mines. Scotland did not appear to exploit its natural silver resources until much later in its history recycling quantities of Roman silver instead. It was not until the twelfth century AD that the first coins would be minted in northern Britain. King David 1 (AD 1124-1153) minted silver coins from a mint in Carlisle, captured from King Stephen of England (AD 1135-1154) (Figure 27). The first coins were minted in AD 1136 bearing the name of David (Bateson 1987, 3). The silver used for the creation of the massive chains must have been from material that arrived with Rome and her imperial interactions with indigenous people.

Traditionally the chains were referred to as Pictish chains, however, only three were recovered from Pictish territory: Torvean, Nigg and Parkhill. Only two chains have Pictish symbolism engraved on their clasps, Parkhill and Whitecleugh. The purpose of wearing such a heavy object of solid silver around one’s neck, if indeed, they were worn around a person’s neck, must be explored, as they weigh anything up to three kilograms, such as the chain from

Traprain Law (Figure 24). The reason for the intentional burying of these precious objects must also be raised.

The chains discovered have been recovered mainly from south-east Scotland with a few found in the north-east (Figure 25). While eleven Pictish chains have reportedly been recovered, only nine survive today. The two lost chains were discovered at Aberdeenshire and Berwickshire. None of the nine surviving chains are complete (Appendix 19) (Youngs 2013). The quantity and quality of the silver chains appears to have been a significant factor, as none of the chains have any decoration on them, apart from the clasps, which we shall return to later.

The Nigg Chain (Canmore ID: 20251) consists of fragments of a massive silver and bronze chain, discovered at a depth of 45 cm at Nigg Bay, Nigg, Aberdeenshire. It was discovered, like the other massive chains, as a result of the land improvements of the 19<sup>th</sup> century (Blackwell et al. 2018, 97). The chain was gifted to the Kings College Museum, Aberdeen, in 1796 by Surgeon Jonathan Troup (Reid 1912; Smith 1875). The Nigg Chain was transferred to Marischal College Museum in 1914 and is the only known massive chain not in the possession of the NMS today. The chain is made of 11 circular alternating paired links and single links, measuring 34 mm in diameter and 7 mm in thickness, it measures around 11 cm in length (Palmer 2018). It is 95% silver and was crafted from casting Roman silver which was subsequently beaten into links. The Nigg chain is similar to the other massive silver chains housed in the NMS collections and reportedly dates to around the seventh century.



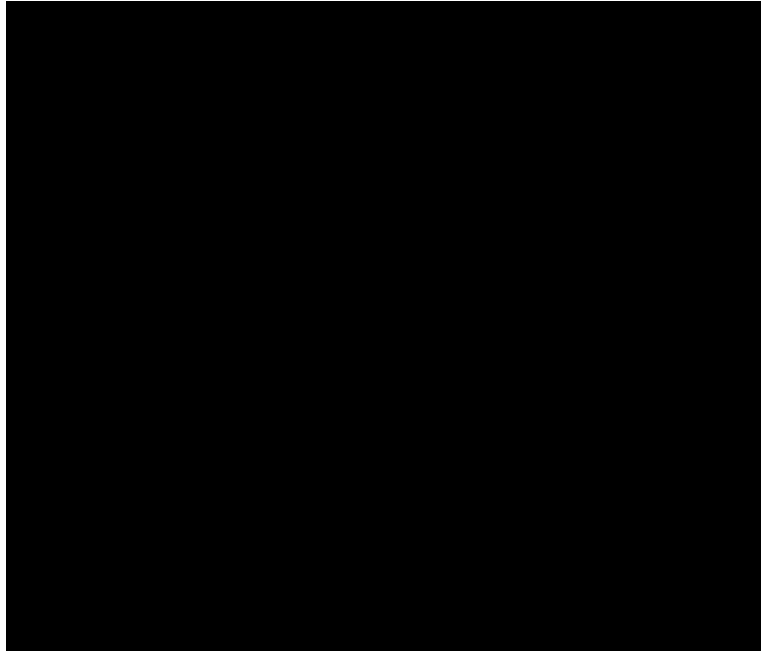
*Figure 25: Map of the Nine Surviving Massive Silver Chains. Created by author using Appendix 19.*

1. Torvean, Highland. 2. Parkhill, Aberdeenshire. 3. Nigg, Aberdeenshire. 4. Traprain Law, East Lothian. 5. Haddington, East Lothian. 6. Hoardweel, Scottish Borders. 7. Whitlaw, Scottish Borders. 8. Borland, South Lanarkshire. 9. Whitecleugh, South Lanarkshire.

Parkhill, Aberdeenshire, (Canmore: 20319) a silver chain measuring 445mm long and weighing 1.23 kilograms, was discovered in the mid-19th century. It consists of twenty-three double circular links and an incised penannular clasp at one end and dates to the 7th or 8th century, though the chain may be considerably older than the clasp, discussed below. Each ring measures 20mm in breadth and 10mm in thickness. The chain was presented to the Society of Antiquaries of Scotland in 1864 as Treasure Trove (FC 147) through the estate of John Henderson (Palmer 2022; Smith 1875, 330-332). The chain from Torvaine, Tor a Bhean, Invernesshire, was discovered in 1809 during the widening of the Caledonian Canal. It is 45.72 cm in length, making it the largest chain to survive and it weighs 2.88 kilograms, each link weighing around 90 grams. It consists of 16 pairs of unornamented rings (Blackwell, et al. 2018, 97; Smith 1875, 328-330).

At Traprain Law, East Lothian, (Canmore: 56385) the site of a silver hoard which had been discovered in 1919, a silver chain was recovered by quarriers in 1938 dating to around the seventh century AD (Edwards 1939; Hunter 2013, 7). Also in East Lothian is Haddington where another massive chain was recovered, this time in 1873. The section of the chain is made of double rings of silver, each weighing 10 grams and dates to between c. AD 400-600 (NMAS 1892).

Two chains found in South Lanarkshire survive. The chain from Borland (X.FC.264) is made up of twenty-one pairs of links, flattened on their inner sides. It is thought to date around AD 400 – 600 (Blackwell et al 2018, 98; Edwards 1939). The other chain from South Lanarkshire is the Whitecleugh Chain (NMS X.FC 150) (Youngs 1990, 28; Blackwell et al 2018, 101) discovered in 1869 (Figure 26). The chain is made from 22 pairs of silver rings with a broad terminal link engraved with Pictish symbols in red enamel and weighs 1.73 kg, this chain is thought to date to the 6<sup>th</sup>/7<sup>th</sup> century.



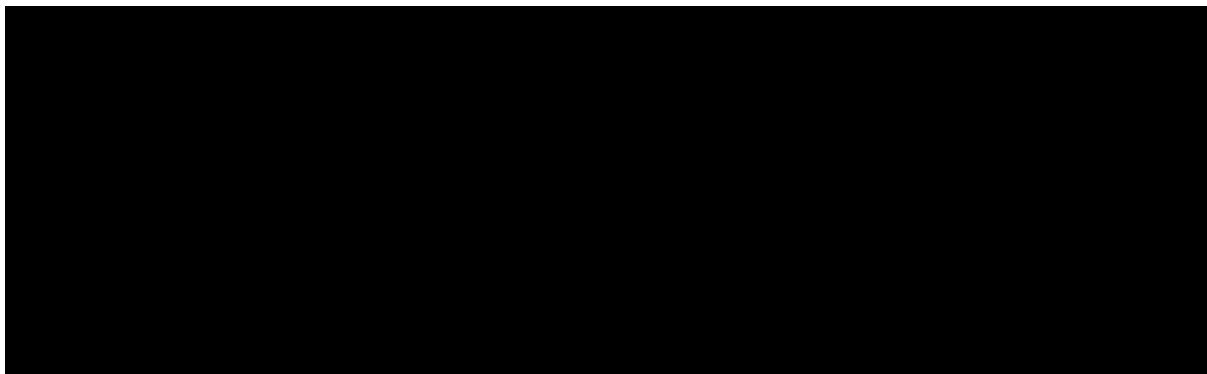
*Figure 26: Massive Silver Chain, Whitecleugh (NMS X.FC 150). Last Accessed, 23rd November 2023.*

The remaining two surviving chains were both discovered in the Scottish Borders. At Whitlaw, in 1895, a section of a much larger chain was recovered (NMS X.FC 172). There were six complete links and two broken links (Blackwell et al 2018, 97; Edwards 1939). The other chain was found at Hoardweel, consisting of forty-one silver links and a penannular ring. The Hoardweel chain measures just over 44 cm in length (Blackwell et al 2018, 97; Dunglas and Smith 1881, 64-66).

Two of the five surviving clasps, used to fasten and unfasten the chains, one from Whitecleugh, South Lanarkshire (Figure 26) and the other from Parkhill, Aberdeenshire, are decorated with Pictish motifs and enamelled in red material. The chain from Whitecleugh has Z-rod symbol also found on a silver plaque from the Norrie's Law Hoard (Chapter 4) and the Pictish symbol stone from Invereen, Inverness-shire, among other sites (Appendix 20) (Blackwell et al 2018, 97-99; Canmore ID:14139). The decoration of the clasps for the 'massive chains' suggest that the chains would have been worn with the decorated piece placed to the front of the neck, allowing display of the ornamentation. Two of the surviving clasps, Parkhill and Borland, display signs of metal being saved from the inside of the clasp using an 'I' shaped profile ensuring this economy would not be easily seen (Blackwell, et al. 2018, 99).

At Greenlaw, Berwickshire, a chain was reported to have been discovered at Herit's/Heriot's Dyke by a woman who thought it was iron due to its discolouration. The woman is reported to have passed the chain onto a Mr Matheson, a local blacksmith, for repair. After Matheson discovered it was a valuable object made of silver the chain was given over to Lord Marchmont. The chain is first mentioned in the New Statistical Account of Scotland in 1834 and reported by Sir Walter Elliot in 1845 to the Society of Antiquities of Scotland (Dunglas and Smith 1881, 69; Smith 1875, 327-328). The chain is now lost.

There is a record that a massive silver chain was recovered at some time in the eighteenth century from Banffshire (Blackwell, et al. 2018, 97).



*Figure 27: Silver Penny of David I, minted at Carlisle. Metal detecting discovery, Kirkcudbright, Dumfries and Galloway (T.T. 112/16). Last Accessed, 4<sup>th</sup> October 2023.*

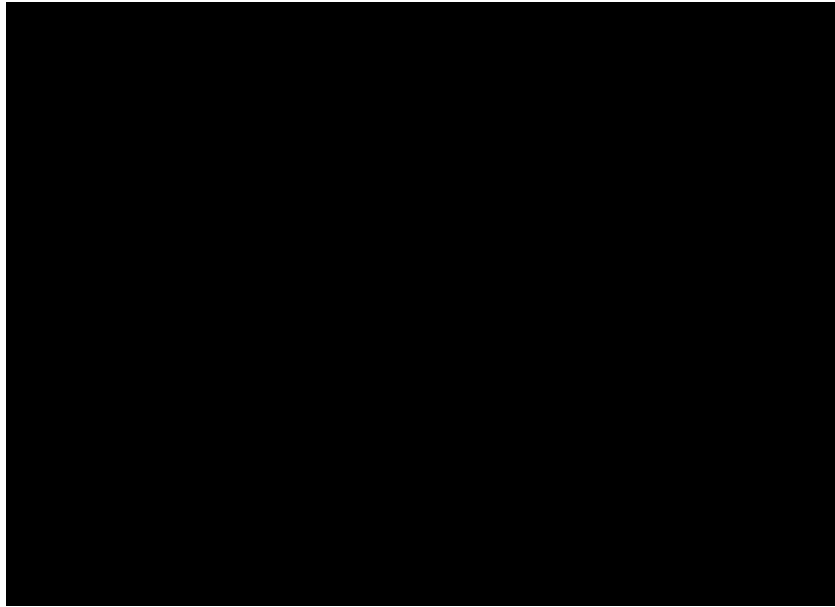
Whatever their purpose was, possibly as badges of high office and status, the amount of silver required to create them was substantial, almost three kilograms in one instance. The combined weight of the six heavy chains from Torvean, Parkhill, Traprain Law, Haddington, Whitecleugh and Hoardweel totals 9.640 kilograms (Appendix 21). Based on a single *denarius* weighing on average 3.85 grams, the creation of the six chains would demand 2,504 *denarii*. The total weight of the six heavy chains would have demanded fewer silver *denarii* than is currently to be found in Scotland because of ancient losses, 3,767 *denarii* have been recovered thus far. The Torvean chain itself would have been made from approximately 749 *denarii*, based on an estimated average weight of one denarius being 3.85 grams, presuming that the silver used for its fashioning was made from available Roman silver coins.

The massive chains demonstrate a growth in the centralisation of power with fewer hands holding greater control over the resources of society. The chains demonstrate the large

quantities of silver available to make these objects, whether in terms of silver coin or silver plate (Goldberg and Blackwell 2022, 398). The uniform style and conformity between all the chains may point to them being fashioned in a relatively tight timeframe, though their conformity may be the result of a fashion of power display that lasted over a much longer period (Blackwell, et al. 2018, 102). The quantity of silver required does point to them belonging to a period which had access to a great quantity of Roman silver and indicates a period between the third century AD and the era of the collapse of the Western Empire in the fifth century AD, when it became Imperial policy to buy peace and border security rather than to garrison the landscape north of Hadrian's Wall.

The motifs on penannular clasps from the chains from Parkhill and Whitecleugh were the reason for the massive chains being called Pictish. However, most of the chains were discovered outside of Pictish territory (Figure 28) (Hinton 2006, 43). While there are similarities between the designs found on the clasps and Pictish symbols there are also differences that may point to the clasps being designed sometime later than the stones, possibly as much as 300 years after the chains were created. The clasps being a later addition to the chains would tie in with the idea that the design of the Parkhill and Whitecleugh clasps are a variation from the designs of the other clasps, using a technique that saved on silver with an 'I-shaped' outline as opposed to the regular 'D-shape' (Blackwell, et al. 2018, 87-99). The clasps were the most vulnerable and easily lost part of the chains structure, being a fastening clasp and not a complete ring.





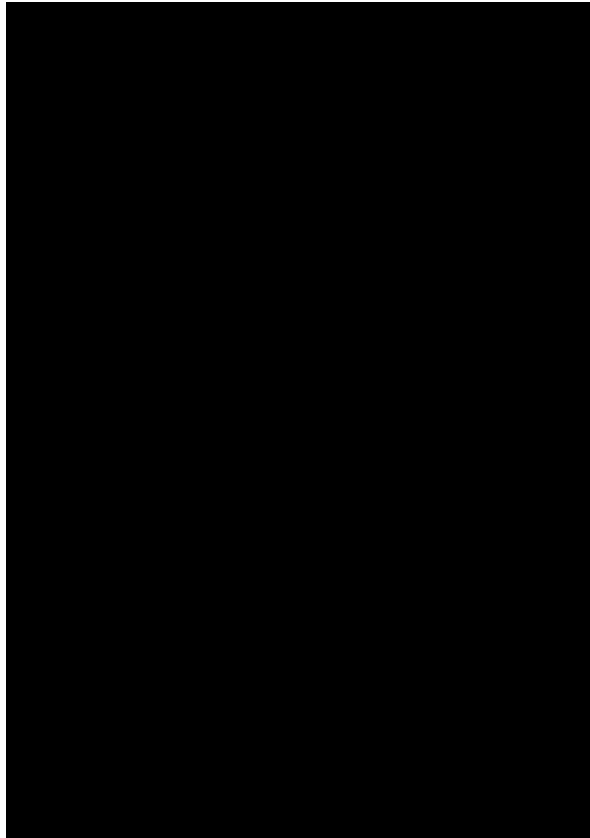
*Figure 28: Whitecleugh Chain Clasp Detail (NMS X.FC 150). Last Accessed, 6th December 2023.*

It is possible that the original older clasps were lost over their long use-life and were replaced in their later history. By then, identification by decoration may have become a significant artistic expression within communities and the replaced clasps were decorated in the style of the seventh century, leading to the chains being misclassified in terms of their age by some 300 years. The earlier chains containing a high purity of silver suggests that there was a ready resource that was available for the forging of these objects with a large quantity of purer silver available. If the two inscribed clasps were created later than the chains, based on the quality of silver used to create them and the effort to save the amount of silver used, these factors point to an increasing scarceness of silver available at the time, and a deliberate effort being made to create an impressive item for public display without using as much silver as would be demanded by the ‘D-shaped’ style of earlier clasps. If the chains pre-date the traditional 7<sup>th</sup> century, a date obtained from analysis of the Pictish clasps comparing them to the artistic styles of Pictish stones, such as the Aberlemno and Invereen stones (Figure 29) then the chains themselves may date from the fourth or fifth century AD and would be more directly related to the hoards at Traprain and Gaulcross. The clasps would relate to a later era when repeated repurposing of silver led to it becoming increasingly debased (Goldberg and Blackwell 2022, 185-398; Hunter 2022).

The geographical distribution of the chains and a later Pictish embellishment on two of the chains would render these to be a pan-regional phenomenon, rather than purely Pictish they should always be more accurately described as '*Massive Silver Chains*'.

The double disk and Z-rod design with a 'tuning fork' symbol and a zig-zag border is enamelled in red, highlighting the designs (Henderson and Henderson 2004, 87) (Appendix 20). The zig-zag border is an innovation and does not appear to be part of the classical Pictish art tradition previously (Noble et al. 2018).

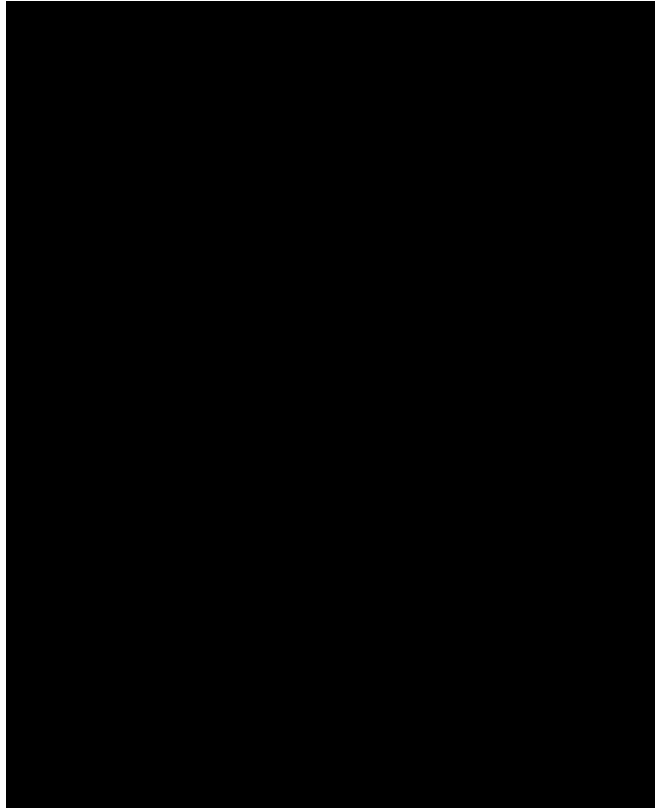
The purpose of the chains is not entirely clear, that they are statements of power, wealth and dominance over large amounts of resources is without doubt. Practically, they would be difficult to wear in the manner of a torque, around a man's neck, they are too small, the most complete examples, from Torvean and Hoardweel, measuring 32-34 centimetres, far too small to fit comfortably around the neck of an average man (Goldberg 2017, 185). Possibly they may be more suited to being worn by a woman or an adolescent, a princeling perhaps. The chains may offer direct evidence of prestige but inevitably the imagery conjured up by chains is one of bondage, potentially marriage and perhaps even oppression. From a religious perspective the chains may point to an association with metamorphosising Celtic deities, namely bird gods who are identified by the silver or gold chains worn around their necks, admittedly, evidence for belief in these bird gods is found within an Irish context (Ross 1959, 41). While this interpretation may be stretching connections, there is no doubt that chains, especially one's made from precious metals, had a deep significance in the Celtic world.



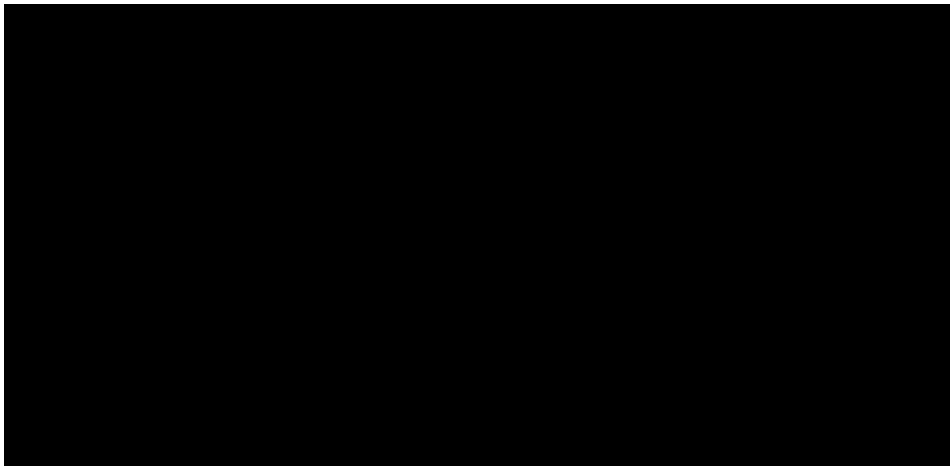
*Figure 29: Aberlemno Pictish Symbol Stone with Double Disk and Z-rod. © Aberdeen Council 2012, <https://online.aberdeenshire.gov.uk/smrpub/master/detail.aspx?refno=NO55NW0008>. Last Accessed: 6<sup>th</sup> December 2023.*

### **Dating the Massive Chains**

Together with the two clasps, from Parkhill and Whitecleugh, displaying red enamelling are three hand pins, made of silver, found within the hoard from Norrie's Law, discovered in 1817, also have an application of red enamel (NMS: X.FC) (Wainwright 1980). The Norrie's Law Hoard also contain two silver leaf-shaped plaques with Pictish symbols in red enamelling, one dating from dating from the seventh century AD (NMS: X.FC 33; 34), the other of these plaques has more recently been discovered to be a 19th century copy or replica (Blackwell, et al. 2018, 85-87; Youngs 1990, 27). Another example of an item displaying red enamelling is a hand pin found in the Gaulcross Hoard, Banffshire (NMS: Q.L. 1962 128) (Figure 30) (Stevenson 1966; Youngs 1990, 27). Within the British Museum collection there is an unprovenanced disc-head pin, from the Londesborough Collection, with an enamelled red background (Figure 31) (Youngs 1990, 28; Stevenson 1955).

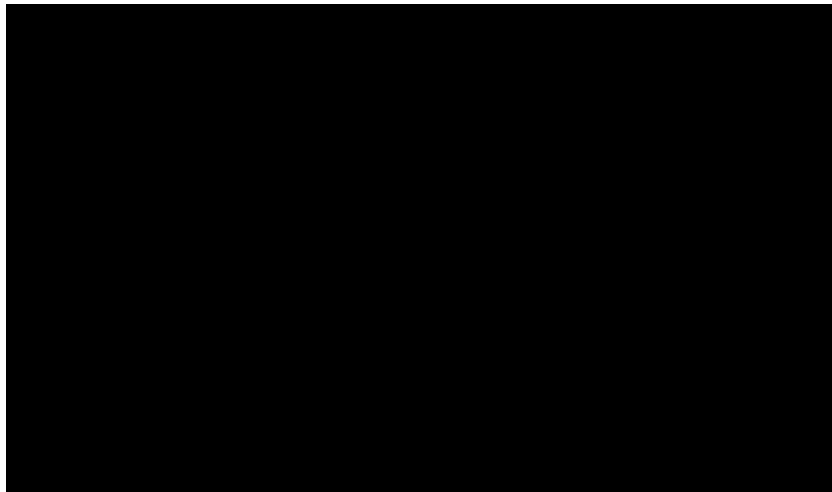


*Figure 30: Detail of Handpin from Gaulcross Displaying Red Enamelling (NMS IL.2011.1.2).  
Last Accessed, 22<sup>nd</sup> August 2023.*



*Figure 31: Disc-head pin, Londesborough Collection, British Museum. Last Accessed, 22<sup>nd</sup>  
August 2023.*

There is also a mount with a triangular cell of red enamel found on one of seven silver bowls retrieved from St Ninian's Isle, Shetland (Figure 32) (NMS: X.FC 273) (O'Dell et al. 1959, 245; Small et al 1973, 56). The bowl is possibly a local interpretation of the imported silver bowl like the, Saxon, Ormside Bowl from a burial at Great Ormside, Cumbria. The Ormside Bowl was most probably a Northumbrian creation bearing striking similarities to the ten bowls found in the Sutton Hoo Burial, possibly the burial of King Rædwald of East Anglia (died AD 624/5) (Bruce-Mitford 1974, 33). The Sutton Hoo bowls are believed to be Byzantine of the late sixth or early seventh century AD (O'Dell et al 1959, 257; Harris 2003, 125; Bintley 2011, 34-35). However, Haselhoff argues that St Ninian's example must be dated to after AD 750 due to its interlace and Celtic ornamentation and its close stylistic affinity to the Book of Durrow (Haselhoff 1958, 83).



*Figure 32: St Ninian's Isle Bowl with Red Enamelling (NMS X.FC 273). Last Accessed, 7<sup>th</sup> March 2023.*

Red enamel was a feature of pre-Roman metalwork in Britain, reflecting its roots in the use of coral as a decorative embellishment, cuprite glass paste was applied to produce red enamelling. The enamel introduced by Roman imperial metallurgists was of a distinctly different make-up, this Roman enamel, however, did not entirely replace the indigenous enamels of Iron Age Britain (Hughes 1987). The Roman era saw an increase in colour options for enamelling developing from red, yellow and blue to include black, white, orange and green. The use of combinations of colour in the Romano-British era assists in dating an enamelled object, blue begins to dominate at the same time as a mixture of blue and red closely followed by a combination of blue and yellow (Bateson 1981, 68). By the post-

imperial era the number of colours chosen drops to only three; most commonly red followed in frequency by yellow and then infrequently the use of blue. Despite the increase in colour ranges and applications, the style adopted by Celtic enamellers drew from affinities with the earlier La Tène tradition, while allowing for adaptations and influences from other traditions and cultures emphasising the greater connectivity between kingdoms and communities in this era that stretched geographically great distances (Stapelton et al. 1999, 913).

The return, by northern communities, to the application of red enamels on significant objects may be seen as harkening back to pre-Roman decoration that had persisted through the Scottish Roman Iron Age. The limiting of colours was more a positive choice than an inability to repeat the styles and techniques of Roman metalsmiths. This could be seen as a rejection of the Roman package in terms of style, while maintaining the selective adoption of Roman material culture by using Roman silver to create significant cultural items for use within local communities. The clasps that appear as part of the Whitecleugh and Parkhill chains were later additions added to much earlier chains after the loss of their original clasps, the new clasps express the self-identity of the communities for which they were made and their changing tastes. The chains themselves date back to the same time as the hoards of silver plate from Gaulcross, Traprain Law and Dairsie and may be seen as part of the effort to promote the self-identity of local groups while repurposing Roman material.

The Roman package was not adopted wholesale, as evidenced above. Local communities adopted Roman material in a manner that suited their own needs and desires, there was not a single homogenous response to Rome and its material culture. Various districts reacted to Roman material in a manner that suited their own needs, the north-east adopting material that more suited their less hierarchical society than groups from the southern districts that appear to accept material that suited their more centralised social dynamic. Silver would be adopted and adapted to reflect the needs of growing power groups and kingdoms, especially in a period where the silver resource was becoming scarcer. Massive silver chains being fashioned from high quality silver that would match material that would be found in hoards of Roman silver plate from Traprain Law and Dairsie, suggesting that the chains may well have been contemporaneous with the plate hoards.

The hoards of Roman silver plate offer insight into the dynamic within the Scottish landscape towards the end of the Western Roman Empire and its complete withdrawal from Britannia. The quality of silver found in the hoards is indicative of a desire to maintain quality of silver

no longer to be found within contemporaneous *denarii*, *denarii* being systematically debased by a series of imperial commands. The massive chains are earlier than the Pictish clasps suggest and while some were undoubtedly fashioned from Roman plate, at least some may have been fashioned from *denarii* that predate the Diocletian coin reforms.

#### 4. Silver Plate Hoards: Scale and Significance



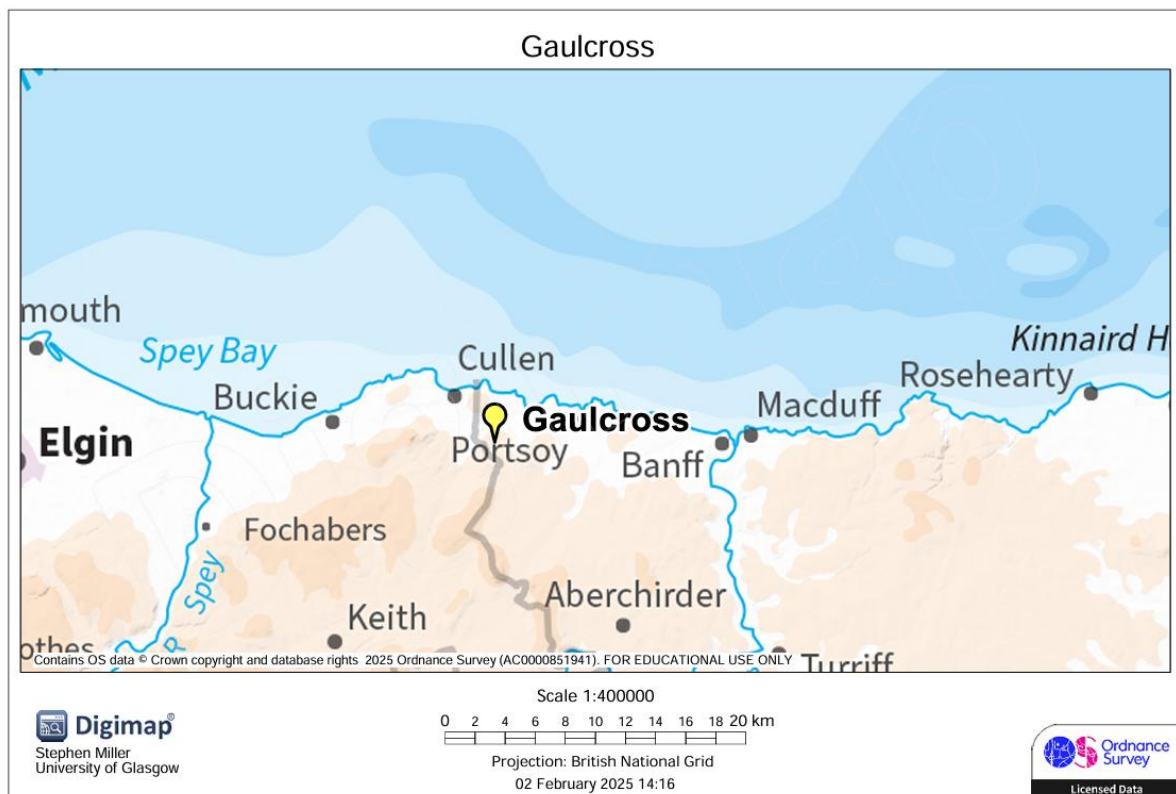
Figure 33: Map of Silver Hoards from Across Scotland. Yellow: contain Roman silver. Purple: later hoards. Green: lost hoards. Map generated by author with Appendix 22.



Traprain Law, Norrie's Law, Gaulcross and Dairsie hoards are the only four extant hoards containing Roman silver plate to have been found in Scotland to date. All four hoards were discovered on the east of Scotland: Traprain Law to the south of the Firth of Forth, near Dunbar, Norrie's Law in a coastal position to the north of the Firth of Forth, Dairsie more inland and Gaulcross close to the Moray Firth (Figure 33). They correspond to the hacksilver tradition employed by the Roman Empire within and beyond its borders as seen in the late Empire. It is often interpreted as evidence for a diplomatic device used by the Empire to buy or secure peace on its borders. Objects from these four hoards include early Christian iconography and pre-Christian, pagan imagery. There is no suggestion that the Christian imagery is evidence of proselytising by the early Christian Church, merely that material for the hoards was derived from several different sources and perhaps gathered over a period of time. Evidence of metalworking indicates that the process of transforming the Roman silver plate was, at least in some cases, almost immediate, with evidence of metalworking appearing alongside the hoards from Traprain Law and Norrie's Law. Traprain Law has long been recognised as a significant willing participant in the history of Roman activity in the region, believed to be a centre of power for the *Votadini*. The four hoards may be indicative of Roman imperial diplomatic policy in dealing with communities beyond their northern frontier, with a focus initially on groups from the east of the district, moving further north as the political situation changed.

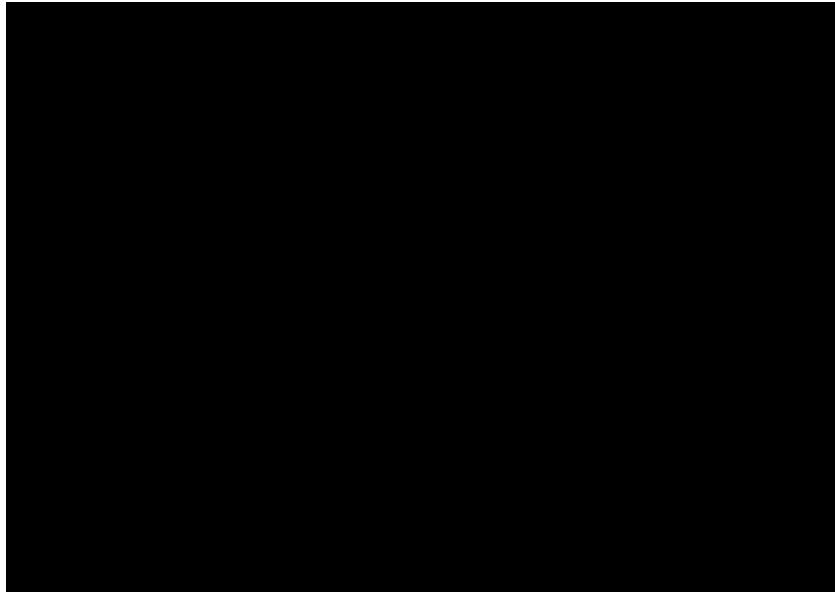
Hoarding Roman silver plate and hacksilver was not unique to northern Britain, it was a practice common to many other regions, both from within the imperial territories and from the borderlands of the Empire (Guest 2019, 331-332). What purpose these hoards served in northern Britain may offer an insight into the communities that often vied with each other during the Roman occupation and after the withdrawal of Rome.

### The Gaulcross Hoard:



*Figure 34: Map of Gaulcross, Aberdeenshire. Map generated by author.*

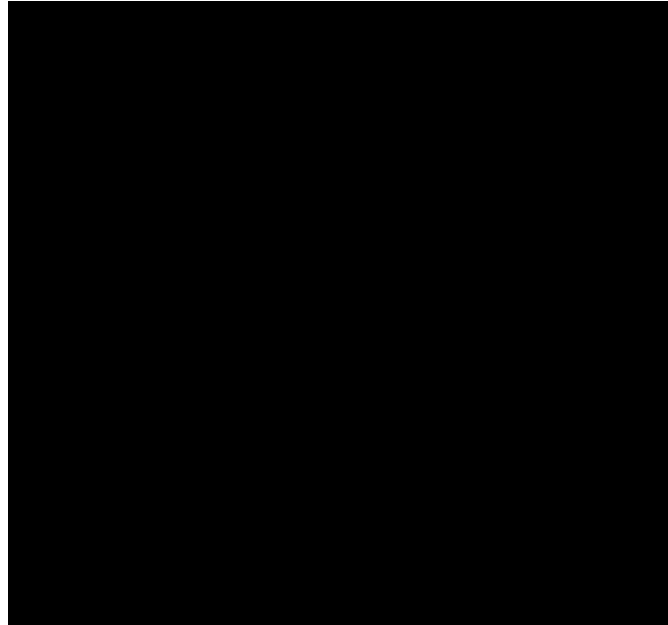
The initial discovery of a large silver hoard at Gaulcross, Aberdeenshire (Figure 34), was in 1838 when workmen dynamited a prehistoric stone circle that stood north of the farmhouse of Ley, making way for ‘land improvements’ of the 19<sup>th</sup> century. The stone circle, consisting of six large orthostats, was just over 18 meters in diameter. The circle was surrounded by large quantity of smaller stones creating an outer ring of five meters (Stuart 1867, 75; Coles 1906, 188; Palmer 2020). The hoard was buried slightly below the ground surface within a much more ancient landscape in the transition period between the Late Roman Iron Age and the Early Medieval Period (Noble et al. 2016; Blackwell et al. 2018, 78, Palmer 2019). The silver hoard was made up of a chain, a silver bangle, pins, brooches, and possibly buckles. The chain and pin are reported as being discovered beside an urn, now lost, the chain, bangle and one pin are all that survived of the hoard until recently (Figure 35). There is a similar style of bracelet in the Norrie’s Law hoard. The chain is a unique item and no known artefact from this era resembles it in either style or design.



*Figure 35: Three Surviving Objects from the Gaulcross Hoard; silver pin, chain and bangle.  
©NMS. Last Accessed, 15<sup>th</sup> October 2022.*

Revisiting the site of the Gaulcross Hoard in 2013, archaeologists from the NMS and Aberdeen University, found little evidence of the prehistoric stone circle but did recover a scatter of some 100 silver objects and fragments, including a silver ingot (Figure 36). Some objects were of local manufacture and others came from late Roman material (Noble et al. 2015; Noble et al. 2016). The spread of the material recovered was presumably the result of dynamiting the stones and subsequent overploughing (Noble et al. 2016; Palmer 2019). The more recently discovered artefacts are Roman and Early Medieval silver objects, some of which had been hacked and formed into identifiable parcels of silver, related to Roman measurements of pounds and ounces (Hunter 2018). Some of the material, including military embellishments, are similar to objects from Traprain Law, they include strap ends, a belt mount and military fittings. Other Roman material consisted of hacked silver dishes, spoon handles and eight clipped *siliquae* of the fourth and early fifth centuries (Noble et al. 2016). Clipping of coins was uncommon in Scotland and only ten other examples have been discovered to date. The clipping of silver coins is suggestive of a diminishing amount of silver available in this transitional period. Some of the single coins were wrapped in a parcel of silver plate and appear to serve as a means of making up a desired overall weight (Guest 2013). Post-Roman brooches and bracelets had been hacked up in preparation for recycling and repurposing. Two penannular brooches from Gaulcross date to the transition between the Late Roman Iron Age and the Early Medieval world, one of which shares features with an

example discovered within the hoard from Norrie's Law, Fife. The similar brooches from the two sites have flattened terminals with twisted hoops and are rare in Scotland (Noble et al. 2016; Blackwell et al. 2018, 77-83).



*Figure 36: Silver Ingot from the 2013 Excavations at Gaulcross, one of 100 objects discovered. ©NMS. Last Accessed, 12<sup>th</sup> December 2022.*

The hoards from Norrie's Law and Gaulcross share several features including a brooch style, a complete brooch in the case of Norrie's Law, while the Gaulcross example is hacksilver, both hoards are dominantly made up of hacksilver (Blackwell, et al. 2018, 77-83).

Analysis by the NMS [X-ray fluorescence] has identified that the silver content of a silver scrap from the Gaulcross Hoard contained 92-95% silver, an extremely high quality of silver matched by material from Traprain Law and the massive silver chains.

### The Dairsie Hoard:



*Figure 37: Map of Dairsie, Fife. Map generated by author.*

Objects from the Dairsie Hoard (Figure 37) stylistically date to the third century AD, making Dairsie the earliest known hoard of hacksilver from beyond Roman imperial borders (Hunter 2022, 362). During a metal detecting rally held near Dairsie in 2014, scattered Roman hacksilver was discovered by metal detectorist David Hall, a boy of 14 years. The discovery led to a full investigation of the area in 2015. The Dairsie Hoard was buried within a more ancient landscape, placed between two standing stones, close to a small peat deposit and overlooking a small river, suggestive of a devotional votive interment (Hunter 2022, 371). It consisted of 408 fragments of silver plate that came from four objects, including a silver beaded-rim platter (Figure 38), most of a fluted bowl, a repoussé-decorated bowl and a rolled cylinder that appears to have been recycled material. This hoard may evidence a change to Roman policy towards troublesome tribes outside of their borders and the beginning of payoffs or bribes to secure peace paid in silver plate and not coin.

The Dairsie Hoard may be considered to mark a change in Roman interaction with communities to the north of their frontier, in the third century. The hoard indicating a move away from using coins as tributes, toward hacksilver.



*Figure 38: Platter from the Dairsie Hoard (NMS X.2016.88.1) (Bargazova 2017). Last Accessed, 12<sup>th</sup> December 2022.*

## Norrie's Law, Fife:

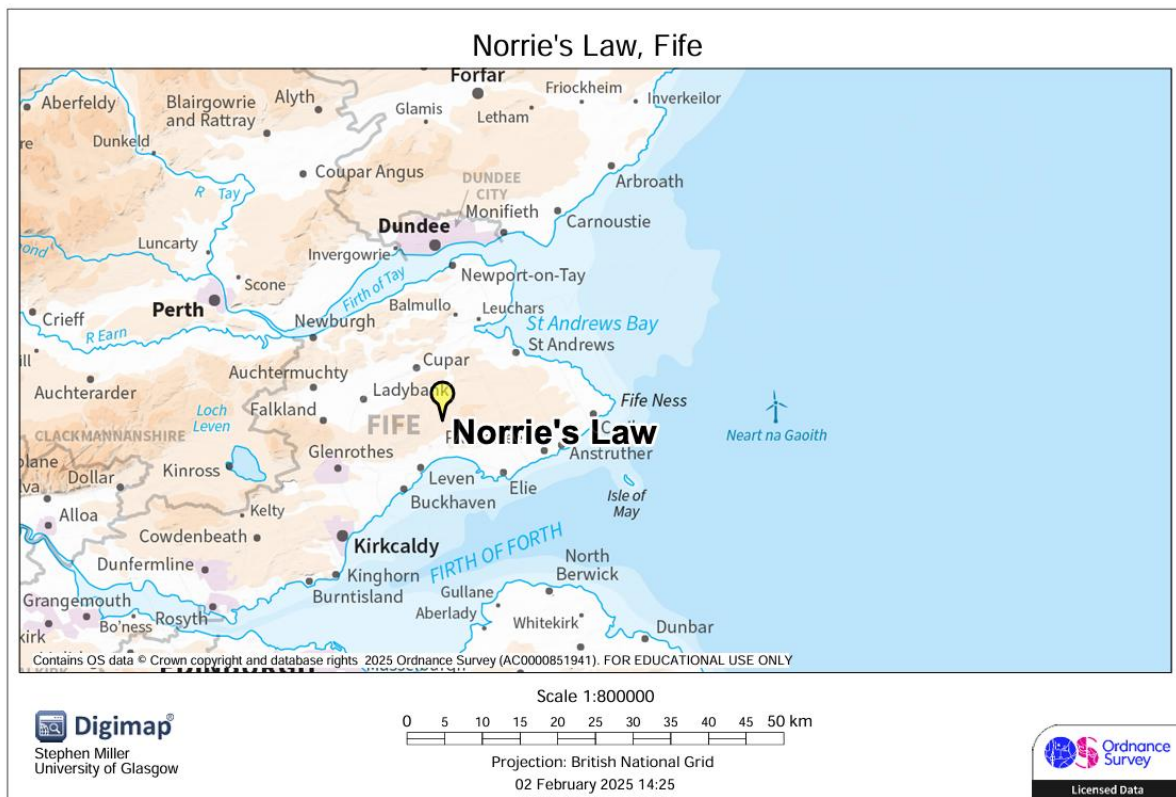
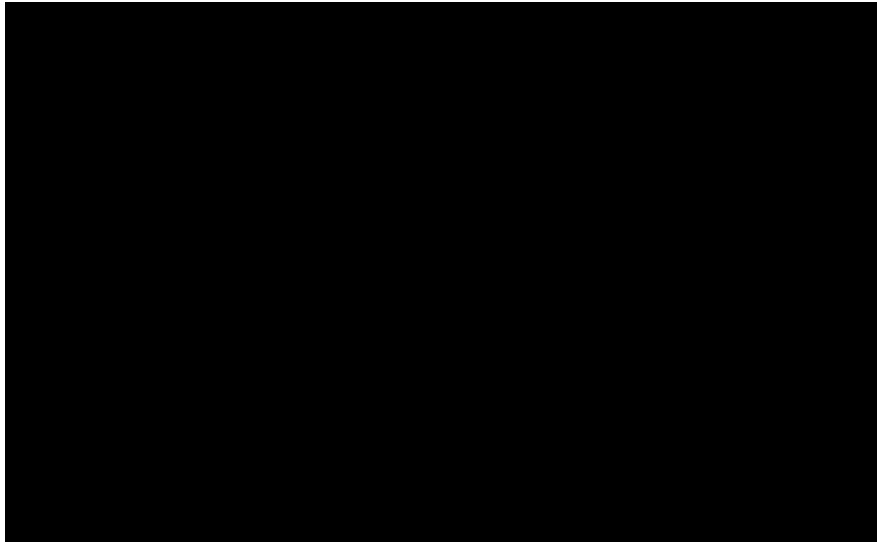
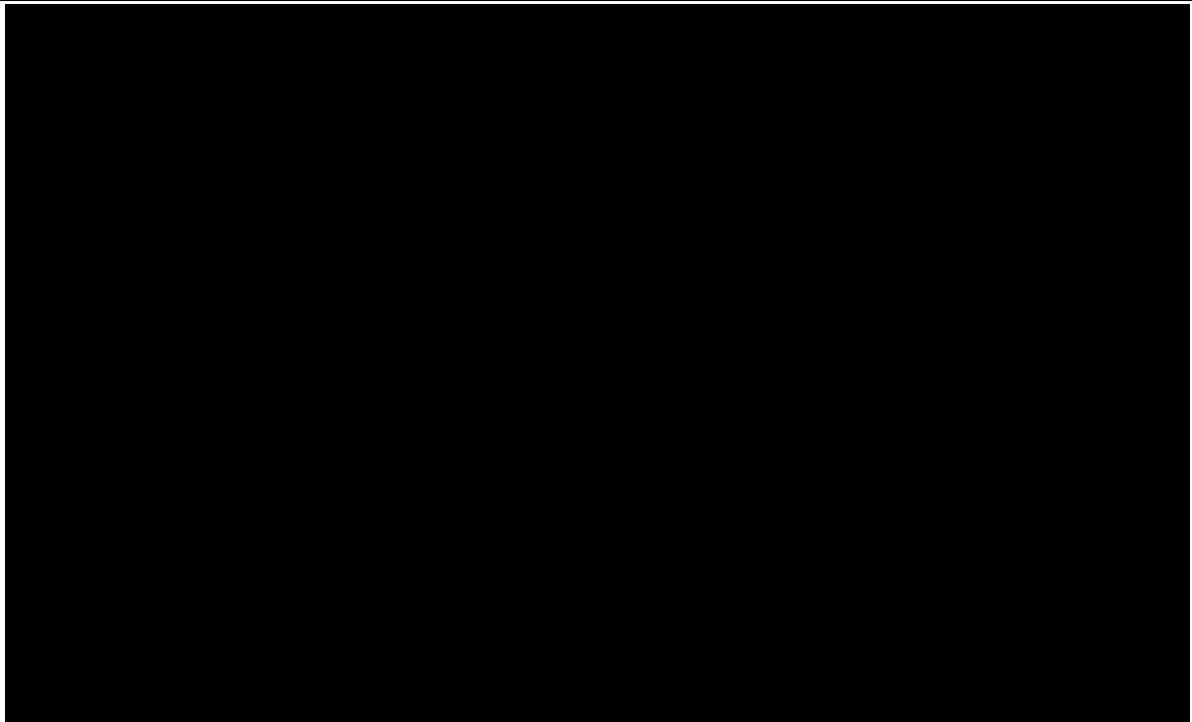


Figure 39: Map of Norrie's Law, Fife. Map generated by author.

The hoard from Norrie's Law, Fife, discovered between 1819 and 1822, consists of Pictish artefacts made from recycled Roman plate and coins, as well as fragments of late Roman hacksilver (Figure 39) (Graham-Campbell 1991; Graham-Campbell 1993, 115; Goldberg 2017, 187-190). The site of the deposition was a prehistoric location, the mound on the summit of Norrie's Law, which rose to a height of approximately 3.5 meters and had a diameter of just over 18 meters. The monument consists of a stone cairn with a revetted ditch. During the early 19<sup>th</sup> century, several cists were explored, one containing an urn and others containing burnt bones (Figure 40) (Stuart 1867, 77-78).



*Figure 40: View from Norrie's Law looking south. ©drew/amj. Last Accessed, 3<sup>rd</sup> March 2023.*



*Figure 41: The Norrie's Law Hoard ©NMS. Last Accessed, 11<sup>th</sup> December 2022.*

The original hoard consisted of over 12 kilograms of silver, dating from the fifth and sixth centuries, though Youngs suggests a much later date of the seventh (Youngs 1990, 26-27; Wainright 1955, 110-111). Less than one kilogram of the silver survives today, the rest probably found its way to the silversmith's melting pot (Blackwell, et al. 2018, 84). A total of 153 silver fragments and complete objects are believed to have been in existence in the mid-



18<sup>th</sup> century. Among the surviving objects are some late Roman silver fragments, but mostly Early Medieval material, it consists of two penannular brooches with plain terminals and spiralled hoops, two oval plaques with red enamelling, though as will be seen only one is original to the hoard, three enamelled handpins, two spiral finger rings, one complete, a disk with a raised border and knob, fragments of other disks, a sheet of cast spirals, a crushed section of a Roman spoon, knife handles, chain fragments, plain rods and an armlet and fragments of other decorative personal ornamentation (Figure 41) (Graham-Campbell 1991, 246-249). Paired objects include the plaques, two large hand-pins and two penannular brooch hoops, making this unique among Scotland's hoards (Goldberg and Blackwell 2013). Sadly, the numismatic evidence was among the victims of the melting pot, coins reportedly dating to the fourth century, a *denarius* of Constantius II (AD 337-361) and a *denarius* of Valens (AD 364-378), indicating a TPQ of no earlier than the late fourth century or early fifth century AD (Wilson 1863, 260; Stuart 1867, 79). Of the 170 surviving objects, four are complete, a plaque decorated with a Pictish symbol, a spiral finger-ring, a hand-pin and a brooch. The remaining objects have been broken down into hacksilver for use as bullion or in readiness for repurposing.

Of the objects donated to the NMS in 1864 and 1883, the Norrie's Law material contained three paired objects, including facsimiles. One was an almost identical copy of a surviving original plaque bearing a Pictish inscription of a 'double disk and Z-rod' accompanied by a Pictish animal (Figure 42). The other facsimile was a large hand-pin with an ornamented head with Pictish design. Analysis of the plaques revealed that one had been cast, while the second had been worked manually with a hammer. It transpired that the second plaque and the hand-pin are, in fact, 19<sup>th</sup> century copies. Significantly, the recognition of the facsimiles removes two of the objects that have Pictish symbols on them, leaving only one authentic item from the hoard decorated with Pictish symbols, the original plaque (Blackwell, et al. 2018, 85-86; Goldberg and Blackwell 2013; Foster, et al. 2014).

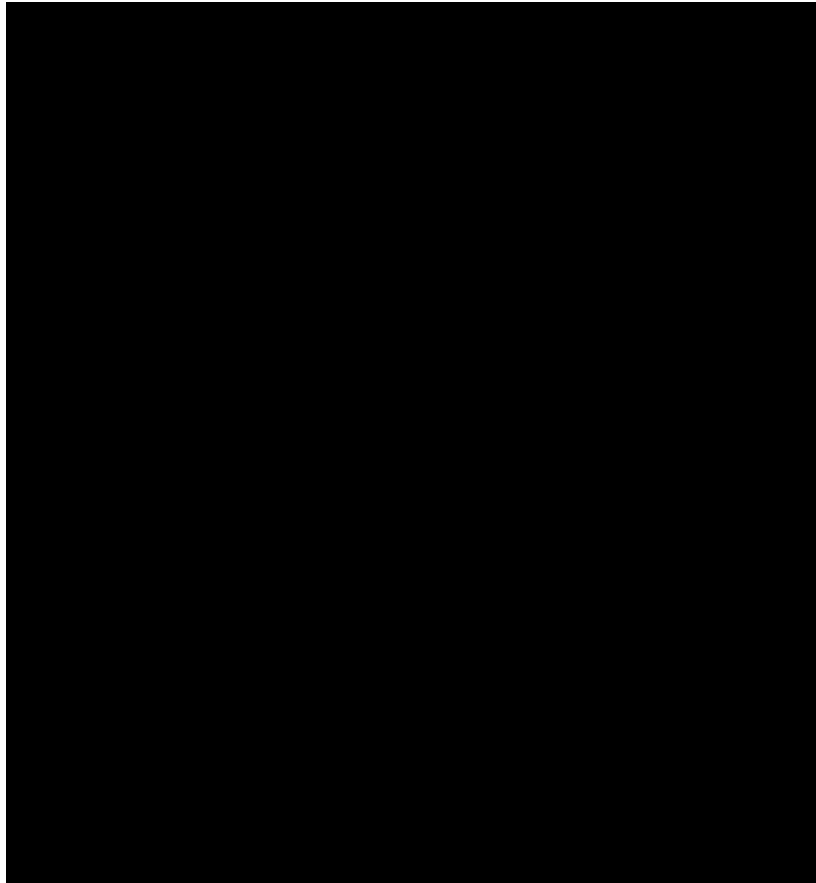


Figure 42: Plaques from the Norrie's Law Hoard. Left is Original (NMS X.FC 34), Right a Facsimile (NMS X.FC 33). Last Accessed, 12<sup>th</sup> February 2024.

Norrie's Law is an excellent indicator pointing to the use of Roman silver as a raw material by local communities, allowing them to fashion items from this precious metal to express their own communities, tastes and ideologies. The hoard may have been buried for safety or as a ritual deposit in the seventh century AD, possibly around the time of the *Battle of the Two Rivers*, fought between the Picts and the Northumbrians. The Northumbrians defeated a Pictish rebellion, having previously annexed their territory in the early seventh century with the siege of *Etain* (Annals of *Tigernach* 638; MacNiocaill 2010). Debate regarding the dating of the hoard has taken place with Youngs suggesting a seventh century deposition, based on Stevenson's dating of the plaques to no later than AD 700 (Youngs 1990, 27; Stevenson 1976, 248-249). Graham-Campbell accepts Stevenson's argument that the hoard should date to the early part of the eighth century AD (Graham-Campbell 1991, 242). Others have argued for an earlier date, including Piggot who situates the plaques to c.600 AD (Piggot 1970, 33), Laing went further back and proposed a date of the fifth century AD (Laing 1987, 22).

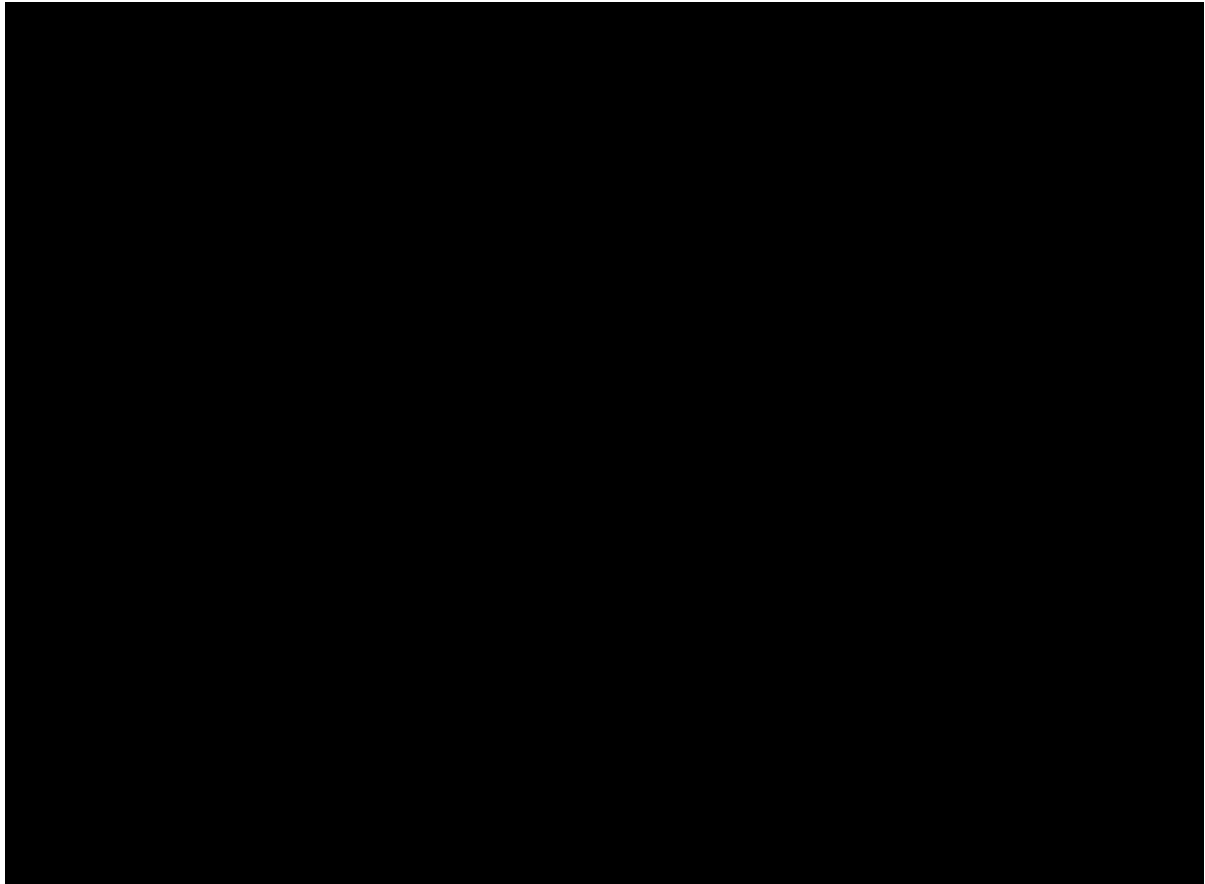
The NMS applied X-ray fluorescence analysis of a small fragment of a late Roman spoon, revealing the percentage of silver contained within it to be between 92-95% silver, similar in purity to the silver plate from Traprain Law (Tate and Troalen 2009). The spoon, together with most of the other objects from the hoard, had been cut and folded, ready for recycling (Goldberg 2017, 189). The silver appears to have come from various sources over time (Graham-Campbell 1993, 116-117). The hoard indicates that raw materials left by Rome were still being used and reworked within Scotland long after Rome's withdrawal.

**Traprain Law, East Lothian:**

*Figure 43: Map of Traprain Law, East Lothian. Map generated by author.*

Traprain Law, or Dumpelder Law, East Lothian, holds a naturally defensive position within the landscape (Figure 43) (Driscoll and Yeoman 1997, 22; Burley 1956, 118) (Canmore ID: 56374). Traprain Law is around 30 kilometres east of Edinburgh and four kilometres from the shore. Today Traprain Law stands as an isolated volcanic outcrop, however, that would deny its centrality in the past. Over 190 cropmarks surrounding Traprain have been discerned by aerial reconnaissance covering every era back into the deep past, including the enclosed settlements at Knowes, Standingstone, Whittinghame and the unenclosed settlement at Phantassie (Cowley, et al. 2009). East Lothian is a fertile coastal landscape and the elevated location of Traprain Law benefits from an easy access to the natural harbour at Dunbar, within a historically deeply occupied region. The site is known to have been in use in the Neolithic (4000-2500 BC). During the Bronze Age it was a ritual site used for burials and was decorated with rock carvings. It was the site of the recovery of the Traprain Hoard over

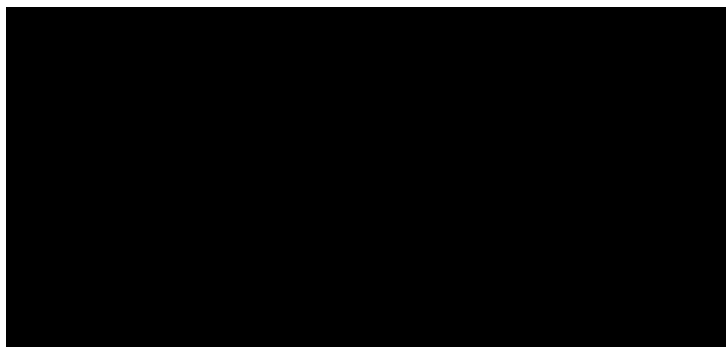
two main seasons of excavations from 1914-1915 and again from 1919-1923 (Appendix: 22.A).



*Figure 44: Traprain Law Treasure. ©NMS. Last Accessed, 20<sup>th</sup> October 2023.*

The hoard was discovered in 1919 as part of an excavation led by Alexander Curle on behalf of the National Museum of Antiquities of Scotland. The hoard consisted of over 300 pieces and weighed over 23 kilograms, making it the largest hoard of hacksilver discovered anywhere in Europe dating from the Roman era (Figure 44) (Cree and Curle 1922; Curle 1923). The hoard consists mostly of Roman silver dining ware of the highest quality and in styles that suggest an age range spanning over 100 years (Goldberg 2017, 183). It appears to have been deposited around AD 410-425, based on numismatic evidence from five coins, one siliqua of Valens (AD 364-378), minted at Trier, one of Arcadius (AD 395-408) and three coins possibly of Honorius (AD 393-423), all minted at Milan (Appendix 16.4A). The hoard contains objects with both pre-Christian and Christian iconography. The imagery from the classical world includes a flagon with a satyr, a gilded platter portraying Venus, a fluted dish with a sea-nymph, or Nereid, and a dish decorated with an image of Hercules (Blackwell, et

al. 2018, 45-67). There are also objects with Christian iconography which are among the first Christian images from Britain to be rendered in silver, they include two spoons with Chi-Rho symbols and another with the inscription of a fish, representing Jesus Christ. There is a silver gilt flask decorated with scenes from the Old and New Testament and another smaller flask has a Chi-Rho monogram (Figure 45) and an 'Alpha' and 'Omega' of the Greek alphabet, signifying a title given to Jesus in the Book of Revelation (Rev. 1:8; 21:6). This silver may represent vessels and utensils used in early Christian worship or items from Christian households, but they are no different from secular vessels, apart from their decoration (Blackwell, et al. 2018, 49-50; Hunter 2022).



*Figure 45: Spoon from the Traprain Law Treasure Displaying the Chi-Rho Symbol (NMS X.GVA 98 A). Last Accessed, 12<sup>th</sup> December 2023.*

The diversity of the hoard, and the treatment received by some of the objects suggest that the assemblage was accumulated over time, rather than one single payment from Rome. The excavations recovered evidence for a long tradition of metalworking present on the site, suggesting that some or all the silver was destined to be repurposed into new objects important to the local community, including a 50mm crucible used in the smelting of silver (Blackwell, et al. 2018, 70) (Figure 46). This is a tangible indication of the process of converting plate into other objects.



*Figure 46: Crucible from Traprain Law with Trace Elements of Silver (NMS X.GVM 574). Last Accessed, 12<sup>th</sup> December 2023.*

From the 300 fragments of Roman silver plate, taken together with associated coins, a date range has been discerned of between c.AD 450, based on a group of coins discovered as part of the hoard (Appendix 23). This early fifth century date places the hoard firmly at a period when the Empire was facing threats on numerous fronts and the Western Empire found itself in a state of impending peril (Hunter et al 2022; Mann and Penman 1985, 61; Goldberg 2017, 183).

The silver hoard from Traprain Law may offer illumination on the social fabric of wider society, groups enjoying, to a greater or lesser extent, Rome's patronage and protection until the Empire's withdrawal and the impact this had on societies that had benefited directly from Rome's policies.

Piggott noted a further hoard containing Roman silver was reported as being discovered at Tarland, Aberdeenshire, in 1898 (Figure 33) (Piggott 1955). Little is known of the contents of the hoard, other than there may have been an early silver penannular brooch, like an example recovered from Newstead, several other items were, 'taken away by the finder' (Callander 1915). Based on the style and design of a bronze cauldron, a bronze fibula of the La Tène style and other Roman material found on the same site, including possible gaming

pieces, it was suggested that this was indeed an early hoard, potentially of the second century AD (Curle 1911, 327).

Another lost hoard was discovered at the Broch of Bugar, Orkney Islands. The broch dates from the Iron age and is just over 18 meters in diameter with four-meter-thick walls. The surviving structural walls reach two meters in height. Unusual for Orcadian structures, the broch has a defensive structure surrounding it (Armit 2003). There was a hoard of later silver material recovered from this site (Graham-Campbell 1987, 115).

Individual and isolated examples of hacksilver found across the Scottish landscape, such as an isolated piece of hacksilver found in Fife, may hint at the presence of other hoards and develop the overall picture further (Figure 47). These individual finds may represent lost larger groups of objects that have been destroyed or displaced by human activity over the centuries.



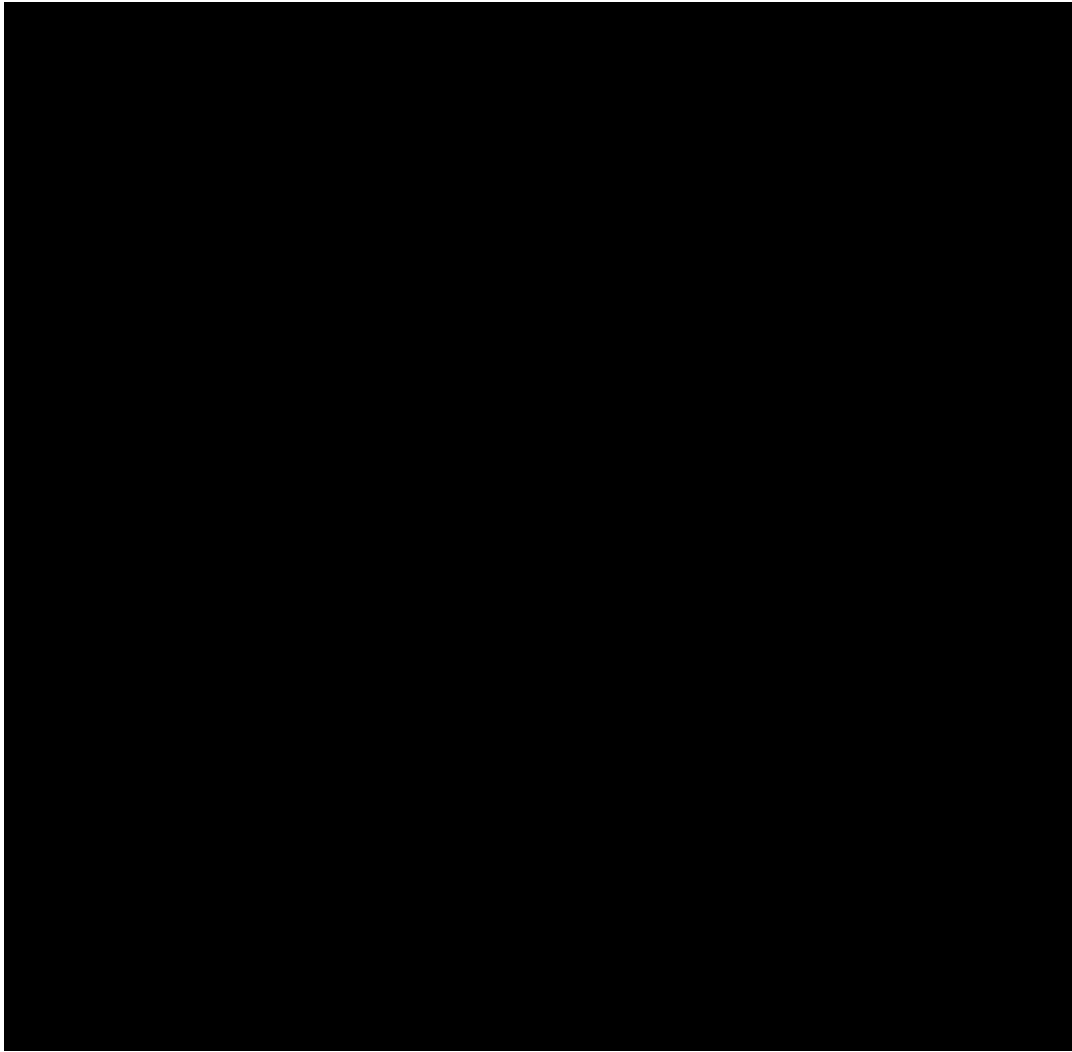
*Figure 47: Folder silver ring segment, hacksilver. (Fife Museums: CUPMS: 2008.0146.2).  
Photograph by author courtesy of Fife Cultural Trust on behalf of Fife Council.*



### The Votadini and Traprain Law:

Ptolemy of Alexandria first recorded, c.AD 140, the existence of the *Votadini* (*Otadini*). Their main settlements were reported as *Curia*, *Alauna* and *Bremium* (Rivet and Smith 1979, 139). *Bremium* is the most attested settlement, being High Rochester, Redesdale, the sites of the other two settlements are contested, though Rivet and Smith suggest *Coria* may be Inveresk, Midlothian, and *Alauna* is potentially Low Leachild, Northumberland. However, Breeze argues that *Coria* may well be Corbridge on the River Tyne (Breeze 2013, 11).

The *Votadini* are again referenced in the poem *The Gododdin* (Jackson 1969, 5-6). The poem records that the capital of King *Mwynfar*'s land was *Dun Eidyn*, equated with Edinburgh. The extent of the lands occupied by the *Votadini* (*Gododdin*) seems to equate with the modern Lothians including Slamannan and Clackmannan (Breeze 2013, 12). *Dun Eidyn*, Edinburgh, appears in the *Gododdin* but should not be equated with the entire region (Jackson 1969). So too with *Manau*, which appears in *Historia Brittonum* (62), it is a place within the *Gododdin*, not a territory itself. *Manau* is located at the head of the Firth of Forth, relating the situation of *Manau* with the towns of Slamannan and Clackmannan (Watson 1926, 128; Jackson 1969, 69-75). In Ptolemy's record only *Bremenium* can be identified as Redesdale, Rochester. *Bremenium* also appears in the Antonine Itinerary and the Ravenna Cosmography. A Roman altar from High Rochester bears the inscription, *D(eae) R(omae) s(acrum) dupl(icarii) n(umeri) Explor(atorum) Bremen(iensium) aram instituerunt n(atali) eius c(urante) Caep(ione) Charitino trib(un)o v(otum) s(olventes) l(ibentes) m(erito)* translating as, 'Sacred to the goddess Rome. The *duplicarii* of the unit of Scouts of *Bremenium* set up this altar on her birthday under the charge of *Caepio Charitinus*, tribune, willingly and deservedly fulfilling their vow' (RIB, 1270). Traprain Law would therefore be placed within the territory of the *Votadini*, however, this also does not equate with Traprain Law being the capital of the district. It was nevertheless a place of significant power within the local landscape and may have been some form of residence for a chieftain within the *Votadini* community, albeit temporary (Breeze 2013, 13). Traprain may have been continuously occupied from the Bronze Age into the Early Medieval period and beyond, with a gradual transition from one economy to the other (Childe 1935, 249).



*Figure 48: Traprain Law, Oblique View. (Dewar 1972).*

Any attempt to explore the communities and societies of Early Medieval Scotland and their relationship with the Roman Empire must include Traprain Law (Figure 48), considering the significance of the hoard discovered on this site by Curle and Cree (Hunter 2013). While the site dates back to the Bronze Age, it appears to have been extensively occupied in the Roman Iron Age and continued until the fifth or sixth century. The relationship of the people of Traprain Law with the Roman forces is one that merits consideration, as Roman activity within the district appears to have been very limited and the site itself affords no evidence for heavy fortifications at that time (Burley 1956, 132). It is around this time that there may have been refugees fleeing from the south of Britain northward, trying to avoid the influence of Roman occupation, these people would have brought with them their own traditional crafts,

skills and material culture. However, the arrival of material and styles from southern Britain may equally be the result of northern Britain's trading and travelling in the south.

In the fourth or fifth centuries an area of around 12 hectares was enclosed by a stone based turfed wall, it seems to have been densely occupied with archaeological survey revealing even the most exposed areas being used for building. Four siliquae, clipped coins, recovered from the site, of Valens, Honorius and Arcadius, (AD 395-408) suggest the hoard could date from c.AD 410-425 (Sekula 1982). Glassware, most especially drinking vessels, is quite abundant amongst the finds, dating to the fourth century. One vessel has similarities with a diplomatic gift found elsewhere (Price 2010, 49). A defensive rampart, four meter wide, was constructed around the site around the fourth century AD. The structure was faced on both sides with stone and is suggestive of a less settled era for the Votadini at the end of Roman interaction with the district (Armit 1998, 79; Painter and Hunter 2017, 304).

Of the crucibles recovered from Traprain Law, ten have traces of silver via scientific analysis carried out by Katherine Eremin, Paul Wilthew and Fraser Hunter. The stratigraphic evidence points to a late or post-Roman date for these objects. Crucibles for the working of silver are unknown at this stage in northern Britain and appear only in a small number of sites from the fifth century.

It was not until the Roman armies had retreated from Scotland that the Traprain Law deposition was made, around the mid-fifth century (Collins 2013, 29). Significantly, Traprain Law sits in what must have been a strategic position for the Romans on the frontier of Hadrian's Wall, having abandoned the northern outposts beyond The Wall in the early part of the fourth century. It has been suggested that Rome had left a kind of 'rump army' in Britain while the Empire was occupied with military and political concerns elsewhere in the Empire, however, the archaeological evidence does not fit with this assumption. There is rather a continuity of occupation into the early fifth century evidenced by modern archaeological excavations. What happened to the occupying forces after the formal withdrawal of Rome from the shores of Britain is a matter for greater research. There is some evidence for a continuation of presence of the last remaining armies where the commanders and troops became assimilated with the local population. The absolute withdrawal of the Roman presence would suggest that abandonment deposits should be discerned within the archaeological record of frontier sites, deposits indicating destruction wrought by marauding local tribes should be visible. Neither abandonment nor destruction on frontier sites has been

evidenced from archaeological examination of frontier sites. The *dux* of the *Notitia Dignitatum* is referred to by Ammianus when speaking of the Barbarian Conspiracy of AD 367 (Ammianus 367 XXVII.8.1). The *dux* was, for most of the time, the ultimate imperial authority in the frontier territories who answered directly to the imperial court, *magistri militum*, commanding all military personnel in the frontier zone. The frontier was being supplied from a central resource under the guidance of Rome in the form of coins and ceramic goods (Collins 2013, 31). On occasions the threat from the Picts and Scots was so great that the local *limitanei*, frontier army, demanded reinforcements from the continent in order to meet the threat. The lack of evidence of intentional violent destruction raises the issue of why the deposition of Roman plate was made by the local people. It has previously been suggested, as with many other hoards, that they were deposited for safe keeping at a time of social and political unrest. This may not be affording due service to the intentions of the people of Traprain Law as the practice of burying hacksilver was one mirrored in the hoard from Coleraine, Ireland, and more broadly across frontier zones in continental Europe. (Guest 2014).

The *Gododdin*, the *Votadini*, predated the activities of Rome, while their power and influence grew after the departure of the Empire from the northern frontier. Rome did not create these communities; however, it did have influence in reinforcing their power and strengthening their hold on the southern territories of northern Britain (Breeze 1994, 15). The connection between the abandonment of Traprain Law at the end of the fifth century and the withdrawal of the Roman presence may not be coincidental. Traprain Law's fate directly relates to a period of anarchy, existing in the former northern frontier and beyond, following the withdrawal of protective Roman presence. It is also possible that other groups took revenge on the people of Traprain Law, for the part played by the *Votadini* in the Roman presence and for the tribes previously beneficial relationship with the Roman powers (Breeze 1994, 17). It is possible that the strategic significance of Traprain Law changed as the local communities political and practical needs refocussed on a new need of a maritime route for trade and exchange. The fort may have been superseded by the coastal fort at Dunbar (Hinton 2006, 21).

The hoards from Traprain Law, Norrie's Law, Gaulcross and Dairsie speak to the later part of the story of Rome's involvement in the Scottish landscape and tie the Scottish hacksilver in with a strategy employed by Rome in other frontiers of the Empire in a bid to secure or pay for peace. The mixture of pagan and Christian iconography that appears on the plate is

characteristic of silver that was circulated across the Roman Empire. Then or later many of the silver objects were transformed into that reflected the power and status of their owners, such as the 'massive silver chains'.

Objects from within the hoards have been proven to contain a high silver content that matches the silver content of the massive silver chains. The hoards speak to communities that enjoyed diplomatic relations with the Roman Empire at a time when its own powers were fading, leading to local communities, such as the *Votadini*, losing their privileged positions within the northern districts of Britannia.

As the Empire lost its direct control of Britannia, the northern districts groups coalesced into more regional powers and kingdoms. These strengthening local polities, and eventually the Christian Church, would refashion Roman silver into objects displaying their power and growing self-confidence as political groups. The brooch was adopted to express the social status of the owners and developed over time from rather plain, undecorated objects into extremely elaborate works of art that married several styles into a new artistic language that spoke to the needs and tastes of local communities.

## **5. Later Silver and the Development of Brooch Design**

The importance of the development of brooches from the Roman era to the Christian era, reflects developing local societies and the growing influence Christianity was having on the Early Medieval world and elites within Scotland. The development of styles and techniques applied to brooches reflects the growing strength of elite groups, it identifies the development of emerged styles influenced by the growing connection Scotland had with the Anglo-Saxon and European worlds.

As societies developed into larger power groups and kingdoms, there was a new need for a different self-expression that spoke to local communities. As part of this transformation, brooches were adapted from functional objects, or adornments drawn from Roman martial insignia, becoming status-symbols serving the needs of growing kingdoms, elites and the Christian Church. Penannular brooches were first quite plain objects with little adornment, influenced by Roman styles and tastes. As time passed and polities grew into kingdoms the brooch became more elaborate and highly decorated. Evidence from seventh and eighth century brooches points to the growing strength of the Church, with Christian iconography embedded into the ornamentation of brooches. The highpoint of Celtic art offers evidence of marrying Roman, Anglo-Saxon and La Tène styles into masterpieces of the Celtic world, indicating a strictly hierarchical society, with growing control over resources and artisanal activities, becoming bound with a Christian ideology.

Brooches appear to have grown from practical workaday objects, acting purely as cloak fasteners. Over time the brooch would be imbued with greater importance for the people of Early Medieval Scotland. The brooch appears to have held significance and meaning, both for those who saw them being worn and for the wearer themselves (Whitfield 2001, 223-226). It is not difficult to accept that the possession of objects crafted from precious metals would mark the wearer as being of a high social status. The items were encased in significance, far beyond their material, shape and form, imbued with religious meaning and expressions of social status and allegiances (Nieke, 1991, 128, Driscoll, 1988, 169).

Scotland is not Ireland, both countries followed their own pathways. Christianity takes root in both lands by adopting a different trajectory in each case. However, certain Irish texts may shine some light on the social dynamic within Scotland at a similar time (Campbell and Driscoll 2020, 48). The wearing of elaborate brooches belonging to a hierarchy of elites is a

shared cultural phenomenon within Irish and Scottish Early Medieval societies (Swift 2013, 16-24). The social function of the brooch is made explicit in the *Cáin Íarraith*, dictating kings should wear gold brooches embellished with crystal, their sons should wear silver brooches, lesser kings should wear decorated silver brooches (Binchy 1978, 21-24; Swift 2013, 27). An Old Irish Law dictated the appropriate wearing of brooches for men and women. A man should wear his brooch on his shoulder, while a woman should wear her brooch on her breast, as seen on the Monifieth 2 Stone, the penannular brooches depicted on the Galmis Stone, Wester Denoon, Angus and the *A'Chill* Cross from Canna, Argyll and Bute (Figures 49 & 50) (Swift 2013, 30). The practice of a man wearing a brooch on his shoulder was adopted from the Roman world, where the brooch supported the cloak, *paludamentum*, leaving the sword arm free (Ireland 1873, 290-291; Whitfield 2001, 221; Trench-Jellicoe 1999, 610-612).

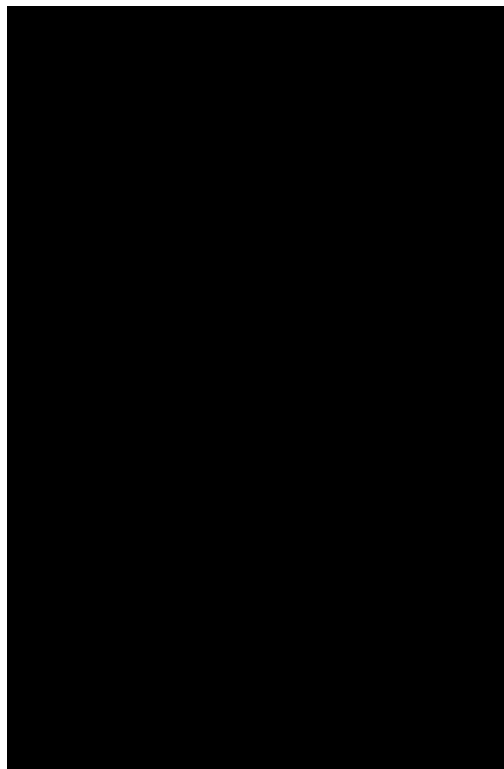


Figure 49: Cross Slab from A'Chill, Canna, Eighth Century. Depicting the Madonna with a penannular brooch attached at her breast. ©HES, IG Scott Collection. Last Accessed, 16<sup>th</sup> November 2023.

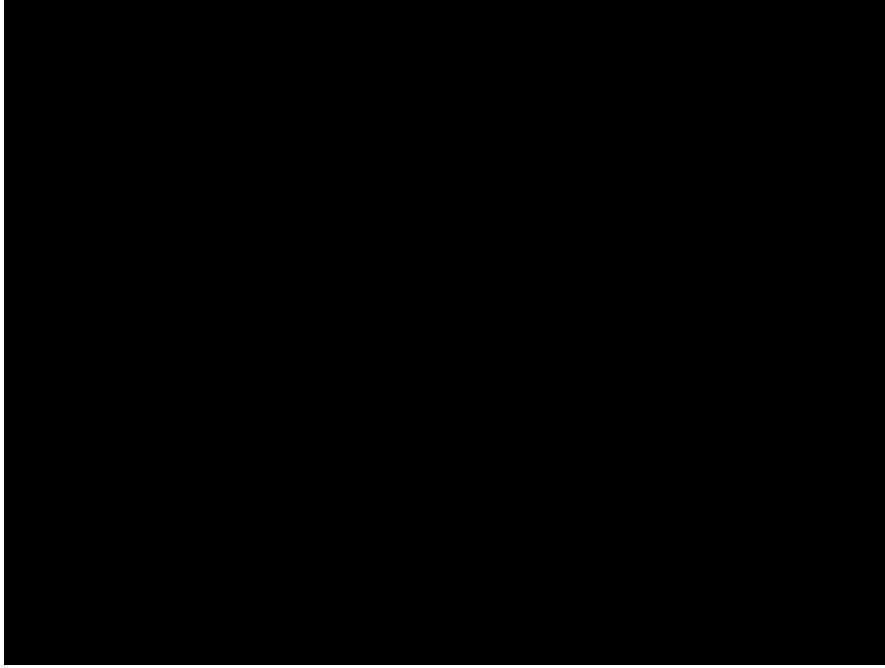


Figure 50: *Canna a'Chill*. Interpretive drawing of the Virgin's brooch. (Trench-Jellico 1999, 611).

The *Críth Gablach* mentions the *aire déso*, a minor noble, should have, with other provisions, a silver brooch weighing one ounce, this should be part of the attire of the lowest ranking of the seven levels of nobility in Irish society, reflecting the seven ecclesiastical levels of authority and rites (Kelly 2011, 26-28; Macneill 1923, 297, V107). The law governing what was considered appropriate supply and adornment for people of different ranks in society followed the Roman tradition, the *Codex Justinianus*, the *Corpus Iurus Civilis*, which regulated who could wear specific pieces of plain and decorated jewellery (Nieke 1991, 129). Control of these socially loaded objects would reinforce the status of leaders.

Motifs and designs that appear on later brooches indicate religious significance as well as demonstrating secular power and position. Indigenous people were influenced by the design and decoration of Roman goods, including bar brooches, a sign of status within the imperial court (Figure 51).





*Figure 51: Emperor Justinian and Members of His Court. 20<sup>th</sup> century copy of the 6<sup>th</sup> century original. Justinian wears a circular brooch, his court wear cross-bow brooches on their right shoulders. ©The Met Museum. Last Accessed, 14<sup>th</sup> September 2023.*



Figure 52: Map of Later Silver Hoards; Croy, Rogart, St Ninian's Isle, Tummel Bridge and Norrie's Law. Map generated by author with Appendix 24.

Five major hoards from the Early Medieval Period within the Scottish landscape have been identified, St Ninian's Isle, Shetland Islands, Croy and Rogart, Highland, Tummel Bridge, Perth and Kinross, Traprain Law and Norrie's Law, Fife, all of which are found north of the River Forth (Figure 52) (Appendix 22B and 24). Objects contained within the hoards highlight a stylistic transition that took place over time, moving away from older styles and designs and demonstrating an ever-increasing mastery of the silversmith's art. There is the primary issue of why the brooches were buried in the first place?

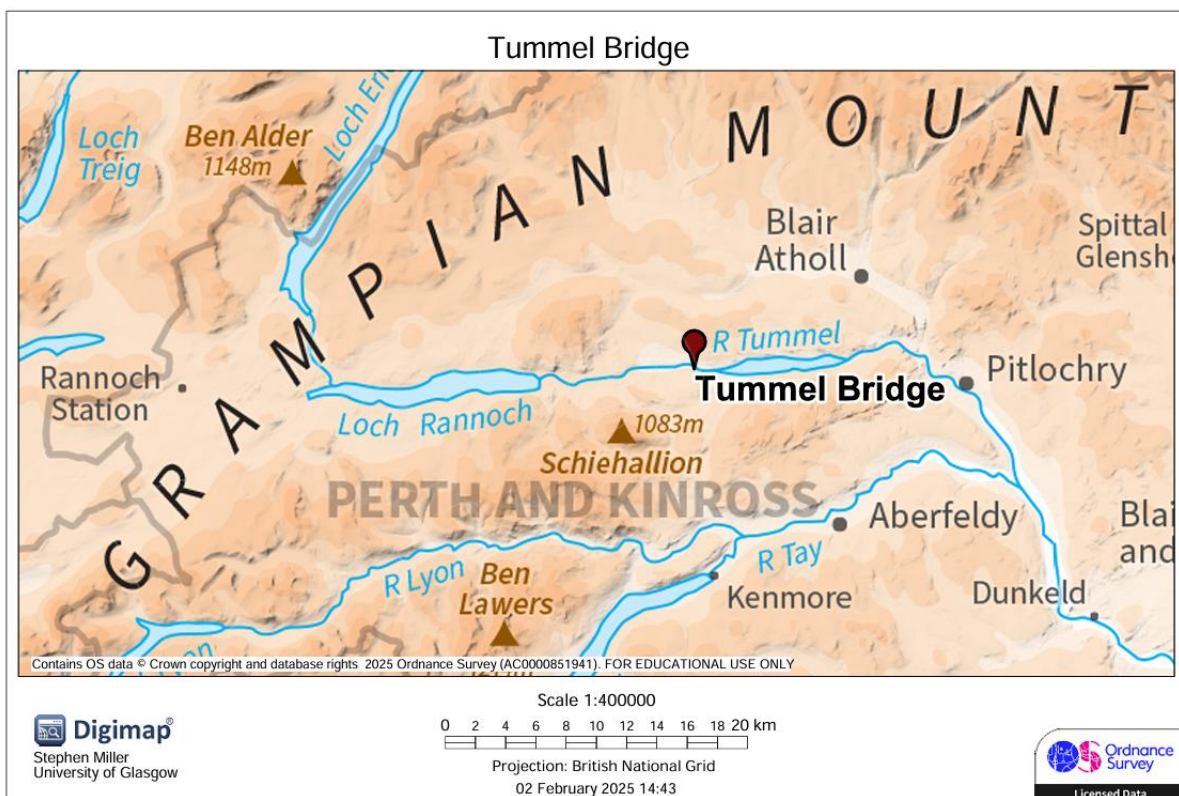
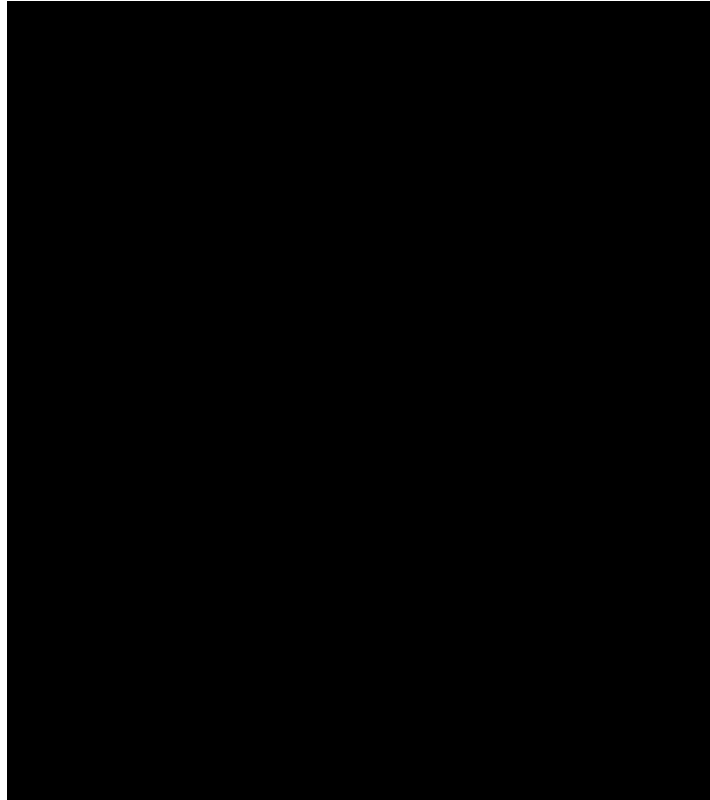


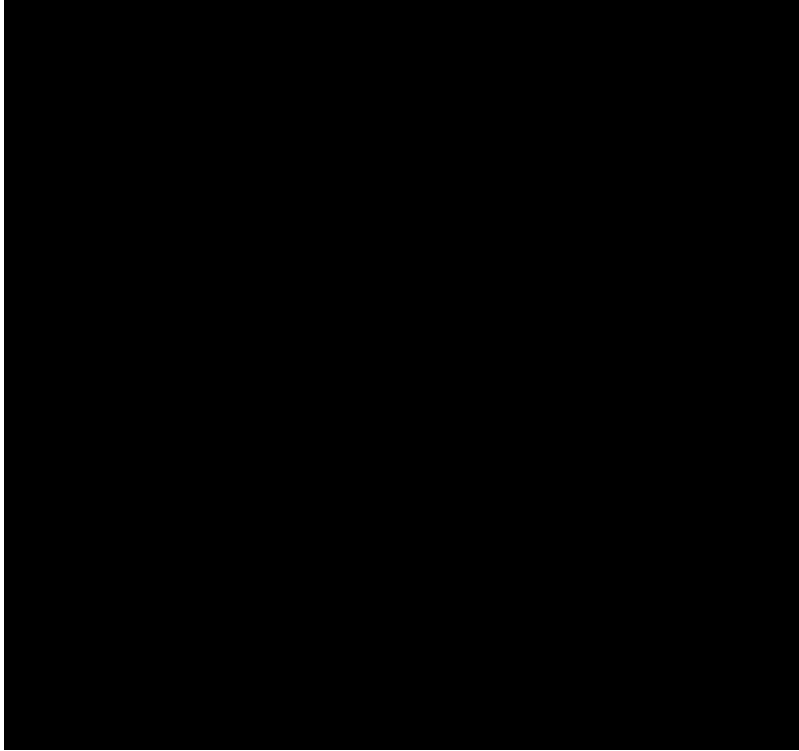
Figure 53: Tummel Bridge, Perth and Kinross. Map generated by author.

A tree that was blown down during a storm in the 1880s unearthed a hoard of three penannular brooches as well as a collection of bronze vessels, including an escutcheon for a hanging bowl at Tummel Bridge (Figure 53) (Laing and Laing 1987, 215). The three brooches are all similar in design and resemble the two examples discovered in the hoard from Norrie's Law (Figures 54 & 55). The Tummel Bridge brooches are plain, one has a stamped decoration on the pin, sharing the same design with a second brooch from the same

hoard, which has the double stamped motif decorating the edges of the flat triangular terminals (Figure 66). The brooches may date to as early as the fifth century AD, with the same style continuing to be used until the seventh century (Henderson and Henderson 2004, 96).



*Figure 54: Norrie's Law Penannular Brooch with Twisted Silver Hoops, the Pin is Missing. (NMS X.FC37). Last Accessed, 18<sup>th</sup> January 2023.*

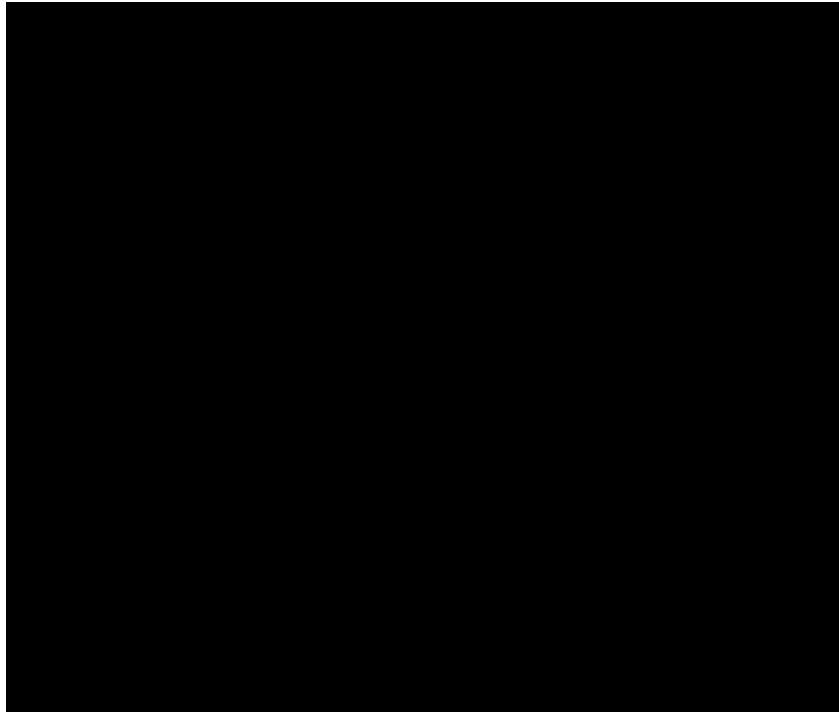


*Figure 55: Norrie's Law Penannular Brooch with Twisted Silver Hoops, the Pin is Missing (NMS X.FC36). Last Accessed, 18<sup>th</sup> January 2023.*



*Figure 56: Rogart, Rovie Lodge, Highland. Nine silver brooches recovered in 1868. Map generated by author.*

Only three from the original hoard of nine brooches discovered in 1868 at Rogart, Highland, are known to exist today, two made of silver and one of bronze. The hoard was uncovered when blasting a boulder during the construction of the Sutherland Railway, there is no certainty regarding the exact location (Banks 1992, 48; Ó Floinn 1990, 116). The silver brooches from the hoard are now with the NMS and illustrate a change in the fashioning and decoration of brooches (Appendix 25). Despite the change in design and decoration, there is a retention of the basic style, favouring the tradition for penannular brooches over more novel designs (Henderson and Henderson 2004, 96).



*Figure 57: Silver Gilt Brooch from Rogart Decorated with Interlace and Bird Head Designs (NMS X.FC 2). Last Accessed, 21<sup>st</sup> August 2023.*

The silver penannular brooches from the Rogart Hoard are distinct in terms of size and weight, NMS: X.FC1 weighs 59.1 grams with a diameter of 77 millimetres. There are settings for nine studs, probably originally glass, it is decorated with gilt interlace at the terminals and either side of the square cartouche setting. The other silver penannular brooch (NMS: X.FC2) weighs 271.4 grams and has a diameter of 120 millimetres (Figure 57). The latter larger brooch is decorated with gilded cast chip-carved interlace and has settings for red glass studs. Eight semicircular fields are mounted with reliefs of bird heads. The bird heads are gilded and are decorated with green glass for their eyes. A similar bird decoration appears on a brooch from found near Clunie Castle (Ó Floinn 1990, 114). Moulds for bird's head decorations were recovered during excavations from the Brough of Birsay, Orkney, 1936-1939 (Ó Floinn 1990, 116; Curle 1982, 29-31; Stevenson 1972). The birds on each terminal of the larger Rogart brooch point inwards and highlight the simple decoration of a Christian cross with a central glass stud.

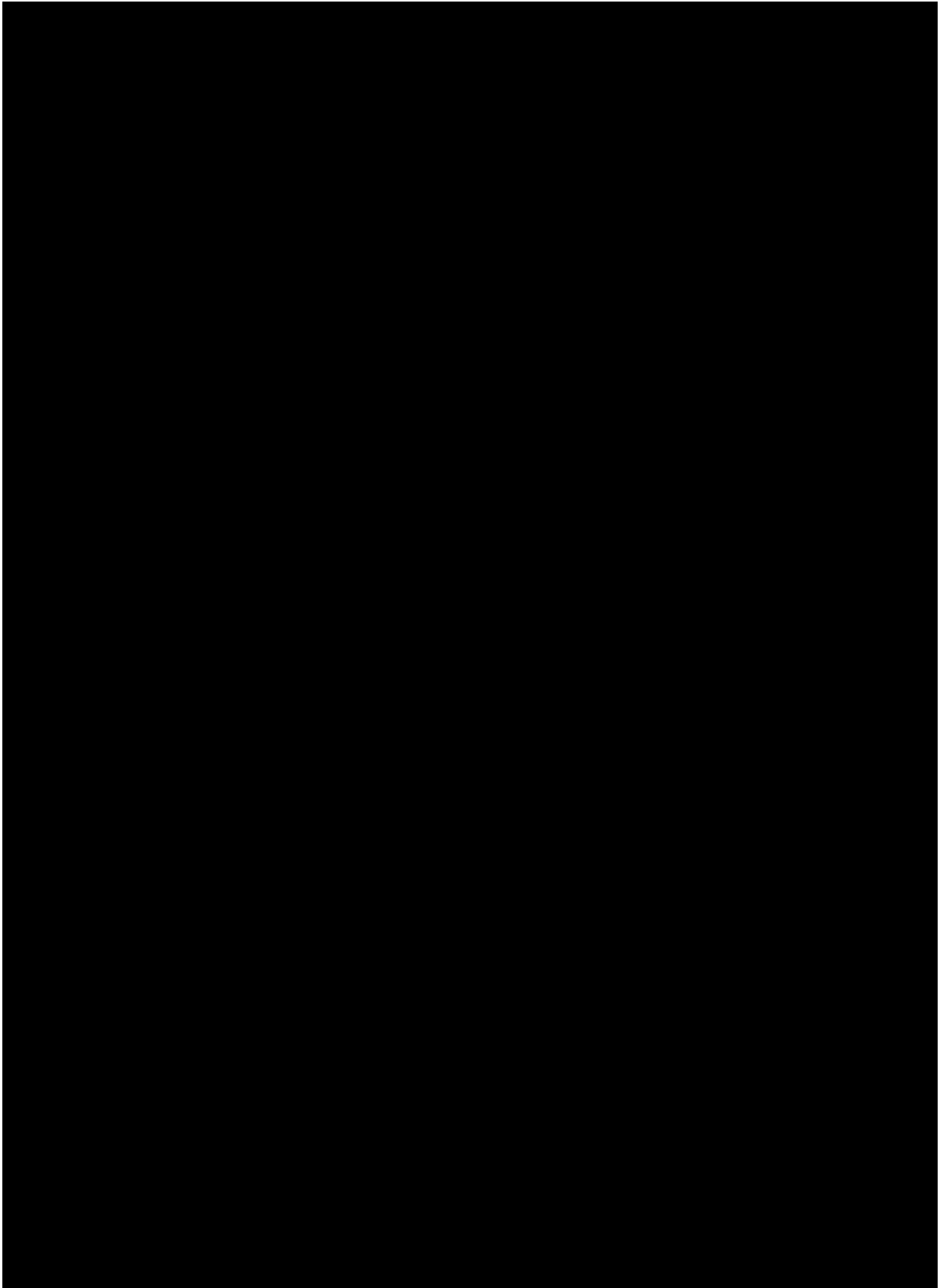


*Figure 58: St Ninian's Isle, Shetland. Map generated by author.*

The hoard of 28 silver and silver gilt objects at St Ninian's Isle, discovered July 1958 at c. 1.5 meters below the church foundation level, under a 35.5 cm long cross marked stone slab, on St Ninian's Isle, Shetland (Figure 58) (O'Dell et al 1959; Graham-Campbell 2003; Henderson and Henderson 2004, 98-99). The treasure weighs 1,918.4 grams in total (Graham-Campbell 2003, 10). The hoard consists of three categories of objects related to dining or worship, weaponry and jewellery (Figure 59). There is one hanging bowl, seven bowls, one with a clear cross-marked base, a prong or fork and a spoon decorated with a dog's head. Some silver objects related to martial activity includes a pommel, three cones and two chapes (Appendix 26). Twelve silver penannular brooches were recovered, together with the jawbone of a porpoise (O'Dell et al 1959; Graham-Campbell 2003, 20).

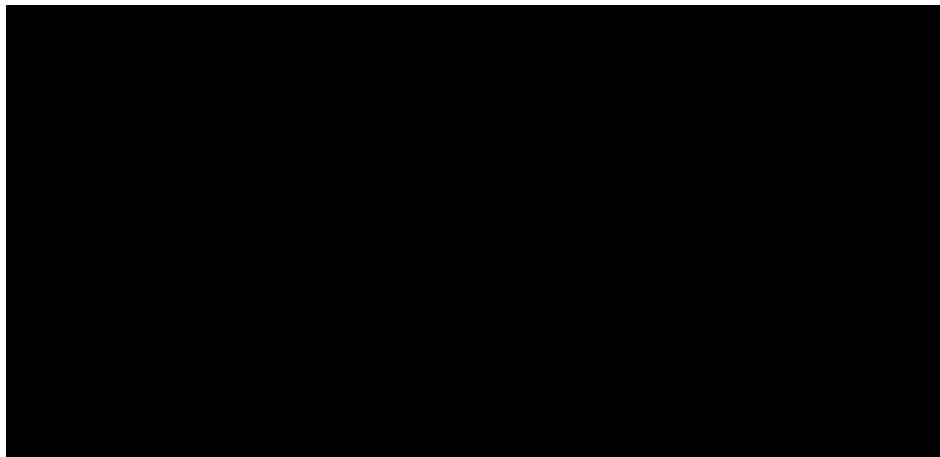
The silver bowls from the hoard are reminiscent of the ten similar bowls found within the Sutton Hoo ship-burial, where the bowls had been imported from the Mediterranean. The bases of the St Ninian's Isle bowls are decorated with a variety of equal armed cross designs (Henderson and Henderson 2004, 109).





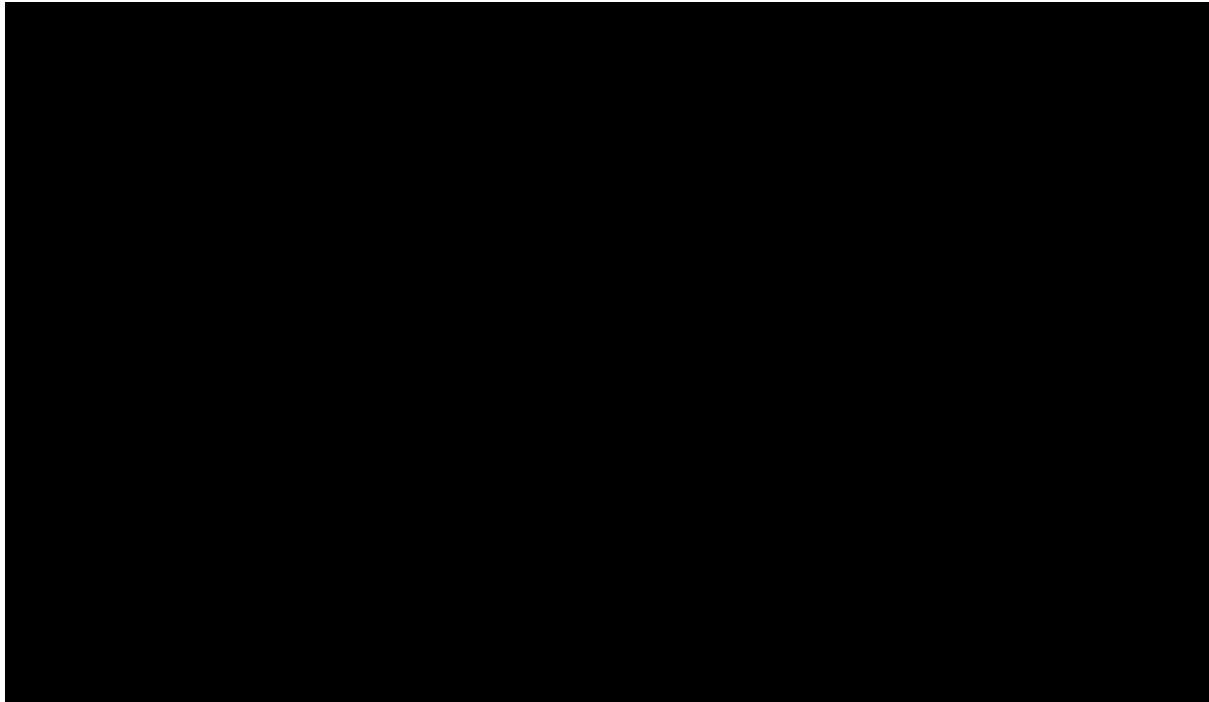
*Figure 59: St Ninian's Isle Hoard (NMS X.FC 296). Last Accessed, 12<sup>th</sup> January 2023.*

The hoard, contained within a larchwood box, may have been buried for protection in a moment of threat from Viking raiders around AD 800, the box was buried upside down and the contents appeared to have been jumbled together at the time of their burial (O'Dell et al 1959; Graham-Campbell 2003, 21). The pommel and the scabbard chapes evidence Anglo-Saxon influence and design translated to a local artistic vernacular (Webster 2001, 223-224). However, the interlocking animals depicted at either side of both chapes have no known match in the Anglo-Saxon world, though there is similarity with intertwined beasts found on the St Andrews sarcophagus. Henderson and Henderson argue that the interlace animal design features on several Pictish objects, a marker of material crafted in Shetland (Graham-Campbell 2003, 32; Henderson and Henderson 2004, 41, 113) (Figure 60).



*Figure 60: The St Andrews Sarcophagus. Creatures similar to the St Ninian's Isle chapes are seen on either collum. Canmore 1951490. Last Accessed, 20<sup>th</sup> November 2023.*

The silver content of the objects found in the hoard is quite low, between 30% and 50%, though brooch 25 has a silver content of 82% (Ó Floin 1990, 108; Henderson and Henderson 2004, 98). Evidence from the St Ninian's Isle Hoard indicates a time in the eighth century when silver was scarce and becomes debased, significant items are made from silver mixed with greater quantities of alloys. The debasement of silver objects from the St Ninian's Isle hoard may be compared with a brooch from Castlehill, Ayrshire, dated by the NMS to 600-900 AD (Figure 61) where a copper alloy brooch of only 21 millimetres diameter was discovered (NMS: X.HH 339). The Castlehill brooch was tinned to imitate silver, reflecting a time when sources of silver were becoming rarer.



*Figure 61: The Castlehill Brooch, Made from Copper Alloy with Evidence for Tinning (NMS X.HH 339). Last Accessed, 12<sup>th</sup> June 2023.*

Should a deposition date be accepted as early as the eighth century for the hoard, the hanging bowl would have been around 100 years old before it was buried, bearing similarity to the bronze hanging bowl of Castle Tioram, Highland, and a mould for a hanging bowl, possibly the mould for the Castle Tioram example, discovered at Craig Phadrig in 1971 (Clarke 2017, 126; Henderson and Henderson 2004, 92; Kilbride-Jones 1937; Small and Cottam 1972, 43). Brooch No. 17, the largest example at 11 centimetres in diameter, has triangular terminals that rise to form a cone shape. Moulds found at the Brough of Birsay mirror brooch No. 17's design (Henderson and Henderson 2004, 99 Figure 104).

The St Ninian's Isle Hoard has been previously thought of as the treasure of a local lord, though an alternative interpretation is that it forms part of an ecclesiastical treasury. Eleven of the brooches are very similar in size, ranging between 65-77 millimetres in diameter. (Appendix 26). Each of the brooches show signs of wear, or extreme wear, with gilding being worn. In addition, glass mounts are missing from each brooch, of a total number of sixty-six mounts only thirty-eight are to be found, and some of those are replacements. The mounts appear to have been missing before the treasure was buried (Clarke 2017, 128-129;

O'Dell et al 1959). The brooches may represent donations and gifts to the Church as part of a ritual pledge, the oath guaranteed through the gift of a precious object.

## The Croy Hoard

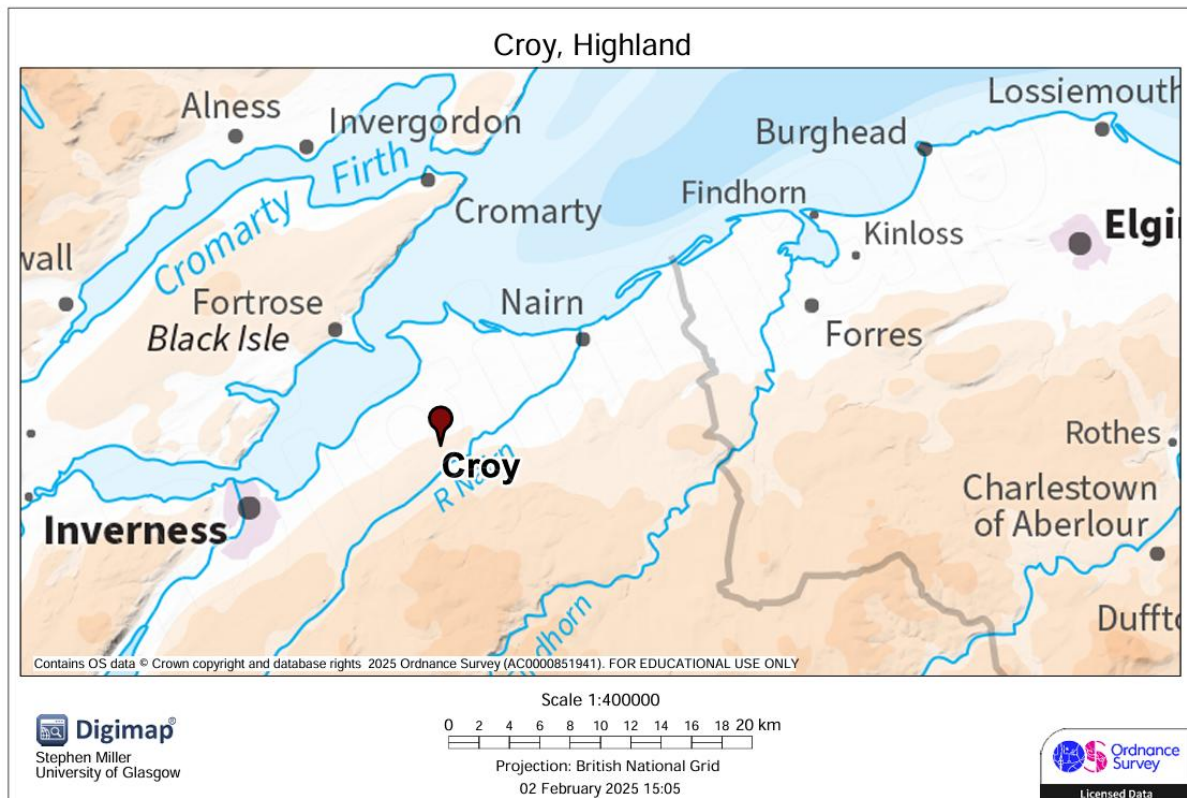
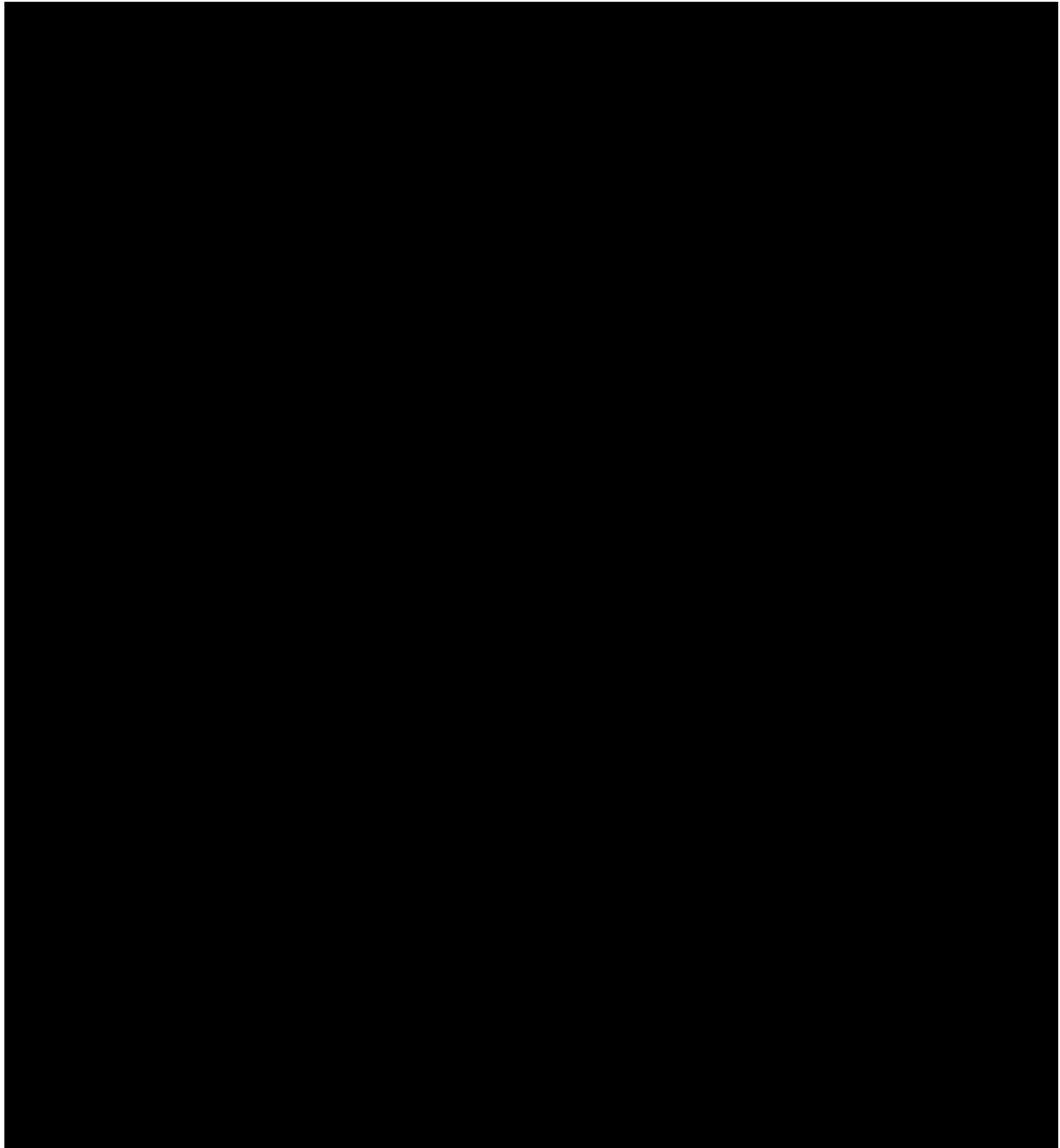


Figure 62: Map of Croy, Highland. Map generated by author.

The Croy Hoard (Figure 62) was discovered on two separate occasions, firstly, in 1875, a silver penannular brooch, part of a knitted chain, a silver penny of *Cænwulf*, King of Mercia (AD 796-821), two glass beads, two amber beads together with others that were subsequently lost by the finder, and a bronze balance beam were also recovered. In 1875/76 a second discovery was made of two portions of silver penannular brooches together with two glass and one amber bead. A coin was also recovered of *Æthelwulf*, King of Wessex (AD 839-858) (Figure 63). Both coins are pierced and may have been worn as talismans (Blackwell 2017, 14).

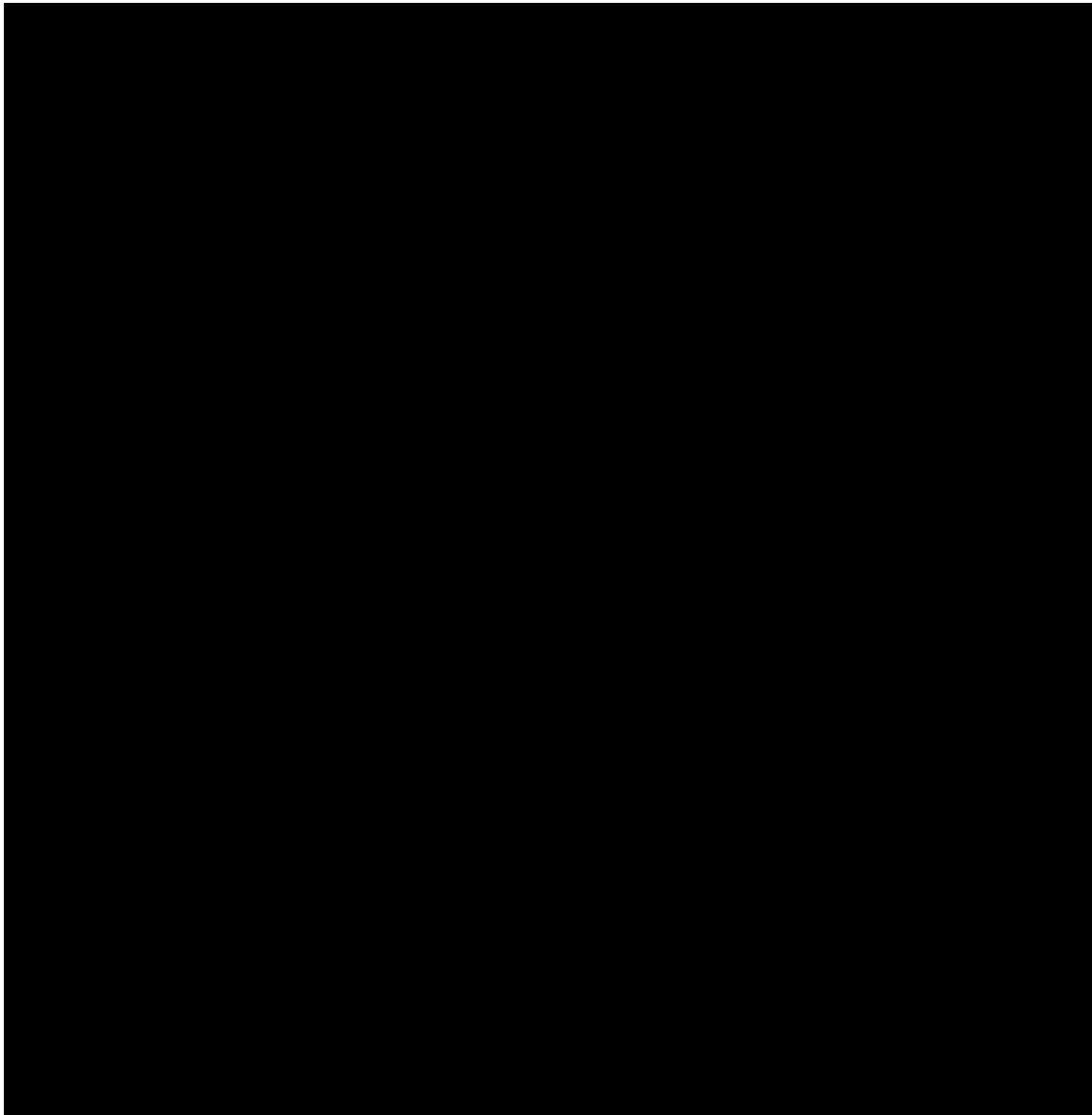


*Figure 63: The Croy Hoard, (NMS X.FC 12-25). Last Accessed, 11<sup>th</sup> December 2022.*

Thin cuts of red glass were mounted within thin gold walls on the terminals of the complete brooch. This use of red glass mirrors the Anglo-Saxon style of decorating objects, although the glass was rarer than garnet used in Anglo-Saxon objects (Blackwell et al 2018, 114). The terminal on the larger incomplete brooch (bottom right Figure 63) has four lobes that form the outline of a cross with a knotted cross decoration in the centre, this is a discrete Christian decoration like the terminal of a silver-gilt brooch from Rogart, Highland. The intentionally

cut silver objects found with a balance beam of the ninth century AD indicates that this is a hacksilver hoard (Blackwell et al 2018, 122; Maldonado 2021).

## The Age of the Brooch



*Figure 64: Detail of the Hilton of Cadboll Stone. Hunting scene with female figure wearing a penannular brooch. Last Accessed, 12<sup>th</sup> August 2023.*

Brooches were familiar within the British landscape from the Iron Age, men often wearing them as a single object while women more often wore them in pairs (Johns 1996). Brooch discoveries are less common in the north from the Early Medieval period, where there are fewer in the entire country than recovered from a single cemetery in Europe (Hunter 2009, 147, 151). The brooch was both functional and simultaneously decorative, developing over time to contain motifs and symbols, including Christian imagery, that would be relevant to

the person wearing it and to the greater community. As time passed and the memory of Rome changed so did the fashions of society. Moving away from the Roman fashion of a circular brooch being worn as a physical representation of a person's military status and authority, the brooch would, in northern Britain, become a new badge of office while societally retaining the memory of its original function (Nieke 1991).

The brooch in post-Roman society appears to have retained a function as a marker of a person's authority and position. The largest figure portrayed on the Class II symbol stone from Hilton of Cadboll, Highland, is a woman riding side-saddle. The female figure appears as the most significant person in the tableau and she wears a penannular brooch (Figure 64) (Mack 1997, 34). The dominant scale of her depiction, its positioning, that she rides a horse in the hunting scene and that she is adorned with a penannular brooch all indicate her position in society as a person of high-status, possibly a noblewoman or even a queen (Alcock 1991, 231-232).

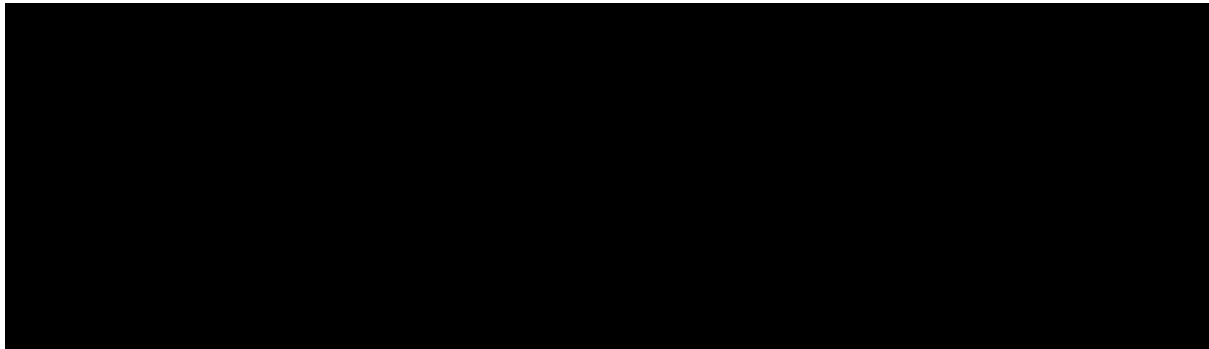
Some Roman styles persisted in the design choices made by local communities in the fifth and sixth centuries. Pins and brooches with zoomorphic terminals, such as the mould for a pin head found at the Mote of Mark developed from Roman military styles (Figure 65).



*Figure 65: Mould and Casting for a Zoomorphic Design for the Terminal of a Pin from Mote of Mark (NMS X.HH 154). Photograph by author, 28<sup>th</sup> March 2023, courtesy of NMS.*



The earlier silver brooches, such as the brooch from the Gaulcross hoard and brooches from Tummel Bridge (PSAS 1888; Fowler 1963), were of plain designs with little decoration. A plainer style was common to early brooches, possibly, the source of their power as objects of authority was derived from the material they were made from, namely Roman silver, rather than from their ornamentation or embellishments. The only design feature of the Gaulcross brooch is a twist in the circular hoop similar to the Norrie's Law and Tummel Bridge examples, mimicking in their style Roman military adornments and rewards (Laing 1994). The Tummel Bridge examples (Figure 66) have been decorated making quite simple perforations by stamping the metal during their production without any specific iconographic embellishments or elaborate designs (Blackwell, et al. 2018, 107-125). The plainer type of brooch may date to the sixth or the early seventh century AD (Youngs 1990, 26).



*Figure 66: Three Silver Brooches from Tummel Bridge, Perth and Kinross. They share a similar design with slight variations. (NMS X.FC 162, 163 & 164). Last Accessed, 12<sup>th</sup> August 2023.*

The penannular brooch, favoured over centuries in Pictland, has been traditionally identified as having a ribbed hoop with an oval cartouche placed in a central position. The pin has a lentoid shaped head, the shaft is created by a simple fold, while adornments and decoration developed, this basic form remained quite consistent (Henderson and Henderson 2004, 97). The brooches displayed local tastes and over time evolve to include more intricate and elaborate designs corresponding with the social transformations taking place across the early kingdoms of Scotland. By the eighth century the brooch was embellished in gold, decorated with glass and garnet, such as the example from Westness, Orkney (NMS X.IL 728, Figure 68), reflecting the growing connectivity of local communities with the wider world, including the Anglo-Saxon world and the impact of a Christian ideology.

Brooches of the seventh and eighth centuries were far more than decorative flourishes for the style conscious Pict or Gael to accessorise their clothing. It is no surprise to recognise that the very possession of objects crafted from precious metals would mark the wearer as being of a high status within society. The items were generally encased in significance and meaning far beyond their material, shape and form, imbued with religious significance and expressions of social status and allegiances (Nieke 1993, 128; Driscoll 1988, 169).

Brooches became a ubiquitous accessory for the people of Early Medieval Scotland. Important leaders within the community would take this a step further in terms of the material from which they were crafted and the decoration and adornments that set these items apart, making them significant works of art of the Early Middle Ages (Figure 35). The gold-plated silver brooch from Rogart is decorated with interlace and bird heads. From the perspective of being viewed from the front the heads appear as raised bevels, however, viewed from the perspective of the wearer the bird heads appear to be drinking from the roundel which in turn has the image of a cross in both terminals (Figure 36) (Nieke 1993, 131-132). There appears to be a secret message that is intended to be read within the brooch by only the wearer. Stevenson holds that these designs for personal reflection and inspiration were inspired by creatures from the creation motifs from the Book of Genesis, he relates them to similar designs found on the Hunterston Brooch where Christian iconography is evident in its design (Stevenson 1974). Bird motifs are to be found used in several early medieval sites, such as at Brough of Birsay, Orkney, where Curle's excavations recovered two halves of the same mould depicting two birds, one with its head in profile and the other viewed upwards (NMS HB: 311; 312) (Curle 1982, 30-31).



Figure 67: Map of Penannular and Pseudo-Penannular Brooches. Green: Isolated Finds. Red: Hoards. Monymusk Reliquary: Blue. Map generated by author.

## All That Glitters

<i>1. Westness</i>	<i>2. Achavrole</i>	<i>3. Slentack Wood</i>
<i>4. Cairn of Arthurhouse</i>	<i>5. Tarland</i>	<i>6. Aldclune</i>
<i>7. Clunie</i>	<i>8. Taymouth Castle</i>	<i>9. Culross</i>
<i>10. Crail</i>	<i>11. Dunipace</i>	<i>12. Hunterston</i>
<i>13. St Ninian's Isle</i>	<i>14. Rogart</i>	<i>15. Croy</i>
<i>16. Tummell Bridge</i>	<i>17. Norrie's Law</i>	<i>18. Monymusk</i>
<i>19. Freswick Links</i>	<i>20. Castlehill</i>	<i>21. Crichton</i>



Figure 68: Fowler's Type 'G' Brooches after Dickinson 1982. Map prepared by author.

1. Luce Sands, Dumfries and Galloway

2. Balevullin, Tiree

3. <i>Castlehill, Dumfries and Galloway</i>	4. <i>Dowalton Loch, Dumfries and Galloway</i>
5. <i>Dunadd, Argyll and Bute (5 Examples)</i>	6. <i>Mote of Mark, Dumfries and Galloway (4 Examples)</i>
7. <i>North Uist, Western Isles</i>	8. <i>Isle of Skye, Highland</i>
9. <i>West of Scotland, Unprovenanced</i>	10. <i>West of Scotland, Unprovenanced</i>

### Material Christian Conversion

Brooches carried within them a sense of secular power and status and with the growing influence of Christianity they also adopted an ideology that reflected the wearers' faith and relationship with the Christian Church. The development of the brooch is reflective of the growing sense of the communities who owned and fashioned them and their ideological drivers. Christian iconography is apparent on several high-status brooches such as on the eighth century Hunterston Brooch (12). A cross may be identified on the terminal of a fragment of a penannular brooch from Freswick Links, Caithness (19), a cross appears on the terminal of the larger brooch section from Croy (15), a cross decorates the head of the brooch pin from Westness (1) (Figure 68), the Rogart Brooch (14) and a brooch from Clunie (7) share a bird motif, linked to Christian symbolism. A ram's head motif appears on a brooch from the St Ninian's Isle hoard (13), a Christological motif (Whitfield 2014-2015; Blackwell 2011). The emblem of the Christian cross can be clearly discerned on the terminal of several penannular brooches including the Hunterston Brooch, made from silver with a novel dominant gold gilding (NMS X.FC8) (Blackwell 2018, 116-120; Ó Floinn 1990, 91-92; Stevenson 1974, 39; Stevenson 1984, 470; Youngs 1990, 91-92, 112-114).



*Figure 69: Brooch Pin from Westness, Orkney. Displaying red glass and gold inlay, recovered from a Viking grave of a woman and an infant. The pin is decorated with a cross motif (NMS X.I.L 728). Last Accessed, 23<sup>rd</sup> December 2023.*

The overt Christianisation of high-status jewellery is shared within the wider Early Medieval world, creating a pan-Christian confederation, where styles and tastes would be shared. The influence of the wider European world is reflected in the development of brooch styles and the options chosen to decorate and embellish them in an artistic *lingua franca*. Frankish belt-buckles have been recognised as amuletic, displaying scenes calling to mind the life of David or the journey of the Magi to do homage to the young Christ. The buckle discovered in the

Sutton Hoo burial is possibly a reliquary, though some seventy years older than the Hunterston Brooch. It was found within a conversion-period grave, shares with the Hunterston Brooch an iconography of birds, snakes and other animals, suggestive of Biblical creation mythologies, though Stevenson recognises pagan antecedents of these motifs (Blackwell 2011; Stevenson 1984, 470). There are many examples of the conversion of pagan motifs and symbolism placed in the service of a Christian message and ideology (Goodenough 1962).

The Hunterston Brooch stands as a unique example of the fusion of old and new styles in one dramatic work of art. There are local and international influences on the brooches' design and decoration. Christian iconography is flawlessly married with pre-Christian imagery. Anglo-Saxon influences are present, as are traditional La Tène decorations combined into a masterpiece of the metalsmith's skill. With the Hunterston Brooch it may not be so much of a stretch to suggest that this, and other metalwork created with the same skill and from the same ideology within the seventh and eighth centuries, may be expressions rendered in precious metal of growing and self-confident unified kingdoms emerging from the previous smaller polities (Youngs 1990, 91-92).

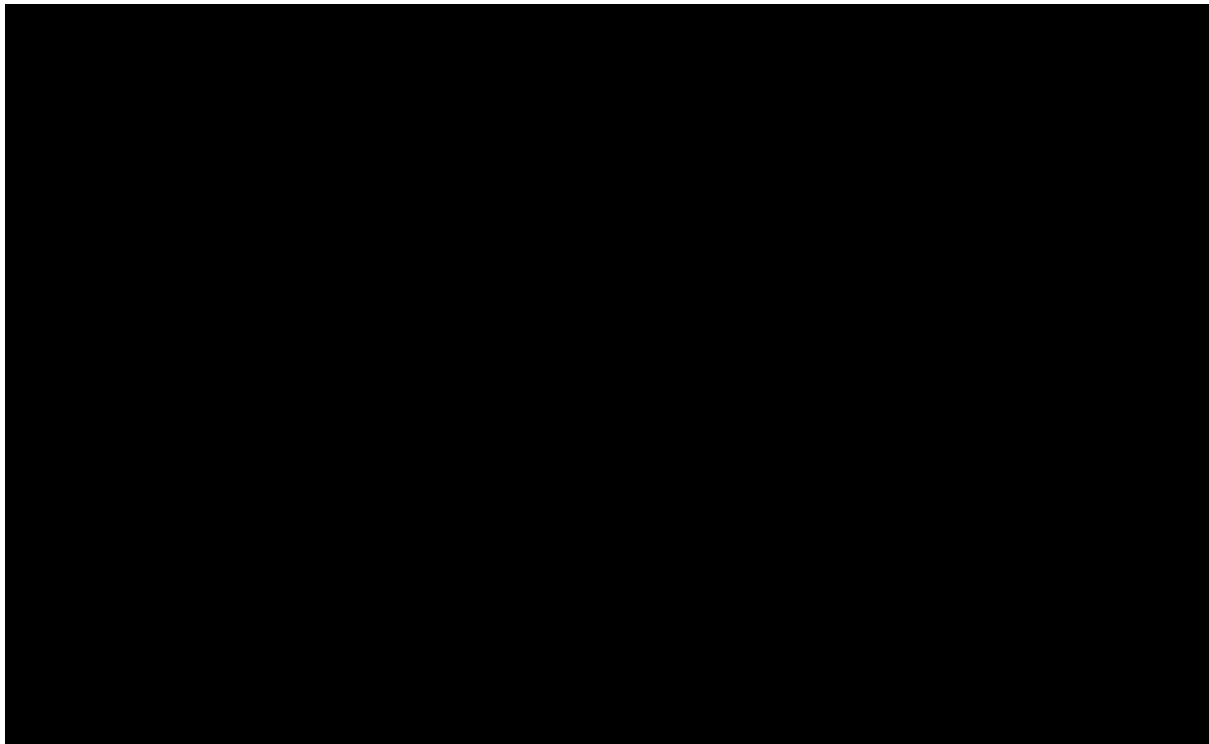
The brooches from Westness, Rogart and St Ninian's Isle, through their repetition of certain key motifs, display Christian symbolism and suggest a link between the authority of the wearer and the authority of the Church (Youngs 1990, 92, 112). A ninth century Norse grave of a woman with the remains of a newborn child was discovered at Westness, Rousay, Orkney, in 1963. The grave was furnished, amongst other items, with an eighth century silver Celtic brooch with gold filigree, two Norse oval brooches, amber studs, possibly from the Baltic, and strips of red glass (NMS: X.II.728) (Henshall 1963, 40; Youngs 1990, 92; Henderson and Henderson 2004, 108). The Westness brooch is a hinged loose-ringed pin in the style of a pseudo-penannular brooch, the pin length measures 175mm and the head is 30mm X 20mm. XRF investigation revealed that the brooch was composed of 70-74% silver, though this may have been depleted over time due to corrosion and may have been originally purer silver (Stevenson 1989, 241). Profiles of six small snake-head motifs are found on the circle of the brooch, zoomorphic motifs being common in insular design (Blackwell 2011) (Figure 65).

The motifs and design found on the Westness Brooch and the Dunbeath Brooch from Achavrole display a close relationship with the Hunterston Brooch in terms of style and



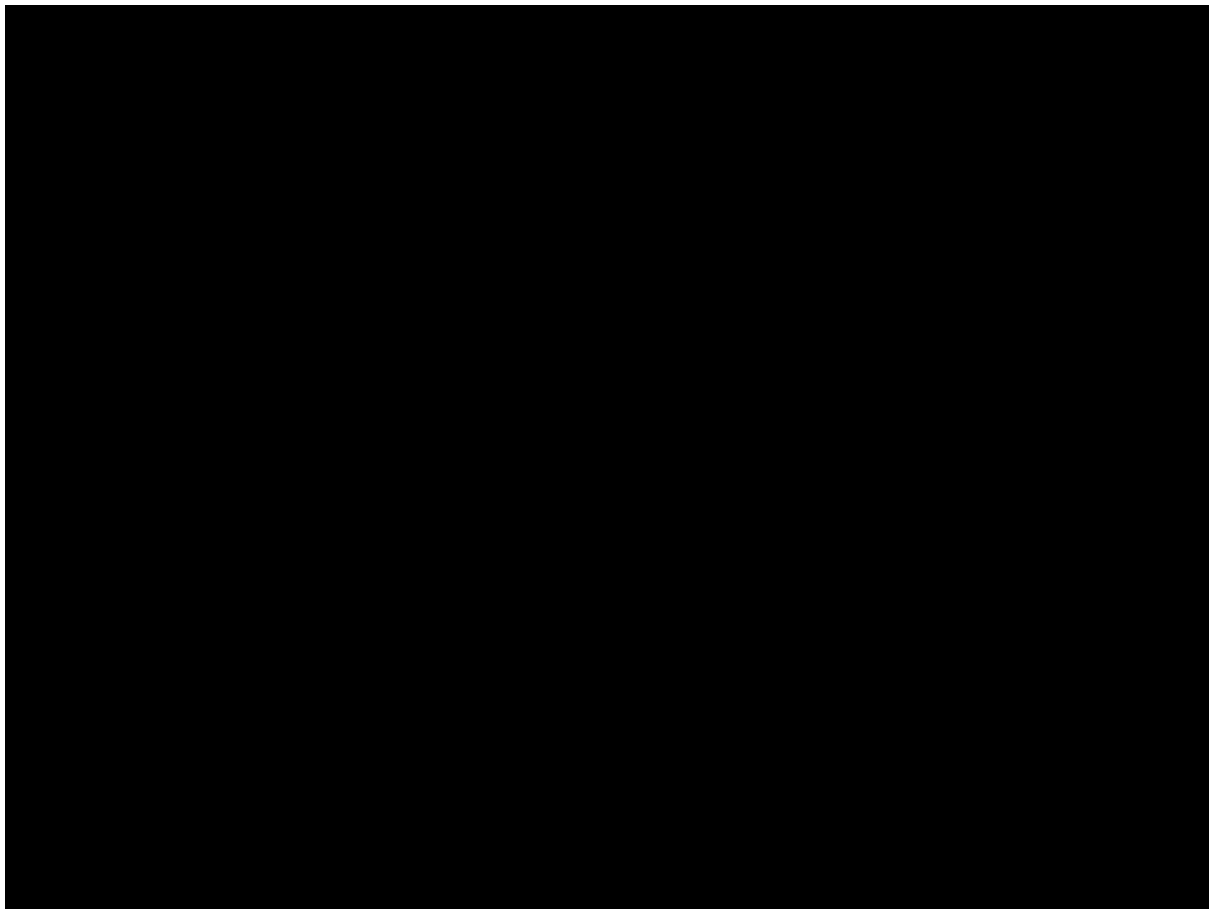
complexity, the use of beasts is mirrored in the Rogart Brooch (Blackwell 2011, 233-234; Henderson and Henderson 2004, 100-102) (Figure 69). The Achavrole brooch may be an attempt to imitate the style of the Hunterston Brooch. The beasts and 'fish' motifs are made of filigree of gold beaded wire, displaying Anglo-Saxon influence and reveal a Christian iconography within the design and meaning of the brooch.

Brooches became more than mere personal adornments or symbols of power and rank; they became embedded in Christianity and a type of conversion of insular art took place at this time, just as there was a conversion of the people and the pre-Christian landscape of northern Britain. Landscape conversion has been captured by *Adomnán* in his *Life of St Columba*, where he recounts the story of Columba converting an ancient well (Adomnán 1995, II:11). This is a period when the Christian Church makes inroads throughout life and culture, influencing all the communities of Early Medieval Scotland, Christianity gaining significant influence across the various kingdoms.



*Figure 70: Detail from the Rogart Brooch decorated with interlace and bird head moulds pointing to a cross design. (NMS X.FC 2). Last Accessed, 21<sup>st</sup> August 2023).*

The 8th/9th century brooch discovered at Aldclune, Blair Atholl, Perthshire, (NMS: X.FC304) was recovered within post-occupation deposits (Figure 70) (Young 1990, 113; Stevenson 1987; Triscott 1980). The penannular brooch is cast in silver with gilt embellishments decorated with blue and amber glass studs, measures 62mm X 65mm. It is decorated with an imitation chip-carved decoration with triangular pseudo-terminals. The head of the pin is chip carved with ‘Celtic’ interlace design and may be a replacement for the original, the tip of the pin has been broken off. This replacement hypothesis is confirmed by chemical analysis of the three sections making up the brooch: the ring, the pin surface and the pin section, demonstrating the quantity of silver being: 90.6%, 77.6% and 58.3% respectively. The decoration of a double row of punched dots along the low mouldings are closely related in style with Brooch 18 of the St Ninian’s Isle Hoard and bowl No. 1 of the same collection (Ó Floinn 1990, 107; Stevenson 1987, 233). The neat conical bosses of the ring suggest this is part of a later development in brooch style and expression, earlier examples having radial ribbing decoration.



*Figure 71: Aldclune Penannular Brooch, silver-gilt with glass settings. (NMS X.FC304). Last Accessed, 19<sup>th</sup> January 2023.*

## Debasement of Silver

The St Ninian's Isle hoard consisted of aristocratic high-status items bowls, personal jewellery and martial activity, all expressions of a person's rank and status in Early Medieval Scotland. Material from the hoard shares similarities with items from Culbin Sands and 16 penannular brooch moulds recovered from the Brough of Birsay, especially the smallest mould recovered (NMS HB: 300), the mould sharing details of a sword chape from the St Ninian's Isle hoard (Close-Brooks 1974, 962; Curle 1982, 26, 29). The quantity of late silver objects found in the St Ninian's Isle hoard may point to the growing strength and the acquisitive nature of the Christian Church, with large amounts of silver being given over for ecclesiastical purposes and use, removed from social transactions. The St Ninian's Isle hoard consists of eight silver bowls, seven with zoomorphic or interlace ornamentation, one of which is of a hanging variety with three silver-gilt zoomorphic suspension loops. This is the most northerly example found in Britain and the latest being from the eighth century AD. Two other examples from a Scottish context are known from Tummel Bridge, Perth and Kinross, and Castle Tioram, Inverness-shire, both dating from the fifth century AD. The bowls, chapes and pommel all show influence from the Anglo-Saxon world (Webster 2001). Several of the objects are inscribed in Latin and have a Christian reference including a sword chape end with the inscription *in nomine d.s.*, the abbreviation for *in nomine Deo Summi*, 'In the name of God the Highest' (O'Dell, et al. 1959, 250-255). The hoard is most likely to have been buried as protection from Viking raiders whose first recorded sacking of a monastery took place at Lindisfarne AD 793 (A.S.C. 1892) (Figure 71).

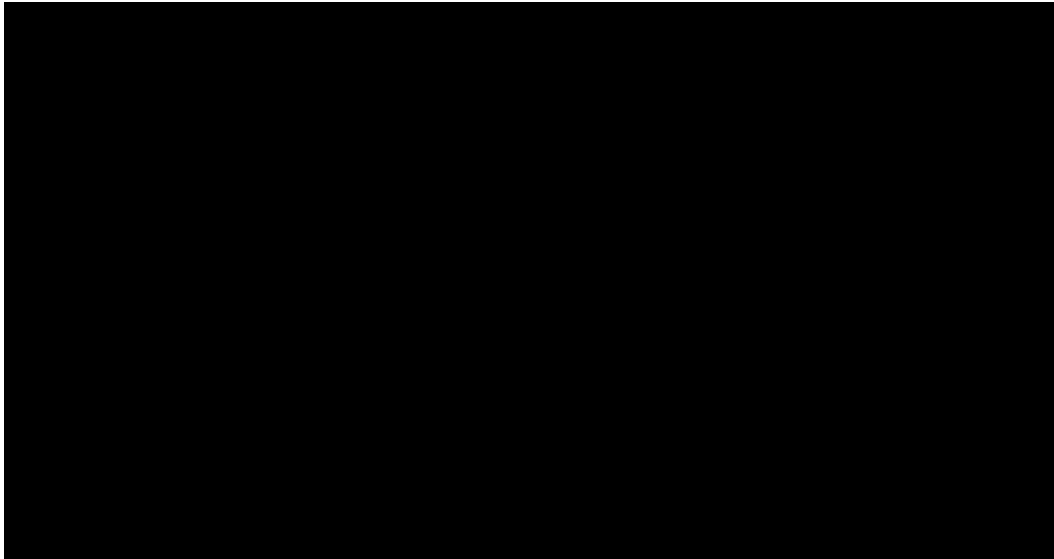
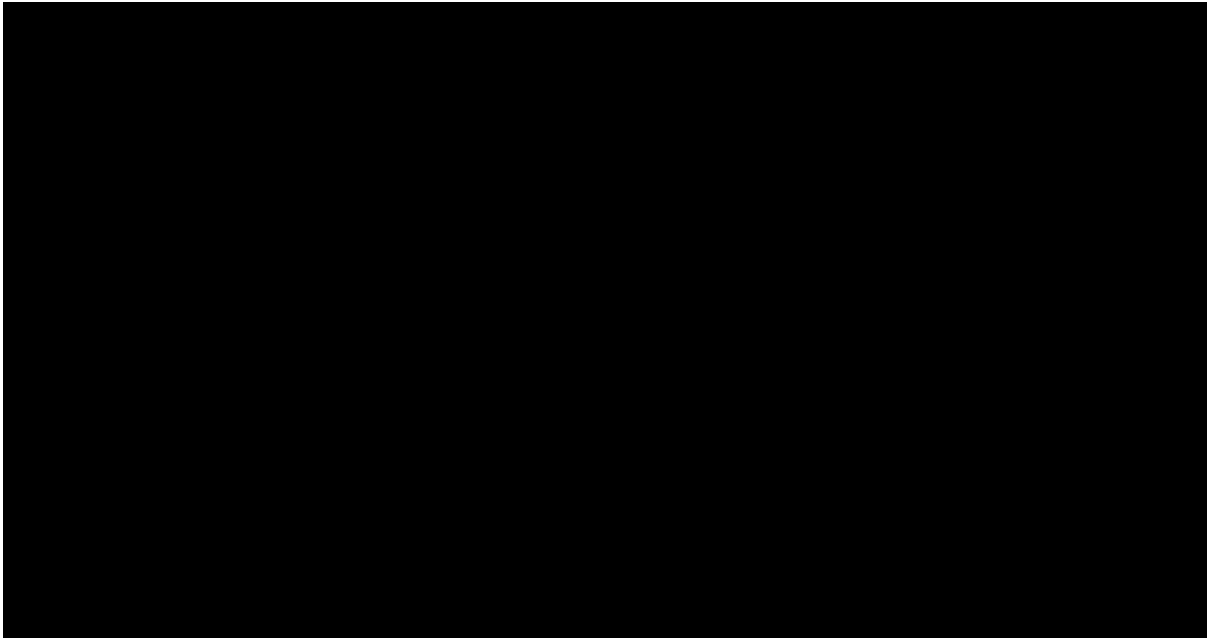
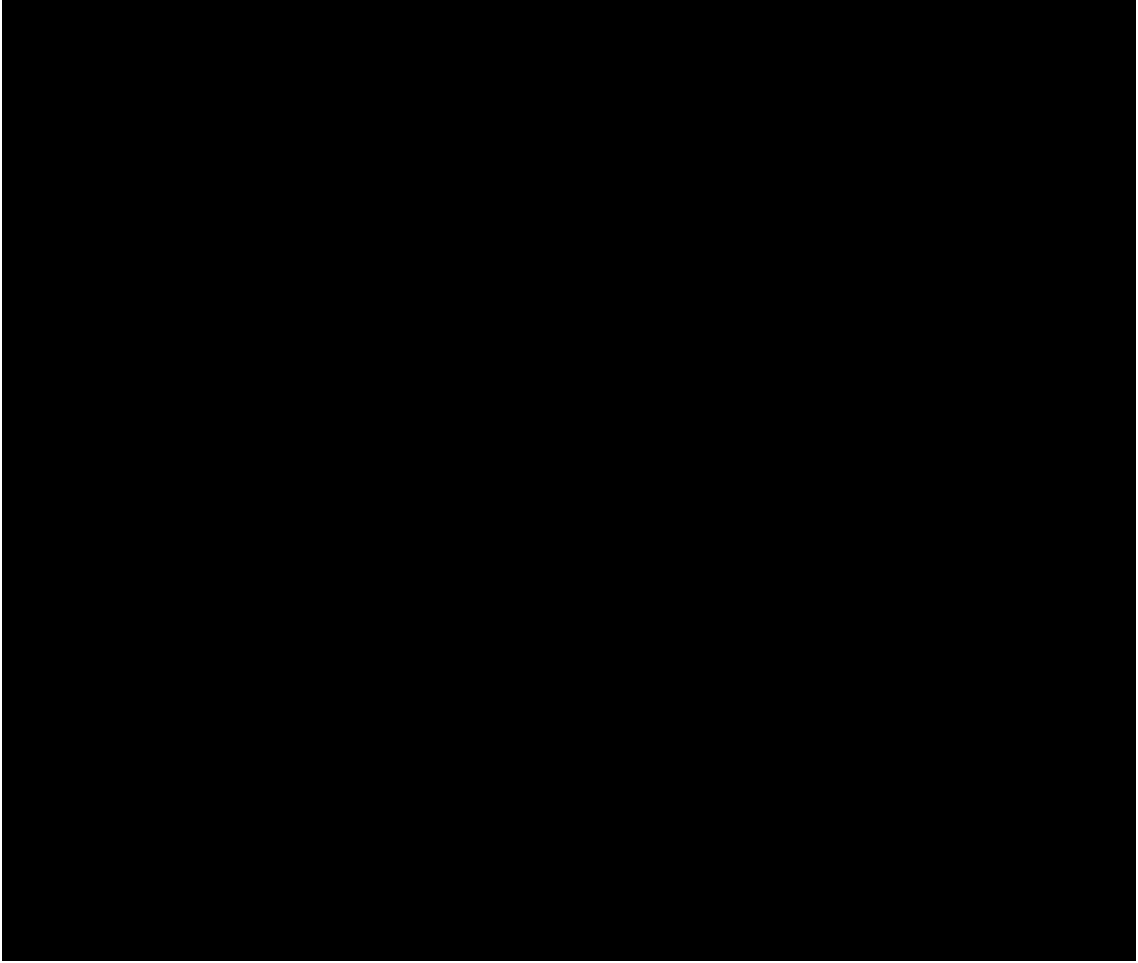


Figure 72: Anglo-Saxon Chronicle Detailing the Sacking of Lindisfarne, AD 793. (The British Library). Last Accessed, 4<sup>th</sup> September 2023.

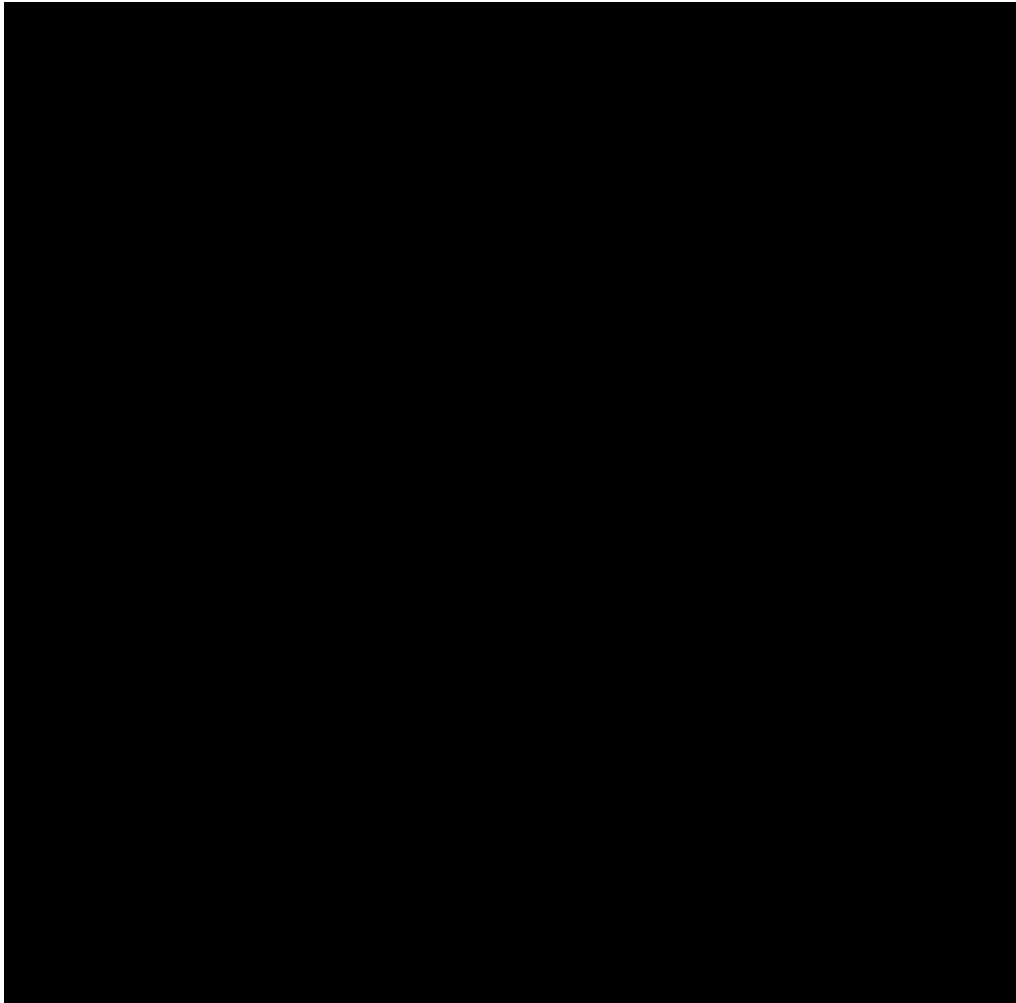
Objects from the St Ninian's Isle hoard may be related to the Monymusk Reliquary, which until recently had been claimed to be The Breccbennach of St Columba. The Monymusk Reliquary was created using silver, bronze, enamel and wood, the silver is decorated using the *pointillé* technique of engraving. The *pointillé* technique is regarded as a pointer towards a Pictish design origin, though not an absolute guarantee (Henderson and Henderson 2004, 115). *Pointillé* was applied to the St Ninian's Isle bowls and to the Monymusk Reliquary, it is found in insular manuscripts like the Lindisfarne Gospels. Two of the bowls containing zoomorphic motifs, No.'s 2 and 3 (Figure 72) share such similarity with the Monymusk Reliquary (Figure 73) that they may have been created by the same hand, or at least by the same school (Henderson and Henderson 2004, 115; O'Dell, et al. 1959, 264). The zoomorphic application is singular regarding other known house-shaped reliquaries, apart from the example held in the *Museo Civico Medievale*, Bologna (Figure 74). The design on the Monymusk Reliquary is applied using the *pointillé* technique, as is the case for the St Ninian's Isle bowls, though the design on the reliquary has become severely worn due to use and handling over a prolonged period. The creatures found on both reliquaries and the bowl from St Ninian's Isle share similarities including indicative feet, the animals have elongated bodies which are shown with tapering legs (Henderson and Henderson 2004, 115).



*Figure 73: Silver Bowl from the St Ninian's Isle Hoard with Zoomorphic Decoration. (NMS X.FC 269). Last Accessed, 17<sup>th</sup> September 2023.*



*Figure 74: Detail of the Monymusk Reliquary Displaying Pictish Zoomorphic Design.  
(Anderson 1881).*



*Figure 75: The Bologna Reliquary. House-shaped shrine with possible Pictish origins. (Society of Antiquaries of Scotland). Last Accessed, 19<sup>th</sup> November 2023.*

The age of the brooch developed as smaller communities grew into larger polities and kingdoms. The brooch, and silver in general, offered a vehicle for the new kingdoms to give voice to their growing self-confidence as growing powers within Early Medieval society. The brooch was imbued with memories of the Roman martial world and Roman material culture, but it was transformed into new types of status-symbols that connected new elites with one another. At first the brooches were rather simple in style and unadorned, these objects gave way to a new artistic expression of highly decorated ornate works of art that drew inspiration from the Roman, Anglo-Saxon, ancient Celtic traditions and the Christian worlds. Brooches would become among the greatest artistic masterpieces of Early Medieval Scotland. In time, as sources of silver began to dry up, objects would be fashioned from

more debased silver but still enjoying the same social significance and elaboration as their earlier counterparts.



## **6: Monopolising and Controlling Fine Metalwork**

The concentration of fine metalwork production at centres of power is a distinctive feature of Early Medieval Scotland. Where silver was transformed, by whom, and why are all questions that contribute to the understanding of how early kingdoms developed as mechanisms employed by elites to cement their control over widening districts. Silver became the prestige metal of elites and was adopted as one aspect displaying their growing strength and control. Silver was used to foster and enhance social control, often manipulated and distributed within centres of power. Centres of power in Early Medieval Scotland offer a rich source of evidence for studying this era (Figure 75) (Alcock 1976, 103).

Elite sites have been considered to hold an elevated position, with defensive structures, trade networks for goods and consumables including wine from the Mediterranean, and material for resource management and craft activity, importantly it also includes evidence of fine metalworking taking place (Appendix 28) (Driscoll 2009, 269; Campbell 2007, 16-18; Campbell 2023). As kin groups gained greater power over their landscape and surrounding populations, they used hillforts to cement their authority. Creating an increasingly asymmetric society, controlling access to silver was a significant elite strategy (Foster 1998, 2; Foster 2017, 62-91).

Evidence for trade and exchange has long been considered an important factor in identifying centres of power, places where surplus goods were brought together for distribution and wider trading activities. Imported goods indicated a site, or its occupants, participated in international trade and exchange (Campbell 2023; Alcock 1981, 235, Laing and Longley 2006, 177-179; Lane 1994, 103). Among at least 21 known sites from across Scotland, from Whithorn, Iona, Dunollie and Dumbarton Rock, Mediterranean material from the Early Historic era has been recovered, including Red Slip ware, *Bi*, *Bii* and *Biv*, like material found in southern Britain, where it appears in greater quantities (Campbell 2007 B, 116).

Recovered from Dumbarton was an amphora originating from the Mediterranean, suggesting a trade in wine as well as wooden casks housing wine coming from France (Alcock 1981, 235). Dunadd is arguably preeminent in the importation of E-ware and may represent a model for the importation and redistribution of goods within the larger landscape (Campbell 2007 B, 117). Whithorn and Iona, both ecclesiastical centres, are the only sites where African Red Slipware have been found from Scottish sites, Whithorn also having the largest

assemblage of glass found in Scotland (Campbell 2007, 16-18, 116-177; Campbell et al 1997, 297-326).

D-ware originated from France; it is a black colour coated grey ware from the sixth century. This D-ware has been found at the Mote of Mark, Dunadd and at Whithorn, suggesting that Mediterranean trade had ended by this time and a new trading partner was found closer to home (Lane 1994, 106). E-ware, dating from the late sixth or early seventh century, consists of hard white ceramic beakers, bowls and containers. E-ware originated from France, possibly from the Saintonge region.

There were two phases of international trade cycles, firstly Mediterranean trade which reached as far as Rhynie, followed by a continental trade and exchange network focussed on the Irish Sea with Dunadd and the ecclesial sites of Iona and Whithorn. Pottery and glass from the fifth to eighth centuries provide a valuable dating tool (Driscoll 2009, 244, 246). The earlier phase of trade was a continuation of late Roman networks followed by the near-Continent once the earlier sources of trade ended (Driscoll 2009, 244-245). Dunadd has provided the largest E-ware assemblage of ceramics from this period from throughout Britain. Adomnán speaks of trade with Gaulish merchants, offering written evidence for the trade in E-ware between Dunadd and Gaul (Adomnán 1995, 1:28; Campbell 1987).

Alcock argues that the dealing in slaves in pre-Viking Britain does not account for the trade in imported glass cullet, ceramics, wines or metal (Alcock 1988, 36). Alcock goes on to suggest that this trade was paid for with raw materials available on the land and around the coast of the Early Medieval power centres, suggesting the trade was met in terms of furs, crystals, pearls and tin, or funded by material such as leather and woollen goods. The glass vessels may have been used in the making of vitreous inlays for the decoration of objects created from fine metal as well as for the creation of high-status objects such as the glass knobbed boss found at Dundurn or the glass beads from Dunadd (Alcock 1981, 235).

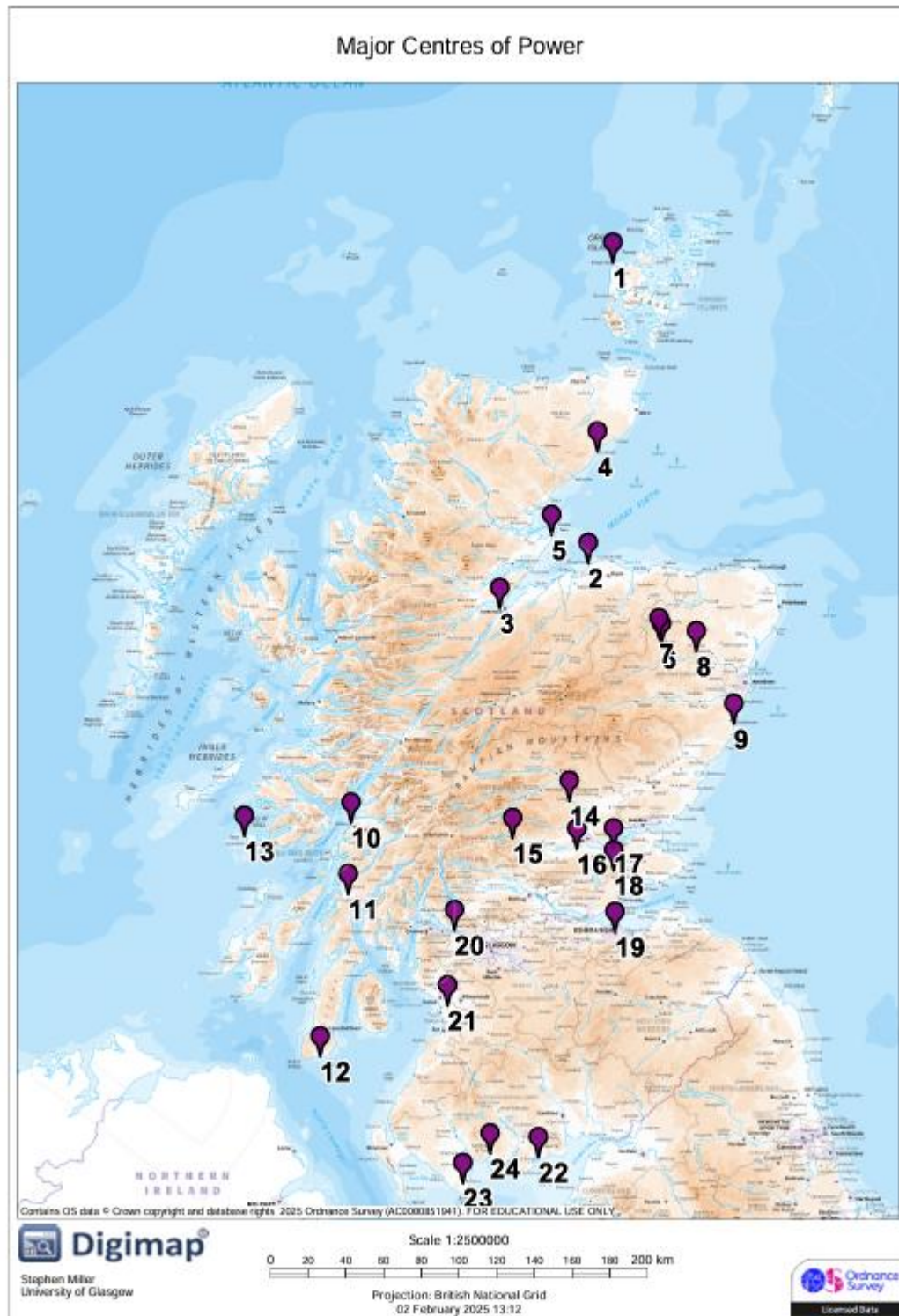


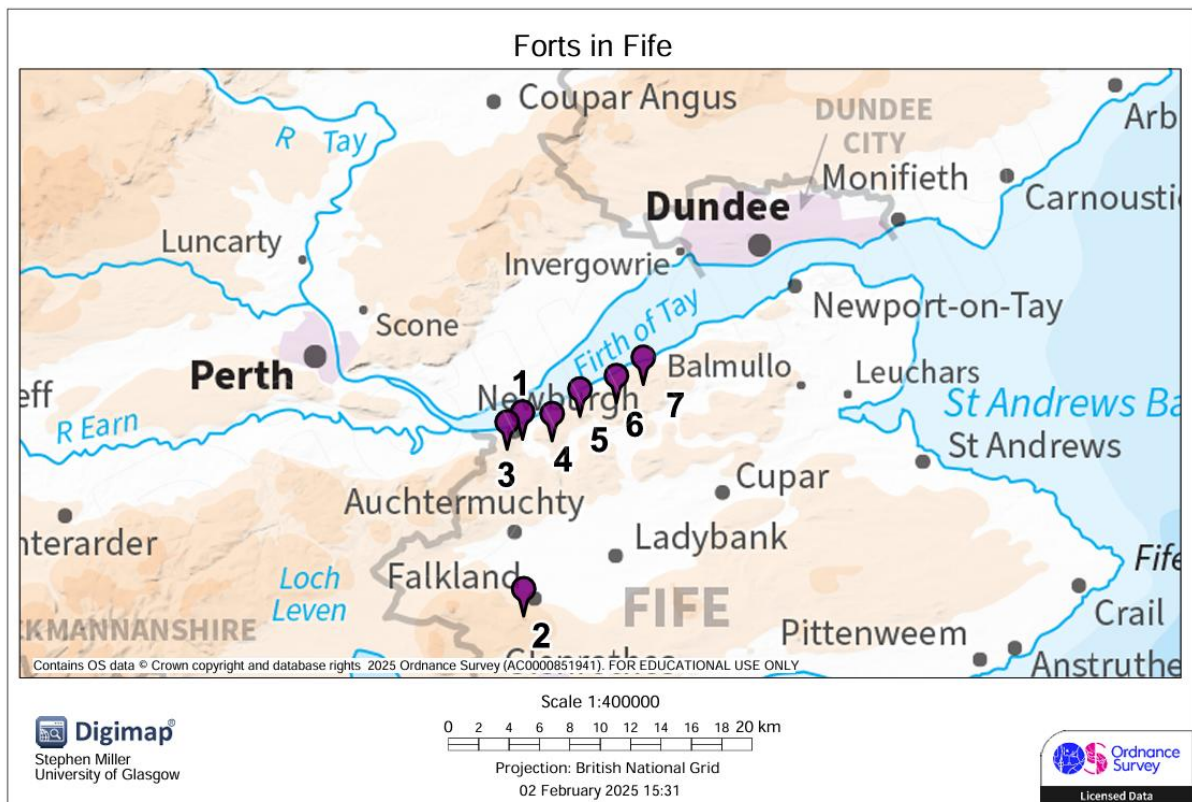
Figure 76: Centres of Power. Map prepared by author using Appendix 25.

Sites mentioned on the above map:

1. Brough of Birsay	2. Burghead	3. Craig Phadrid
4. Dunbeath	5. Portmahomack	6. Rhynie

<i>7. Tap o' North</i>	<i>8. Mither Tap</i>	<i>9. Dunnottar</i>
<i>10. Dunollie</i>	<i>11. Dunadd</i>	<i>12. Dunaverty</i>
<i>13. Iona</i>	<i>14. King's Seat</i>	<i>15. Dundurn</i>
<i>16. Forteviot</i>	<i>17. Clatchard Craig</i>	<i>18. East Lomond Hill</i>
<i>19. Edinburgh</i>	<i>20. Dumbarton Rock</i>	<i>21. Dundonald</i>
<i>22. Mote of Mark</i>	<i>23. Whithorn</i>	<i>24. Trusty's Hill</i>

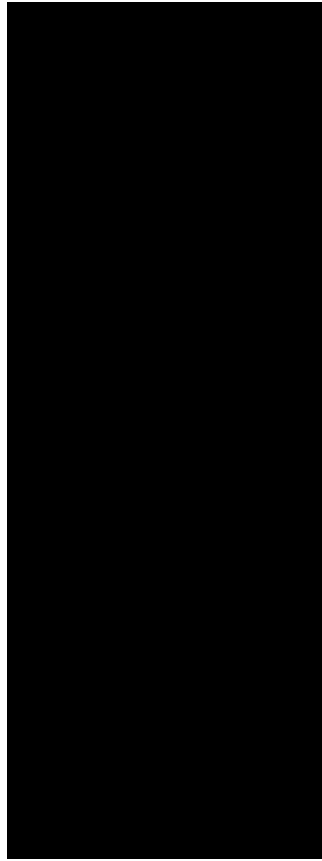
## Clatchard Craig, Fife



*Figure 77: Early Historic Forts of Fife. Map generated by author.*

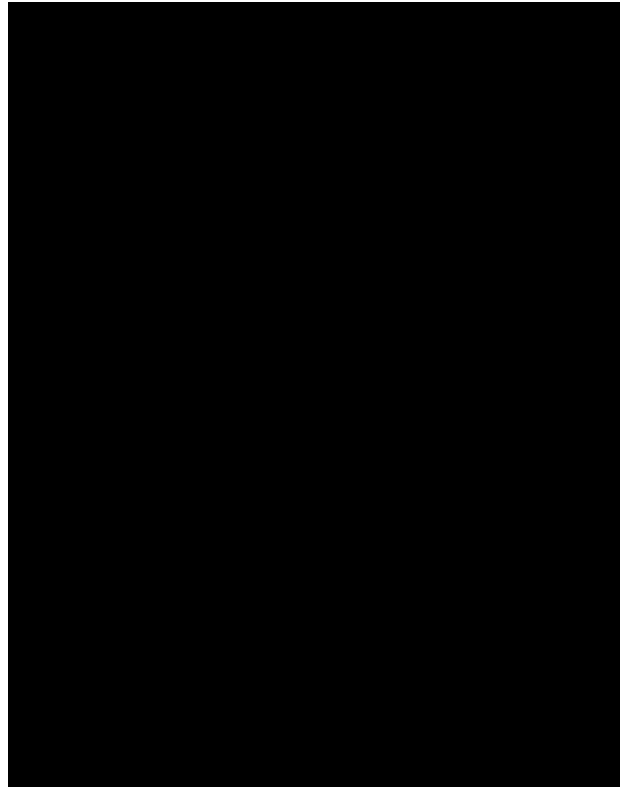
1. Clatchard Craig. 2. Easty Lomond Hill. 3. Black Cairns. 4. Braeside Mains.
5. Glenduckie. 6. Norman's Law. 7. Green Craig.

The fort at Clatchard Craig, Fife, (Figure 76) was multivallate with a natural defence on the north side of a sheer cliff edge (Noble et al 2022, 269). It is one of the most heavily defended hillforts of Early Medieval Scotland, with a minimum of seven defensive lines. Rampart 2 offers evidence of Roman stone being incorporated into the defences, the stone drawn potentially from Carpow, a Roman fort three kilometres to the west of Clatchard Craig. Early Medieval moulds for metalworking were recovered from Clatchard Craig along with a silver ingot and E-ware. A separate metalworking site was recognised to the south-west of the seventh-century fort (Figure 77) (Noble et al 2022, 288).



*Figure 78: Staged drawing of the phases of Clastchard Craig showing separate metalworking site to the south-east of the fort dating to the 8<sup>th</sup> century. (Noble et al 2022, 277).*

The brooch moulds recovered from excavations at Clatchard Craig include mould fragments for both small and large brooches, the larger displaying both triangular and round terminals (Figure 78) (Close-Brooks 1986, 156-166).

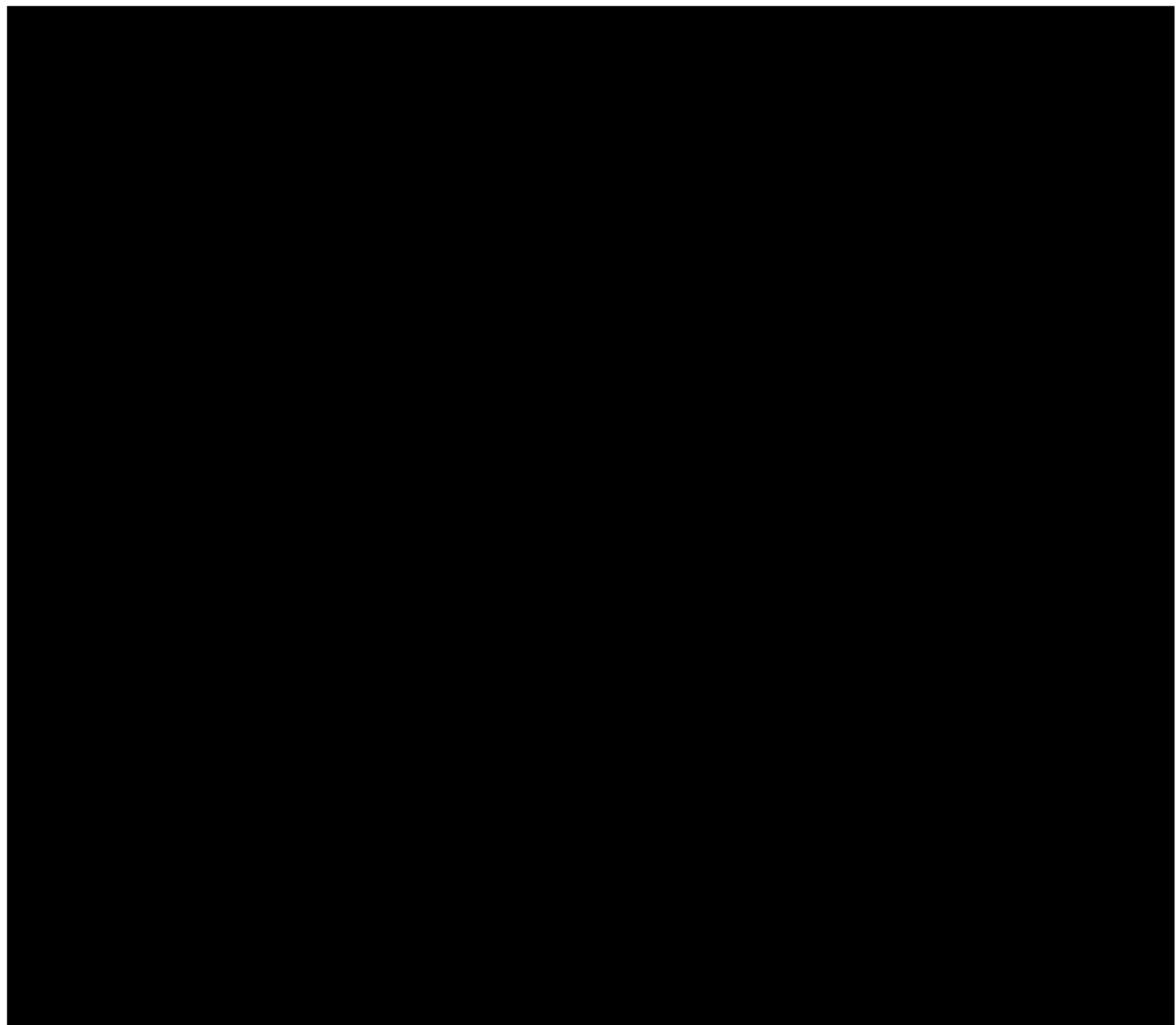


*Figure 79: Selection of Clay Moulds from Clatchard Craig, Fife. (Close-Brooks 1986, 159).*

The larger brooches were dated to the seventh century, based on their similarity to brooches discovered at St Ninian's Isle (Noble et al 2022, 274; Close-Brooks 1986, 162; Wilson 1973). A silver ingot, which is linked to Pictish high status metalworking was also recovered from Clatchard Craig, as were moulds for the crafting of penannular brooches (Figure 79) (Maldonado 2021, 33). The ingot tapers slightly at one end, the sides are faceted, it measures 73 millimetres by 10 by 5 mm and weighs 28.42 grams. Analysis of the ingot using X-ray fluorescence carried out in 1981 by demonstrated a high content of silver with a similar composition to the massive chains and late Roman silver plate, indicative of the long life of silver ingots (Close-Brooks 1986, 1676) (Table 6).

*Table 6: Analysis of Silver Ingot from Clatchard Craig Using X-Ray Fluorescence (1981) with traces of 0.5% gold (Close-Brooks 1986, 167).*

	Copper	Zinc	Lead	Silver
Uncleaned	17.2%	1.9%	1.5%	79.4%
Cleaned	20.7%	1.8%	1.5%	76.1%



*Figure 80: Silver Ingot from Clatchard Craig, 73 by 10 by 5 mm, weighing 28.42 g. (NMS X.HCC 121). Last Accessed, 17<sup>th</sup> May 2023.*



## Dunollie, Argyll and Bute

Occupying a strategic sea stack to the north of Oban Bay, which provided a sheltered safe harbour for the seafarers of Dál Riata stands Dunollie (Figure 80; Figure 81) (Alcock 1981, 234). There are five references to Dunollie, *Dùn Ollaigh*, possibly due to its proximity to Iona. AD 686 when it was possibly destroyed by fire and again in AD 698. In AD 701 Dunollie was destroyed by *Selbach* and in AD 714 it was rebuilt by the same *Selbach*, who may have been responsible for the construction of fortified dry-stone wall erected around the stack (Alcock and Alcock 1987, 120; Alcock 1981, 234). Outside of the main fortification was an industrial zone containing a large hearth, crucibles and pottery very similar to the situation in Dunadd (Figure 82).

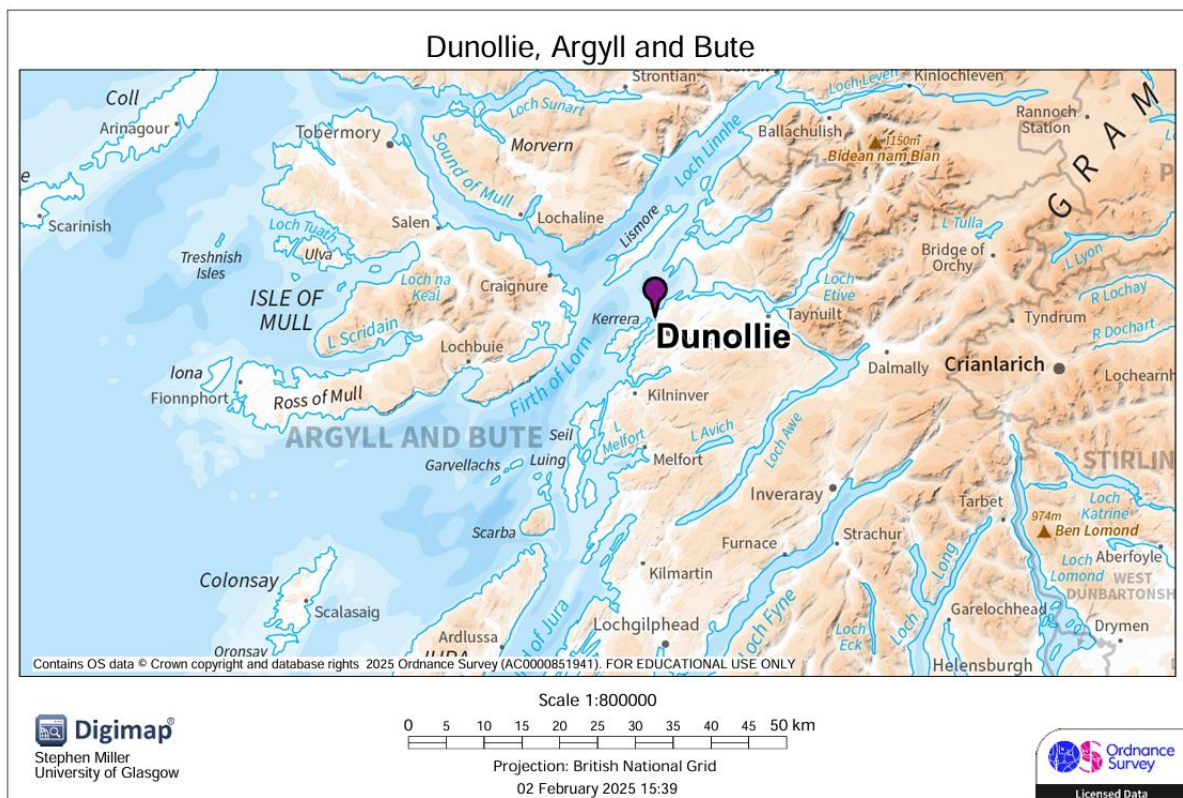
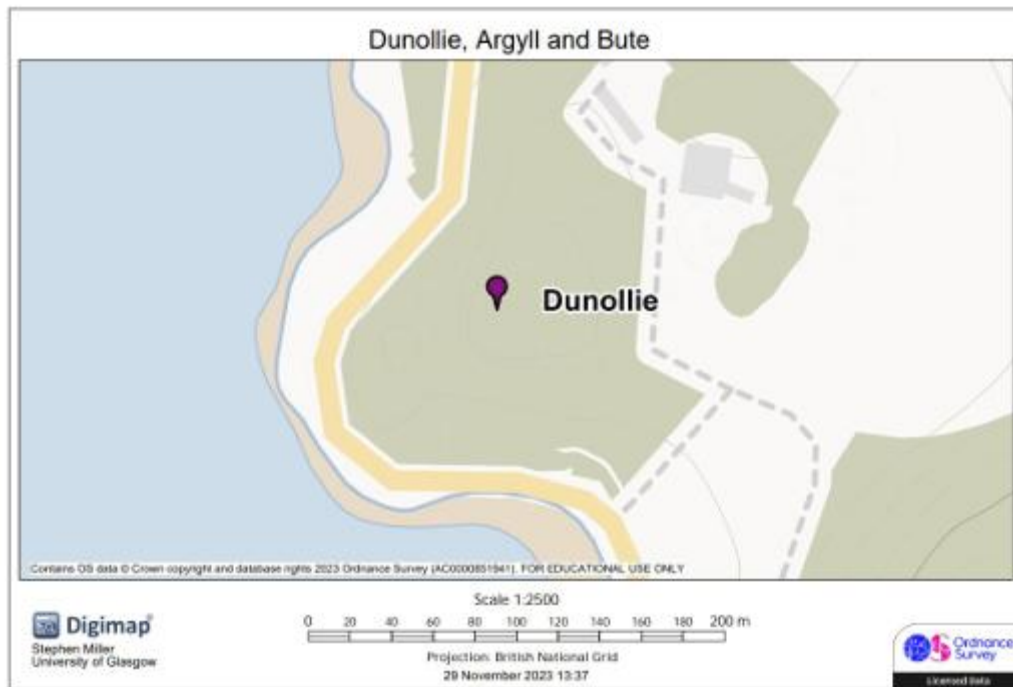
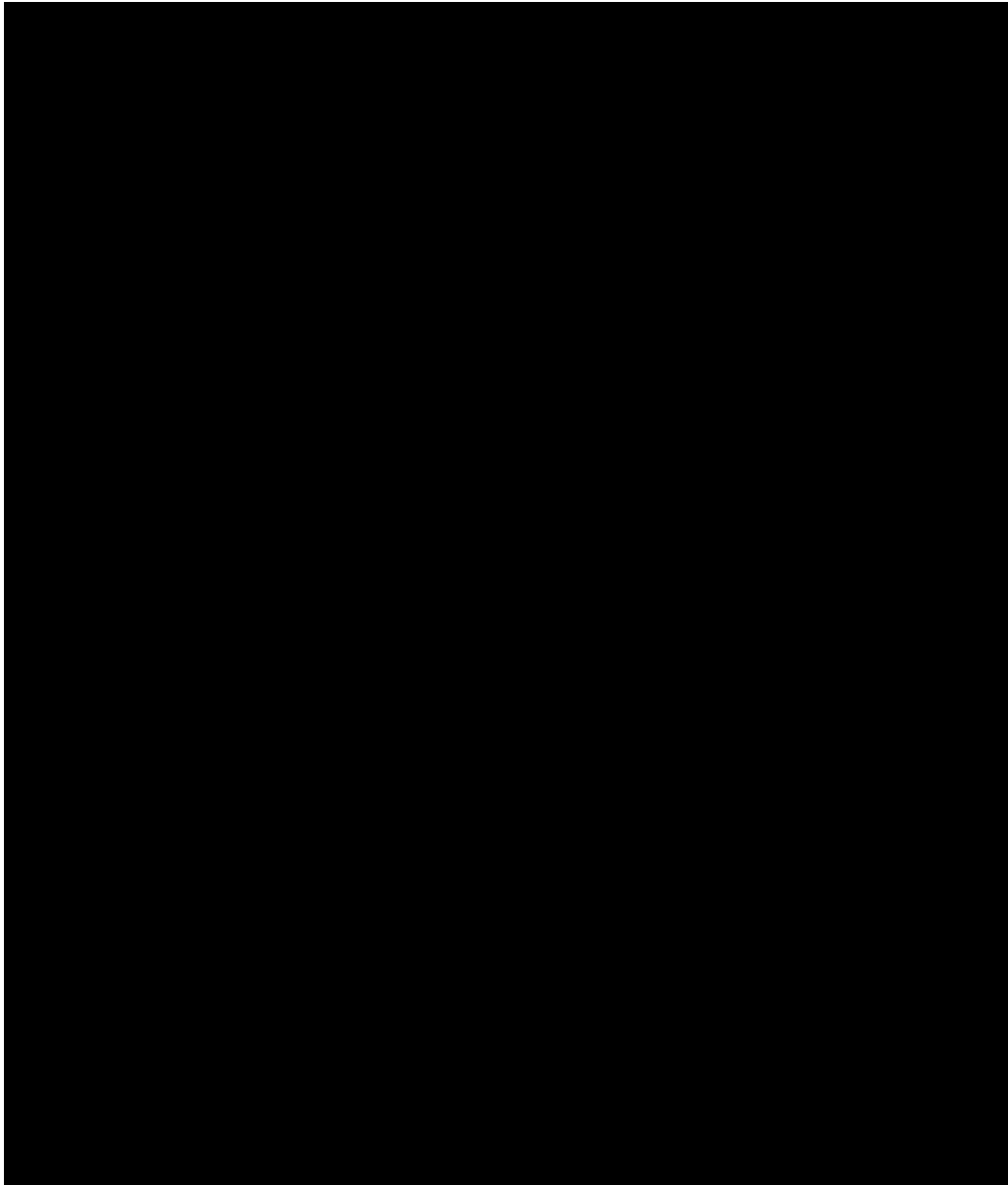


Figure 81: Map of Dunollie, Argyll and Bute. Map generated by author.

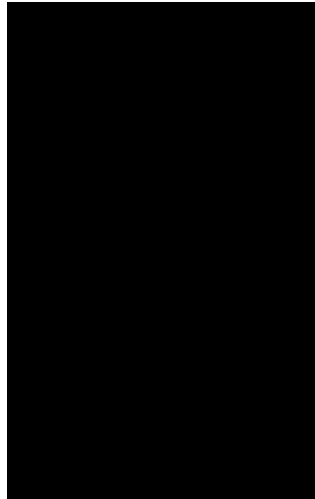


*Figure 82: Dunollie with a natural harbour to the south of the fort. Map generated by author.*



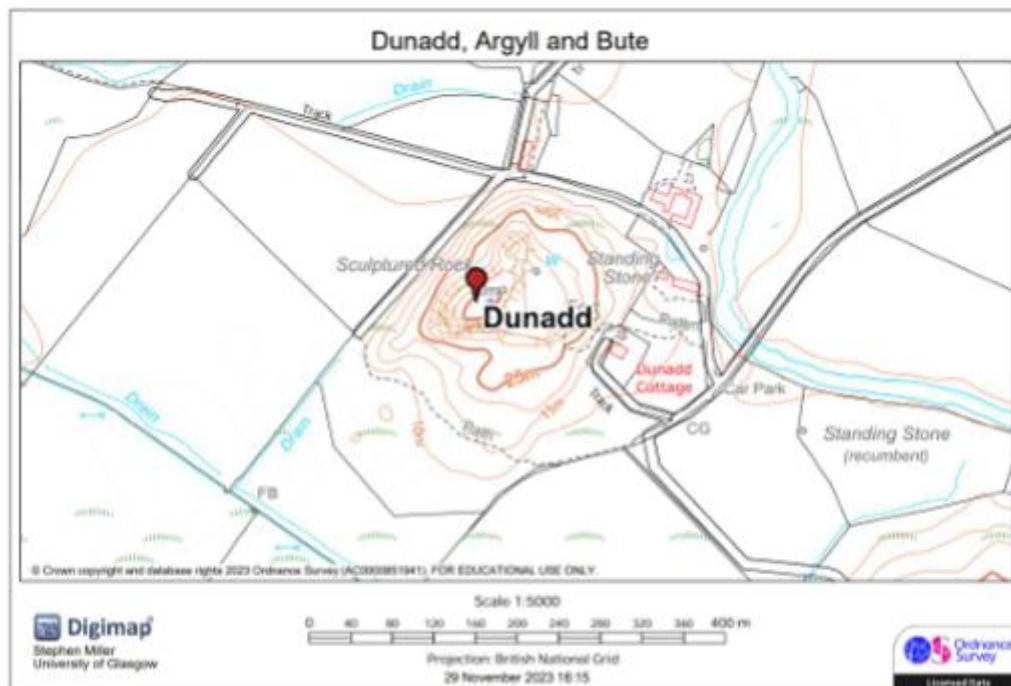
*Figure 83: Dunollie Castle and earthworks with evidence of metalworking on the northern edge of the enclosure, trench 101. (Alcock and Alcock 1987, 123).*

Clay mould fragments recovered from Dunollie suggest that metal objects created there were predominantly pins (Alcock and Alcock 1987, 121). Scrap glass and cullet were recovered, suggesting use for the decoration of personal jewellery including enamelling for brooches. A mould for casting silver was also discovered indicating high status metallurgy taking place at the site (Figure 83) (Alcock and Alcock 1987, 141).



*Figure 84: Mould from Dunollie for casting silver with trace elements detected (Alcock and Alcock 1987, 140).*

## Dunadd, Argyll and Bute



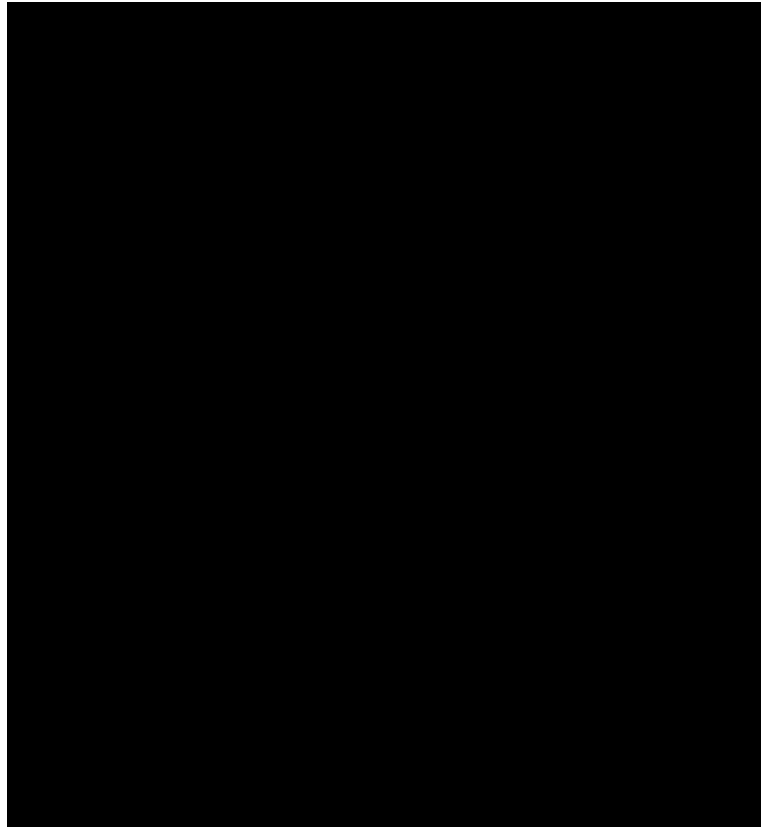
*Figure 85: Dunadd, Argyll and Bute. Map generated by author.*

The most significant post-Roman artefact assemblage has come from Dunadd, mid-Argyll, the site of a much more ancient fort (Figure 84) (Lane and Campbell 2000, 98-200; Foster 2017, 81). Among the items recovered were artefacts displaying Anglo-Saxon design of garnet and gold as well as crucibles for casting gold and silver, moulds for the forging of metal ingots (Figure 85) and moulds for manufacturing high status brooches including brooches with bird head terminals and interlace, reflecting a merging of both Celtic and Anglo-Saxon tastes (Figures 86 & 87). Dunadd was a centre for various types of craft working and for the storage and distribution of resources (Maldonado 2022, 33).

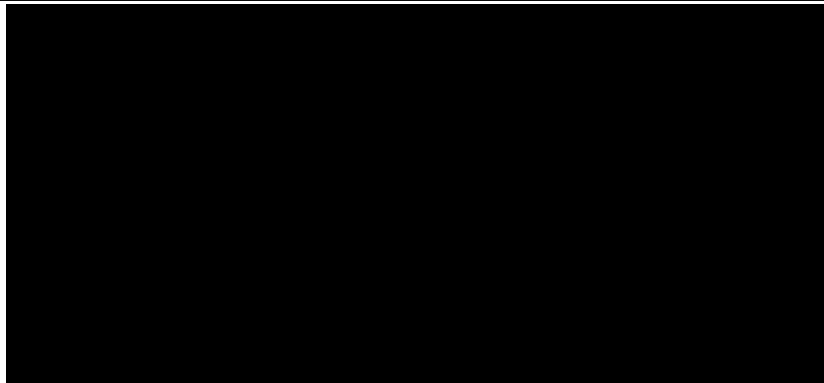
In the earlier phase of post-Roman brooch development decoration of brooches, often zoomorphic decorations, were restricted to the brooch terminals. As tastes changed the style of the brooch also developed, the pin and the hoop of the brooches became flatter, allowing for more intricate designs and decorations, often the brooches would be embellished with enamel, amber, semi-precious gems and gold filigree (Youngs 1990).



*Figure 86: Ingot mould from Dunadd (NMS XGP 198). Photograph by author with permission.  
14<sup>th</sup> March 2023.*



*Figure 87: Mould for casting a bird-headed penannular brooch from Dunadd. (NMS X.1997.483). Last Accessed, 17<sup>th</sup> March 2023.*



*Figure 88: Moulds for bird-headed penannular brooches from Dunadd. (Driscoll 2009, 249, after Lane and Campbell 2000).*

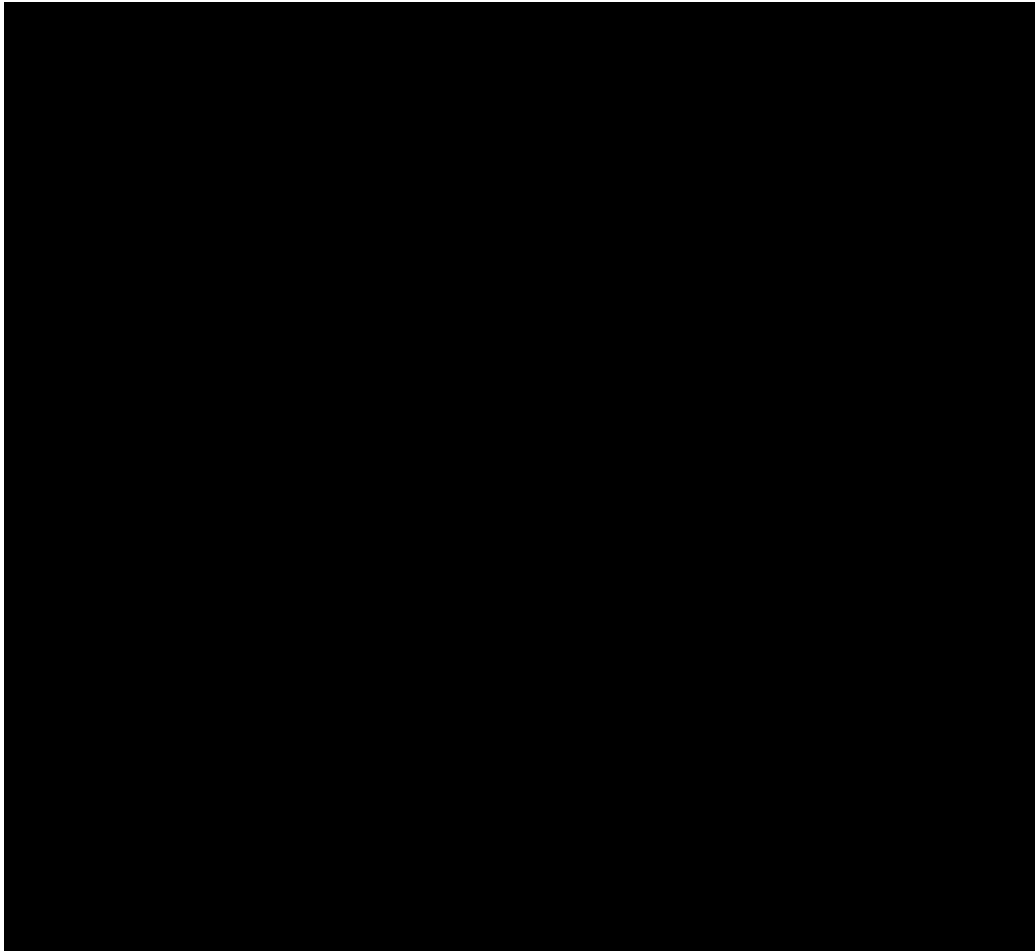
From the eighth-century Dunadd was described as the capital of *Dál Riata*, though there must be some caution taken when applying the nominal ‘capital’ to any Early Historic site. There is no doubt that Dunadd was a place of great significance at that time, being one of the most

defended sites within the landscape and a primary royal site within *Dál Riata* (Figure 87) (Campbell and Lane 1993, Lane and Campbell 2000, 8-18; 52; Alcock 1988, 31-32; Alcock, 1981 B, 231; Craw 1930).

Rock carvings suggest ritual practice took place at Dunadd, the inauguration of the *Dál Riadic* king, making him ontologically part of the landscape (Campbell and Lane 1993, 52). Dunadd is mentioned twice in the Iona Annals, later incorporated into the Annals of Ulster (Alcock 1981, 231) once in a short reference to a siege, '*The siege of Dún At*' (AU 2020, 683.3), with no reference to the aggressor or the motivation for the siege. The second refers to the capture of Dunadd by a Pictish king, '*Aengus son of Fergus, king of the Picts, laid waste the territory of Dál Riata and seized Dún At and burned Creic and bound in chains two sons of Selbach, Donngal and Feradach*' (AU 2020, 736.1). There is in the Annals a hint at power struggles between rival leaders suggesting an attempt at a martial takeover of a power centre by a rival group, revealing that the relationship between the peoples of Pictland and *Dál Riata* was not always peaceful or harmonious (Alcock 1988, 32). It is possible that a reference made by *Adomnán* to the *caput regionis* may also refer to Dunadd (Adomnán 1995, I:28). If this is the case there is a direct reference to Dunadd trading with Gaul, evidenced by finds of E-ware ceramics and glass imported by Gaulish traders, though this may point to the status of Dunadd in the 7<sup>th</sup> century at the time of *Adomnán*'s writing rather than to the time of Columba (Campbell 2007, 116-117; Campbell 1987, 113-114).

Excavations carried out at Dunadd in 1980-81 uncovered an undisturbed metalworking assemblage of mould fragments, slag, one complete crucible, over 200 crucible fragments and other related materials (Figure 88) (Campbell and Lane 1993, 52; Bayley 1984).





*Figure 89: Complete Crucible from Dunadd. (NMS X.1996.293.1261). Last Accessed, 17<sup>th</sup> March 2023.*

Site 3 evidenced the presence of a major metalworking workshop from the seventh century providing evidence for the processing of gold, silver, copper alloys, lead and iron. The crucibles found at Dunadd revealed several features when subjected to X-FRS by J Bayley, NMS, including the presence of silver in two Type A crucibles, three Type B, seven Type C and four Type D. No trace of precious metal was discovered in the Type E crucibles, gold was found in Types B and C (Lane and Campbell 2000, 206-207) (Figure 89) (Appendix 29).

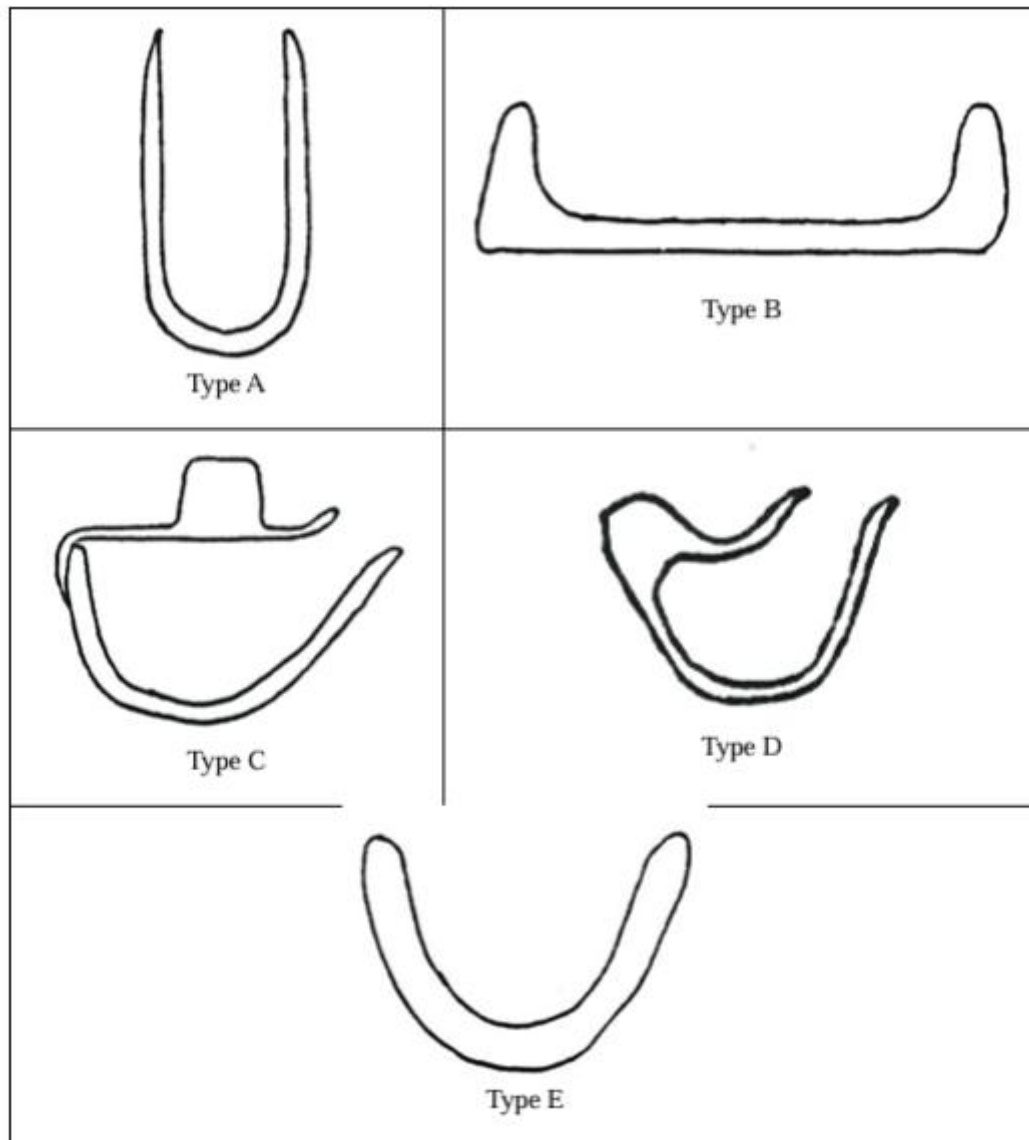


Figure 90: Crucible Types from Dunadd, Argyll and Bute. Drawings after Bayley 1984.

Metalworking evidence from the 1980-81 excavations led Campbell and Lane to conclude that Dunadd was in fact of central importance to the marrying of Celtic and Anglo-Saxon styles and, based on the numerous penannular moulds from Dunadd, it may be one of the birthplaces of the style that would eventually lead to the creation of the Hunterston Brooch and other later objects that display a cohesive Celtic/Anglo-Saxon marriage of styles and techniques (Campbell and Lane 1993, 54; Swift 2013, 13). Among the fragments of brooch moulds excavated at Dunadd are a group of seven large moulds that are intricately decorated and show a fusion of Pictish and Irish styles. The crossover of styles may be representative

of a unique Dalriadic style or a simple mix of the two traditions (Swift 2013, 9). The marriage of various styles suggests the peripatetic nature of the silversmith, moving between regions and kingdoms, offering their services to the local lords and kings (Swift 2013, 11-12, 15).

The penannular and annular brooches produced and designed on sites like Dunadd were worn in both Scotland and Ireland as status symbols according to Irish law tracts (Kelly 2011). Controlling the production and distribution of these high-status items underlined the importance of the gift-giver and reinforced their position as the significant power within a landscape (Nieke 1991, 128-129; Driscoll 2009, 202-203; Swift 2013, 6-7). Gift giving in the Early Medieval world was tied to allegiances, the exchange of high-status metalwork was a method of reinforcing alliances and a culture of debt being owed by the receiver to the benefactor.

Two major factors would in time come to play pivotal roles in the development of the political landscape of northern Britain, the rise of Christianity and the impact of Viking activity (Driscoll 1998, 47-51). The king in the pre-Christian landscape of Northern Britain personified his land and his people making the bond between them almost mystical and animistic in nature. The evidence of the powerful inauguration ceremonies of early medieval Dál Riata can be attested to by sites such as Dunadd, with the king's footprints (Figure 90) carved into the entrance of the inner citadel together with a rock-cut bowl, possibly used for purification rituals within the inauguration ceremony. The carved boar may be a later embellishment by Pictish people after they captured Dunadd in AD 736 by *Aengus* (A.T. 2010, 239; AU 736; Anderson 2011, 132).

The pre-Christian inauguration rites may have been adopted and adapted by Christian missionaries to suit their agenda. The site of Dunadd itself may have continued to be used and recognised as a symbolic sacred landscape long after the conversion of the region, one of the earliest recorded Christian anointing of a king within a European context was reported by *Adomnán*, with Columba anointing *Aedán* son of *Gabrán* as king in *Dál Riata* (Adomnán 1995, III, 5).



*Figure 91: Protective Cast Covering the King's Footprint, Dunadd. Photograph by author June 2022.*

The social dynamic of a centre of power for the elite could be mixed, it may be a place of anointing and recognition of the rightful king, such as at Dunadd. It was also a place of security and refuge, standing proudly in the landscape making a visible statement of the power and prestige of the lord. A centre of power played a dynamic role in the martial power politics with other kingdoms and polities, protecting and controlling the landscape around it. Some power centres display evidence of being destroyed violently by fire, such as *Alt Cluth*, West Dunbartonshire, Dundurn, Perth and Kinross and Mote of Mark, Dumfries and Galloway. The daily function of these power centres would have been as resource gathering and redistribution centres and as administrative organs promoting the laws and stability of the societies they served (Alcock 1988, 27).

The lord of Dunadd would have stood above clients who owed a debt of service and payments of food and goods. Tenants would have worked the land controlled by the king of *Dál Riata* acting as estate workers, in return they would gain protection from the king (Charles-Edwards 1993, 367-369). As well as physical and martial service, the lord would be expected to receive food gifts from their clients and to offer hospitality to a more senior lord or king. Sites, such as Dunadd, saw metalworking taking place and the creation of high-status personal jewellery. Kings and local lords used precious metal objects as a tool used to

expand their influence over client groups together with their traditional martial activity. The emerging kings of the fifth to eighth centuries embraced silver objects together with imported luxury resources, surpluses of goods, crops and livestock as vehicles for developing and maintaining their individual powerbase. As power centred on fewer hands and the continental influence was more strongly felt, Aachen and the Frankish Empire became the model for royalty and the ideal royal residence. There was a choice to move down from elevated defensive structures, such as Dunadd, toward the low-lying and undefended foundation at Forteviot in the ninth century: with its royal residence, ecclesiastical structures and cemeteries founded within ancestral landscapes.

Considering the number of metalworking sites in Argyll and the Western Isles, both secular and ecclesiastical (Figure 44) while so few Roman silver finds have been discovered from the same districts (Appendices 28.A; 28.B; 31), there may be a relationship between these two facts. The development of post-Roman *Dál Riata* matches the social changes taking place in Northumbria and Fortriu, where larger scale state-like kingdoms were forming with growing control over agriculture, resources and the land. Part of the levers of power and control was the production, use and distribution of high-status metalwork (Driscoll 2009, 280-281).

Argyll and Bute had four major centres of power from the Early Medieval period, including Tarbert, Dunadd, Dunaverty and Dunollie and the ecclesiastical site at Iona. The same district has a total of nine identified metalworking sites from the same period; Dunadd and Dunollie offer evidence of metalworking on the sites while Dunaverty has provided no evidence for this activity so far. Midross, Bruach an Druimein, St Columba's Cave and a crannog on Loch Glashan all display metalworking evidence beyond the power centres. The ecclesiastical centre of Iona is seen as a cultural hub, with evidence of several high-status activities taking place within the monastic complex including metalworking, with two other ecclesiastical sites being used as places where metalworking was carried out; Inchmarnock and St Blane's on the Isle of Bute. No hoards of Roman silver coins or plate have been recovered from the district of Argyll and Bute where there appears to have been intensive metalworking activity taking place. It is possible that rather than hoarding the precious metal the kings of *Dál Riata* used Roman silver more directly and reused this resource as an economic tool for their immediate social and political ends. Hoarding was not part of the ideological package of the people of *Dál Riata* unlike the people of Strathclyde, the Picts or the Bernicians. The different response of the people of *Dál Riata* from the other polities of northern Britain towards silver is indicative of local and regional nuanced relationships

within the landscape, highlighting the fact that there was no one response to Rome or Roman material. Regional variations and responses took place dependent upon the needs of the communities and leaders of the northern lands.

The Christianisation of kingship led to a new understanding of what it meant to be king, he had to enjoy God's, and the Church's, favour. The Church would play a more central role in the inauguration of kings, the pre-Christian element would be consecrated by the actions of the Church and churchmen who themselves would gain political influence and authority (Foster 1998, 9). A symbiotic relationship developed between the king and the Church, the king gaining favour and legitimacy while the Church would receive protection, endowments and political influence. Emblems of rank that were once enjoyed by secular elites became adopted into the ecclesiastical vernacular and be pressed into the service of the Christian Church and her ideological mission.

## Mote of Mark, Dumfries and Galloway

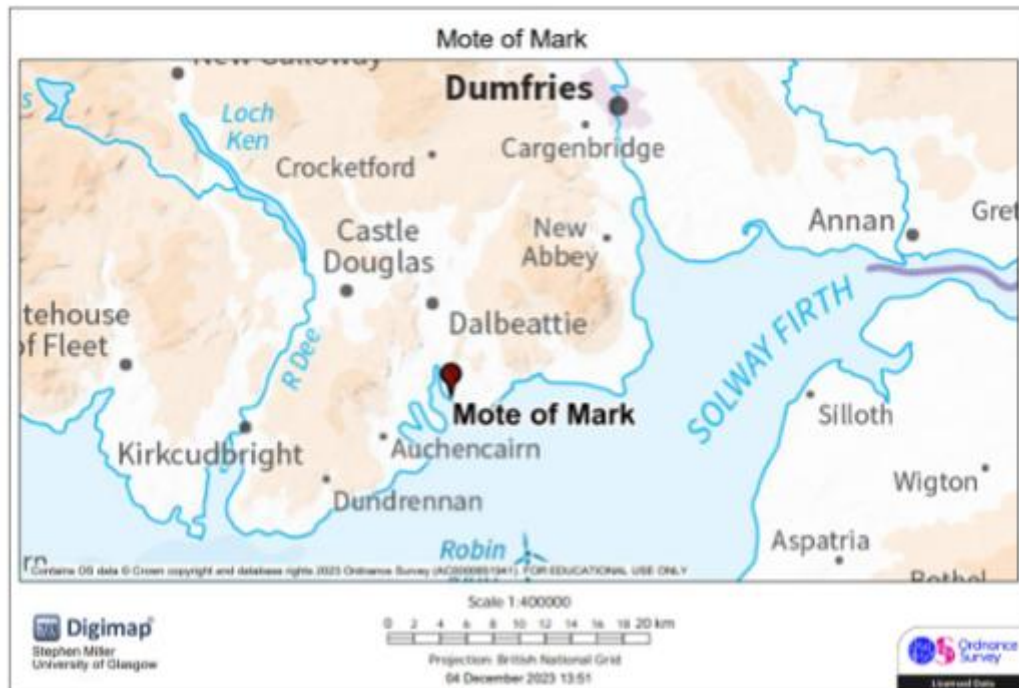


Figure 92: Mote of Mark, Dumfries and Galloway. Map generated by author.

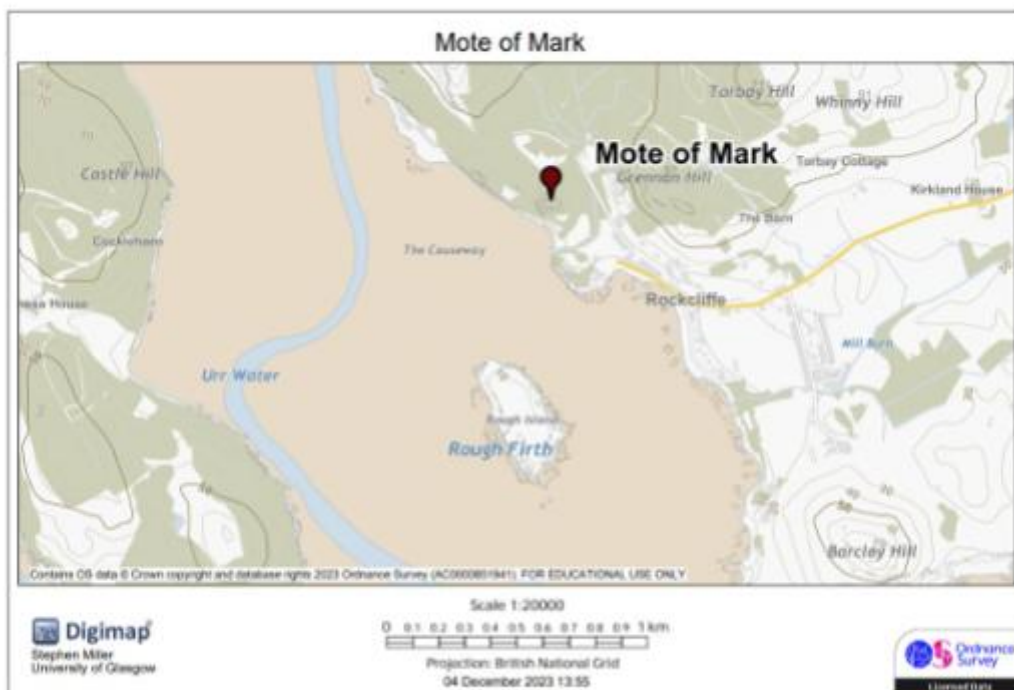
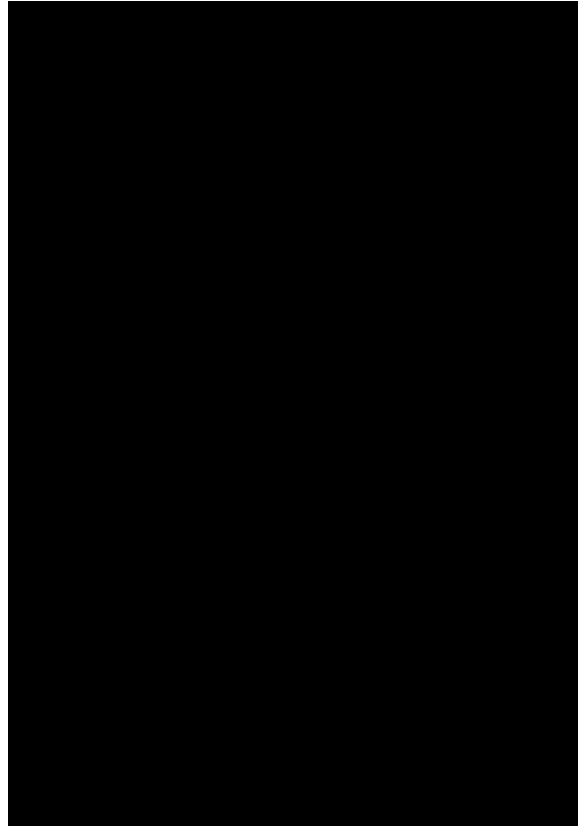


Figure 93: Mote of Mark seen close to an inlet on the Solway Firth. Map generated by author.

The Mote of Mark, Dumfries and Galloway (Figures 91; 92) occupies the summit of a granite rocky knoll, 45 meters above the shoreline of Rough Firth where the Urr Water enters the Solway Firth. It was formed by a vitrified timber-laced rampart that encircled the summit, though it stands in a much-denuded state today (Figure 93). The site is said, from folklore, to take its name from Mark, King of *Dumnonia*, a figure from the legend of Tristan and Isolda.



*Figure 94: Plan and section drawing of the summit of Mote of Mark (Curle 1914, 9).*

Evidence for metalworking at Mote of Mark was discovered during excavations led by Curle in 1913 including fragments of crucibles (Figure 94), imported glass dating to the 9th century, and clay mould fragments for casting personal objects and ornamentations (Curle 1914, 140-141). Curle's excavations focussed on a 'central hollow' between two raised natural features on the summit where, at a depth of just below 30.5 centimetres, many of the objects were recovered. A three-sided stone structure was identified engrained with sooty soil. The structure has been identified as a revetment to protect an industrial hearth (Curle 1914, 138; Laing and Longley 2006, 25). Curle was unable to discern any obvious stratification related to the recovery of the objects though he recognised that most mould fragments and glass were

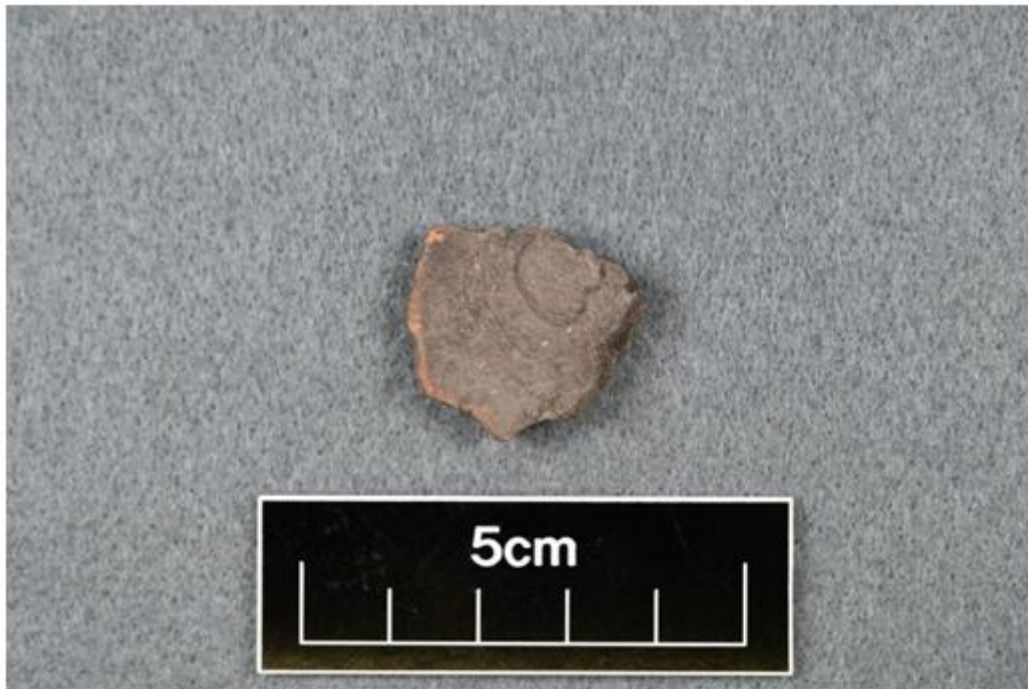


found at the level of the clay floor at a depth of between 35.5 centimetres and 61 centimetres (Curle 1914, 140).



*Figure 95: Crucible portion from Mote of Mark (NMS X.HH 275). Photograph by author with permission. 28<sup>th</sup> March 2023.*

Curle separated the moulds for personal ornaments into three categories: plain penannular brooches (Figure 95), highly decorated penannular brooches and crosses (Figure 96) and simple pins, there were 26 moulds for pins recovered by Curle (Figure 97) (Curle 1914, 141). He suggests the more elaborately decorated moulds are indicative of the early Christian era and the epoch of Celtic metalwork, pointing to the absence of any zoomorphic decoration or design and an increase in interlace and intricate design features (Curle 1914, 150).



*Figure 96: Mould fragment for a plain penannular brooch from Mote of Mark (NMS X.HH 124). Photograph by author with permission. 28<sup>th</sup> March 2023.*



*Figure 97: Mould fragment and impression for a highly decorated penannular brooch from Mote of Mark (NMS X. HH 93). Photograph by author with permission. 28<sup>th</sup> March 2023.*



*Figure 98: Mould for simple pins with impression from Mote of Mark (NMS S.HH 150).  
Photograph by author with permission. 28<sup>th</sup> March 2023.*

The Mote of Mark appears to be a centre of production for a high-status metalsmith rather than the residence of a local king, there is a great deal of evidence for metalworking, including the crafting of high-status objects with little evidence for any other craft activities taking place at the site (Laing and Longley 2006, 174). The metalsmith may have been a local lord offering patronage to others who owed him allegiance and service. There were 96 fragments of smaller crucibles recovered including eight vitrified quartz fragments which were most likely crucibles, 18 fragments for large crucibles and 18 fragments for very large ‘dog-dish’ crucibles (Table 7). A total of 482 clay moulds were recovered from the site including six moulds for penannular brooches from the 1913 excavations (Appendix 30).

**Table 7: Total Crucible from their Contexts.**

	<b>Context</b>	<b>Small Crucibles</b>	<b>Large Crucibles</b>	<b>Very Large Crucibles</b>	<b>Total</b>
<b>1a</b>	Pre-rampart	0	0	0	<b>0</b>
<b>1b</b>	Earliest interior	0	1	0	<b>1</b>
<b>2</b>	Rampart	0	0	0	<b>0</b>
<b>3a</b>	Earliest Occupation	5	0	0	<b>5</b>
<b>3b</b>	Later Occupation	3	2	0	<b>5</b>
<b>4a and b</b>	Late Occupation	20	0	0	<b>20</b>
<b>5</b>	Post- Occupation	2	0	1	<b>3</b>
<b>6 and 8</b>	1913 assemblage and backfill	35	12	17	<b>64</b>
<b>7</b>	Unstratified	31	3	0	<b>34</b>
	<b>Total</b>	<b>96</b>	<b>18</b>	<b>18</b>	<b>132</b>

*Table after Laing and Longley 2006, 41 (Prepared by author).*



### Foretviot, Perth and Kinross

The site at Forteviot, Perth and Kinross, mentioned in the Pictish Chronicle, AD 858, where there was a royal hall, or *palacium*, in the ninth-century AD and was a place of historic significance (Figure 98). Forteviot is not elevated but does have an enclosure ditch, the site sits within an ancient landscape close to a Neolithic complex, suggesting a connection between the earlier site and the choice of location of the later royal centre (Campbell and Driscoll 2020, 1-3, 12). The lowland site of the later royal centre, within one of the most fertile landscapes of Scotland, sets it apart from the hilltop enclosures found locally from the earliest part of the Early Medieval period and may indicate the demise of the hillfort tradition (Driscoll 2009, 258). A carved arch was recovered from the Water of May prior to 1832, the archway has an external diameter of 2.01 meters and an internal measurement 1.2 meters with a depth of 33 centimetres (Figure 99) (Campbell 2023, 1; Alcock 1981, 236; Alcock 1988, 23; Anderson and Anderson 1922, 270, 288, 291).

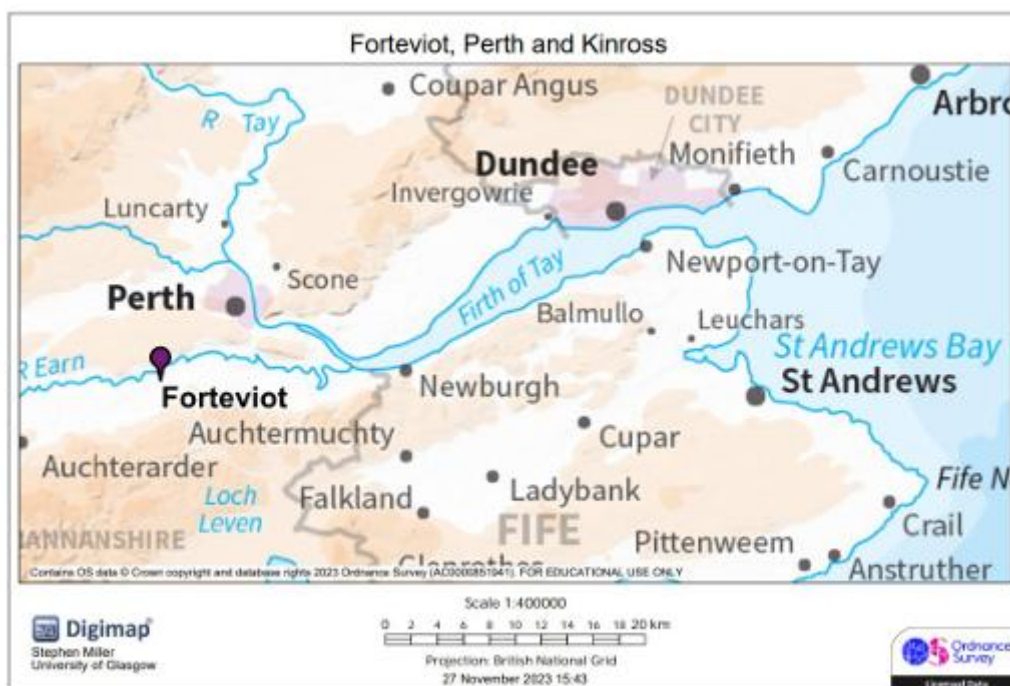
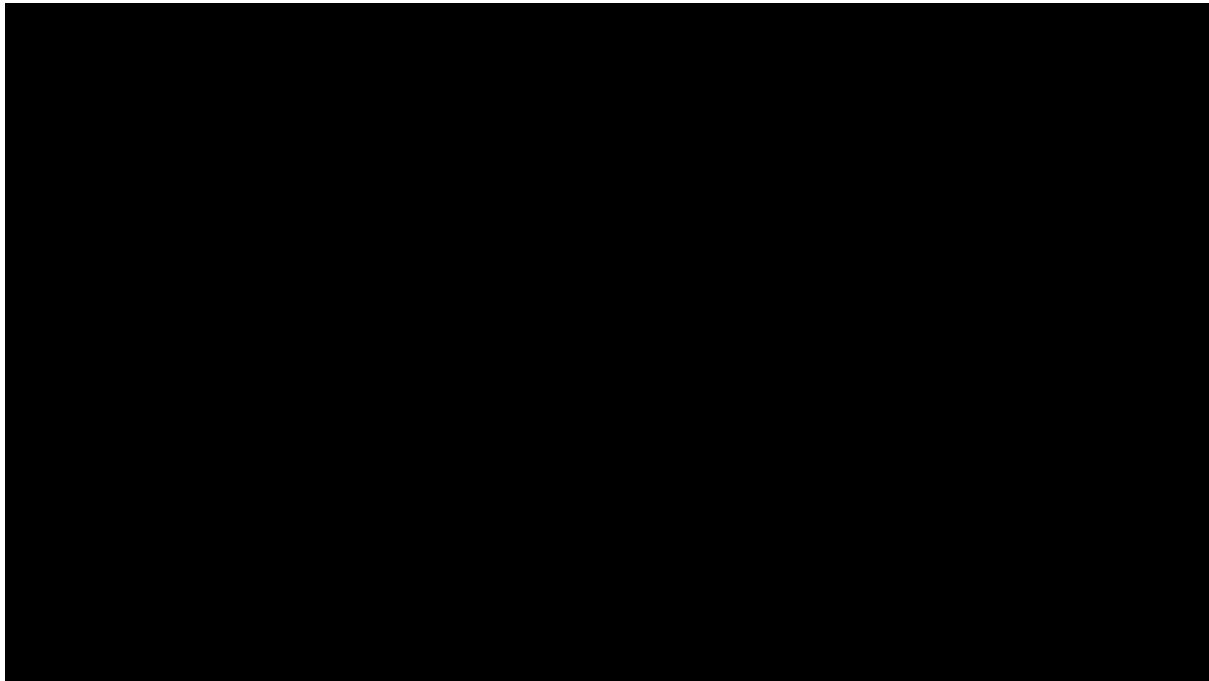


Figure 99: Forteviot, Perth and Kinross. Map generated by author.



*Figure 100: The Forteviot Arch depicting a central damaged cross and a representation of the 'Agnus Dei' decoration. NMS. Last Accessed, 12<sup>th</sup> June 2023.*

The Forteviot Arch may be linked stylistically to the Dupplin Cross, or more accurately, the Constantine Cross. Constantine, *Custantín*, (AD 775-820) has his name engraved on the back of the Constantine Cross which depicts a nobleman on horseback accompanied by his retinue. The legend *Custantin filius Fircus* refer to a Pictish king referred to in the Irish Annals as *Custantin mac Fergusu, rex Fortreinn*. The name harkens back to Constantine the Great (AD 306-337) and relates to the contemporary of *Custantín*, the Eastern Emperor, Constantine V (AD 741-775) (Alcock and Alcock 1992, 240-241; Maldonado 2021, 25-26).

Power held by an individual or group is afforded an expression in terms of architecture and material culture, often discernible within the archaeological record (Giddens 1994, 265-295). Centres of power can be identified by the presence of resource management evidence including the storage and redistribution of surplus goods, there is often evidence of labour and craft making activity with metalworking, jewellery making and glass working, though no evidence of metalworking has yet been found at Forteviot. There is often evidence of the importation of goods, both local and more distant trade activity, with connectivity via water and land routes. They are most often defended and are often to be found in elevated positions

and positioned within a more ancient landscape. Many centres of power are mentioned in early chronicles, annals and documents (Maldonado 2021, 30).

Most centres of power imply that they played an administrative and political role within society and were placed within a defensible position in the landscape, though this is not universally the case, such as the island setting of the Brough of Birsay, or the apparently undefended site of Forteviot. Centres of power often had direct access to waterways and to the sea, allowing for transport links and freedom of movement (Alcock and Alcock 1990, 119-138; Foster 1998, 11). Metalworking sites appear, in the main, to be restricted to high status sites, except for metalworking sites found in the Western Isles, Northern Isles and parts of Argyll. The control and distribution of resources by elite individuals appears to be an intentional political tool employed to foster greater loyalty among the kingdom, as part of marriage contracts as well as being a device used as an instrument to promote a wider reach of the ruler (Heald 2011, 225-227). Many of these 'high status' sites provide evidence of the production of penannular brooches, an item denoting loyalty (Curle 1982; Nieké 1991, 129-130; Foster 1998, 17).

The development of a firm and solid basis for power and increasing that power would be controlling the landscape including farming, animal husbandry, industrial activity and production. This would inevitably necessitate control over the local population; however, this was experienced first by the local society then growing into a more regional control as a lord's power base increased. The power to exploit resources and people inevitably would lead to a control over commercial, economic and military structures (Foster 1998, 3). Power was reinforced by employing religious ideologies and, ecclesiastic structures and belief systems. As the Early Medieval Period developed, the literacy offered by Church institutions and management structures were utilised as a further tool for control, becoming a central element in the development of early kingdoms as the extent of territories controlled increased and rested in the hands of fewer leaders and kings.

The fifth century and beyond saw the foundation of new high-status sites, such as Dunollie, Argyll and Bute, Dundurn, Perth and Kinross and Clatchard Craig in Fife (Noble et al 2022; Alcock 1988, 23). From the Iron-Age social groupings mentioned by classical writers rose powers that strengthened and combined to become stable polities as early as the sixth century AD, gradually developing over the fifth to ninth centuries from smaller fiefdoms into a regal authority expanding across the landscape, with deepening connections between Scots, Picts,

Britons and Northumbrians through intermarrying and the practice of fostering and trade (Maldonado 2021, 30; Anderson 2011; Foster 2017, 33-34).



### **Whithorn, Dumfries and Galloway:**

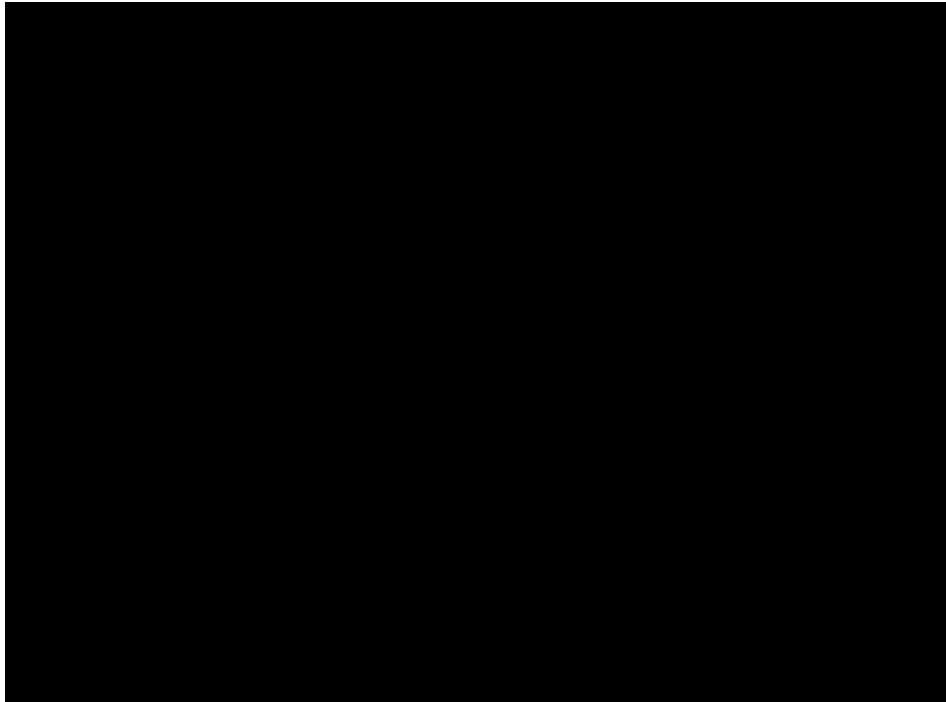
The ecclesiastical site of Whithorn (Figure 100) and its founder, Ninian, are, like all northern Britain of that time, participants in the ‘transformation of the Roman world’ rather than ‘the Fall of the Roman Empire’ (Wolf 2009, 7). While excavations of 1972 provided no tangible artefacts, they did offer direction for future archaeological investigations (Tabraham 1979). The 1984-91 excavations provided much more material and displayed a wide chronology for the site based on finds related to indigenous, Gaulish, Mediterranean, Anglo-Saxon, Norse and Irish communities (Campbell 1997, 297-322). Mediterranean amphorae sherds were recovered, 211 in total, and nine sherds of African Red Slip ware (Campbell 1997, 315-316). The excavations of 1997 uncovered the largest collection of imported glassware found in Britain. The evidence suggests a continuation of the site’s use from the earliest days of Christianity in Northern Britain with the late Roman Empire around the fifth century AD, through to the Northumbrian takeover of Whithorn recorded by Bede (Bede 2008, 289; Wooding 2009, 12). The site may have been a novel construction of the fifth century, for no absolute dating evidence is available prior to this time (Macquarrie 1997, 51-53; Hill et al 1997, 74-76) apart from a handful of Roman finds (Campbell et al 1997, 292-297).

Whithorn, like many other significant ecclesiastical sites of the era, was supported by an extended settlement where the industrial and artisanal needs of the monastery were served, where merchants and pilgrims would gather, these could be seen as proto-urban settlements (Driscoll 2009, 271; Hill 1997, 24-25). Whithorn had a clear street system and was densely populated, many of the buildings offering evidence for craft production rather than animal husbandry, though it appears to have had a market from the early sixth century (Hill, P., 1997. 26-40).



*Figure 101: Whithorn, Dumfries and Galloway. Map generated by author.*

Seventeen silver finds were recovered from Hill's excavations at Whithorn together with four gold pieces (Nicholson 1997, 397-400). Evidence related to c.AD 700 suggest that there was a metalsmith's workshop on the western side of the site, though the exact location was not located (Figure 101). The items recovered include a small gold ingot and a small rod of gold, stone moulds, crucibles containing traces of silver and silver foil (SR16) and an ovoid silver mount (SR10) that may have initially been circular, matching mounts found within at Sutton Hoo (Nicholson 1997, 297-398; Bruce-Mitford 1979, 63). The moulds and crucibles that were recovered from Whithorn included 64 fragments of crucibles (SG15.1-64) ten fragments of clay moulds (SG17.1-10), one mould of stone (SE46) and six stone ingot moulds (SE45.1-5, 44.4) (Hill and Nicholson 1997, 400). Forty-seven of the mould and crucible fragments were analysed using X-ray fluorescence and demonstrated the presence of copper alloy, silver, gold and lead.



*Figure 102: Oblique aerial view centred on Whithorn parish church, looking east-north-east.  
(Canmore DP 147952). Last Accessed, 11<sup>th</sup> August 2023.*

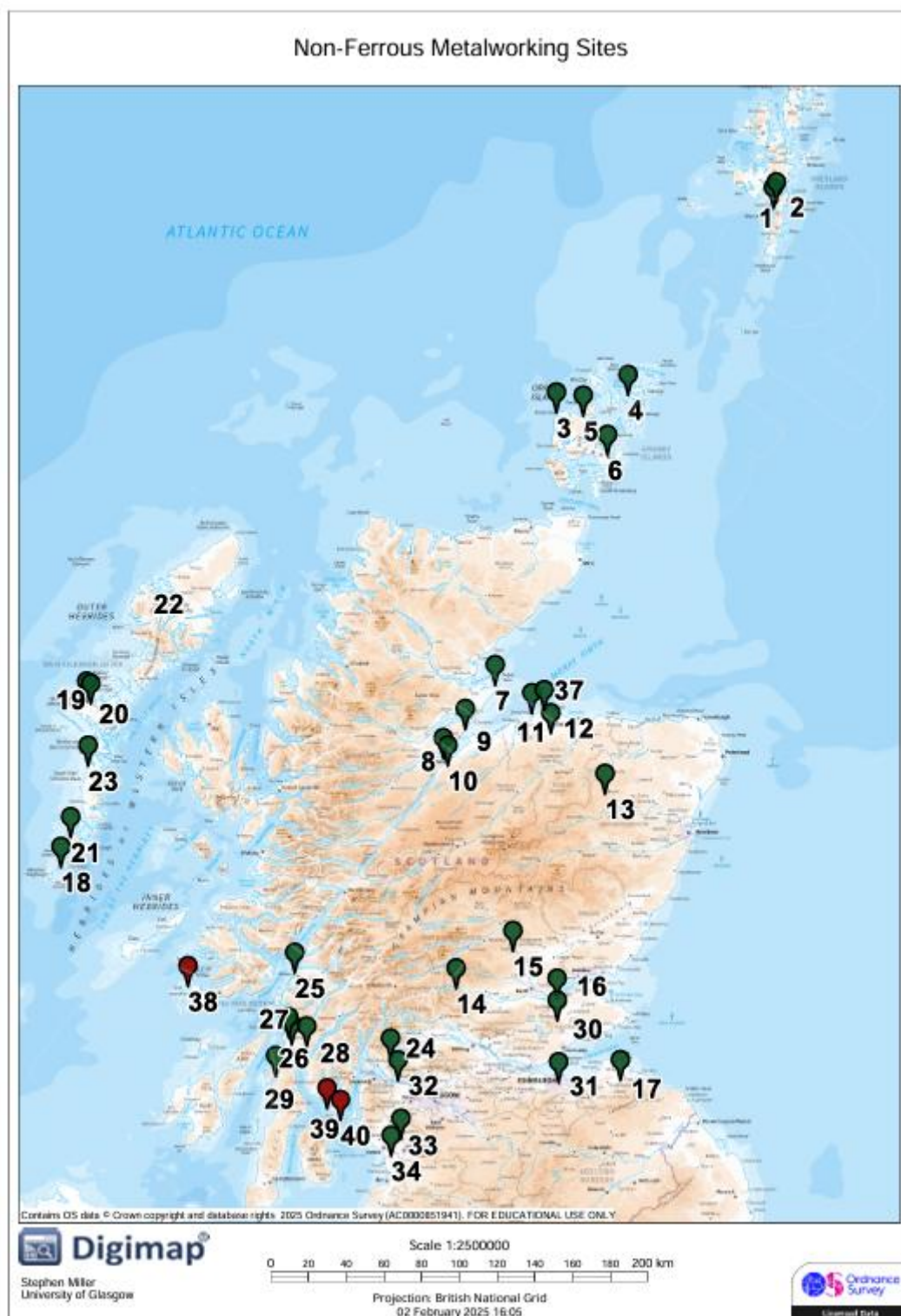


Figure 103: Non-Ferrous Metalworking Sites. Green: Secular Sites. Red: Ecclesiastical Sites. Map prepared by author using Appendix 31.

1. Tronda	2. Scalloway	3. Brough of Birsay
4. Sanday, Pool	5. Aikerness	6. Tankerness
7. Portmahomack	8. Craig Phadrig	9. Learnie
10. Old Town of Leys	11. Burghead	12. Birnie
13. Rhynie	14. Dundurn	15. King's Seat
16. Clatchard Craig	17. Traprain Law	18. Pabbay
19. Griminish	20. Cnoc a' Comhdhalach	21. Dun Cuier
22. Loch Na Beirgh	23. A' Cheardach	24. Midross
25. Dunollie	26. Dunadd	27. Bruach an Druimein
28. Loch Glashan	29. St Columba's Cave	30. East Lomond Hill
31. Edinburgh	32. Dumbarton	33. Buiston
34. Dundonald	35. Trusty's Hill	36. Mote of Mark
37. Covesea	38. Iona	39. Inchmarnock
40. St Blanes	41. Whithorn	

## Christian Ideology in Silver

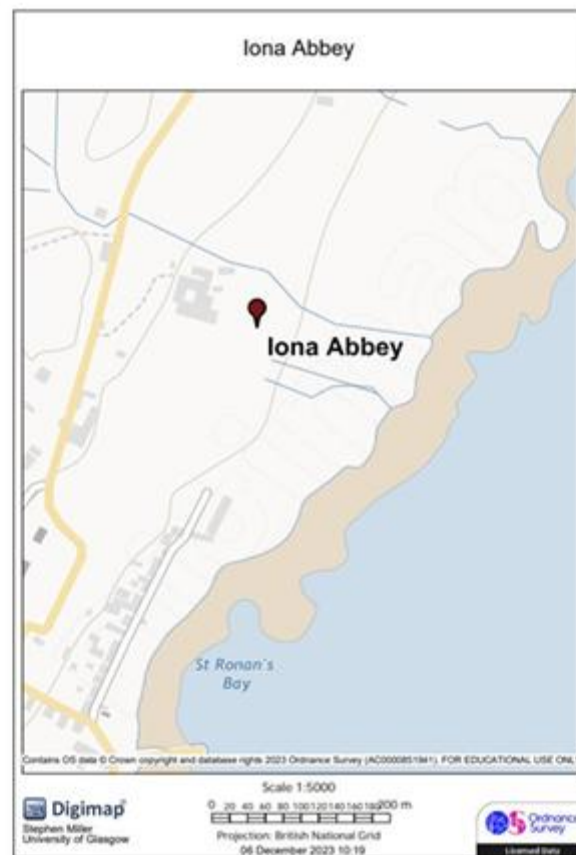
There is evidence of high-status metal smithing taking place at Iona (Figure 103; 104) and Whithorn as well as lesser religious sites such as Inchmarnock and St Blanes (Figure 102) (Appendix 31). The ecclesial impact on the formation of centres of power in Early Medieval Scotland was not inconsiderable, the needs of monastic communities and church foundations took place simultaneously with a secular development. Iona was one of the most significant Christian centres in north-western Europe, rising to become a centre of excellence both intellectually and artistically (Campbell et al 2019, 298).



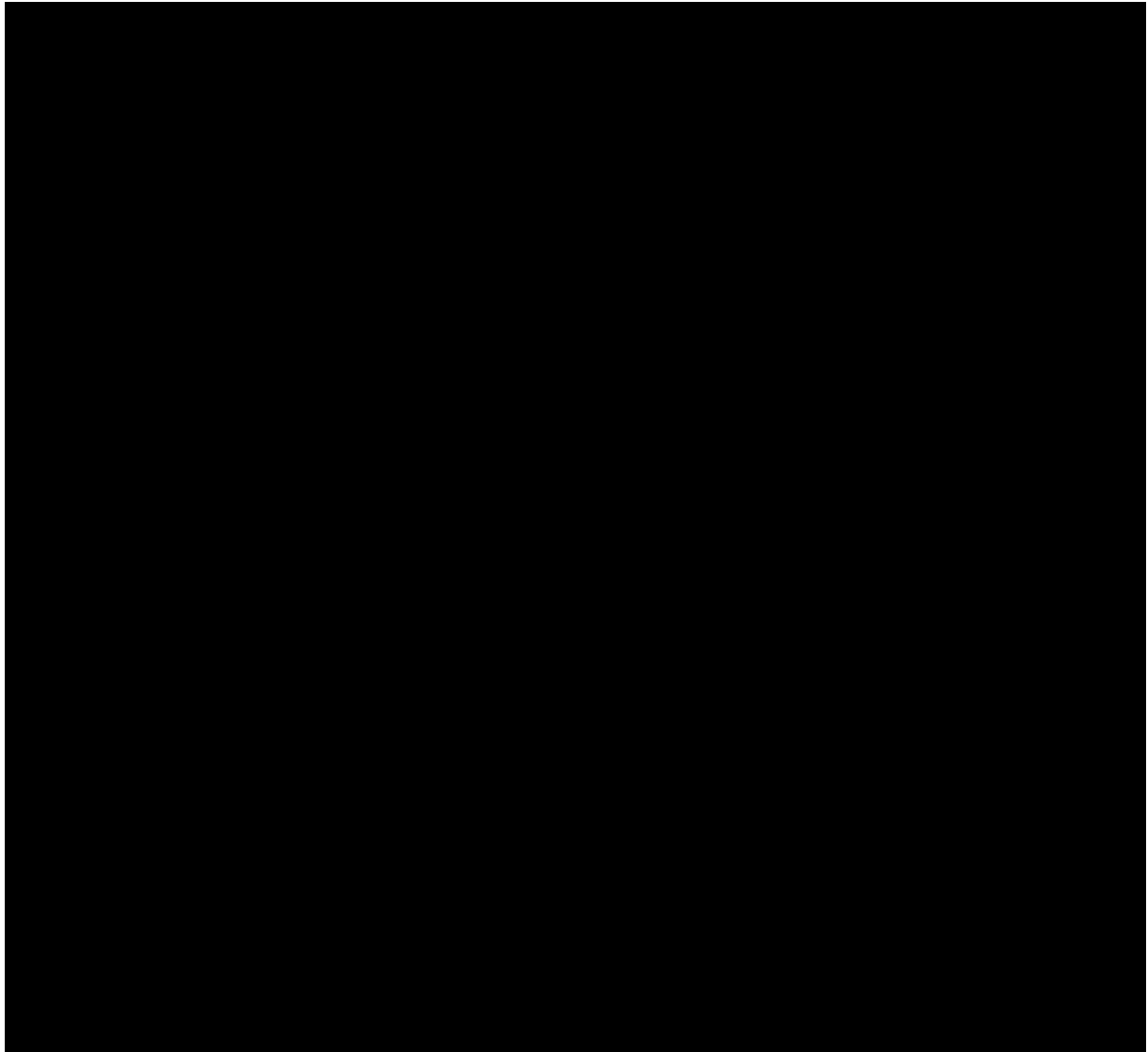
*Figure 104: Iona Abbey, Argyll and Bute. Map generated by author.*

Iona offers evidence of metalworking taking place at the site from as early as the eighth century, in the form of fragments of moulds and crucibles related to non-ferrous metalworking that appear similar in style and form to examples discovered at Dunadd, which had close associations with the Columban community (Campbell et al 2019, 302; McCormick 1992, 207-214). Among the metal objects recovered there was a moulded 39mm copper-

alloy lion figurine, from the late seventh or eighth century (Campbell et al 2019, 304). A silver strap fitting for a small buckle with decorated borders and rope moulding which appears to have been produced locally (Campbell et al 2019, 315). Three moulds for decorative glass working inlaid with silver wire were uncovered in excavations of an industrial zone some 50 meters north of the Columba shrine (Figure 105) (Campbell et al 2019, 324-325; Reece 1981, 24). The moulds had a diameter of 29 millimetres and were dated to the seventh-century due to their association with a large E-ware vessel and a bell of that era.



*Figure 105: Site of the ruined monastic community, Iona, Argyll and Bute. Map generated by author.*



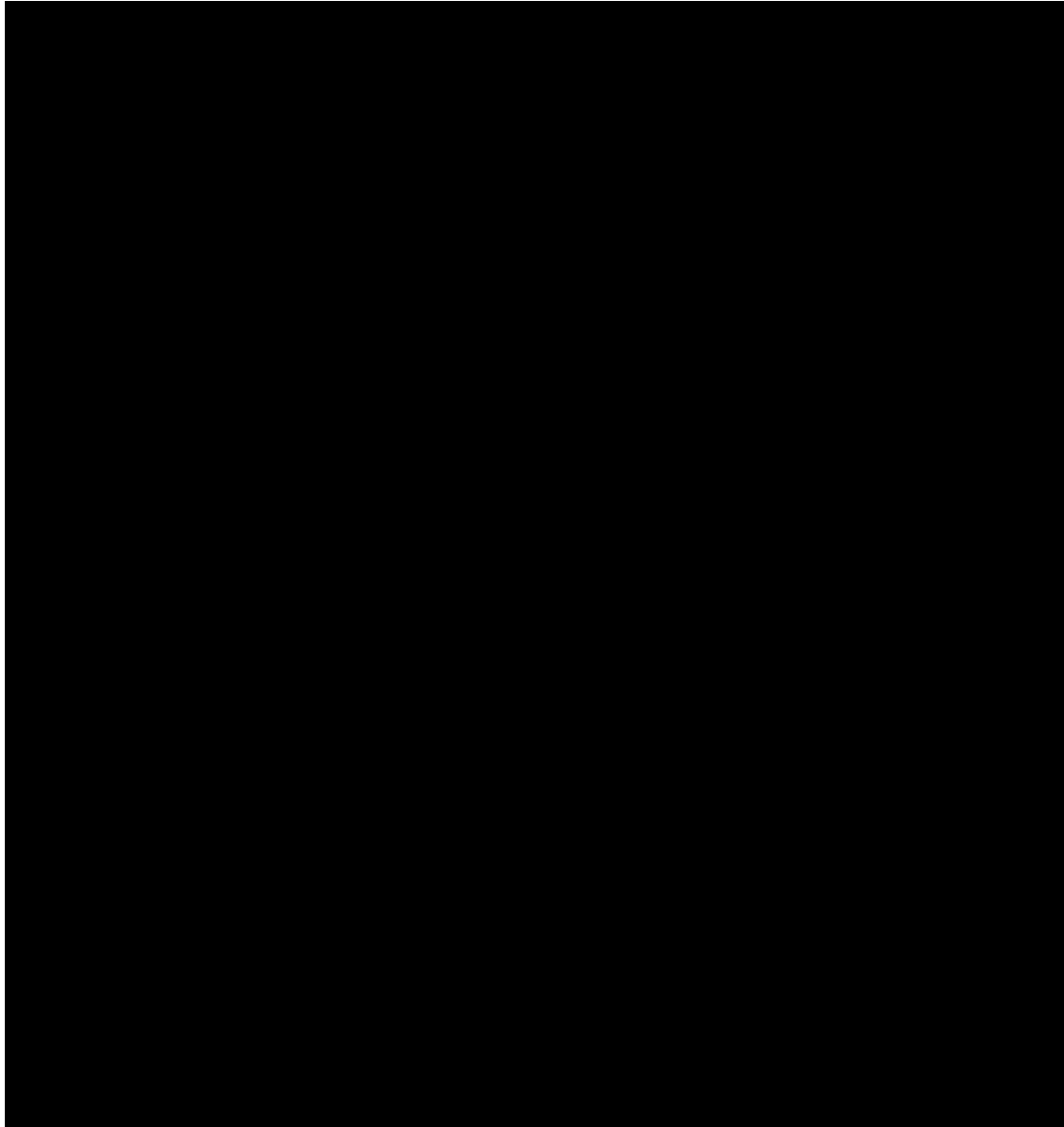
*Figure 106: Mould for glass stud with silver interlace from Iona (NMS X.1997.759). Last Accessed, 12<sup>th</sup> September 2023.*

Sacred vessels were fashioned from precious metals including silver and gold, remaining examples of ecclesiastical plate in the Insular style are found mainly in Ireland today. Mostly, ecclesiastical metalwork is seen in terms of chalices, ciboria and crosier embellishments, though reliquaries also survive.

Tied up with the exchange of gifts among elite society was the significance of the Christian Church. Many of the leaders of the Church were themselves from elite backgrounds and the styles adopted by higher status secular society would be mirrored by the styles of high-ranking ecclesiastical figures. With this came the religious iconography often portrayed on high status objects, such as the Hunterston Brooch (Figure 106), where the cross is clearly



displayed below the pin as a reflection of the piety of the wearer and as a sign that the wearer has been rightfully chosen by God as the king and his rule is underwritten through the blessing of the Church (Youngs 1990, 91-92; Foster 2017, 92).



*Figure 107: The Hunterston Brooch, front view. (NMS X.FC8). Last Accessed, 22<sup>nd</sup> December 2023.*

The Hunterston Brooch, whose filigree displays some Anglo-Saxon tastes, shares similarities with the Tara Brooch both in style and quality, including the zoomorphic trumpet scrolls, also seen in the Lindisfarne Gospels. It is constructed of silver-gilt with inset gold panels. Both the Hunterston and Tara brooches have completely closed rings, an irregular feature in

brooches of this period where they more often display, at least the memory of the older style of a closed gapped ring motif. The Hunterston Brooch was decorated with amber settings which are mostly decayed today. The decoration includes gold filigree work depicting animals in Style II form with grains of gold depicting the creature's eyes. The reverse of the brooch, seen only by the wearer, displays curvilinear decoration similar to scroll decorations found in illuminated manuscripts of the period, such as the Book of Kells, potentially created at Iona. The scrolls may act as a protective border from the secular and profane world offering protection to the wearer of the Hunterston Brooch just as the borders of the Book of Kells afforded protection to the sacred texts, the scrolls are designed in sets of three with a Trinitarian formula viewed and reflected on solely by the wearer. An object viewed intentionally in two ways suggests both a public dimension to the Hunterston Brooch as a badge of office and status while simultaneously being a private meditative object for the wearer, encouraging reflection upon their status as owing their position and protection to the Christian God. The style of decoration on the Hunterston Brooch is among the pinnacle of insular art on any objects from Britain. The brooch displays evidence of the cross-fertilisation of different styles from La Tène influences, the north of Britain, from Ireland and from the Anglo-Saxon world. Later the brooch would become the property of a Viking named *Melbrigda*, who had his name inscribed upon the brooch as a statement of ownership. The fusion of styles is indicative of the development of brooches that has been traced at Dunadd and stands as a masterpiece of the metalsmith's craft.

## **7. Conclusion and Future Research:**

### **Future Opportunities for Research:**

Drawing together investigative procedures, recent finds and information from numerous sources will allow for a more rigorous understanding of the material available academically. There are discoveries of hoards of Roman silver coins and silver plate yet to be made. Casual finds added to hoards will continue to contribute to our understanding of the communities of Early Medieval Scotland. They will highlight the geographical extent of this material and allow insight into the mechanisms used by communities to transform silver for their own purposes.

Objects that have been previously catalogued as being made of alloys should be re-examined using X-ray fluorescence analysing their composition, some later objects were originally plated with silver or had a silver covering applied to them. Understanding the extent of this practice will contribute to our appreciation of the significance silver had on the material culture of the early kingdoms. Silver played a more significant role in Early Medieval society than has been appreciated.

Further analysis of metalworking techniques applied in the crafting of high-status objects will afford greater insight into the spread of elite activity across Scotland, identifying centres of innovation and cross-fertilisation of material culture.

A developed understanding of nuclear forts should be encouraged on a regional basis, using LiDAR technology, mapping these locations across Scotland, building on and expanding the work carried out by the Northern Picts Project. Information from remote survey should feed into regional approaches, developing targeted research at specific sites. These investigations should lead directly into an examination of the economic sources of power for the growing kingdoms, with a discrete understanding of the changing policy moving from occupying elevated and defended centres of power towards lowland settlements.

As artistic innovations took place across Scotland, including, Dunadd, Mote of Mark, Iona and Whithorn, there should be an approach that draws this material together, recognising the seventh and eighth centuries as a period of great international connectivity. A period of social, educational and artistic innovation leading it to be a key moment for the development of Scotland's politics, recognising the uniqueness of the Scottish use of silver within a

European context. The silver that remained after Rome became an essential material; it would be used to express the ambitions of smaller communities growing to become the kingdoms of Early Medieval Scotland.

Gathering recent finds into a single database will enhance available intelligence, new discoveries drive our knowledge forward. Objects handed to Treasure Trove should be catalogued and cross referenced covering all the years of discovery. Items recovered from Kingsbarns, Fife, were delivered to Treasure Trove: a silver ingot (TT 252/16) and a silver annular brooch (TT 106/17) (Appendix 32). From Auldearn three objects were recovered on separate occasions by metal detecting: a Romano-British brooch (TT 86/14) an Iron Age torc (TT 87/14) and a penannular brooch (TT 116/13) (Appendix 32). Objects gathered from Kingsbarns and Auldearn are worthy of further investigation, suggesting potential further significant finds, perhaps the presence of undiscovered hoards. Finds highlight the geographical spread of silver touching districts that were not directly impacted on by the Roman presence.

## **Conclusion:**

Silver can be used to help unpack the history of Roman Iron Age and Early Medieval Scotland in a way that it would be difficult to do with any other material. Silver lasts and can be repurposed in a way few materials can. The arrival of coin, then silver plate, gives expression to the emerging polities and kingdoms of Early Medieval Scotland. Silver was repurposed to express the longings and ideals of local communities, growing to be embedded in the world of Christian Scotland. The groups who encountered and utilised Roman silver were impacted on by Imperial and Roman material, they responded to Roman material to suit their own needs and utilised this resource in the development of their societies.

Roman silver arrived in Scotland in extremely limited amounts before the Flavian campaigns. As the military forces of Rome bore down on Scottish societies the volume of silver increased greatly, reaching a high point with the campaigns of Antoninus Pius. In the period of Antonine's activity, the cost of garrisoning Scotland with infantry can be estimated to 5,260,00 *denarii* per annum, notionally costing over 126 million *denarii*. Whether all this coin circulated in Northern Britain is unknown, it does indicate a large volume of silver currency.

Silver coin arrived with troops who would exchange them for local services with those friendly to the invading forces. In addition to military salaries, coin was used as a diplomatic device by Roman officials to pay for loyalty, creating buffer zones between Rome's borders and neighbouring communities. The earliest hoard found in Scotland dates to the reign of Vespasian, with the peak period of hoarding dating to the reign of Pius. Hoard evidence suggests that the diplomatic payments from Rome coincided with the Empire's withdrawal to Hadrian's Wall and the campaigns of Severus. There is a final flurry of hoarding around the time of Severus Alexander, after which silver plate dominates.

Geographically, coin hoards appear to be dispersed throughout most of the Scottish landscape apart from Highlands, focussing on the fertile Lowlands.

Silver plate replaced coin as a form of payment or tribute from Rome to local communities. The earliest evidence for this transitional moment has been found in the Dairsie Hoard dating to the third century, the practice continued until the fifth century. The hoards from Dairsie, Gaulcross, Traprain and Norrie's Law were all buried within ancient, memorable landscapes, suggesting that this was a valued commodity worthy of deposition. The hoards point to a

strategic change in Imperial policy mirroring Continental border practice. Analysis of a silver scrap from Gaulcross revealed a content of 92-95% silver, matching the silver content of some of the massive chains. The purity and the weight of the silver was significant, leading to the practice of hacksilver transactions. The hacksilver created portable bullion that could be repurposed locally. Crucibles discovered at significant sites, including Traprain Law and Gaulcross, afford evidence of silversmithing taking place at these sites, at least some of these objects were being transformed immediately.

Silver is a visible and enduring aspect of a larger cultural and material package that arrived from Rome. Local people took Roman material and treated it with reference to their own needs, ideologies and social norms, making them into votive offerings, while also repurposing Roman material to serve their own needs. Massive silver chains are the first and significant example of communities transforming Roman silver into objects of their own design expressing status. The purity of the silver used in creating the massive silver chains indicates an early date, linking them to the high levels of purity found in Roman silver plate.

Silver was embraced by local communities as a suitable medium expressing their tastes and social desires, repurposing Roman silver into valued local objects, making silver a transforming and a transformative material. The massive silver chains required copious amounts of silver in the hands of few people, indicating the hierarchical nature of communities. The chains were in use for a prolonged period as status symbols from the fourth to the sixth or seventh centuries.

Silver penannular brooches became the most widespread object used to denote personal prestige. Building on the tradition of Roman brooches being used as badges of rank this concept was embraced by local people. The brooch continued to be used as a status symbol, marking the wearer out as a person enjoying an elite position. The use of red enamelling on indigenously crafted silver objects harkens back to a pre-Roman local style reflecting a continuation of craft and use of traditional expression on the new, exotic silver.

Early Insular brooches were unadorned, decorated with a twist and large flanges, such as the Tummell Bridge examples, dating to the early fifth century. In these brooches the metal itself would appear to be the most significant feature of display. By the seventh and eighth centuries the style of brooches developed. They became more decorative and could be gilded. Zoomorphic designs were common features of Celtic art, appearing on many brooches. With the impact of Anglo-Saxon fashions, stylistic flourishes were adopted into

Celtic metalwork and design, interlace became common in the seventh and eighth centuries, while retaining close affinity with earlier Celtic artistic expression.

With the growth of Christianity came the conversion of people, landscape and material. Ecclesiastical leaders often rose from among elite secular groups, bringing with them secular tastes and traditions, including using brooches to mark out status, demonstrating no dichotomy between the sacred and the secular. Several brooches developed to feature Christian iconography becoming a feature of the Christian Celtic world. Brooches such as Hunterston and Rogart display Christian imagery that could be seen publicly. These brooches also contain iconography that can only be appreciated by the person wearing the brooch, provoking personal reflection and piety.

Despite the greater distance from the original silver source, there remained a desire for highly crafted silver brooches, but the silver content had to be stretched further to meet the demand. Material found within the St Ninian's Isle Hoard, buried around AD 800, has Christian iconographic messages found on several items. The material from St Ninian's Isle mostly comprises pieces that contain 30% and 50% of silver. The debasement of silver is indicative of a period when silver became scarce and it had to be debased, the brooch remaining an item of continued value and a prized possession.

The management and control of fine metalworking was an important elite strategy, though it was not absolute in its success. The presence of metalworking on a site has traditionally been seen as an indicator of a high-status site. Regional variations in approach to metalworking demonstrates that it may be a good indicator. However, a 'one size fits all' approach fails to recognise the various responses groups and communities had toward metalworking.

The position of the silversmith was significant in the hierarchy of Early Medieval Scotland. Silversmiths, and their craft, were used as diplomatic assets forging bonds and loyalties between individuals and groups, heightened as power entered the hands of emerging powers and kingdoms. The silversmith enjoyed protections under the ancient laws, providing them with the status of middle-people within society, some rising to become minor lords.

People of Early Medieval Scotland had agency and responded to their situation dependent on their community's needs and traditions. Metalworking sites can be found in Argyll and Bute, the Western Isles and the Northern Isles that are not part of a power complex. Fortifications at a site have also been seen as an indicator of a place of power, however, Iona and Whithorn, both ecclesiastical sites, were never fortified, yet they are certainly significant high-status

sites. Forteviot, a lowland site marks a change in royal strategy related to settlements moving from high, easily defended structures, towards the fertile landscapes marked out by its ancient associations. Manufacturing of crafts, storing resources, redistribution of goods and trading with the wider world, taken together, these are indicative of significant centres of power. Critically, the production of high-status goods is a clear indicator of the status of a site in the Early Middle Ages. Even Argyll fits this pattern where smaller sites and crannogs served Dunadd and were used in the service of the royal centre.

Roman silver became a transformative material helping polities to develop and express their growing strength and confidence. Silver became a resource that supported people and power, it was transformed into items that gave material expression to the communities that would begin to flourish in the post-Roman Scottish landscape.



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**Appendices:****Appendix 1:**

Roman Emperors Until Roman Withdrawal from Britain 410 AD and Single Coin Finds.  
Chart prepared by author:

Name	Reign	Activities in N. Britain	Coins Found
<i>Republic</i>	<i>45 BC</i>		<i>Republican Denarius</i>
<i>Julius Caesar</i>	<i>45-44 BC</i>		<i>Republican denarius (49-48 BC)</i>
<i>Mark Antony</i>	<i>42 – 30 BC</i>		<i>5 Legionary Denarii (c.32 – 21 BC)</i>
Augustus	27 BC – 14 AD		
Tiberius	14 – 37 AD		2 Denarius  Silver coin of Drusus (Son of Tiberius)
Caligula	37 – 41 AD		
Claudius	41 – 54 AD	43 AD King of Orkney submits to Claudius.  Claudius begins conquest of Britannia with four legions under the command of Plautius.  44 AD Claudius celebrates the	

		conquest of Britannia.	
Name	Reign	Activities in N. Britain	Coins Found
Nero	54 - 68 AD	66 AD Legio XIV withdrawn from Britannia.	2 Billon  1 Denarius  9 Gold Coin  + 1 gold coin of unknown origin
Galba	68 – 69 AD		2 Denarius
Otho	69 AD	69 AD Troops withdrawn from Britannia due to civil war in the empire.	1 Denarius  2 Gold Coins
Vitellius	69 AD		1 Gold Coin
Vespasian	69 – 79 AD	Bolanus, Governor of Britain, 69 – 71 AD, campaigns in the ‘Caledonian fields of battle’ (Statius).  77 AD Agricola arrives in Britannia.  79 AD invades northern Britain up to the Forth- Clyde isthmus.	12 Denarius  1 Denarius (deified)  6 silver coins  5 Gold Coins (70- 90)
Name	Reign	Activities in N. Britain	Coins Found

Titus	79 – 81 AD	80 AD Agricola secures the Forth-Clyde isthmus.	4 Denarius 1 Gold Coin
Domitian	81 – 96 AD	83 AD Mons Graupius Calgacus (Tacitus).  87 AD Mitelus Nepos withdraws from north of the River Tay, Inchtuthil abandoned.  Staged withdrawal from positions in the north begins. Return to the Forth and Clyde isthmus.	3 silver coins 4 Denarius 1 Gold Coin
Nerva	96 – 98 AD		2 Denarius
Trajan	98 – 117 AD	Withdrawal of <i>Legio II Adiutrix</i> from southern Britain. Northern Britain abandoned in favour of Trajan's Dacian campaigns (Henig, 1998).	18 Denarius 1 silver drachm (Lycia mint) 1 Silver Coin 2 Silver Medals 3 Gold Coin
<b>Name</b>	<b>Reign</b>	<b>Activities in N. Britain</b>	<b>Coins Found</b>
Hadrian	117 – 138 AD	Hadrian's Wall constructed,	½ Denarius

		122 – 138 AD (Hanson, 2003 195).	21 Denarius (117- 138)  1 Denarius of Sanina (wife)  1 Billon (Alexandrian)  <i>1 Cast of Forgery</i>  1 Gold coin of Marcianna
Antoninus Pius	138 – 161 AD	Campaigns of Urbicus, governor of Britain.  Antonine Wall constructed, 140 – 148 AD (Hanson, 2003).	1 Denarius of Deified Emperor (138-161)  7 Denarius  1 Silver Faustina [wife] (140-141)  1 Deified Faustina [wife] (141)  1 Forgery of Faustina  1 coin with two heads: commemorating Antoninus & Aurelius  2 Gold Coins
Marcus Aurelius	161 – 180 AD		9 Denarius  4 Denarius of Faustina II [Wife]
<b>Name</b>	<b>Reign</b>	<b>Activities in N. Britain</b>	<b>Coins Found</b>
Lucius Verus	161 – 169 AD		1 Denarius



			1 Silver Lucilla (161-2)
Commodus	180 – 192 AD	Antonine Wall abandoned (c.188 AD).	
Pertinax	193 AD		Silver coin (193)
Didius Julianus	193 AD		
Septimius Severus	193 – 211 AD	Campaigns of Severus in northern Britain due to the aggressive actions of the <i>Maeatae</i> . Antonine Wall reoccupied, 197/8 AD. (Dio Cassius).  Rome retreats from its northern position in Britain, 211 AD.	10 Denarius  1 Denarius of Caracalla [Son] (206)  1 Silver coin  3 Denarius Julia Domna [Wife]
Caracalla	211 – 217 AD	Caracalla sues for peace.  Roman troops withdrawn to Hadrian's Wall, 213 AD (Hanson, 2003, 198).	1 Denarius  1 Denarius Plautilla (Wife)
<b>Name</b>	<b>Reign</b>	<b>Activities in N. Britain</b>	<b>Coins Found</b>
Geta	211 AD		5 Denarius (209-212)

Macrinus	217 – 218 AD		
Diadumenium	218 AD		
Elagabalus	218 – 222 AD		1 Denarius
Severus Alexander	222 – 235 AD		
Maximinus I	235 – c.238 AD		
Gordian I	c.238 AD		
Gordian II	c. 238 AD		
Pupienus	c.238 AD		
Balbinus	c.238 AD		
Gordian III	c.238 AD – c.244 AD		3 Antoninians
Philip I	c.244 – 249 AD		
Philip II	247 – 249 AD		
Decius	249 – 251 AD		1 Antoninianus
<b>Name</b>	<b>Reign</b>	<b>Activities in N. Britain</b>	<b>Coins Found</b>
Herennius Etruscus	251 AD		
Hostilian	251 AD		
Trebonianus Gallus	251 – c.253 AD		1 Antoninianus
Volusianus	c.251 – c.253 AD		

Aemilianus	253 AD		
Silbannacus	253 AD		
Valerian	c.253 – c.260 AD		1 Antoninianus
Gallienus	c.253 – c.268 AD		9 Antoninianus  1 Antoninianus of Salonina [Wife] 9260-8)
Saloninus	c.260 AD		
<i>Postumus</i>	260 – 269 AD ( <i>Gallic Empire</i> )		1 <i>Antoninianus</i>
<i>Victorinus</i>	c.268-270 AD ( <i>Gallic Lands</i> )		2 <i>Antoninianus</i>
Claudius II	c.268 – c.270 AD		1 Antoninianus
Quintillus	270 AD		
<i>Tetricus II</i>	273 – 274 AD ( <i>Gallic Empire</i> )		3 <i>Antoninianus</i>
<b>Name</b>	<b>Reign</b>	<b>Activities in N. Britain</b>	<b>Coins Found</b>
Aurelian	270 – 275 AD		
Tacitus	275 – 276 AD		
Florianus	276 AD		
Probus	276 – 282 AD		2 Antoninianus

Carus	282 – 283 AD		2 Billon
Carinus	283 – 285 AD		
Numerian	c.283 – 284 AD		1 Antoninianus (Tripolis mint)
Diocletian	284 – 305 AD		2 Antoninianus  2 Billon of Alexandria (287-8)
Maximian	286 – 305 AD (West)  306 – 308 AD (Italy)		1 Antoninias (minted at Cynicus)  1 Alexandrian coin  1 Billon (Alexandrian mint)
Galerius	305 – 311 AD (East)		1 Alexandrian coin
Constantius I	305 – 306 AD (West)	Campaigns against the Caledonians & <i>Meaetae</i> 305 AD.	
Severus II	306 – 307 AD (West)		
<b>Name</b>	<b>Reign</b>	<b>Activities in N. Britain</b>	<b>Coins Found</b>
Maxentius	306 – 312 AD (Italy)		
Licinius	308 – 324 AD (West then East)		1 silver coin

Maximinus II	310 – 313 (East)		
Valerius Valens	316 – 317 AD (West)		
Martinian	324 AD (West)		
Constantine I	306 – 337 AD (West the entire empire)		
Constantine II	337 – 340 AD (West)		
Constans I	337 – 350 AD (West)		
Constantius II	337 – 361 (East then entire empire)		1 Denarius
Magnentius	350 – 353 AD (West)		
Nepotianus	350 AD (West)		
Vetranio	350 AD (West)		
Constantius Gallus	351-354 (East)		
Julian	361 – 363 AD		
<b>Name</b>	<b>Reign</b>	<b>Activities in N. Britain</b>	<b>Coins Found</b>
Jovian	363 – 364 AD		

Valentinian I	364 – 375 AD (Entire empire then West)	The Barbarian Conspiracy 367 AD. (Marcellinus).	1 small silver coin
Valens	364 – 378 AD (East)		
Procopius	365 – 366 AD (East)		
Gratian	375 – 383 AD (West)		
Numerian	383-384 AD		1 Antoninianus
Magnus Maximus	383 – 388 AD (West)		
Valentinian II	388 – 392 AD (West)		
Eugenius	392 – 394 AD (West)		
Theodosius I	379 – 395 AD (East the entire empire)		
Arcadius	395 – 408 AD (East)		
Honorius	395 – 423 AD (West)		
Constantine III	407 – 411 AD (West)	Rome abandoned southern Britain, 410/411 AD.	
<b>Name</b>	<b>Reign</b>	<b>Activities in N. Britain</b>	<b>Coins Found</b>

Theodosius II	408 – 450 AD (East)		
Priscus Attalus	409 – 410 AD (Italy)		

*'Emperors' in italics are either Republican leaders, such as Julius Caesar and Mark Antony, stand as pretenders to the main recognised emperor or restricted to localised regions. Compiled by author with evidence from: Hanson 2003: Henig 1998: Tacitus, Dio Cassius: Marcellinus, Statius.*

**Appendix 2:**

## Index of Flavian Invasion Temporary Camps, 77-86/90 AD.

District:	Site:	Canmore ID:	Source:
Moray	<i>Auchinhove</i>	<a href="http://canmore.org.uk/site/17349">http://canmore.org.uk/site/17349</a>	(St Joseph 1951)
Moray	Muiryfold	<a href="http://canmore.org.uk/site/17346">http://canmore.org.uk/site/17346</a>	(St Joseph 1961)
Aberdeenshire	Burnfield	<a href="http://canmore.org.uk/site/17841">http://canmore.org.uk/site/17841</a>	(Frere 1985)
Aberdeenshire	Glenmailen, l & ll	<a href="http://canmore.org.uk/site/18225">http://canmore.org.uk/site/18225</a>	(St Joseph 1969)
Aberdeenshire	Logie Durno	<a href="http://canmore.org.uk/site/18107">http://canmore.org.uk/site/18107</a>	(Jones 2011, 264-265)
Aberdeenshire	Kintore	<a href="http://canmore.org.uk/site/18584">http://canmore.org.uk/site/18584</a>	(Courtney 1870)
Aberdeenshire	<i>Raedykes</i>	<a href="http://canmore.org.uk/site/37153">http://canmore.org.uk/site/37153</a>	(Crawford 1949, 108, 130-133)
Aberdeen, City of	Normandykes	<a href="http://canmore.org.uk/site/37075">http://canmore.org.uk/site/37075</a>	(Jones 2011, 285-286)
Angus	Stracathro	<a href="http://canmore.org.uk/site/35940">http://canmore.org.uk/site/35940</a>	(St Joseph 1970)
Angus	Dun	<a href="http://canmore.org.uk/site/35673">http://canmore.org.uk/site/35673</a>	(St Joseph 1974, 8)



Angus	Inverquharity	<a href="http://canmore.org.uk/site/33728">http://canmore.org.uk/site/33728</a>	(Maxwell 1984)
Perth & Kinross	Inchtuthil l & ll	<a href="http://canmore.org.uk/site/28593">http://canmore.org.uk/site/28593</a>	(Hanson 1980, 142)
<b>District:</b>	<b>Site:</b>	<b>Canmore ID:</b>	<b>Source:</b>
Perth & Kinross	Carey, Abernethy	<a href="http://canmore.org.uk/site/27933">http://canmore.org.uk/site/27933</a>	(Dunwell & Keppie 1995, 60)
Perth & Kinross	Dalginross	<a href="http://canmore.org.uk/site/24821">http://canmore.org.uk/site/24821</a>	(Rogers 1993)
Stirling	Bochastle	<a href="http://canmore.org.uk/site/24351">http://canmore.org.uk/site/24351</a>	(St Joseph 1973, 224)
Stirling	Malling l & ll (Lake of Menteith)	<a href="http://canmore.org.uk/site/24038">http://canmore.org.uk/site/24038</a>	(Maxwell 1980, 34-35, 40, 42)
Falkirk	Lochlands l & ll	<a href="http://canmore.org.uk/site/46972">http://canmore.org.uk/site/46972</a>	(Thomson 1968)
Midlothian	Woodhead	<a href="http://canmore.org.uk/site/53546">http://canmore.org.uk/site/53546</a>	(Maxwell 1980, 34, 38, 45)
Midlothian	Carlops, Spittal	<a href="http://canmore.org.uk/site/50170">http://canmore.org.uk/site/50170</a>	(Jones 2011, 161)
South Lanarkshire	Kirkhouse	<a href="http://canmore.org.uk/site/48851">http://canmore.org.uk/site/48851</a>	(Frere 1984, 276)
South Lanarkshire	Castledykes	<a href="http://canmore.org.uk/site/47720">http://canmore.org.uk/site/47720</a>	(Keppie and Walker 1987, 45)

Dumfries & Galloway	Bankhead	<a href="http://canmore.org.uk/site/45501">http://canmore.org.uk/site/45501</a>	(Jones 2011, 323)
Dumfries & Galloway	Raeburnfoot	<a href="http://canmore.org.uk/site/274593">http://canmore.org.uk/site/274593</a>	(Jones 2011, 295)
Dumfries & Galloway	Beatoch, Barnhill	<a href="http://canmore.org.uk/site/48381">http://canmore.org.uk/site/48381</a>	(Breeze 1980, 17)
<b>District:</b>	<b>Site:</b>	<b>Canmore ID:</b>	<b>Source:</b>
Dumfries & Galloway	Dalswinton, Bankfoot I & II	<a href="http://canmore.org.uk/site/65895">http://canmore.org.uk/site/65895</a>	(Jones 2011, 183-184)
Dumfries & Galloway	Glenlochar	<a href="http://canmore.org.uk/site/64696">http://canmore.org.uk/site/64696</a>	(Pickin 2016, 56)
Dumfries & Galloway	Glenluce	<a href="http://canmore.org.uk/site/79047">http://canmore.org.uk/site/79047</a>	(Jones 2011, 217)
Dumfries & Galloway	Girvan	<a href="http://canmore.org.uk/site/62049">http://canmore.org.uk/site/62049</a>	(Jones 2011, 214)
Scottish Borders	Eshiels	<a href="http://canmore.org.uk/site/51256">http://canmore.org.uk/site/51256</a>	(Jones 2011, 200)
Scottish Borders	Newsted I & II	<a href="http://canmore.org.uk/site/55620">http://canmore.org.uk/site/55620</a>	(Hunter 1997, 117)
Scottish Borders	Oakwood	<a href="http://canmore.org.uk/site/54276">http://canmore.org.uk/site/54276</a>	(Steer and Feachem 1954)

## Appendix 3:

## Index of Flavian Forts and Fortlets Along the Gask Ridge:

District:	Site Name:	Information :	Canmore ID:	Source:
Stirling	<i>Doune</i>	Triple-ditch defensive structure whose terminals curved inwards.	<a href="http://canmore.org.uk/site/24767">http://canmore.org.uk/site/24767</a>	Keppie 2000, 381
Perth & Kinross	Glenbank	Fortlet	<a href="http://canmore.org.uk/site/25236">http://canmore.org.uk/site/25236</a>	Maxwell 1984, 4
Perth & Kinross	Kaims Castle	Fortlet, analogous finds point to a 1st Century date.	<a href="http://canmore.org.uk/site/25365">http://canmore.org.uk/site/25365</a>	Wooliscroft 1993
Perth & Kinross	Ardoch	One of the best-preserved Roman Forts in the empire.	<a href="http://canmore.org.uk/site/25227">http://canmore.org.uk/site/25227</a>	Breeze 1980, 21
Perth & Kinross	Strageath	Fort.	<a href="http://canmore.org.uk/site/25296">http://canmore.org.uk/site/25296</a>	Frere and St Joseph 1983, 86-7, 133-4
Perth & Kinross	Bertha	Fort	<a href="http://canmore.org.uk/site/26734">http://canmore.org.uk/site/26734</a>	Breeze 1980, 21

## Appendix 4:

## Index of Forts &amp; Fortlets from the Antonine Campaigns, 138-165 AD:

District:	Site:	Canmore ID:	Source
Perth & Kinross	Bertha	<a href="http://canmore.org.uk/site/26734">http://canmore.org.uk/site/26734</a>	Adamson and Gallagher 1987
Perth & Kinross	Strageath	<a href="http://canmore.org.uk/site/25296">http://canmore.org.uk/site/25296</a>	Breeze 1980, 55
Perth & Kinross	Ardoch	<a href="http://canmore.org.uk/site/25227">http://canmore.org.uk/site/25227</a>	Breeze 1983
Falkirk	Camelon	<a href="http://canmore.org.uk/site/46920">http://canmore.org.uk/site/46920</a>	Bailey 1994, 307
East Lothian	Inveresk	<a href="http://canmore.org.uk/site/53919">http://canmore.org.uk/site/53919</a>	Breeze 1980 54-55
Edinburgh, City of	Cramond	<a href="http://canmore.org.uk/site/50409">http://canmore.org.uk/site/50409</a>	Breeze 1980, 54-55
Renfrewshire	Bishopton, Whitemoss	<a href="http://canmore.org.uk/site/43341">http://canmore.org.uk/site/43341</a>	Breeze 1982, 110
Inverclyde	Lurg Moor	<a href="http://canmore.org.uk/site/41342">http://canmore.org.uk/site/41342</a>	Hanson and Maxwell 1983, 100 & 170
North Lanarkshire	Bothwellhaugh	<a href="http://canmore.org.uk/site/45661">http://canmore.org.uk/site/45661</a>	Breeze 1982, 108
South Lanarkshire	Castledykes	<a href="http://canmore.org.uk/site/47721">http://canmore.org.uk/site/47721</a>	Hanson and Maxwell 1983, 150-151

South Lanarkshire	Wandel	<a href="http://canmore.org.uk/site/47366">http://canmore.org.uk/site/47366</a>	Breeze 1982, 121
South Lanarkshire	Crawford	<a href="http://canmore.org.uk/site/47396">http://canmore.org.uk/site/47396</a>	Breeze 1982, 45 & 53
South Lanarkshire	Redshaw Burn	<a href="http://canmore.org.uk/site/48503">http://canmore.org.uk/site/48503</a>	RCAHMS 1978, 134- 135
<b>District:</b>	<b>Site:</b>	<b>Canmore ID:</b>	<b>Source</b>
East Ayrshire	Loudon Hill	<a href="http://canmore.org.uk/site/44771">http://canmore.org.uk/site/44771</a>	Breeze 1982, 65
North Ayrshire	Outerwards	<a href="http://canmore.org.uk/site/41272">http://canmore.org.uk/site/41272</a>	Breeze 1980, 55- 56
Dumfries & Galloway	Durisdeer	<a href="http://canmore.org.uk/site/47285">http://canmore.org.uk/site/47285</a>	Frere and St Joseph 1883, 142- 144
Dumfries & Galloway	Milton	<a href="http://canmore.org.uk/site/48383">http://canmore.org.uk/site/48383</a>	Breeze 1982, 45
Dumfries & Galloway	Raeburnfoot	<a href="http://canmore.org.uk/site/67274">http://canmore.org.uk/site/67274</a>	Breeze 1982, 111
Dumfries & Galloway	Birrens	<a href="http://canmore.org.uk/site/67099">http://canmore.org.uk/site/67099</a>	Breeze 1980, 56- 57
Dumfries & Galloway	Drumlanrig	<a href="http://canmore.org.uk/site/65200">http://canmore.org.uk/site/65200</a>	Gibson 2004
Dumfries & Galloway	Barburgh Mill	<a href="http://canmore.org.uk/site/65789">http://canmore.org.uk/site/65789</a>	Breeze 1982, 101
Dumfries & Galloway	Carzield	<a href="http://canmore.org.uk/site/65890">http://canmore.org.uk/site/65890</a>	Hanson and Maxwell 1983, 72 & 148

Dumfries & Galloway	Burnswark	<a href="http://canmore.org.uk/site/66626">http://canmore.org.uk/site/66626</a>	Breeze 1982, 144-145
Dumfries & Galloway	Glenlochar	<a href="http://canmore.org.uk/site/64687">http://canmore.org.uk/site/64687</a>	Breeze 1982, 65
Scottish Borders	Cappuck	<a href="http://canmore.org.uk/site/57050">http://canmore.org.uk/site/57050</a>	Breeze 1982, 139
Scottish Borders	Lyne	<a href="http://canmore.org.uk/site/50065">http://canmore.org.uk/site/50065</a>	Breeze 1982, 121
Scottish Borders	Oxton	<a href="http://canmore.org.uk/site/54576">http://canmore.org.uk/site/54576</a>	Hanson and Maxwell 1983, 71
<b>District:</b>	<b>Site:</b>	<b>Canmore ID:</b>	<b>Source</b>
Scottish Borders	Newstead I & II	<a href="http://canmore.org.uk/site/55621">http://canmore.org.uk/site/55621</a>	Hanson and Maxwell 1983, 37-38, 70-71

## Appendix 5:

## Index of Fortifications Along the Antonine Wall:

Region:	Site:	Canmore ID:	Source
West Dunbartonshire	Duntocher, Clydebank	<a href="http://canmore.org.uk/site/4326">http://canmore.org.uk/site/4326</a> 5	Breeze 1980, 50
West Dunbartonshire	Old Kilpatrick	<a href="http://canmore.org.uk/site/4332">http://canmore.org.uk/site/4332</a> 7	Bailey 1994, 304
East Dunbartonshire	Castlehill	<a href="http://canmore.org.uk/site/4451">http://canmore.org.uk/site/4451</a> 0	Breeze 1982, 111
East Dunbartonshire	Bearsden	<a href="http://canmore.org.uk/site/4453">http://canmore.org.uk/site/4453</a> 2	Bailey 1994, 300, 304-305
East Dunbartonshire	Cadder	<a href="http://canmore.org.uk/site/4524">http://canmore.org.uk/site/4524</a> 7	Breeze 1982, 46, 106 & 108
East Dunbartonshire	Wilderness Plantation	<a href="http://canmore.org.uk/site/4447">http://canmore.org.uk/site/4447</a> 5	Hanson and Maxwell 1983, 93- 96
East Dunbartonshire	Kirkintilloch	<a href="http://canmore.org.uk/site/4520">http://canmore.org.uk/site/4520</a> 4	Breeze 1980, 57
East Dunbartonshire	Auchendavy	<a href="http://canmore.org.uk/site/4520">http://canmore.org.uk/site/4520</a> 1	Breeze 1980, 50, 52
East Dunbartonshire	Bar Hill	<a href="http://canmore.org.uk/site/4592">http://canmore.org.uk/site/4592</a> 0	Bailey 1994, 304
East Dunbartonshire	Glasgow Bridge	<a href="http://canmore.org.uk/site/4525">http://canmore.org.uk/site/4525</a> 3	Breeze 1980, 50
Glasgow, City of	Summerston	<a href="http://canmore.org.uk/site/4448">http://canmore.org.uk/site/4448</a> 2	Hanson and Maxwell 1983, 94- 95

Glasgow, City of	Balmuildy	<a href="http://canmore.org.uk/site/44476">http://canmore.org.uk/site/44476</a>	Bailey 1994, 303-304, 309
North Lanarkshire	Croy Hill	<a href="http://canmore.org.uk/site/45875">http://canmore.org.uk/site/45875</a>	Bailey 1994, 304
Region:	Site:	Canmore ID:	Source
North Lanarkshire	Westerwood	<a href="http://canmore.org.uk/site/45870">http://canmore.org.uk/site/45870</a>	Breeze 1980, 54
Falkirk	Camelon	<a href="http://canmore.org.uk/site/46920">http://canmore.org.uk/site/46920</a>	Bailey 1994, 307
Falkirk	Castlecary	<a href="http://canmore.org.uk/site/45828">http://canmore.org.uk/site/45828</a>	Breeze 1980, 50, 52 & 57
Falkirk	Rough Castle	<a href="http://canmore.org.uk/site/46803">http://canmore.org.uk/site/46803</a>	Hanson and Maxwell 1983, 98-99, 107-109
Falkirk	Pleasance	<a href="http://canmore.org.uk/site/74326">http://canmore.org.uk/site/74326</a>	Breeze 1982, 110
Falkirk	Mumrills	<a href="http://canmore.org.uk/site/47870">http://canmore.org.uk/site/47870</a>	Breeze 1980, 50, 52, 56-57
Falkirk	Inveravon	<a href="http://canmore.org.uk/site/82872">http://canmore.org.uk/site/82872</a>	MacDonald 1925, 271-272
Falkirk	Carriden	<a href="http://canmore.org.uk/site/49589">http://canmore.org.uk/site/49589</a>	Breeze 1980, 50, 52 & 54
Falkirk	Seabegs Wood	<a href="http://canmore.org.uk/site/46788">http://canmore.org.uk/site/46788</a>	Breeze 1980, 50
Falkirk	Watling Lodge	<a href="http://canmore.org.uk/site/46783">http://canmore.org.uk/site/46783</a>	Breeze 1980, 50



## All That Glitters

Falkirk	Kinneil	<a href="http://canmore.org.uk/site/4813">http://canmore.org.uk/site/4813</a> 5	Breeze 1980, 50 & 52
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## Appendix 6:

## Index of Military Sites During the Flavian Invasions:

Region:	Site:	Canmore ID:	Source:
Aberdeenshire	Kair House	<a href="http://canmore.org.uk/site/36383">http://canmore.org.uk/site/36383</a>	Hanson 1980, 146
Aberdeenshire	Balmakewan	<a href="http://canmore.org.uk/site/35912">http://canmore.org.uk/site/35912</a>	RCAHMS 1982, 23
Angus	Keithock	<a href="http://canmore.org.uk/site/36037">http://canmore.org.uk/site/36037</a>	Jones 2011, 243
Angus	Marcus	<a href="http://canmore.org.uk/site/34819">http://canmore.org.uk/site/34819</a>	Halpin 1993
Angus	Kinnell	<a href="http://canmore.org.uk/site/35838">http://canmore.org.uk/site/35838</a>	Jones 2011, 245
Angus	Battledykes, Oathlaw	<a href="http://canmore.org.uk/site/33667">http://canmore.org.uk/site/33667</a>	Jones 2011, 141-142
Angus	Eassie	<a href="http://canmore.org.uk/site/32074">http://canmore.org.uk/site/32074</a>	Jones 2011, 194
Angus	Kirkbuddo	<a href="http://canmore.org.uk/site/33612">http://canmore.org.uk/site/33612</a>	Jones 2011, 248-249
Angus	Cardean	<a href="http://canmore.org.uk/site/30693">http://canmore.org.uk/site/30693</a>	Jones 2011, 158-159
Perth & Kinross	Lintrose	<a href="http://canmore.org.uk/site/30598">http://canmore.org.uk/site/30598</a>	Jones 2011, 254

Perth & Kinross	Longforan	<a href="http://canmore.org.uk/site/30624">http://canmore.org.uk/site/30624</a>	Jones 2011 266-267
Perth & Kinross	Grassy Walls	<a href="http://canmore.org.uk/site/28188">http://canmore.org.uk/site/28188</a>	Jones 2011, 219-220
Perth & Kinross	Carpow	<a href="http://canmore.org.uk/site/30081">http://canmore.org.uk/site/30081</a>	Breeze 1982, 132, 135-136
Perth & Kinross	Scone Park	<a href="http://canmore.org.uk/site/28142">http://canmore.org.uk/site/28142</a>	Jones 2011, 302
<b>Region:</b>	<b>Site:</b>	<b>Canmore ID:</b>	<b>Source:</b>
Perth & Kinross	Forteviot	<a href="http://canmore.org.uk/site/26608">http://canmore.org.uk/site/26608</a>	Jones 2011, 205
Perth & Kinross	Innerpeffrey West	<a href="http://canmore.org.uk/site/26014">http://canmore.org.uk/site/26014</a>	Jones 2011, 230-231
Perth & Kinross	Ardoch	<a href="http://canmore.org.uk/site/25388">http://canmore.org.uk/site/25388</a>	Jones 2011, 129-131
Fife	Edenwood	<a href="http://canmore.org.uk/site/31521">http://canmore.org.uk/site/31521</a>	Jones 2011, 198-199
Fife	Auchtermuchty	<a href="http://canmore.org.uk/site/30297">http://canmore.org.uk/site/30297</a>	Jones 2011, 42, 75 & 101
Stirling	Craigarnhall	<a href="http://canmore.org.uk/site/45998">http://canmore.org.uk/site/45998</a>	Jones 2011, 176

Falkirk	Househill, Dunipace	<a href="http://canmore.org.uk/site/47052">http://canmore.org.uk/site/47052</a>	Jones 2011, 225-226
Edinburgh, City of	Cramond	<a href="http://canmore.org.uk/site/50409">http://canmore.org.uk/site/50409</a>	RCAHM S 1929, 38-41
Midlothian	Pathhead	<a href="http://canmore.org.uk/site/53559">http://canmore.org.uk/site/53559</a>	Jones 2011, 291-292
Scottish Borders	Channelkirk	<a href="http://canmore.org.uk/site/54587">http://canmore.org.uk/site/54587</a>	Jones 2011, 171-172
Scottish Borders	St Leonard's Hill	<a href="http://canmore.org.uk/site/55839">http://canmore.org.uk/site/55839</a>	Jones 2011, 299-300
Dumfries & Galloway	Kilpatrick Fleming	<a href="http://canmore.org.uk/site/67135">http://canmore.org.uk/site/67135</a>	Jones 2011, 251

**Appendix 10:****Index of Single Coin Finds from Indigenous Sites:**

District:	Site:	Information	Canmore ID:	Source:
Shetland Islands	Lerwick, Annsbrae House	<i>Antoninianus</i> of Gallienus	<a href="http://canmore.org.uk/site/1040">http://canmore.org.uk/site/1040</a>	Robertson 1963, 150
<i>Shetland Islands</i>	<i>Gulberwick</i>	<i>Cast forgery of Hadrian</i>	<a href="http://canmore.org.uk/site/981">http://canmore.org.uk/site/981</a>	Robertson 1984, 405-408
Orkney Islands	Shapinsay, Agricola	Possible coins of Agricola, antiquarian report	<a href="http://canmore.org.uk/site/2397">http://canmore.org.uk/site/2397</a>	Robertson 1984, 417
Western Isles	Harris	Worn <i>denarius</i> of Drusus	<a href="http://canmore.org.uk/site/10538">http://canmore.org.uk/site/10538</a>	Robertson 1952, 148
Western Isles	North Uist	Billon of Alexandria (283/4)	<a href="http://canmore.org.uk/site/10217">http://canmore.org.uk/site/10217</a>	MacDonald 1918, 250
Highland	Old Tarbat, Portmahomack	Worn <i>antoninianus</i> of Tetricus II	<a href="http://canmore.org.uk/site/15647">http://canmore.org.uk/site/15647</a>	Robertson 1984, 415
Moray	Burghead	Worn <i>antoninianus</i> of Gallienus	<a href="http://canmore.org.uk/site/16191">http://canmore.org.uk/site/16191</a>	Robertson 1984, 414
Moray	Elgin	Alexandrian coin of Galerius	<a href="http://canmore.org.uk/site/16640">http://canmore.org.uk/site/16640</a>	Robertson 1963, 146
District:	Site:	Information	Canmore ID:	Source:

Moray	Culbin Sands	Denarius of Hadrian	<a href="http://canmore.org.uk/site/15906">http://canmore.org.uk/site/15906</a>	MacDonald 1934, 29
Moray	Forres, Kenora	Constantinapolis of Constantine I	<a href="https://canmore.org.uk/site/15793/forres-kenora">https://canmore.org.uk/site/15793/forres-kenora</a>	Robertson 1984, 444, Table 5
Aberdeenshire	Castle Newe	Denarius of Nerva	<a href="http://canmore.org.uk/site/16779">http://canmore.org.uk/site/16779</a>	MacDonald 1918, 234-235
Aberdeenshire	Clatt Parish	Denarius of Valentinian I	<a href="http://canmore.org.uk/site/17662">http://canmore.org.uk/site/17662</a>	MacDonald 1918, 247
Aberdeenshire	Port Elphinstone	Gold coin of Vespasian	<a href="http://canmore.org.uk/site/18907">http://canmore.org.uk/site/18907</a>	Robertson 1984, Table 4
Aberdeenshire	Laurencekirk	Denarius of Aurelius & Pius	<a href="http://canmore.org.uk/site/36565">http://canmore.org.uk/site/36565</a>	MacDonald 1918, 247
Angus	Glen Isla	Worn denarius of Hadrian	<a href="http://canmore.org.uk/site/29265">http://canmore.org.uk/site/29265</a>	Robertson 1974, 18-19
Angus	White Caterthun	Alexandrian coin of Maximian	<a href="http://canmore.org.uk/site/35012">http://canmore.org.uk/site/35012</a>	Robertson 1963, 138
Angus	Kirriemuir	Worn denarius of Faustina I	<a href="http://canmore.org.uk/site/32321">http://canmore.org.uk/site/32321</a>	Robertson 1984, 410
<b>District:</b>	<b>Site:</b>	<b>Information</b>	<b>Canmore ID:</b>	<b>Source:</b>

Angus	Montrose	Worn denarius of Marcus Aurelius	<a href="http://canmore.org.uk/site/36233">http://canmore.org.uk/site/36233</a>	Robertson 1974, 119
Angus	Seaton of Usan	Denarius of Marcus Aurelius (1) Half denarius of Hadrian (1) Denarius of Antoninus Pius	<a href="http://canmore.org.uk/site/110529">http://canmore.org.uk/site/110529</a>	Benzie 1996, 12; Benzie 1998, 11
Angus	Lunan Bay	Worn antoninianus of Gallienus	<a href="http://canmore.org.uk/site/35796">http://canmore.org.uk/site/35796</a>	Robertson 1974, 119
Dundee, City of	Broughty Ferry	Worn antoninianus of Maximian	<a href="http://canmore.org.uk/site/33425">http://canmore.org.uk/site/33425</a>	Robertson 1974, 118
Fife	St Andrews	Antoninianus of Victorinus	<a href="http://canmore.org.uk/site/34337">http://canmore.org.uk/site/34337</a>	Robertson 1984, 412
Fife	Kirkcaldy	Antoninianus of Postumus	<a href="http://canmore.org.uk/site/52916">http://canmore.org.uk/site/52916</a>	Robertson 1963, 142
Fife	Kirkcaldy	Worn denarius of Lucius Verus	<a href="http://canmore.org.uk/site/52918">http://canmore.org.uk/site/52918</a>	Robertson 1963, 142
Fife	Auchterderran	Denarius of Pertinax	<a href="http://canmore.org.uk/site/51044">http://canmore.org.uk/site/51044</a>	Robertson 1984, 404-448
<b>District:</b>	<b>Site:</b>	<b>Information</b>	<b>Canmore ID:</b>	<b>Source:</b>

Fife	Leden Urquhart	Denarius of Domitian	<a href="https://canmore.org.uk/site/28061/leden-urquhart">https://canmore.org.uk/site/28061/leden-urquhart</a>	Robertson 1984, Table 3
Perth & Kinross	Perth, Wellshill Cemetery	Billon of Nero	<a href="http://canmore.org.uk/site/70064">http://canmore.org.uk/site/70064</a>	King 1990
Perth & Kinross	Perth	Billon of Nero (1) Denarius of Licinius I	<a href="http://canmore.org.uk/site/28457">http://canmore.org.uk/site/28457</a>	Robertson 1963, 147
Perth & Kinross	Perth, Old Parliament House	Denarius of Tiberius	<a href="https://canmore.org.uk/site/28397/perth-old-parliament-house">https://canmore.org.uk/site/28397/perth-old-parliament-house</a>	Robertson 1984, 431, 445, Table 4 & 5
Perth & Kinross	Crieff	Gold coin of Marcianna		Robertson 1984, Table 4
Stirling	Callander	Gold coin of Nero		Robertson 1984, Table 4
Stirling	Invertrossachs Country Estate	Antoninianus unknown emperor	<a href="http://canmore.org.uk/site/24023">http://canmore.org.uk/site/24023</a>	Robertson 1984, 414
Stirling	Drymen	Gold coin of Nero (1) Gold coin of Trajan (1)		Robertson 1984, Table 4
Stirling	Leckie Broch, Gargunnock	Worn denarius of Julius Caesar (1) Worn denarius of Trajan (1)	<a href="http://canmore.org.uk/site/45379">http://canmore.org.uk/site/45379</a>	Robertson 1984, 410
<b>District:</b>	<b>Site:</b>	<b>Information</b>	<b>Canmore ID:</b>	<b>Source:</b>



Falkirk	Carron Dams	Antoninianus of Trajan Decius	<a href="http://canmore.org.uk/site/46917">http://canmore.org.uk/site/46917</a>	Robertson 1963, 150
Argyll & Bute	Islay, Loch Finlaggan	Billon coin of Diocletian	<a href="http://canmore.org.uk/site/37711">http://canmore.org.uk/site/37711</a>	MacDonald 1918, 249-250
Argyll & Bute	Tarbert	Athenian tetradrachm, 450 BC	<a href="http://canmore.org.uk/site/39331">http://canmore.org.uk/site/39331</a>	Robertson 1984, 440
Argyll & Bute	Largiemore	Denarius of Trajan	<a href="http://canmore.org.uk/site/38369">http://canmore.org.uk/site/38369</a>	Robertson 1984, 410
Argyll & Bute	Campbeltown	Denarius of Trajan		Robertson 1984, 410
East Dunbartonshire	Clachan Glen, Campsie	Denarius of Hadrian	<a href="http://canmore.org.uk/site/45318">http://canmore.org.uk/site/45318</a>	MacDonald 1918, 245
East Dunbartonshire	Baldernock Churchyard	Denarius of Trajan	<a href="http://canmore.org.uk/site/44411">http://canmore.org.uk/site/44411</a>	Robertson 1963, 149
North Lanarkshire	Arniebog, Cumbernauld	Denarius of Hadrian	<a href="http://canmore.org.uk/site/45814">http://canmore.org.uk/site/45814</a>	Robertson 1952, 158
North Lanarkshire	Glenboig	Silver coin of Ptolemy XIII	<a href="http://canmore.org.uk/site/45776">http://canmore.org.uk/site/45776</a>	Robertson 1984, 413
North Lanarkshire	Airdrie	Denarius of Flavius		Robertson 1984, Table 4
<b>District:</b>	<b>Site:</b>	<b>Information</b>	<b>Canmore ID:</b>	<b>Source:</b>

North Lanarkshire	Lilly Loch, Shotts	Denarius of Marcus Aurelius	<a href="http://canmore.org.uk/site/46729">http://canmore.org.uk/site/46729</a>	Robertson 1974, 125
North Lanarkshire	Shotts	Denarius of Marcus Aurelius	<a href="http://canmore.org.uk/site/46732">http://canmore.org.uk/site/46732</a>	Robertson 1963, 145
Glasgow, City of	Alexandra Park	Antoninianus of Probus	<a href="http://canmore.org.uk/site/45015">http://canmore.org.uk/site/45015</a>	Robertson 1984, 413
Glasgow, City of	Possilpark	Antoninianus of Gordian III	<a href="http://canmore.org.uk/site/44111">http://canmore.org.uk/site/44111</a>	Robertson 1974, 124
Glasgow, City of	Unknown Location	Gold coin of Nero		Robertson 1984, Table 4
Glasgow, City of	Canon Lane	Denarius of unknown emperor	<a href="http://canmore.org.uk/site/45004">http://canmore.org.uk/site/45004</a>	MacDonald 1924, 328
Glasgow, City of	Broomielaw	Denarius of Constantius II	<a href="http://canmore.org.uk/site/44325">http://canmore.org.uk/site/44325</a>	MacDonald 1918, 244
Glasgow, City of	London Road	Antoninianus of Diocletian	<a href="http://canmore.org.uk/site/45064">http://canmore.org.uk/site/45064</a>	Robertson 1952, 145
Glasgow, City of	King's Park	Worn antoninianus of Gallienus	<a href="http://canmore.org.uk/site/44311">http://canmore.org.uk/site/44311</a>	Robertson 1963, 143
<b>District:</b>	<b>Site:</b>	<b>Information</b>	<b>Canmore ID:</b>	<b>Source:</b>

Renfrewshire	Stanely Reservoir, Paisley	Denarius of Antoninus Pius	<a href="https://canmore.org.uk/site/43149/paisley-stanely-reservoir">https://canmore.org.uk/site/43149/paisley-stanely-reservoir</a>	Robertson 1984, 433, 445
Edinburgh, City of	Dalmeny	Denarius of Marcus Aurelius		Robertson 1984, Table 3
Edinburgh, City of	Kaimes Hill	Denarius of Severus	<a href="http://canmore.org.uk/site/50329">http://canmore.org.uk/site/50329</a>	Robertson 1984, Table 3
Edinburgh, City of	Balerno	Antoninianus of Gallienus (1) Antoninianus of Salonina (1)	<a href="http://canmore.org.uk/site/50301">http://canmore.org.uk/site/50301</a>	Robertson 1984, 413
Edinburgh, City of	Sighthill	Antoninianus of Trebonianus Gallus	<a href="http://canmore.org.uk/site/50698">http://canmore.org.uk/site/50698</a>	Robertson 1963, 146
Edinburgh, City of	Corstorphine	Antoninianus of Valerian	<a href="http://canmore.org.uk/site/52655">http://canmore.org.uk/site/52655</a>	Robertson 1952, 146
Edinburgh, City of	Silverknowes Avenue	Denarius of Faustina II	<a href="http://canmore.org.uk/site/52064">http://canmore.org.uk/site/52064</a>	Robertson 1963, 145
Edinburgh, City of	High Street	Denarii of Severus (2)	<a href="http://canmore.org.uk/site/52539">http://canmore.org.uk/site/52539</a>	MacDonald 1918, 240
Edinburgh, City of	Holyrood Abbey	Denarius of Marcus Aurelius	<a href="http://canmore.org.uk/site/52369">http://canmore.org.uk/site/52369</a>	Robertson 1984, 433- 434
<b>District:</b>	<b>Site:</b>	<b>Information</b>	<b>Canmore ID:</b>	<b>Source:</b>

Edinburgh, City of	Hay Road	Denarius of Caracalla	<a href="http://canmore.org.uk/site/52201">http://canmore.org.uk/site/52201</a>	Robertson 1984, 414
East Lothian	Musselburgh, Mayfield Place	Denarius of Trajan	<a href="http://canmore.org.uk/site/53923">http://canmore.org.uk/site/53923</a>	Robertson 1984, 412
East Lothian	Dodridge Law	Denarius of Trajan	<a href="http://canmore.org.uk/site/54795">http://canmore.org.uk/site/54795</a>	Robertson 1984, Table 2
East Lothian	Gullane Golf Course	Denarius of Hadrian	<a href="http://canmore.org.uk/site/55048">http://canmore.org.uk/site/55048</a>	Robertson 1952, 146
East Lothian	North Berwick Links	Denarius of Caracalla	<a href="http://canmore.org.uk/site/56672">http://canmore.org.uk/site/56672</a>	MacDonald 1918, 235
East Lothian	Mill Burn, North Berwick	Worn antinianus of Dioceltian	<a href="http://canmore.org.uk/site/56681">http://canmore.org.uk/site/56681</a>	Robertson 1952, 146
Lothian	Penicuik	Gold coin of Vitellius		Robertson 1984, Table 4
Lothian	Dunbar	Gold coin of Nero	<a href="http://canmore.org.uk/site/57638">http://canmore.org.uk/site/57638</a>	Robertson 1984, Table 4
Midlothian	Bilston	Antoninianus of Claudius II	<a href="http://canmore.org.uk/site/51841">http://canmore.org.uk/site/51841</a>	Robertson 1984, 414
<b>District:</b>	<b>Site:</b>	<b>Information</b>	<b>Canmore ID:</b>	<b>Source:</b>

South Lanarkshire	Belstane	Denarius of Faustina I (c. 1834)	<a href="http://canmore.org.uk/site/46691">http://canmore.org.uk/site/46691</a>	Robertson 1984, 442, Table 5
South Lanarkshire	Bothwell, Fallside Road	Antoninianus of Gallienus	<a href="http://canmore.org.uk/site/45664">http://canmore.org.uk/site/45664</a>	Robertson 1974, 123
South Lanarkshire	Carluke	Gold coin of Nero (1) Gold coin of Otho (1)		Robertson 1984, Table 4
South Lanarkshire	Castle Hill	Denarius of Faustina I	<a href="http://canmore.org.uk/site/46574">http://canmore.org.uk/site/46574</a>	Robertson 1984, Table 3
South Lanarkshire	Biggar	Gold coin of Vespasian	<a href="http://canmore.org.uk/site/48647">http://canmore.org.uk/site/48647</a>	Robertson 1984, Table 3
South Lanarkshire	Chapelton	Antoninianus of Gordian III	<a href="http://canmore.org.uk/site/44820">http://canmore.org.uk/site/44820</a>	Robertson 1974, 123
South Lanarkshire	Cadzow	Denarius of Marcus Aurelius	<a href="http://canmore.org.uk/site/45727">http://canmore.org.uk/site/45727</a>	Archer and Henderson 1989, 59
South Lanarkshire	Torfoot	Denarius of Antoninus Pius	<a href="http://canmore.org.uk/site/44772">http://canmore.org.uk/site/44772</a>	Robertson 1984, 418
East Ayrshire	Galston	Worn denarius of Vespasian	<a href="http://canmore.org.uk/site/42776">http://canmore.org.uk/site/42776</a>	Robertson 1974, 120

District:	Site:	Information	Canmore ID:	Source:
East Ayrshire	Cumnock	Denarius of Faustina II	<a href="http://canmore.org.uk/site/43603">http://canmore.org.uk/site/43603</a>	Robertson 1963, 138
North Ayrshire	Saltcoats	Denarius of Faustina (?)	<a href="https://canmore.org.uk/site/41106/saltcoats">https://canmore.org.uk/site/41106/saltcoats</a>	Robertson 1984, Table 3
North Ayrshire	Stevenston	Billon of Alexandria	<a href="http://canmore.org.uk/site/41067">http://canmore.org.uk/site/41067</a>	MacDonald 1934, 31
North Ayrshire	Irvine	Worn denarius of Antoninus Pius	<a href="http://canmore.org.uk/site/41927">http://canmore.org.uk/site/41927</a>	Robertson 1963, 138
South Ayrshire	Troon	Worn antoninianus of Victorinus	<a href="http://canmore.org.uk/site/42012">http://canmore.org.uk/site/42012</a>	Robertson 1974, 120
Scottish Borders	Torwoodlee Broch	Denarius of Titus	<a href="http://canmore.org.uk/site/54353">http://canmore.org.uk/site/54353</a>	Robertson 1984, Table 3
Scottish Borders	Eildon	Denarius of Hadrian	<a href="http://canmore.org.uk/site/55668">http://canmore.org.uk/site/55668</a>	Robertson 1984, Table 3
Scottish Borders	Hawkley Haugh, Dryburgh	Denarius of Vespasian	<a href="https://canmore.org.uk/site/55610/hawkly-haugh-dryburgh">https://canmore.org.uk/site/55610/hawkly-haugh-dryburgh</a>	Robertson 1963, 139-140
Scottish Borders	Fairnington	Denarius of Geta	<a href="http://canmore.org.uk/site/56974">http://canmore.org.uk/site/56974</a>	MacDonald 1924, 327

District:	Site:	Information	Canmore ID:	Source:
Scottish Borders	Kelso	Gold coin of Nero (1) Gold coin of Antoninus Pius (1)	<a href="http://canmore.org.uk/site/58442">http://canmore.org.uk/site/58442</a>	Robertson 1984, 437, 445, Tables 4 & 5
Scottish Borders	Trowpenny	Denarius of Severus	<a href="http://canmore.org.uk/site/56973">http://canmore.org.uk/site/56973</a>	MacDonald 1934, 30
Scottish Borders	Jedburgh, House Market	Billon of Alexandria	<a href="http://canmore.org.uk/site/57041">http://canmore.org.uk/site/57041</a>	Robertson 1984, 436, 445
Scottish Borders	Edgerston	Denarius of Trajan	<a href="http://canmore.org.uk/site/56917">http://canmore.org.uk/site/56917</a>	Robertson 1984, Table 3
Scottish Borders	Teviotdale	Gold coin of Vespasian (1) Gold coin of Domitian (1)		Robertson 1984, Table 3
Scottish Borders	Cavers	Denarius of Hadrian	<a href="http://canmore.org.uk/site/370233">http://canmore.org.uk/site/370233</a>	TT 2019; TT:2015/19
Dumfries & Galloway	Slateheugh	Worn antoninianus of Gallienus (1) Worn antoninianus of Tetricus II	<a href="http://canmore.org.uk/site/63108">http://canmore.org.uk/site/63108</a>	Robertson 1974, 128
Dumfries & Galloway	Urr	Denarius of Tiberius	<a href="http://canmore.org.uk/site/64982">http://canmore.org.uk/site/64982</a>	Robertson 1984, 431
Dumfries & Galloway	Lochside	Antoninianus of Probus	<a href="http://canmore.org.uk/site/65598">http://canmore.org.uk/site/65598</a>	Robertson 1974, 121

District:	Site:	Information	Canmore ID:	Source:
Dumfries & Galloway	Dumfries	Denarius of unknown emperor	<a href="http://canmore.org.uk/site/65584">http://canmore.org.uk/site/65584</a>	Robertson 1963, 171
Dumfries & Galloway	Langholm, Wauchope Bridge	Gold coin of Otho	<a href="http://canmore.org.uk/site/67652">http://canmore.org.uk/site/67652</a>	Robertson 1984, Table 4
Dumfries & Galloway	Irvine House	Denarius of Antoninus Pius	<a href="http://canmore.org.uk/site/67711">http://canmore.org.uk/site/67711</a>	MacDonald 1934, 30
Dumfries & Galloway	Canonbie Glebe	Gold coin of Nero	<a href="http://canmore.org.uk/site/67526">http://canmore.org.uk/site/67526</a>	Robertson 1984, Table 4



**Appendix 11:****Index of Single Coin Finds from a Roman Context:**

District:	Site:	Information:	Canmore ID:	Source:
Aberdeenshire	Raedykes	A silver coin of the Ptolomies	<a href="http://canmore.org.uk/site/37150">http://canmore.org.uk/site/37150</a>	Robertson 1963, 142
Angus	Kinnell	Gold coin of Antoninus Pius		Robertson 1984, Table 4
Angus	Cardean	2 slightly worn <i>denarii</i> of Vespasian	<a href="http://canmore.org.uk/site/30689">http://canmore.org.uk/site/30689</a>	Robertson 1984, 407
Perth & Kinross	Lintrose	Republican <i>denarius</i> (1) <i>Denarius</i> of Faustina (1)	<a href="http://canmore.org.uk/site/30598">http://canmore.org.uk/site/30598</a>	Robertson 1984, Table 2
Perth & Kinross	Carpow	<i>Denarius</i> of Geta (1) Corroded <i>denarius</i> of Severus (1)	<a href="http://canmore.org.uk/site/82392">http://canmore.org.uk/site/82392</a>	Zealand 1992, 75; Bateson 1990, 166
Perth & Kinross	Carey	<i>Denarius</i> of Titus, discovered 1895	<a href="http://canmore.org.uk/site/27959">http://canmore.org.uk/site/27959</a>	MacDonald 1918, 246
Perth & Kinross	Fendoch	<i>Denarius</i> of Galba	<a href="http://canmore.org.uk/site/26132">http://canmore.org.uk/site/26132</a>	Robertson 1984, Table 2

District:	Site:	Information:	Canmore ID:	Source:
Perth & Kinross	Dalginross	Denarius of Domitian (1) found before 1786 Denarius of Severus (1) Gold coin of Vespasian (1)	<a href="http://canmore.org.uk/site/24832">http://canmore.org.uk/site/24832</a>	Robertson 1984, Table 2
Perth & Kinross	Strageath	Worn legionary denarius of Mark Anthony (1) Worn denarius of Domitian (1) Worn denarius of Hadrian (1)  1979 excavations: Denarius of Mark Anthony (1) Denarii of Vespasian (3) Denarius of Hadrian (1)	<a href="http://canmore.org.uk/site/25296">http://canmore.org.uk/site/25296</a>	Robertson 1984, 408-409
Renfrewshire	Bishopton, Whitemoss	Worn denarius of Nero (1) Denarius of Vespasian (1) Denarius of Domitian (1) from excavations between 1952-57	<a href="http://canmore.org.uk/site/43341">http://canmore.org.uk/site/43341</a>	Robertson 1984, 409

East Dunbartonshire	Bearsden	Worn antoninianus of Numerian (1) donated 1957	<a href="http://canmore.org.uk/site/44533">http://canmore.org.uk/site/44533</a>	Robertson 1963, 140
District:	Site:	Information:	Canmore ID:	Source:
East Dunbartonshire	Cadder	Denarius of Galba (1) Denarius of Trajan (1)	<a href="http://canmore.org.uk/site/45247">http://canmore.org.uk/site/45247</a>	Robertson 1984, Table 1
East Dunbartonshire	Kirkintilloch	Worn denarius of Vespasian	<a href="http://canmore.org.uk/site/45242">http://canmore.org.uk/site/45242</a>	MacDonald 1934, 28
East Dunbartonshire	Auchendavy	Gold coin of Trajan	<a href="http://canmore.org.uk/site/45201">http://canmore.org.uk/site/45201</a>	Robertson 1984, Table 1
North Lanarkshire	Croy Hill	Denarius of Trajan (1) Denarius of Domitian (1)	<a href="http://canmore.org.uk/site/45875">http://canmore.org.uk/site/45875</a>	Robertson 1984, 406
North Lanarkshire	Westerwood	Denarius of Hadrian	<a href="http://canmore.org.uk/site/45870">http://canmore.org.uk/site/45870</a>	Robertson 1984, Table 1
Falkirk	Castlecary	Denarius of Hadrian (1) found in 1771. Denarius of Trajan (1) found in 1907	<a href="http://canmore.org.uk/site/45828">http://canmore.org.uk/site/45828</a>	MacDonald 1918, 223
Falkirk	Rough Castle	Denarius of Mark Antony	<a href="http://canmore.org.uk/site/46803">http://canmore.org.uk/site/46803</a>	Robertson 1984, Table 1

Falkirk	Lochlands	Denarius of Hadrian	<a href="http://canmore.org.uk/site/46972">http://canmore.org.uk/site/46972</a>	Robertson 1984, Table 2
Falkirk	Falkirk	Corroded, possibly burned, denarius of Domitian		Robertson 1984, 407
District:	Site:	Information:	Canmore ID:	Source:
Falkirk	Carriden	Gold coin of Vespasian	<a href="http://canmore.org.uk/site/49589">http://canmore.org.uk/site/49589</a>	MacDonald 1918, 222
Edinburgh, City of	Cramond	Worn denarius of Severus (1) Worn denarius of Sabina (1) Worn denarius of Severus (1) Antoninianus of Tetricus II (1) All isolated finds	<a href="http://canmore.org.uk/site/50409">http://canmore.org.uk/site/50409</a>	Robertson 1984, 409
Edinburgh, City of	Cramond House	Occasional finds from surrounding area: Denarius of Vespasian (1) Denarii of Trajan (3) Denarii of Hadrian (6) Denarii of Antoninus Pius (2) Denarius of Faustina Senior (1) Denarius of Marcus Aurelius (1) Denarius of Faustina Jnr	<a href="http://canmore.org.uk/site/50414">http://canmore.org.uk/site/50414</a>	MacDonald 1918, 215

		(1) Denarii of Severus (4) Denarii of Julia Domna (2) Denarius of Plautilla (1) Denarii of Geta (2)		
District:	Site:	Information:	Canmore ID:	Source:
East Lothian	Musselburgh	Denarius of Trajan (1) – 1953 Denarius of Hadrian (1) – 1974 From 1976-1977 excavations: Denarius of Mark Antony (1) Worn denarius of Vespasian (1) Worn denarius of Hadrian (1) Corroded denarius of Antoninus Pius (1) Worn antoninianus of Gallienus (1)	<a href="http://canmore.org.uk/site/53871">http://canmore.org.uk/site/53871</a>	Robertson 1963, 136; Robertson 1984, 408
East Ayrshire	Loudon Hill	1831: Denarius of Augustan (1) Denarii of Domitian (2) Separate finds	<a href="http://canmore.org.uk/site/44771">http://canmore.org.uk/site/44771</a>	Abdy 2002, 190, 193, 195; Robertson 1984, Table 2

South Lanarkshire	Castledykes	Worn denarius of Trajan	<a href="http://canmore.org.uk/site/47721">http://canmore.org.uk/site/47721</a>	Robertson 1984, 407
South Lanarkshire	Crawfordjohn	Denarius of Marcus Aurelius	<a href="http://canmore.org.uk/site/46447">http://canmore.org.uk/site/46447</a>	MacDonald 1918, 243
Scottish Borders	Lyne Fort	Denarius of Titus	<a href="http://canmore.org.uk/site/50065">http://canmore.org.uk/site/50065</a>	MacDonald 1918, 216
Scottish Borders	Oakwood	Denarius of Vespasian	<a href="http://canmore.org.uk/site/54330">http://canmore.org.uk/site/54330</a>	Robertson 1984, Table 2
District:	Site:	Information:	Canmore ID:	Source:
Dumfries & Galloway	Glenlochar House	Worn denarius of Trajan (1) Denarius of Hadrian (1)	<a href="http://canmore.org.uk/site/64680">http://canmore.org.uk/site/64680</a>	Robertson 1963, 135; Robertson 1984, Table 2
Dumfries & Galloway	Birrens	Worn denarius of Domitian	<a href="http://canmore.org.uk/site/67099">http://canmore.org.uk/site/67099</a>	Robertson 1984, 407

**Appendix 12:****The Debasement of Silver**

Year:	Action:	Weight	Purity
211 BC	Denarius first struck.	4.55 grams	95-98%
200 BC	Debased.	3.9 grams	95-98%
14-37 AD	Increased purity by Tiberius.	3.9 grams	97.5-98%
64-68 AD	Debased by Nero to closely match the Greek drachma, 64 AD.	3.41 grams	93.5%
148-161 AD	Debased under Antonius Pius.	3.41 grams	83.5%
193-235 AD	Debased under several emperors.	3.41 grams	78.5% - 50%
212 AD	Caracalla introduces the <i>antoninianus</i> .	5.1 grams	52%
241 AD	Dramatic debasement under Gordian III.	3.41 grams	48%
274 AD	Aurelian reform. Minting of the <i>aurelianus</i> , or double denarius.	3.41 grams	5%

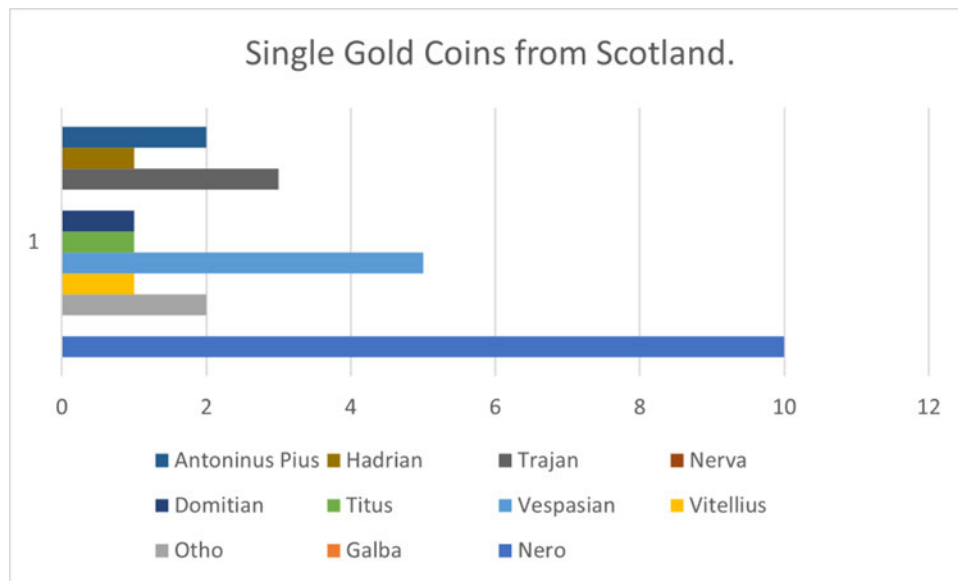
## All That Glitters

Year:	Action:	Weight	Purity
276 AD	Tacitus doubled the silver content, lasting only for a short time.	3.41 grams	10%
301 AD	Diocletian's Monetary Reforms		

*Source: (Sutherland, 1961) (Bransbourg, 2020)*

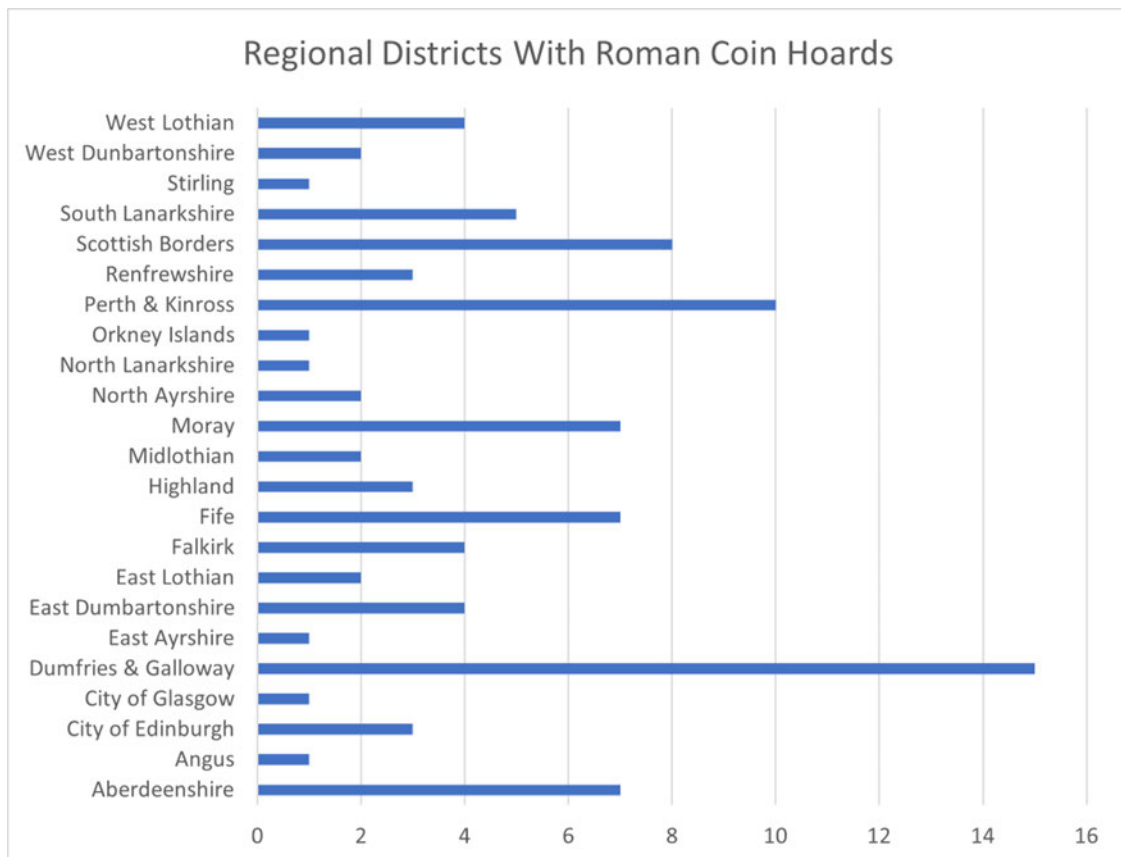


## Appendix 13:



*Gold Coin Finds Arranged by Emperor. Chart prepared by author.*

## Appendix14:



*Geographical Distribution of Roman Coin Hoards. Chart prepared by author.*

## Appendix 15: 1 Roman Sites

Flavian Dynasty Hoards 69 – 96 AD:

Appendix 15: 1A

Dalswinton, Dumfries & Galloway:

Emperor	Date	Denomination	Total
Republic	Pre 45 BC	<i>Denarii</i>	3
Mark Antony	42 – 30 BC	<i>Denarius</i>	1
Tiberius	14 – 37 AD	<i>Denarii</i>	3
Domitian	81 – 96 AD	<i>Denarius</i>	1
Uncertain Reign (Fragment)	Uncertain	<i>Denarius</i>	1
Total			9

Source: (Robertson 1984, Table 1)

Appendix 15: 1B

Loudon Hill, East Ayrshire:

Emperor	69	Denomination	Total
Augustus	27 BC - 14 AD	<i>Denarius</i>	1
Domitian	81 – 96 AD	<i>Denarii</i>	2
Total			3

Source: (Robertson 1984, Table 2)

Appendix 15. 1C

Roman Elginhaugh, Midlothian, Aberdeenshire

Emperor	Date	Denomination	Total
Republic	<i>Pre-45 BC</i>	<i>Denarius</i>	25
Republic, Mark Antony	<i>42 – 30 BC</i>	<i>Denarius</i>	10

## All That Glitters

Nero	54 – 68 AD		1
Vespasian	69 – 79 AD	<i>Denarius</i>	7
Domitian (for)			1
Total			44

Source: Hanson 1987, 268-72; Bateson 1990, 167; MacDonald 1918, 203-276; Bateson & Hanson 1990; <https://chre.ashmus.ox.ac.uk/hoard/1334>.

Appendix 15: 2

Nerva-Antonine Hoards 96 – 192 AD

Appendix 15: 2A

Roman, Whitemoss, Bishopton, Renfrewshire:

Emperor	Date	Denomination	Total
Nero	54 – 68 AD	<i>Denarius</i>	1
Vespasian	69-79 AD	<i>Denarius</i>	1
Domitian	81-96 AD	<i>Denarius</i>	1
Total			3

Source: Robertson 1984, Table 2

Appendix 15: 2B

Appendix 15: 2C

Roman Site, Balmuirdy, Glasgow, City of:

Emperor	Date	Denomination	Total
Mark Antony	42-30 AD	Denarius	1
Vitellius	69 AD	Denarius	1
Trajan	98-117 AD	Denarius	1
Hadrian	117-138 AD	Denarius	1
Total			4

Source: (Robertson 1984, Table 1)

Appendix 15: 2D

Cowie Moss, Fetteresso, Aberdeenshire

Emperor	Date	Denomination	Total
Vespasian	69 – 79 AD	Denarius	(1) ?
Titus	79 – 81 AD	Denarius	Possible
Domitian	81 – 96 AD	Denarius	Possible
Nerva	96 – 98 AD	Denarius	Possible
Trajan	98 – 117 AD	Possible Denarius	(1) ?

Hadrian	117 – 138 AD	Denarius	Possible
<b>Emperor</b>	<b>Date</b>	<b>Denomination</b>	<b>Total</b>
Antoninus Pius	138 – 161 AD	Denarius	(1) ? Possible
Faustina I			
<i>Antoninus Philosophus</i>	<i>AD</i>	<i>Denarius</i>	<i>Possible</i>
Marcus Aurelius	161 – 180 AD	Denarius	1 (?) Possible
Lucius Verus	161 – 169 AD	Denarius	<i>Possible</i>
Lucilla			
Commodus	180 – 192 AD	Denarius	1 (?) 1 (?)
Crispina			
Severus	193 – 211 AD	Denarius	<i>Possible</i>
Total		Discovered 1843 Unknown Total	6 (?)

Source: (Robertson 2000, 77; MacDonald 1918, 203-276).

## Appendix 15: 2E

Ardoch, Perth &amp; Kinross

Emperor	Date	Denomination	Total
Nero	54-68 AD	Denarius	1
Vespasian	69-79 AD	Denarius	3
Domitian	81-96 AD	Denarius	1
Trajan	98 – 117 AD	Denarius	1
Hadrian	117 – 138 AD	Denarius	1
Antoninus Pius	138 – 161 AD	Denarius	1
Total			8

*Source: (Robertson 1984)*

## Appendix 15: 2F

Briglands, Rumbling Bridge, Perth &amp; Kinross

Emperor	Date	Denomination	Total
Nero	54 - 68 AD	<i>Denarii</i>	2
Otho	69 AD	<i>Denarius</i>	1
Vitellius	69 AD	<i>Denarii</i>	2
Vespasian	69 – 79 AD	<i>Denarii</i>	6
Titus		<i>Denarii</i>	2
Julia Titi		<i>Denarius</i>	1
Domitian		<i>Denarii</i>	2
Titus	79 – 81 AD	<i>Denarius</i>	1
Domitian	81 – 96 AD	<i>Denarii</i>	7
Nerva	96 – 98 AD	<i>Denarii</i>	3
Trajan	98 – 117 AD	<i>Denarii</i>	25 (+ 1 Possible)

Hadrian	117 – 138 AD	<i>Denarii</i>	21
Sabina		<i>Denarius</i>	1
Emperor	Date	Denomination	Total
Antoninus Pius	138 – 161 AD	<i>Denarii</i>	32 (1 Deified)
Faustina I		<i>Denarii</i>	12 (10 Deified)
Marcus Aurelius		<i>Denarii</i>	6 (1 Deified)
Faustina II		<i>Denarii</i>	4 (2 Deified)
Marcus Aurelius	161 – 180 AD	<i>Denarii</i>	21 (1 discovered 1972)
Faustina II		<i>Denarii</i>	11
Commodus		<i>Denarius</i>	1
Lucius Verus	161 – 169 AD	<i>Denarii</i>	6 (1 Deified)
Lucilla		<i>Denarii</i>	4
Commodus	180 – 192 AD	<i>Denarii</i>	7
Crispina		<i>Denarius</i>	1
Total			180

Source: (MacDonald 1918, 203-276).



Appendix 15: 2G

Strageath, Perth & Kinross

Emperor	Date	Denomination	Total
Mark Antony	42 – 30 BC	Denarii	2
Vespasian	69-79 AD	Denarii	4
Domitian	81-96 AD	Denarius	1
Hadrian	117 – 138 AD	Denarii	2
Total			9

Source: (Robertson 1984, 405-448, Table 2; MacDonald 1918, 203-276)

Appendix 15: 2H

Castledykes, South Lanarkshire

Emperor	Date	Denomination	Total
Nero	54-68 AD	Denarius	1
Vespasian	69-79 AD	Denarii	2
Trajan	98-117 AD	Denarius	1
Hadrian	117-138 AD	Denarius	1
Total			5

Source: (Robertson 1984, Table 2)

Appendix 15: 2I

Crawford, South Lanarkshire

Emperor	Date	Denomination	Total
Nero	54-68 AD	Denarius	1
Titus	79-81 AD	Denarius	1
Trajan	98-117 AD	Denarius	1
Hadrian	117-138 AD	Denarius	1
Total			4

Source: (Maxwell 1974, 183-185; Robertson 1984, 405-448)

Appendix 15: 2J

Inveresk, East Lothian

Emperor	Date	Denomination	Total
Mark Antony		Denarius	1
Vespasian	69-79 AD	Gold	1
		Denarii	2
Trajan	98 – 117 AD	Denarii	3
		Gold	1
Hadrian	117 – 138 AD	Denarii	3
Antoninus Pius	138 – 161 AD	Denarius	1
Faustina Jnr (Daughter)		Denarius	1
Total			11 + 2 Gold Coins

Source: (MacDonald 1918; Robertson 1984)

Appendix 15: 2K

Mumrills, Falkirk

Emperor	Date	Denomination	Total
Mark Antony	42-30 AD	Denarii	2
Nero	54-68 AD	Denarius	1
Vitellius	69 AD	Denarius	1
Vespasian	69-79 AD	Denarius	1
Trajan	98-117 AD	Denarii	2
Antoninus Pius	138-161 AD	Denarii	3
Uncertain Reign	?	Denarius	1
Total			11

Source: (Robertson 1984, Table 1)

## Appendix 15: 2L

## Castlecary, Falkirk

Emperor	Date	Denomination	Total
Mark Antony	42-30 AD	Denarius	1
Trajan	98-117 AD	Denarii	2
Hadrian	117-138 AD	Denarius	1
Total			4

Source: (Robertson 1984, Table 1)

## Appendix 15: 2M

## Camelon, Falkirk

Emperor	Date	Denomination	Total
Republic:	45 BC	Denarius	1
Republic: Mark Antony	42-30	Denarii	3
Augustus	27 BC – 14 AD	Denarius	1
Vespasian	69 – 79 AD	Denarii	14
Domitian	81 – 96 AD	Denarii	4
Nerva	96 – 98 AD	Denarii	3
Trajan	98 – 117 AD	Denarii	7
Plotina (Wife)		Gold	1
Hadrian	117 – 138 AD	Denarii	5

Antoninus Pius	138 – 161 AD	Denarius	1
Total			39 + 1 Gold Coin

*Source: (MacDonald 1918; Robertson 1984, Table 2)*

## Appendix 15: 2N

### Bearsden, East Dunbartonshire

Emperor	Date	Denomination	Total
Mark Antony	42-30 BC	Denarius	1
Trajan	98-117 AD	Denarii	2
Hadrian	117-138 AD	Denarius	1
Total			4

*Source: (Robertson 1984, 406)*

Appendix 15: 20

Bar Hill, East Dunbartonshire

Emperor	Date	Denomination	Total
Mark Antony	42-30 BC	Denarius	1
Vespasian	69-79 AD	Denarii	2
Domitian	81-96 AD	Denarius	1
Nerva	96-98 AD	Denarius	1
Trajan	98-117 AD	Denarii	9
Hadrian	117-138 AD	Denarii	3
Antoninus Pius	138-161 AD	Denarius	1
Marcus Aurelius	161-180 AD	Denarius	1
Faustin II		Denarius	1
Uncertain Reign		Denarii	5
Total			25

Source: (Robertson 1984, 406, Table 1)

Appendix 15: 2P

Kirkintilloch, East Dunbartonshire

Emperor	Date	Denomination	Total
Vespasian	69-79 AD	Denarii	2
Titus	79-81 AD	Denarius	1
Domitian	81-96 AD	Denarii	5
Nerva	96-98 AD	Denarii	2
Trajan	98-117 AD	Denarii	16
Hadrian	117-138 AD	Denarii	20
Faustina II		Denarius	1
Total			47

Source: (MacDonald 1918).

Appendix 15: 2Q

Clydebank, Golden Hill, Duntocher, West Dunbartonshire

Emperor	Date	Denomination	Total
Vespasian	69-79 AD	Gold	1
Domitian	81-96 AD	Denarius	1
Trajan	98-117 AD	Denarius	1
Hadrian	117-138 AD	Gold	1
Atoninus Pius	138-161 AD		
Faustina I		Denarius	1
Total			3 + 2 Gold Coins

Source: (Robertson 1984, 411, Table 1)

Appendix 15: 2R

Old Kilpatrick, West Dunbartonshire

Emperor	Date	Denomination	Total
Vespasian	69-79 AD	Denarius	1
Domitian	81-96 AD	Denarii	2
Trajan	98-117 AD	Denarius	1
Hadrian Aelius (Son)	117-138 AD	Denarius	1
Atoninus Pius	138-161 AD	Denarius	1
Faustina l		Denarius	1
Marcus Aurelius Lucilla (Daughter)	161-180 AD	Denarius	1
Total			8

Source: (Robertson 1984, Table 1)



Appendix 15: 2S

Birrens, Dumfries & Galloway

Emperor	Date	Denomination	Total
Mark Antony (Republic)	42-30 BC	Denarii	7
Vespasian	69-79 AD	Gold Coin	1
Domitian	81 - 96 AD	Denarii	2
Nerva	96 – 98 AD	Denarius	1
Trajan	98-117 AD	Denarii	3
Hadrian	117 – 138 AD	Denarius	1
Antoninus Pius	138 - 161 AD	Denarius	1
Faustina I		Denarius	1
Severus Alexander	222-235 AD	Denarius	1
Constantius I	305-306 AD	Gold	1
<i>Uncertain Reign</i>		Denarii	6
Total			23 + 2 Gold Coins

Source: (MacDonald 1918).

Appendix 15: 2T

Birrenswark, Burnswark, Dumfries & Galloway

Emperor	Date	Denomination	Total
Nero	54-68 AD	Denarius	1
Vespasian Caracalla	69-79 AD	Denarius	1
Trajan	98-117 AD	Denarii	2
Caracalla	211-217 AD	Denarius	1
Total			5

Source: (MacDonald 1918).

## Appendix 15: 2U

## Gallaberry, Dumfries &amp; Galloway

Emperor	Date	Denomination	Total
Hadrian	117-138 AD	Denarius	1
Antoninus Pius	138-161 AD	Denarius	1
Uncertain Reign		Denarius	1
Total			3

Source: (Robertson 1984, Table 1: TTU (SC) 09/12/13)

## Appendix 15: 2V

## Newstead, Scottish Borders

Emperor	Date	Denomination	Total
Republic:	45 BC	<i>Denarii</i>	11
Republic: Mark Antony	42-30 BC	<i>Denarii</i>	8
Augustus	27 BC – 14 AD	<i>Denarius</i>	1
Tiberius	14 – 37 AD	<i>Denarii</i>	2
Nero	54 – 68 AD	<i>Denarius</i>	1
		<i>Gold</i>	2
Galba	68 – 69 AD	<i>Denarii</i>	2
Otho	69 AD	<i>Denarius</i>	1
Vitellius	69 AD	<i>Denarius</i>	1
Vespasian	69 – 79 AD	<i>Denarii</i>	26
Titus	79 – 81 AD	<i>Denarii</i>	3
		<i>Gold</i>	1
Domitian	81 – 96 AD	<i>Denarii</i>	14
Nerva	96 – 98 AD	<i>Denarii</i>	3
Trajan	98 – 117 AD	<i>Denarii</i>	18
		<i>Gold</i>	2

Hadrian	117 – 138 AD	<i>Denarii</i>	24
Sabinan (Wife)		<i>Denarii</i>	2
Emperor	Date	Denomination	Total
Antoninus Pius	138 – 161 AD	<i>Denarii</i>	7
		<i>Gold</i>	1
Faustina Jnr (Daughter)		<i>Denarii</i>	6
Commodus	180 – 192 AD		
Crispina (Wife)		<i>Denarius</i>	1
Marcus Aurelius	161-180 AD	<i>Denarius</i>	1
Faustina II (Wife)		<i>Denarius</i>	1
Lucius Verus	AD	<i>Denarius</i>	1
Total			134 + 6 Gold Coins

Source: (MacDonald 1918; Robertson, 1984, Table 2)

Appendix 15: 3

Severan Dynasty, 193 – 295 AD

Appendix 15: 3A

Cramond, City of Edinburgh: 1954-1966

Emperor	Date	Denomination	Total
Vespasian	AD 69 – 79	<i>Denarius</i>	1
Titus	AD 79-81	<i>Denarius</i>	1
Domitian	AD 81 – 96	<i>Denarii</i>	2
Trajan	AD 98-117	<i>Denarius</i>	1
Hadrian	AD 117-138	<i>Denarius</i>	1
Antoninus Pius	AD 138 – 161	<i>Denarii</i>	3
Faustina II (Daughter)		<i>Denarii</i>	2
Marcus Aurelius	AD 161-180	<i>Denarii</i>	5
Faustina II (Wife)			
Lucius Verus	AD 161-162	<i>Denarii</i>	2
Commodus	AD 180-192	<i>Denarius</i>	1
Septimus Severus	AD 193-211	<i>Denarii</i>	12
Julia Domna (Wife)		<i>Denarii</i>	5
Geta	AD 209-211	<i>Denarii</i>	2
		Gold	1
Caracalla	AD 211-217	<i>Denarius</i>	1
		Gold	1
		<i>Denarius</i>	1
Plautilla (Wife)			
Tetricus II	AD 273-274	<i>Denarius</i>	1
Total			41 + 2 Gold Coins

Source: (Rae et al. 1974; Robertson 1984)

### Appendix 15: 3B

#### Carpow, Perth & Kinross

Emperor	Date	Denomination	Total
Vespasian	69 – 79 AD	Denarius	1
Antoninus Pius Faustina I (Daughter)	138 – 161 AD	Denarius	1
Marcus Aurelius Lucilla (Daughter)	161-180 AD	Denarius	1
Septimus Severus Julia Domna (Wife)	193-211 AD	Denarii Denarius	3 1
Caracalla Plautilla (Wife)	211-217 AD	Denarii Denarius	3 1
Total			11

Source: (Rae et al. 1974; Robertson 1984)

### Appendix 15: 3C

#### Roman Kirkness, Portmoak, Perth & Kinross

Emperor	Date	Denomination	Total
Nero	54-68 AD	Denarius	1
Galba	68-69 AD	Denarii	2
Otho	69 AD	Denarius	1
Vitellius	69 AD	Denarii	2
Vespasian	69-79 AD	Denarii	6 (1 deified)
Titus	79-81 AD	Denarii	2

Domitian		Denarius	1
Domitian	81-96 AD	Denarii	2
<b>Emperor</b>	<b>Date</b>	<b>Denomination</b>	<b>Total</b>
Nerva	96-98 AD	Denarius	1
Trajan	98-117 AD	Denarii	10
Hadrian	117-138 AD	Denarii	17 (1 deified)
Sabina		Denarius	1
Antoninus Pius	138-161 AD	Denarii	19 (2 Deified)
Faustina I		Denarii	8 (All Deified)
Marcus Aurelius		Denarii	4 (1 deified)
Marcus Aurelius	161-180AD	Denarii	6
Faustina II		Denarii	6
Commodus		Denarius	1
Lucius Verus	161-169 AD	Denarii	3
Lucilla		Denarii	3
Commodus	180-192 AD	Denarii	6
Severus	193-211 AD	Denarii	2
Total		Discovered 1851	104

Source: (Robertson 2000, 78; MacDonald 1918).

## Appendix 15: 3D

Bell's Meadow, Falkirk

Emperor	Date	Denomination	Total
Republic	45 BC	Denarii	7
Mark Antony	31 BC	Denarii	17
Nero	54-68 AD	Denarii	27
Galba	68-69 AD	Denarii	14
Otho	69 AD	Denarii	7
Vitellius	69 AD	Denarii	15
Vespasian	69-79 AD	Denarii	350
Titus	79-81 AD	Denarii	63
Julia Tita		Denarius	1
Domitian	81 - 96 AD	Denarii	85
Nerva	96 – 98 AD	Denarii	19
Trajan	98-117 AD	Denarii	215
Hadrian	117 – 138 AD	Denarii	235
Sabina		Denarii	19
Aelius	136-138 AD	Denarii	5
Antoninus Pius	138 - 161 AD	Denarii	205
Faustina I		Denarii	104
Pius & Aurelius		Denarii	7
Marcus Aurelius	161-180 AD	Denarii	122
Faustina II		Denarii	100
Lucius Verus	161-169 AD	Denarii	13
Marcus Aurelius & Lucius Verus		Denarii	3
Lucilla		Denarii	15
Commodus	177-192 AD	Denarii	41
Crispina		Denarii	11
Didius Julianus	193 AD	Denarius	1

Emperor	Date	Denomination	Total
Clodius Albinus	193 AD	Denarii	6
Septimius Severus	193-211 AD	Denarii	55
Julia Domna		Denarii	34
Caracalla	198-217 AD	Denarii	33
Plautilla		Denarii	2
Geta	209-212 AD	Denarii	13
Macrinus	217-218 AD	Denarii	2
Diadumenianus	218 AD	Denarius	1
Elagabalus	218-222 AD	Denarii	27
Julia Paula		Denarius	1
Aquilia Severa		Denarius	1
Julia Soaemias		Denarii	7
Julia Maesa		Denarii	8
Alexander Severus	222-235 AD	Denarii	34
Julia Mamaea		Denarii	6
Total			1,925

Source: (MacDonald 1934).



## Appendix 16:

### Indigenous Sites:

Appendix 16: 1

Falvian Dynasty, 69 – 96 AD:

Appendix 16: 1A

Broomholm, Langholm, Dumfries & Galloway

Emperor	Date	Denomination	Total
Nero	54-68 AD	<i>Denarii</i>	4
Vespasian	69-79 AD	<i>Denarii</i>	2
Domitian	81-96 AD	<i>Denarius</i>	1
Total			7

Source: (NSA 1835, 404)

Appendix 16: 1B

Green Cairn, Angus

Emperor	Date	Denomination	Total
Galba	AD 68-69	<i>Denarii</i>	1
Unknown Emperor		Silver Medals	Unknown
Total			Unknown

Source: (Macdonald 1918, 267)

Appendix 16: 1C

Leven, Fife (Recorded 1575)

Emperor	Date	Denomination	Total
Galba	AD 68-69	<i>Denarii</i>	1
Unknown Emperors		Silver Medals	<i>A great quantity</i>
Total			Unknown

Source: (Macdonald 1918, 265-266)

Appendix 16: 2

Nerva – Antonine, 96 – 192 AD:

Appendix 16: 2A

Deskford, Moray

Emperor	Date	Denomination	Total
Otho (Victoria Othonis)	69 AD	Denarius	1 (?)
Antoninus Pius  Faustina	138-161 AD	Denarius	1 (?)
Various Emperors	AD	Denarius	1 (?)
Total		<i>Unknown Total discovered 1726</i>	c. 27 preserved

*Source: (Robertson 2000, 39)*

## Appendix 16: 2B

Elgin, Moray

Emperor	Date	Denomination	Total
Hadrian	117-138 AD		–
Sabina		Denarius	1
Antoninus Pius	138-161 AD	Denarius	1
Faustina I		Denarius	1
Total			3

*Source: Robertson 1963, 147.*

## Appendix 16: 2C

Clarkly Hill, Moray

Emperor	Date	Denomination	Total
Republic: Mark Antony	42-30 AD	Denarii	3
Otho	69 AD	Denarius	1
Vespasian	69 – 79 AD	Denarii	4
Vespasian for Titus		Denarius	1
Titus	79 – 81 AD	Denarii	4
Domitian	81 – 96 AD	Denarii	5
Nerva	96 – 98 AD	Denarius	1
Trajan	98 – 117 AD	Denarii	11
Hadrian	117 – 138 AD	Denarii	17
Hadrian for Sabina		Denarius	1
Antoninus Pius	138 – 161 AD	Denarii	12
Antoninus for Faustina		Denarii	4
Antoninus for Marcus Aurelius		Denarii	3
Antoninus & Marcus Aurelius		Denarius	1
Marcus Aurelius	161 – 180 AD	Denarii	6
Marcus Aurelius for Faustina II		Denarii	3

Lucius Verus	161-169 AD	Denarius	1
Emperor	Date	Denomination	Total
Commodus	180-192 AD		-
Commodus for Crispina		Denarius	1
Uncertain Reign	?	Denarius	6
Total			85

Source: (Holmes 2018)

## Appendix 16: 2D

### Belladrum, Highland

Emperor	Date	Denomination	Total
Domitian	81-96 AD	Denarii	7
Trajan	98-117 AD	Denarii	10
Hadrian	117-138 AD	Denarii	9
Antoninus Pius	138-161 AD	Denarii	4
Faustina I		Denarii	4
Marcus Aurelius		Denarii	3
Faustina II		Denarii	2
Total			39

Source: (Holmes 2006; Holmes 2018)

Appendix 16: 2E

Fawsyde, Aberdeenshire, Avondale, South Lanarkshire

Emperor	Date	Denomination	Total
Antoninus Pius	138-161 AD	Denarius	3 (?)
Total		<i>Total Not Known, reported as a hoard. Discovered 1800's</i>	3 (Unknown Number)

Source: Macdonald 1918, 267.

Appendix 16: 2F

Indigenous Site, Muthill, Perth & Kinross

Emperor	Date	Denomination	Total
Domitian	81-96 AD	Denarius	1 (?)
Trajan	98-117 AD	Denarius	1 (?)
Antoninus Pius	138-161 AD	Denarius	1 (?)
Faustina I			1 (?)
Commodus	180-192 AD	Denarius	1 (?)
Total		<i>Total Not Known, Discovered c. 1672</i>	5 (?)

Source: (Robertson 2000, 74).

## Appendix 16: 2G

Taymouth, Perth &amp; Kinross

Emperor	Date	Denomination	Total
Antoninus Pius	138-161 AD	Denarius	1 (?)
Marcus Aurelius	161-180 AD	Denarius	1 (?)
Total		<i>Unknown Total discovered 1755 Exact make-up is unknown.</i>	2 (?) 12 reported to have been discovered.

Source: Macdonald 1918, 264

## Appendix 16: 2H

Pitcullo, Fife

Emperor	Date	Denomination	Total
Nero	54-68 AD	Denarius	1
Domitian	81-96 AD	Denarius	1
Trajan	98-117 AD	Denarius	1
Hadrian	117-138 AD	Denarius	1
Antoninus Pius	138-161 AD	Denarius	1
Marcus Aurelius	161-180 AD	Denarius	1
Fustina II		Denarius	1
Commodus	180-192 AD	Denarius	1
Total		<i>Total Not Known, Discovered 1781</i>	8 of 19

Source: Robertson 1984, Table 1; TTU (SC) 09/12/13

Appendix 16: 2I

Aitnock Fort, North Ayrshire

Emperor	Date	Denomination	Total
Vespasian	69-79 AD	Denarius	1
Hadrian	117-138 AD	Denarius	1
Antoninus Pius	138-161 AD	Denarii	2
Total			4

*Source: Robertson 1984, Table 1; TTU (SC) 09/12/13.*

## Appendix 16: 2J

## Shotts, North Lanarkshire

Emperor	Date	Denomination	Total
Republic	45 BC	Denarius	1
Galba	68-69 AD	Denarius	1
Vespasian	69-79 AD	Denarius	1
Titus	79-81 AD	Denarius	1
Domitian	81-96 AD	Denarii	3
Trajan	98-117 AD	Denarii	6
Hadrian	117-138 AD	Denarii	5
Sabina		Denarius	1
Antoninus Pius	138-161 AD	Denarii	3
Marcus Aurelius	161-180 AD	Denarius	1
Lucius Verus	161-169 AD	Denarius	1
Lucilla		Denarius	1
Commodus	180-192 AD	Denarius	1
Crispina		Denarius	1
Total		<i>Total Not Known, Discovered 1852, 1921, 1947</i>	26

Source: Robertson 1984, Table 1; TTU (SC) 09/12/13



## Appendix 16: 2K

Torfoot, Strathaven, Avondale, South Lanarkshire

Emperor	Date	Denomination	Total
Trajan	98-117 AD	Denarius	1 (?)
Antoninus Pius	138-161 AD	Denarii	2 (?)
Faustina I		Denarius	1 (?)
Marcus Aurelius	161-180AD	Denarius	1 (?)
Commodus	180-192 AD		
Crispina		Denarius	1 (?)
<i>Various other emperors and empresses</i>		Unknown	
Total		<i>Total Not Known, reported as c. 400 Discovered 1803, 1980</i>	<i>6 (400 reported)</i>

Source: (Robertson 2000, 74)

## Appendix 16: 2L

Lanark, South Lanarkshire

Emperor	Date	Denomination	Total
Nerva	96-98 AD	Denarius	1 (?)
Trajan	98-117 AD	Denarius	1 (?)
Hadrian	117-138 AD	Denarius	1 (?)
Antoninus Pius	138-161 AD	Denarius	1 (?)
Total		<i>Unknown Total discovered 1847</i>	<i>4 (?)</i>

Source: (NSA 1835, 404)

Appendix 16: 2M

Cobbinshaw Moss, Crosswoodhill, West Lothian

Emperor	Date	Denomination	Total
Domitian	81-96 AD	Denarius	1 (?)
Trajan	98-117 AD	Denarius	1 (?)
Hadrian	117-138 AD	Denarius	1 (?)
Antoninus Pius	138-161 AD	Denarius	1 (?)
Faustina I		Denarii	2 (?)
Marcus Aurelius	161-180 AD	Denarii	3 (?)
Total		<i>No complete record. Discovered 1810.</i>	9 (?)

Source: Macdonald 1918, 262.

Appendix 16: 2N

Linlithgow, Burgh Muir, West Lothian

Emperor	Date	Denomination	Total
Antoninus Pius	138-161 AD	Denarius	1 (?)
Marcus Aurelius	161-180 AD	Denarius	1 (?)
Total		<i>Unknown Total discovered 1755 Exact make-up is unknown.</i>	2 (?) 12 reported to have been discovered.

Source: (Smellie 1782, 58 & 60).

Appendix 16: 2O

Crosswood Hill, West Calder, West Lothian

Emperor	Date	Denomination	Total
Domitian	81-96 AD	Denarius	1
Hadrian	117-138 AD	Denarius	1
Antoninus Pius Faustina I	138-161 AD	Denarius	1
Marcus Aurelius	161-180 AD	Denarius	1
Total		<i>Discovered 1810</i>	4

*Source: Scots Magazine, May 1810, 381*

Appendix 16: 2P

Broch of Lingro, Orkney Islands

Emperor	Date	Denomination	Total
Vespasian	69 AD	Denarius	1
Hadrian	117-138 AD	Denarius	1
Antoninus Pius	138-161 AD	Denarii	2
Commodus Crispina	180-192 AD	Denarii	2
Total		<i>Discovered</i>	6

*Source: Robertson 1975, 387*

Appendix 21: 2Q

Ashkirk, Scottish Borders

Appendix 16: 3

Severan Dynasty, 193 – 295 AD

Appendix 16: 3A

Hill of Megray, Fetteresso, Aberdeenshire

Emperor	Date	Denomination	Total
Galba	68-69 AD	Denarius	1
Vespasian	69-79 AD	Denarius	1
Titus			1
Trajan	98-117 AD	Denarii	2
Hadrian	117-138 AD	Denarii	3
Antoninus Pius	138-161 AD	Denarii	3
Faustina I		Denarii	2 (deified)
Marcus Aurelius		Denarius	1
Marcus Aurelius	161-180 AD	Denarii	2
Commodus	180-192 AD	Denarius	1
Crispina		Denarius	1
Albinus	193 AD	Denarius	1
Severus	193-211 AD	Denarius	1
Total		<i>Discovered 1852,</i>	20

Source: Scott 1851-54, 226.

## Appendix 16: 3B

Laurencekirk, Aberdeenshire

Emperor	Date	Denomination	Total
Domitian	81-96 AD	Denarius	1 (?)
Trajan	98-117 AD	Denarius	1 (?)
Hadrian	117-138 AD	Denarius	1 (?)
Antoninus Pius	138-161 AD	Denarius	1 (?)
Faustina I		Denarii	2 (?)
Marcus Aurelius	161-180 AD	Denarii	3 (?)
Total		<i>No complete record. Discovered 1810.</i>	13 (?)

Source: Macdonald 1918, 262.

## Appendix 16: 3C

Craigie Hill, Leuchars, Fife

Emperor	Date	Denomination	Total
Antoninus Pius	138-161 AD	Denarius	1 (?)
Faustina I			1 (?)
Severus	193-211 AD	Denarius	1 (?)
Total		<i>Discovered 1808 reported that c.100 coins were recovered</i>	3 (?)

Source: New Statistical Account for Scotland, IX 1846, 223.

## Appendix 16: 3D

## Birnie, Moray, Hoard 1

Emperor	Date	Denomination	Total
Nero	54-68 AD	<i>Denarii</i>	2
Galba	68-69 AD	<i>Denarii</i>	6
Otho	69 AD	<i>Denarius</i>	–
Vitellius	69 AD	<i>Denarius</i>	1
Vespasian	69-79 AD	<i>Denarii</i>	26
Titus		<i>Denarii</i>	6
Domitian		<i>Denarii</i>	5
Titus	79-81 AD	<i>Denarii</i>	4
Domitian		<i>Denarius</i>	1
Julia Titi		<i>Denarius</i>	1
Vespasian (Deified)			–
Domitian	81-96 AD	<i>Denarii</i>	4
<i>Cast Forgery</i>		<i>Forgery</i>	1
Nerva	96-98 AD	<i>Denarii</i>	2
Trajan	98-117 AD	<i>Denarii</i>	47
<i>Lycian Drachma</i>			1
Hadrian	117-138 AD	<i>Denarii</i>	40
<i>Lycian Drachma</i>			1
Sabina		<i>Denarii</i>	5
Antoninus Pius		<i>Denarius</i>	1
Antoninus Pius	138-161 AD	<i>Denarii</i>	28
Faustina I		<i>Denarii</i>	2
Faustina I (Deified)		<i>Denarii</i>	17
With Marcus Aurelius			–
Marcus Aurelius		<i>Denarii</i>	10
Faustina II		<i>Denarii</i>	4

Marcus Aurelius	161-169 AD	<i>Denarii</i>	25
Antoninus Pius (Deified)		<i>Denarii</i>	5
Commodus			–
Faustina II		<i>Denarii</i>	15
Faustina II (Deified)		<i>Denarii</i>	2
Lucilla		<i>Denarii</i>	4
<b>Emperor</b>	<b>Date</b>	<b>Denomination</b>	<b>Total</b>
Lucius Verus	161-169 AD	<i>Denarii</i>	7
Commodus	180-192 AD	<i>Denarii</i>	27
Marcus Aurelius (Deified)		<i>Denarii</i>	5
Crispina		<i>Denarii</i>	2
Pertinax	193 AD		–
Septimius Severus	193-211 AD	<i>Denarii</i>	6
Julia Domna		<i>Denarius</i>	1
Total			314

Source: Holmes 2006; Holmes (Unpublished)

## Appendix 16: 3E

Birnie, Moray, Hoard 2:

Emperor	Date	Denomination	Total
Nero	54-68 AD	<i>Denarii</i>	3
Galba	68-69 AD	<i>Denarius</i>	–
Otho	69AD	<i>Denarius</i>	1
Vitellius	69 AD	<i>Denarius</i>	1
Vespasian	69-79 AD	<i>Denarii</i>	29
Titus		<i>Denarii</i>	4
Domitian		<i>Denarii</i>	2
Titus	79-81 AD	<i>Denarii</i>	2
Domitian		<i>Denarii</i>	4
Julia Titi		<i>Denarius</i>	1
Vespasian (Deified)		<i>Denarii</i>	2
Domitian	81-96 AD	<i>Denarii</i>	8
Nerva	96-98 AD	<i>Denarius</i>	1
Trajan	98-117 AD	<i>Denarii</i>	65
<i>Lycian Drachma</i>			–
Hadrian	117-138 AD	<i>Denarii</i>	43
<i>Lycian Drachma</i>			–
Sabina		<i>Denarii</i>	3
Antoninus Pius		<i>Denarius</i>	1
Antoninus Pius	138-161 AD	<i>Denarii</i>	35
Faustina I		<i>Denarius</i>	1
Faustina I (Deified)		<i>Denarii</i>	18
With Marcus Aurelius		<i>Denarius</i>	1
Marcus Aurelius		<i>Denarii</i>	11
Faustina II		<i>Denarii</i>	9



Emperor	Date	Denomination	Total
Marcus Aurelius	161-180 AD	<i>Denarii</i>	12
Antoninus Pius (Deified)		<i>Denarii</i>	8
Luius Verus (Deified)		<i>Denarius</i>	1
Commodus		<i>Denarii</i>	3
Faustina II		<i>Denarii</i>	8
Faustina II (Deified)		<i>Denarii</i>	3
Lucilla		<i>Denarii</i>	4
Lucius Verus	161-169 AD	<i>Denarii</i>	10
Commodus	180-192 AD	<i>Denarii</i>	11
Marcus Aurelius (Deified)		<i>Denarius</i>	1
Crispina		<i>Denarii</i>	3
Pertinax	193 AD	<i>Denarius</i>	1
Septimius Severus	193-211 AD		–
Julia Domna		<i>Denarius</i>	–
Total			310

Source: Holmes 2006; Holmes (Unpublished)

## Appendix 16: 3F

### Fort Augustus, Highland

Emperor	Date	Denomination	Total
Diocletian	284-305 AD	Denarii & Mixed Coins	c.300 reported
Total		<i>Discovered 1767</i>	c.300

Source: Scots Magazine 1767, 326; Robertson 2000, 237.

Appendix 16: 4

Post Severan Hoards, 295 – 410 AD

Appendix 16: 4A

Traprain Law, East Lothian: 1914/15; 1921 – 23,

Emperor	Date	Denomination	Total
Republic	45 BC	Denarius	1
(Republic) Mark Antony	42-30 BC	Denarius	1
Nero	54 – 68 AD	Denarius	1
Vespasian	69 – 79 AD	Denarii	2
Domitian	81 – 96 AD	Denarius	1
Trajan	98 – 117 AD	Denarius	1
Hadrian	117 – 138 AD	Denarii	2
Antoninus Pius	138 – 161 AD	Denarii	2
Marcus Aurelius (Faustina 1)	161 – 180 AD	Denarius	1
Total			12

(Robertson 1984).

Appendix 16: 4B

Norrie's Law, Fife: 1845

Emperor	Date	Denomination	Total
Constantius II	337 – 361 AD	Denarius	1
Valens	364 – 378 AD	Denarius	1
Total			2

(MacDonald 1918).

Appendix 16: 4C

Dreghorn, North Ayrshire

Emperor	Date	Denomination	Total
Valentinian I (GLORIA ROMANORVM)	364-375 AD	Denarius & Mixed Coins	1 (?)
Total		<i>Discovered 1897</i>	c.36 coins reported.

## Appendix 17:

## Cylindrical Cups Recovered from Scotland:

Region	Site	Details	Source
Angus	Airlie	Undecorated vessel intact, green hue.	Davidson 1886, 138
Angus	Kingoldrum	Undecorated complete cup, now lost	Davidson 1886, 139
Angus	Redcastle, Lunan Bay	25 fragments of base. Tubular base ring.	Ingemark 2014
Fife	Hallowhill	Possibly two undecorated cups, now lost.	Stuart 1867, lix
Orkney	Westray, Links of Trenabie	Undecorated complete cup when found, fragments survive	RCAHMS 1983, 34
East Lothian	Traprain Law	<p>Evidence of four cups.</p> <p>Undecorated rim of cup.</p> <p>Fragment of body of cup with horizontal blue band.</p> <p>Blue-green rim fragment with applied horizontal design.</p> <p>Greenish base fragment with tubular ring base, possibly reused as gaming pieces.</p>	Curle 1932

## All That Glitters

Shetland	Clickhimin	Rim fragment with evidence of decoration, yellow, red and blue dots on surface.	Fojut 1998
Argyll	Dun Mor Vault, Tiree	Clear glass with evidence of red paintwork.	MacKie 1997
Argyll	Dunollie	Rim fragment, clear with evidence of painted white dots.	Alcock and Alcock 1987
Shetland	Old Scatness	Fragments of painted cup.	Fojut 1998
Stirlingshire	Leckie	Base fragment with applied opaque white glass design.	MacKie 1973, 2 & 9)

*Source: Ingemark, 2014, 65-66.*

## Appendix 18:

## Power Centres and Metalworking Sites in Early Medieval Scotland:

District:	Site:	Period:	Landscape:	Defensive:	Metalworking:	Primary Source:	Sources:
Orkney Islands	Brough of Birsay	Pictish	Open	None	Yes, High Status	682 AD  'The Orkneys were destroyed by Brude.'  Tigernach Annals; Review Celtique, Vol. XVII	Curle, 1982; Ritchie 2003
Highland	Craig Phadrig	4 <sup>th</sup> Century	Elevated	Palisaded	Yes, Hanging Bowl	(Adomnán, 1995)	Small and Cottam, 1972; Noble, et al. 2015; Noble, et al. 2022
Highland	Dunbeath		Promontory			'The siege of Dunbaitte. Duncan, son of Eoganan, was slaughtered.'  AU: Vol. I 680	RCAHMS 1911, 49-50

Highland	Portmahomack		Monastic Settlement	None	Yes		Carver and Spall, 2006a; Carver and Spall 2006b; RCAHMS, 1979, 28
District:	Site:	Period:	Landscape:	Defensive:	Metalworking:	Primary Source:	Sources:
Moray	Burghead	4 <sup>th</sup> /7 <sup>th</sup> Century	Promontory	Ramparts			Noble, et al., 2020; Young, 1891
Aberdeenshire	Rhynie	5 <sup>th</sup> /6 <sup>th</sup> Century	Low Lying		Yes		Noble and Gondek, 2014; Noble and Gondek 2011, 27; Noble, et al. 2020
Aberdeenshire	Mither Tap	Pre-historic	Elevated				Noble, et al. 2020
Aberdeenshire	Dunnottar		Elevated			'The siege of Dunnottar.' AU: Vol. I 681	Alcock and Alcock 1993, 267-282

						<p>'The siege of Dunottar.'</p> <p>AU: Vol. I 694</p>	
District:	Site:	Period:	Landscape:	Defensive:	Metalworking:	Primary Source:	Sources:
Argyll & Bute	Dunollie	6 <sup>th</sup> /7 <sup>th</sup> Century	Elevated	Defensive		<p>'The Burning of Dunolly.'</p> <p>AU: Vol. I 698</p> <p>'A conflict in Skye, and there fell Conaing, Duncan's son, and the son of Cuanda.</p> <p>The destruction of Dunolly by Selbach.'</p> <p>AU: Vol. I, 701</p> <p>714 AD</p> <p>'Dunolly was built by Selbach. Ailen Daingen was destroyed.'</p>	<p>Alcock, 1981; Alcock and Alcock 1987; Anderson and Anderson 1922, 215</p>



						<p>Tigernach Annals; Review Celtique, Vol. XVII, p. 224</p> <p>‘Talorcan, Drostan’s son, was taken and bound near Dunolly.’</p> <p>AU: Vol. 734</p>	
Argyll & Bute	Dunadd		Elevated	Defensive	Yes, High Status	<p>‘The siege of Dunadd, and the siege of Dundurn.’</p> <p>AU: Vol. I 683</p> <p>‘Angus, Fergus’ son, king of the Picts, wasted the districts of Dalriata, and gained Dunadd, and burned Ceic; and he bound with chains two sons of Selbach, namely</p>	<p>Campbell, 1987; Campbell 2003; Lane and Campbell 2000; Anderson and Anderson 1922, 232-233</p>

						Dungal and Feradach.'	
						Tigernach Annals; Revue Celtique, Vol. XVII, p.239	
District:	Site:	Period:	Landscape:	Defensive:	Metalworking:	Primary Source:	Sources:
Argyll & Bute	Dunaverty		Elevated	Defensive		'The burning of Tairpert-boitter, Congal, Dargairt's son, died.The siege of Aberte [Dunaverty] by Selbach.'	RCAHMS 1971, 263
						AU: Vol. I, 712	
Argyll & Bute	Iona	6 <sup>th</sup> Century	Low Lying	None	Yes, High Status	'The community of Iona was slain by the gentiles, that is to say sixty-eight.'	Easson 1957; Hamlin 1988
						AU: Vol. I, 806	
Perth & Kinross	King's Seat, Dunkeld		Elevated	Natural & Augmented			Welsh 2008

Perth & Kinross	Dundurn, St Fillan's Hill	6 <sup>th</sup> /7 <sup>th</sup> Century	Elevated	Palisaded		'The siege of Dunadd, and the siege of Dundurn.'  AU: Vol. I 683	Alcock, et al. 1989
Perth & Kinross	Forteviot		Low Lying	None			Campbell and Driscoll 2020; Chadwick 1949, 123-124
District:	Site:	Period:	Landscape:	Defensive:	Metalworking:	Primary Source:	Sources:
Fife	Clatchard Craig		Elevated, Terraced		Yes		Noble and Evans 2022
Fife	East Lomond Hill		Elevated		Yes		O'Grady, 2017; O'Grady and Fitzpatrick 2018
Edinburgh, City of	Dun Eidin		Elevated				Driscoll, 1992; Driscoll & Yeoman, 1997; Koch 1997
West Dunbartonshire	Alt Clut		Elevated		Yes	'The burning of Dumbarton on the Kalends of January.'	Alcock and Alcock, 1990; Alcock and et al. 1992;

						AU: Vol. I, 780 (AU, 2020)	Alcock, et al. 1993
South Ayrshire	Dundonald	Early Medieval			Yes		RCAHMS, 1985, 22
Dumfries & Galloway	Trusty's Hill	Early Medieval	Elevated		Yes		RCAHMS 1914, 14-16,
District:	Site:	Period:	Landscape:	Defensive:	Metalworking:	Primary Source:	Sources:
Dumfries & Galloway	Mote of Mark	Early Medieval	Elevated		Yes		Curle 1914, 156-168; Laing and Laing 1987, 213-214; Laing and Longley 2006)
Dumfries & Galloway	Whithorn		Low Lying				Hill 1988

## Appendix 19:

## Massive Silver Chains:

Region:	Site:	Description:	Canmore ID & Museum Reference	Source:
Highland	Torvaine (Torvean) Caledonian Canal	Large Silver Chain of 18 inches in length and weighing 93 ounces of 16 pairs of rings and a single ring at the end. 1809	<a href="http://canmore.org.uk/site/13495">http://canmore.org.uk/site/13495</a>  NMS: X.FC 148	Smith 1875, 328-330, 329; Blackwell et al. 2018; 91-105
Aberdeen, City of	Nigg Parish	Silver Chain, Portion of 11 interlinked circular links, 11cm long alternating between single and double links. (1796).	<a href="http://canmore.org.uk/site/20251">http://canmore.org.uk/site/20251</a>  ABDUA:15644	Reid 1912, 18; Blackwell et al. 2018, 91-105
Aberdeenshire	Parkhill	Silver Chain, one foot 5 1/2 inches long composed of 23 twin links with a Penannular Ring engraved 'S' shape. (1864).	<a href="http://canmore.org.uk/site/20319">http://canmore.org.uk/site/20319</a>  NMS: X.FC 147	Smith 1875, 330-332; Blackwell et al. 2018, 91-105
East Lothian	Traprain Law	Discovered while quarrying (1938).	<a href="http://canmore.org.uk/site/56385">http://canmore.org.uk/site/56385</a>	Edwards 1939; Hunter 2013;

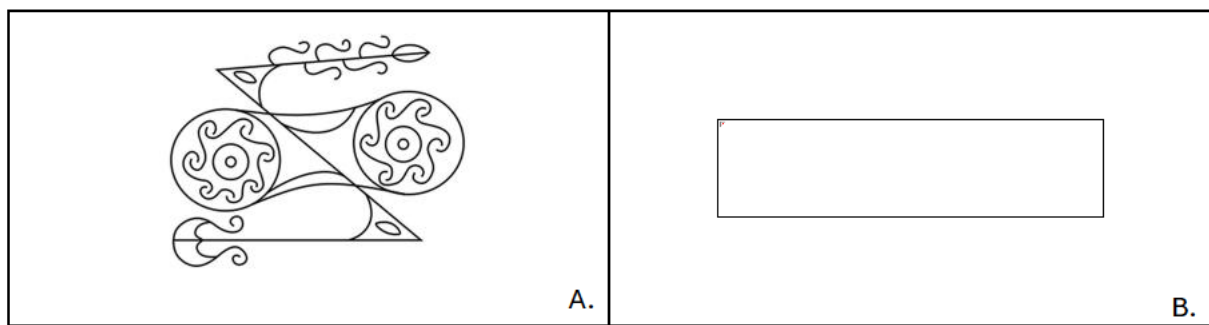
			NMS: X.FC 248	Blackwell et al. 2018, 91-105
Region:	Site:	Description:	Canmore ID & Museum Reference	Source:
South Lanarkshire	Whitecleuch	Large Silver Chain with Open Link, 22 pairs of links, 2 other links were broken and lost in the 19th C (Terminal is engraved with Pictish symbols). (1869).	<a href="http://canmore.org.uk/site/46402">http://canmore.org.uk/site/46402</a> NMS: X.FC 150	Smith 1875, 333-335; Blackwell et al. 2018, 91-105
South Lanarkshire	Borland	Silver Chain, partial, 21 pairs of rings 15.6" long. (1895).	<a href="http://canmore.org.uk/site/48826">http://canmore.org.uk/site/48826</a> NMS: X.FC 264	Edwards 1939; Blackwell et al. 2018, 91-105
Scottish Borders	Whitlaw	Section of Large Silver Chain, 6 complete links and 2 broken. Donated to the NMS (1895).	<a href="http://canmore.org.uk/site/54466">http://canmore.org.uk/site/54466</a> NMS: X.FC 172	Edwards 1939; Blackwell et al. 2018, 91-105
Scottish Borders	Hoardweel	Silver Chain of 41 links and a Penannular link. (1880).	<a href="http://canmore.org.uk/site/58590">http://canmore.org.uk/site/58590</a> NMS:	Dunglas Smith 1881; Blackwell et al. 2018, 91-105

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<i>Banffshire</i>	<i>Unknown Location</i>	Lost		Blackwell et al. 2018, 97
<i>Berwickshire</i>	<i>Herit's Dyke, Greenlaw</i>	Silver Chain. Recorded 'New Statistical Account of Scotland in 1834 by Rev. A. Home. Now lost		Breeze 1998

*Items in italics are now lost.*

Appendix 20:



*Image of Pictish Symbols. (A) Double disk and Z-rod. (B) Tuning fork. (RCAHMS, 2007).*

Appendix 21:

Combined Weight of Six Massive Silver Chains:

District:	Site:	Weight of Chain in Grams
Highland	Torvean	2,880
Aberdeenshire	Parkhill	1,230
East Lothian	Traprain Law	1,503
East Lothian	Haddington	687
South Lanarkshire	Whitecleugh	1,730
Scottish Borders	Hoardweel	1,610
Total		9,640

*Source: NMS.*



Appendix 22:

Silver Hoards from Across Scotland:

22.A:

Containing Hacksilver: Chart prepared by author.

District:	Site:	Information:	Canmore ID:	Source:
Aberdeenshire	Gaulcross North	Discovered in 1838, a hoard, all that remains are a chain, a bracelet and a hand-pin.  2013, 100 silver pieces recovered including hacksilver of Roman plate.	<a href="http://canmore.org.uk/site/17979">http://canmore.org.uk/site/17979</a>	Blackwell et al. 2018; Hunter 2022; Stevenson 1966; Youngs 1990
Fife	Dairsie	Discovered 2015, hacksilver hoard.	<a href="http://canmore.org.uk/site/358182">http://canmore.org.uk/site/358182</a>	Hunter 2018; Bargazova 2017
Fife	Norrie's Law	Discovered in 1819, a hoard, most of which is no longer extant.	<a href="http://canmore.org.uk/site/32527">http://canmore.org.uk/site/32527</a>	Blackwell et al. 2018; Stevenson 1956; Stuart 1867
East Lothian	Traprain Law	Recovered in 1919, a 24 kg silver hoard including Roman	<a href="http://canmore.org.uk/site/56374">http://canmore.org.uk/site/56374</a>	Cree 1923; Cree 1924; Cree & Curle 1922; Curle 1923;

items, coins together with hacksilver.	Goldberg and Blackwell 2022; Guest 2013; Hunter 2022; Youngs 1990
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## Appendix 22.B:

Later Silver Hoards Across Scotland: Chart prepared by author.

District:	Site:	Information:	Canmore ID:	Source:
Shetland Islands	St Ninian's Isle	Silver Hoard from c.750-825 AD (1958).	<a href="http://canmore.org.uk/site/587">http://canmore.org.uk/site/587</a>	McRoberts, 1963; O'Dell et al. 1959
Orkney Islands	Broch of Burger	Lost silver hoard reported in 1863.	<a href="http://canmore.org.uk/site/2178">http://canmore.org.uk/site/2178</a>	The Orcadian 1863; Graham-Campbell 1987; Graham-Campbell 1978
Highland	Croy	Silver Hoard. Silver penannular brooches, 1 complete (c.820 AD), Half of another and fragment of a third, a fragment of a knitted silver wire band and coins of the 8th & 9th centuries (1875 & 1876).	<a href="http://canmore.org.uk/site/14148">http://canmore.org.uk/site/14148</a>	Blunt, 1952; Noble & Goldberg 2016
Aberdeenshire	Tarland, Waulmill	A number of silver objects discovered including a silver penannular brooch,	<a href="http://canmore.org.uk/site/17024">http://canmore.org.uk/site/17024</a>	Piggott 1955

		possibly 2nd century. Most objects retained by finder (1898).		
Dumfries & Galloway	Talnotrie, Glen of the Bar	Silver Hoard. Silver strap-end (?), 2 disc headed pins (?), EM coins, Viking type weight. The coins consisted of 9th century silver pence and Northumbrian stycas.	<a href="http://canmore.org.uk/site/63576">http://canmore.org.uk/site/63576</a>	Maxwell 1913
Dumfries & Galloway	Drumcoltran	Silver Hoard consisting of a Denarius of Hadrian (117-138 AD), 14th/15th Century talismanic brooch and thick silver ring. (Exhibited 1880 by WG Gibson Clerkhill)	<a href="http://canmore.org.uk/site/64920">http://canmore.org.uk/site/64920</a>	(Robertson 1984)

Appendix 23:

Siliquae from the Traprain Law Treasure. Chart prepared by author.

NMS Ref	Emperor	Reverse	Mint-Mark	Mint	Reference	Date	Diameter/Clipped	Weight
GVA 152A	Valens	VRBS Roma - 1 <sup>st</sup> Issue Throne/sceptre - fishtail	//TR[PS..]	Trier	Hx 265; RIC IX 27e/45b	c.374-377 AD	13.2mm/CF4	1.05g
GVA 152B	Eugenius/Theodosius 1/Arcadius	VIRTVS ROMANORVM – 1 <sup>st</sup> Issue	//[MDPS]	Milan	Hx 687; RIC IX 32	393-394 AD	13.1mm/CF4	0.74g
GVA 152C	Honorius	VIRTVS ROMANORVM (cuirass – b)	//[MDPS]	Milan	Hx 720; RIC 1228	397-402 AD	11.9mm/†	0.5g
GVA 152D	Arcadius/Honorius	VIRTVS ROMANORVM – 2 <sup>nd</sup> Issue	//[MDPS]	Milan	Hx 746; RIC 1227/8	397-402 AD	11.8mm/†	0.44g

*Hx = Hoxne (Guest, 2005)*

*RIC X = Kent (Kent, 1994)*

*† - Badly Corroded, potentially chipped.*

*(Guest, 2013, 101)*

## Appendix 24:

Later Silver Hoards Across Scotland with Brooches: Chart prepared by author.

District:	Site:	Information:	Canmore ID:	Source:
Shetland Islands	St Ninian's Isle	Silver Hoard from c.750-825 AD (1958).	<a href="http://canmore.org.uk/site/587">http://canmore.org.uk/site/587</a>	McRoberts 1963; O'Dell et al. 1959
Orkney Islands	Broch of Burger	Lost silver hoard reported in 1863.	<a href="http://canmore.org.uk/site/2178">http://canmore.org.uk/site/2178</a>	The Orcadian 1863; Graham-Campbell 1987; Graham-Campbell 1978
Highland	Rogart, Rovie Lodge	9 silver brooches were discovered in 1869, only three can be accounted for, the remainder disposed of by the finder's family. The three surviving brooches appear to date from the 8th century AD.	<a href="http://canmore.org.uk/site/6009">http://canmore.org.uk/site/6009</a>	Banks 1992; PSAS 1870
Highland	Croy	Silver Hoard. Silver penannular brooches, 1 complete (c.820 AD), Half of another	<a href="http://canmore.org.uk/site/14148">http://canmore.org.uk/site/14148</a>	Blunt 1952; Noble & Goldberg 2016

		and fragment of a third, a fragment of a knitted silver wire band and coins of the 8th & 9th centuries (1875 & 1876).		
Aberdeenshire	Tarland, Waulmill	A number of silver objects discovered including a silver penannular brooch, possibly 2nd century. Most objects retained by finder (1898).	<a href="http://canmore.org.uk/site/17024">http://canmore.org.uk/site/17024</a>	Piggott 1955
Perth & Kinross	Tummel Bridge	5th century hoard of 3 silver penannular brooches discovered in the 1880's. Similar with slight variations.	<a href="http://canmore.org.uk/site/25080">http://canmore.org.uk/site/25080</a>	Fowler 1963; PSAS 1888

## Appendix 25:

## The Rogart Hoard

Object	NMS ID	Diameter	Measurement	Weight	Composition	Other Info
Penannular Brooch Pin	<i>X.FC 1</i>	<i>7.7 cm</i>	-- Length 13.3 cm	59.1 g	Silver, gilt	Chipped carved interlace. Settings for nine studs.
Penannular Brooch Pin	X.FC 2	12 cm	-- 19.3 cm	271.4 g	Silver, gilt, glass	Chipped carved and gilded interlace. Bird heads decoration.

Source: (Ó Floinn 1990, 116)



## Appendix 26:

## The St Ninian's Isle Hoard

Object	NMS ID	Diameter	Measurement	Weight	Composition	Other Info
Bowl	<i>X.FC 268</i>	<i>15 cm</i>	<i>Depth 5.7 cm</i>		Silver	Pointillé forming a cross on base
Bowl	X.FC 269	14.4 cm	Depth 4.7 cm	101.3 g	Silver	Pointillé zoomorphic with a cross on base
Bowl	X.FC 270	14.6 cm	Depth 4.8 cm		Silver	Pointillé zoomorphic
Bowl	X.FC 271				Silver	Pointillé with cross design
Bowl	X.FC 272				Silver	Pointillé four panels
Bowl	X.FC 273	14.3 cm	Depth 3.6 cm	90.5 g	Silver with gilt	Pointillé, red enameling on triangular escutcheon with human faces on corners
Bowl	X.FC 274				Silver	Pointillé with interlace

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Hanging Bowl	X.FC 275	14 cm	Depth 4.5 cm		Silver and gilt	Zoomorphic, boar, escutcheons
Spoon	X.FC 276		Length 21.5 cm		Silver and glass	Dog head design with blue glass eyes
Dining Utensil	X.FC 277		Length 16.5 cm		Silver	Interlace. Possibly for eating shellfish
Sword Pommel	X.FC 278 A				Silver and gilt	Cocked hat form with chip carved zoomorphic design
Loose Nail	X.FC 278 B				Silver	Found in 278 A
Cone Shaped Mount	X.FC 279	3.7 cm	Hight 4.3 cm	62.9 g	Silver	Zoomorphic
Cone Shaped Mount	X.FC 280	3.4 CM	Hight 3.8 cm	33.2 g	Silver	Zoomorphic
Cone Shaped Mount	X.FC 281	3.5 cm	Hight 3.8 cm	24.6 g	Silver	Spiral pattern
Scabbard Chape	X.FC 282		Width 8.1 cm	62.9 g	Silver with gilt and glass	Zoomorphic with Latin inscription, <i>INNOMINEDS</i> , 'In the name of God.'

Scabbard Chape	X.FC 283		Width 8.2cm	69.6 g	Silver with gilt and glass	Zoomorphic headed terminals with zoomorphic and geometric interlace
Penannular Brooch Pin Reconstruction	X.FC 284	10.8 cm	-- Length 19 cm	149.7 g 22.7 g	Silver	Chip-carved interlace, glass insets missing
Penannular Brooch	X.FC 285				Silver-gilt with glass	Green glass insets with poor interlace, inset missing
Penannular Brooch Pin	X.FC 286	7.5cm	-- Length 14.6 cm	69.6 g	Silver and gilt	Cross design within terminal
Penannular Brooch	X.FC 287				Silver-gilt and glass	Inward facing bird heads design with glass eyes. Pin with interlace
Penannular Brooch	X.FC 288				Silver	Zoomorphic and knots
Penannular Brooch	X.FC 289				Silver and glass	Concentric circles around blue glass

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Penannular Brooch	X.FC 290				Silver and gilt	Central disk with concentric circles
Penannular Brooch	X.FC 291				Silver and gilt	Zoomorphic
Penannular Brooch	X.FC 292				Silver and gilt	Milled band with interlace, formerly with ten studs
Penannular Brooch Pin	X.FC 293	7.1 cm	-- Length 11.2 cm	57.9 g	Silver and gilt	Eight of ten original studs survive, one green, seven brown. Ribbon interlace
Penannular Brooch	X.FC 294				Silver-gilt and glass	Interlace with green and blue glass insets
Penannular Brooch Pin	X.FC 295	7.1 cm	-- Length 1.2 cm	68.3 g	Silver and gilt	Zoomorphic facing terminals

Source: (Ó Floinn 1990, 108-112; O'Dell et al 1959)

## Appendix 27: Index of Miscellaneous Finds:

District:	Site:	Information:	Canmore Reference:	Source:
Highland	Carn Liath	Romano-British Brooch 4 <sup>th</sup> Century	<a href="http://canmore.org.uk/site/6546">http://canmore.org.uk/site/6546</a>	Robertson 1970, Vol. 1, Table 2
Highland	Ospisdale, Dornoch	Romano-British Dolphin Style Brooch	<a href="http://canmore.org.uk/site/351606">http://canmore.org.uk/site/351606</a>	Hunter 2015, 101
Highland	Clashmore, Dornoch	Silver Ingot	N/A	T.T. 2013
Moray	Covesea, Sculptor's Cave	Silver Tweezers and Decorated Pin, 4 <sup>th</sup> Century	<a href="http://canmore.org.uk/site/16278">http://canmore.org.uk/site/16278</a>	Benton 1931, 177-216
Moray	Culbin Sands	Roman Gem Set Finger-ring displaying the god Silvanus (10mm) (NMS:X.BI 29463) together with other Roman items.	<a href="http://canmore.org.uk/site/15907">http://canmore.org.uk/site/15907</a>	Henig 1974, 231-2
Highland	Auldearn	Massive Romano-British Brooch and Iron Age Torc	<a href="http://canmore.org.uk/site/351593">http://canmore.org.uk/site/351593</a>	Hunter 2015, 97

Highland	Auldearn	Penannular Brooch, metal detecting find	N/A	T.T. 2013
Aberdeenshire	Macduff	Roman Gilt Silver Ram's Head Terminal, possibly from a penannular bracelet, 24mm long, weighing 4.93g. Metal detecting find	<a href="http://canmore.org.uk/site/355675">http://canmore.org.uk/site/355675</a>	Hunter 2016, 20
District:	Site:	Information:	Canmore Reference:	Source:
Fife	Tayport	Silver Brooch, metal detecting find (TT:221/12)	N/A	T.T. 2012
Fife	Charlestown	Romano-British Brooch, traces of red enamel	<a href="http://canmore.org.uk/site/351553">http://canmore.org.uk/site/351553</a>	Hunter 2015, 87
Fife	Kingsbarns	Part of a Silver Ingot (57.mm X 15.3mm, 53.2g)	<a href="http://canmore.org.uk/site/354710">http://canmore.org.uk/site/354710</a>	Blackwell 2017, 84
Fife	Kingsbarns	Silver Annular Brooch (TT: 106/17)	N/A	Blackwell 2019

Fife	Boarhills	Penannular Brooch, Early Medieval (TT:167/15)	N/A	T.T. 2015
Fife	Carenden	Roman Silver Intaglio Ring. Metal detecting find (TT:52/17)	N/A	T.T., 2017
District:	Site:	Information:	Canmore Reference:	Source:
Fife	Capeldrae	Roman Finger Ring: the bezel has a truncated conical form of the late Roman period; the upper decorative serrated edge probably mimics beaded filigree wire. (TT:52/17).	<a href="http://canmore.org.uk/site/358176">http://canmore.org.uk/site/358176</a>	Hunter 2018, 93
Fife	Hallow Hill, St Andrews	Roman Silver Zoomorphic Bracelet	<a href="http://canmore.org.uk/site/32900">http://canmore.org.uk/site/32900</a>	Clarke et al. 2012, 130

Fife	Cupar	Silver Tag With Latin Inscription (TT:135/99)	N/A	T.T. 1999
Fife	Kirkcaldy	Medieval Silver Brooch (TT:142/12)	N/A	T.T. 2012
Fife	Dunfermline	Romano-British Trumpet Brooch	N/A	Hunter 2006
Fife	Culross	Early Historic Silver Brooch Terminal	N/A	T.T. 2009, 96/07
Stirling	Dunblane	Hacksilver, possibly part of a silver ingot. (TT:172/15).	<a href="http://canmore.org.uk/site/355212">http://canmore.org.uk/site/355212</a>	Blackwell, 2017, 169
District:	Site:	Information:	Canmore Reference:	Source:
East Lothian	Gilmertin House, Athelstaneford	Silver Romano-British Trumpet Brooch, Portion. (TT:38/07).	<a href="http://canmore.org.uk/site/295660">http://canmore.org.uk/site/295660</a>	Hunter 2007, 69
East Lothian	Athelstaneford	2 Roman Silver Brooches	N/A	T.T. 46/07



Scottish Borders	Stobo	Romano-British Dragonesque Brooch. (TT:212/15).	<a href="http://canmore.org.uk/site/355133">http://canmore.org.uk/site/355133</a>	Hunter 2017, 157
Scottish Borders	Kelso	Early Historic Silver Ingot	N/A	T.T. 43/04
Scottish Borders	Philiphaugh	Roman Gold Finger Ring (Child's) depicting the goddess Ceres. 15mm in Diameter. (NMS: X.1992.8.)	<a href="http://canmore.org.uk/site/75181">http://canmore.org.uk/site/75181</a>	NMS 1992, 7-8
Scottish Borders	Branxholm	Piece of Silver Ingot. (T.T. 220/15)	<a href="http://canmore.org.uk/site/355087">http://canmore.org.uk/site/355087</a>	T.T. 2015
Scottish Borders	Cappuck	Roman Silver Brooch	N/A	Blackwell et al. 2017, 17
Scottish Borders	Shotheids	Romano-British Silver Trumpet Brooch, broken.	<a href="http://canmore.org.uk/site/157624">http://canmore.org.uk/site/157624</a>	Hunter 1999, 78
District:	Site:	Information:	Canmore Reference:	Source:
Ayrshire	Location Unknown	Roman Silver Fibula Brooch:	N/A	Johns 1996, 160-165

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		trumpet, harp shaped. (NMS: X.FG 9).		
Dumfries and Galloway	Saint John's Town of Dalry	Silver Annular Brooch. (T.T. 069/15)	N/A	T.T. 2015
Dumfries and Galloway	Dalswinton	Medieval Silver Brooch. (T.T. 217/12).	N/A	T.T. 2012



*Map generated by author using Digimaps.*

Appendix 28:  
Centres of Power in Early Medieval Scotland

District:	Site:	Period:	Landscape:	Defensive:	Metalworking:	Primary Source:	Sources:
Orkney Islands	Brough of Birsay	7 <sup>th</sup> -15 <sup>th</sup> Century AD	Tidal Island	None/Natural	Yes	682 AD  'The Orkneys were destroyed by Brude.'  Tigernach Annals; Review Celtique, Vol. XVII	Curle 1982; Ritchie 2003; HES 2004
Highland	Craig Phadrig	4 <sup>th</sup> Century	Elevated	Palisaded	Yes, Hanging Bowl, tools	(Adomnán 1995)	Small & Cottam, 1972; Noble et al. 2015; Noble et al. 2022; Laing 1975
Highland	Dunbeath	7 <sup>th</sup> Century	Promontory	Natural headland	Yes, iron ore	'The siege of Dun-baitte. Duncan, son of	RCAHMS 1911, 49-50

						Eoganan, was slaughtered.'	
						AU: Vol. I 680	
Highland	Portmahomack	6 <sup>th</sup> Century	Monastic Settlement	None	Yes		Carver & Spall 2006A; Carver & Spall 2006B; RCAHMS 1979, 28
Moray	Burghead	4 <sup>th</sup> /7 <sup>th</sup> Century	Promontory	Ramparts			Noble et al. 2020; Young 1891
Aberdeenshire	Rhynie	5 <sup>th</sup> /6 <sup>th</sup> Century	Low Lying	Fortified	Yes		Noble and Gondek 2014; Noble and Gondek 2011, 27; Noble et al. 2020
Aberdeenshire	Tap o' Noth	Prehistoric	Elevated	Fortified			Noble et al. 2018

Aberdeenshire	Mither Tap	Pre-historic	Elevated			<i>Claimed by some to be the site of Mons Graupius, AD 84</i>	Noble et al. 2020
Aberdeenshire	Dunnottar	5 <sup>th</sup> Century foundation	Elevated, promontory	Natural Defensive		<p>'The siege of Dunnottar.'</p> <p>AU: Vol. I 681</p> <p>'The siege of Dunnottar.'</p> <p>AU: Vol. I 694</p>	Alcock and Alcock 1993, 267-282
Argyll & Bute	Dunollie	6 <sup>th</sup> /7 <sup>th</sup> Century	Elevated promontory	Defensive		<p>'The Burning of Dunolly.'</p> <p>AU: Vol. I 698</p> <p>The destruction of Dunolly by Selbach.'</p> <p>AU: Vol. I, 701</p> <p>714 AD</p>	Alcock 1981; Alcock & Alcock 1987; Anderson & Anderson 1922, 215

						<p>‘Dunolly was built by Selbach. Ailen Daingen was destroyed.’</p> <p>Tigernach Annals; Review Celtique, Vol. XVII, p. 224</p> <p>‘Talorcan, Drostan’s son, was taken and bound near Dunolly.’</p> <p>AU: Vol. 734</p>	
Argyll & Bute	Dunadd		Elevated	Defensive	Yes, High Status	<p>‘The siege of Dunadd, and the siege of Dundurn.’</p> <p>AU: Vol. I 683</p> <p>‘Angus, Fergus’ son, king of the Picts, wasted</p>	<p>Campbell 1987; Campbell 2003; Lane and Campbell 2000; Anderson and</p>

						<p>the districts of Dalriata, and gained Dunadd, and burned Ceic; and he bound with chains two sons of Selbach, namely Dungal and Feradach.'</p> <p>Tigernach Annals; Revue Celtique, Vol. XVII, p.239</p> <p>Possible mention of Dunadd in reference to traders from Gaul.</p> <p>Adomnán I:28</p>	<p>Anderson 1922, 232-233; Adomnán 1995 132</p>
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Argyll & Bute	Dunaverty		Elevated	Defensive		‘The burning of Tairpert-boitter ( <i>Tarbert</i> ), Congal, Dargairt’s son, died. The siege of Aberte [Dunaverty] by Selbach.’  AU: Vol. I, 712	RCAHMS 1971, 263
Argyll & Bute	Iona	6 <sup>th</sup> Century	Low Lying	None	Yes, High Status	‘The community of Iona was slain by the gentiles, that is to say sixty-eight.’  AU: Vol. I, 806	Easson 1957; Hamlin 1988
Perth & Kinross	King’s Seat, Dunkeld	Early Medieval	Elevated	Natural & Augmented	Yes, moulds and crucibles.		Welsh 2008; Cook et al. 2018
Perth & Kinross	Dundurn, St Fillan’s Hill	6 <sup>th</sup> /7 <sup>th</sup> Century	Elevated	Palisaded		‘The siege of Dunadd, and	Alcock et al. 1989

						the siege of Dundurn.’ AU: Vol. I 683	
Perth & Kinross	Forteviot	Early Medieval	Low Lying	None		Said to be the site of the death of Cináed mac Ailpin in AD 858. Chronicle of the Kings of Scotland (A & D).	Campbell and Driscoll 2020; Chadwick 1949, 123-124; Anderson and Anderson 1922, 288, 289
Fife	Clatchard Craig	Neolithic onwards	Elevated, Terraced	Palisaded	Yes, Iron slag		Noble and Evans 2022
Fife	East Lomond Hill	Iron Age	Elevated	Ramparts	Yes		O'Grady 2017; O'Grady and Fitzpatrick 2018

Edinburgh, City of	Dun Eidin	6 <sup>th</sup> Century	Elevated		Yes	Mentioned in the Gododdin, 6 <sup>th</sup> C.	Driscoll 1992; Driscoll and Yeoman 1997; Koch 1997, xiii
West Dunbartonshire	Alt Clut	Early Medieval	Elevated	Natural, palisaded	Yes	'The burning of Dumbarton on the Kalends of January.'  AU: Vol. I, 780 (AU, 2020)	Alcock and Alcock 1990; Alcock & et al. 1992; Alcock et al. 1993
South Ayrshire	Dundonald	Early Medieval	Elevated		Yes		RCAHMS 1985, 22; Ewart 1988
Dumfries & Galloway	Trusty's Hill	Iron Age / Early Medieval	Elevated	Ramparts	Yes		RCAHMS 1914, 14-16
Dumfries & Galloway	Mote of Mark	Early Medieval	Elevated	Fortified	Yes		Curle 1914, 125-168; Laing and Laing 1987,

					213-214; Laing and Longley 2006
Dumfries & Galloway	Whithorn	Early Medieval Ecclesiastical Settlement	Low Lying	Palisaded	Hill 1988

## Appendix: 31

## Early Medieval Metal Working Sites:

District:	Site:	Information:	Canmore ID:	Source:
Shetland Islands	Tronda, Burland	Metal Working Site, Late Iron Age. A series of small hearths together with an anvil stone and widespread evidence of hammer scale were found in the interior. (2000).	<a href="http://canmore.org.uk/site/2434">http://canmore.org.uk/site/2434</a> 31	Moore and Wilson 2000; Moore and Wilson 2002
Shetland Islands	Scalloway	Broch, Iron Age. Metalworking Debris Recovered.	<a href="http://canmore.org.uk/site/995">http://canmore.org.uk/site/995</a>	Sharples 1998; Mackie 2007, 88-89
Orkney Islands	Brough of Birsay	Evidence of Metalworking, suggestive of a fortified centre of power for a chieftain of the EM Period. Prestige metal goods, mostly in bronze, iron and lead, were created here and may suggest a link to	<a href="http://canmore.org.uk/site/1796">http://canmore.org.uk/site/1796</a>	Ritchie 2003; Curle 1982; Clarke et al. 2012, 101-

		other sites of power in this era such as Dunadd, due to similarities between moulds from both sites. Evidence for the making of mostly brooches, finger-rings and dress-pins, implying patronage by wealthy individuals. 16 moulds for penannular brooches were recovered from this site. The smallest brooch has similarities of design and ornamentation with a sword chape from St Ninian's Isle.		102; Laing and Laing 1987, 211-221
Orkney Islands	Sanday, Pool	Broch, Iron Age, Later Viking Activity.	<a href="http://canmore.org.uk/site/3422">http://canmore.org.uk/site/3422</a>	Hunter 2007
Orkney Islands	Aikerness, Broch of Gurness	Evidence of metalworking at the site including clay moulds.	<a href="http://canmore.org.uk/site/2201">http://canmore.org.uk/site/2201</a>	Hedges 1987, 163-165
Orkney Islands	Tankerness, Mine Howe	Metalworking Site, Iron Age/Late Iron Age. Roman material discovered together with other material (2000). Trench 'E' revealed industrial waste including moulds, slag, furnace linings and evidence for bone and antler working.	<a href="http://canmore.org.uk/site/2998">http://canmore.org.uk/site/2998</a>	Card et al. 2000; Card and Downes 2003
Highland	Portmahomack, Tarbat	Evidence for Metalworking including over 50 crucible fragments, some with silver residue.	<a href="https://www.york.ac.uk/archaeology/staff/sites/tarbat/bulletins/bulletin7/research.html">https://www.york.ac.uk/archaeology/staff/sites/tarbat/bulletins/bulletin7/research.html</a>	MacDonald and Laing 1973, 138; Carver and

			<a href="http://canmore.org.uk/site/1566">http://canmore.org.uk/site/1566</a> 2	Spall 2006, 102-103
Highland	Craig Phadrig	Evidence of Metalworking, clay mould for the escutcheon of a hanging bowl. A mount of this design has been found on a fragmentary hanging-bowl from Castle Tioram in Argyll and may have been produced at Craig Phadrig.  Possible site of St Columba's visit to the King of the Picts, Brideison, who reigned 555-584 AD. A massive Pictish chain was discovered nearby at Torvean in 1808.	<a href="http://canmore.org.uk/site/1348">http://canmore.org.uk/site/1348</a> 6	Laing 1975; Noble et al. 2015; Adomnán 1995
Highland	Learnie, Rosemarkie	Metal Working Site. Bloom refining and smithing was potentially taking place in the cave.	<a href="http://canmore.org.uk/site/2934">http://canmore.org.uk/site/2934</a> 66	Birch et al. 2018; Wood 2006
Highland	Old Town of Leys, Culduthel	Evidence for metalworking (Iron Age). Crucibles, slag, metalworking debris recovered from the site in 2005 when preparing for a housing development.	<a href="http://canmore.org.uk/site/1635">http://canmore.org.uk/site/1635</a> 81	Murray 2006; Murray 2007
Moray	Burghead	Burghead Fort (Pictish), Evidence for Metalworking discovered 2019. Finds from this trench included fragments of crucibles and other metalworking evidence.	<a href="http://canmore.org.uk/site/1614">http://canmore.org.uk/site/1614</a> 6	Noble et al. 2020; Johnson 2002

Moray	Birnie	Evidence of Metalworking at the Site.	<a href="http://canmore.org.uk/site/158983">http://canmore.org.uk/site/158983</a>	Hunter 2007; Hunter 2000
Moray	Sculptor's Cave, Covesea	Crucibles and Metalworking Evidence.	<a href="http://canmore.org.uk/site/16280">http://canmore.org.uk/site/16280</a>	Armit and Büster 2020
Aberdeenshire	Rhynie, Barflat	Metalworking Evidence, Pictish. Late Roman amphorae, crucible sherds, mould fragments, evidence for metal working and iron smelting.	<a href="http://canmore.org.uk/site/281408">http://canmore.org.uk/site/281408</a>	Noble and Gondek 2014; Noble and Gondek 2011; Noble et al. 2020
Perth & Kinross	Dundurn, St Fillan's Hill	Hillfort with evidence of metalworking. A Pictish stronghold.	<a href="http://canmore.org.uk/site/24873">http://canmore.org.uk/site/24873</a>	Alcock et al. 1989
Perth & Kinross	King's Seat, 'Fort of the Caledonians'	Evidence of metalworking present; moulds & crucible fragments recovered from trench 4 (2017).	<a href="http://canmore.org.uk/site/27172">http://canmore.org.uk/site/27172</a>	Cook et al. 2018; RCAHMS 1994, 57, 74, 89, 158
Fife	Clatchard Craig	Evidence of Metalworking, silver ingot, clay moulds and other debris, Roman Samian pottery	<a href="http://canmore.org.uk/site/30074">http://canmore.org.uk/site/30074</a>	Close-Brooks 1986; RCAHMS 1933, 4-6

East Lothian	Traprain Law	Crucibles Recovered: Evidence of smelting silver	<a href="http://canmore.org.uk/site/56396">http://canmore.org.uk/site/56396</a>	Cree 1923; Cree 1924; Cree and Curle 1922; Hunter 2022; Hunter 2022; Hunter 2013 Hunter and Painter 2013
Western Isles	Dunan Ruadh, Pabbay	Broch, Iron Age.	<a href="http://canmore.org.uk/site/21383">http://canmore.org.uk/site/21383</a>	Foster and Pouncett 2000
Western Isles	Eilean Olabhat, Griminish, North Uist	Evidence of Metalworking Silver Present on This Site.	<a href="http://canmore.org.uk/site/10063">http://canmore.org.uk/site/10063</a>	Armit et al. 2009; Gilmour 2000
Western Isles	Cnoc a' Comhdhala ch, North Uist	Mould Fragment	N/A	Campbell 2007
Western Isles	Dun Cuier, Barra	Broch, Iron Age.	<a href="http://canmore.org.uk/site/9710">http://canmore.org.uk/site/9710</a>	Young 1954; Young 1955



Western Isles	Loch Na Beirgh, (Traigh na Berie) Lewis	Cellular Building, Iron Age	<a href="http://canmore.org.uk/site/4100">http://canmore.org.uk/site/4100</a>	Harding and Gilmour 2000
Western Isles	A' Cheardach Mhor, South Uist	Wheelhouse, Iron Age	<a href="http://canmore.org.uk/site/9949">http://canmore.org.uk/site/9949</a>	Armit 1996, 31, 147, 155; Young and Richardson 1960, 135-173
Argyll & Bute	Midross, Loch Lomond	Iron smelting bloomery.	<a href="http://canmore.org.uk/site/281535">http://canmore.org.uk/site/281535</a>	Rennie 2005
Argyll & Bute	Dunollie Castle	Evidence of Fine Metalworking	<a href="http://canmore.org.uk/site/23027">http://canmore.org.uk/site/23027</a>	Lock and Ralston 2016; Alcock and Alcock 1987
Argyll & Bute	Dunadd	Evidence of Fine Metalworking.	<a href="http://canmore.org.uk/site/39564">http://canmore.org.uk/site/39564</a>	Lane 1994; Lane and Campbell 2000; Clarke

				et al. 2012, 85-87
Argyll & Bute	Iona	Early Christian Monastery founded by St Columba. Moulds for metalworking discovered.	<a href="http://canmore.org.uk/site/21649">http://canmore.org.uk/site/21649</a>	Reece 1981; Hamlin 1988
Argyll & Bute	Bruach an Druimein, Potalloch	Evidence of Metalworking Present at the Site.	<a href="http://canmore.org.uk/site/39451">http://canmore.org.uk/site/39451</a>	RCAHMS 1988, 204; Heald and Hunter 2008, 42
Argyll & Bute	Loch Glashan	Crannog, Iron Age. A small crucible, pieces of slag, whetstones.	<a href="http://canmore.org.uk/site/40047">http://canmore.org.uk/site/40047</a>	Campbell 2005; RCAHMS 1988, 35, 205-208
Argyll & Bute	St Columba's Cave	Cave, evidence for deep occupation.	<a href="http://canmore.org.uk/site/39012">http://canmore.org.uk/site/39012</a>	Tolan-Smith 2001, 200-201
Argyll & Bute	Inchmarnock, Midpark,	Monastic Settlement.	<a href="http://canmore.org.uk/site/40268">http://canmore.org.uk/site/40268</a>	Conolly et al. 2002
Argyll & Bute	St Blane's, Isle of Bute	Monastic Settlement. Finds include an ingot-mould and crucibles and a series of motif-pieces.	<a href="http://canmore.org.uk/site/40292">http://canmore.org.uk/site/40292</a>	Anderson, 1900 307-325; Laing et

				al. 1998, 551-565
Fife	East Lomond Hill	Iron Age Fort.	<a href="http://canmore.org.uk/site/29881">http://canmore.org.uk/site/29881</a>	O'Grady 2017; RCAHMS 1933, 143-144
Edinburgh, City of	Edinburgh Castle, Dun Eidin	First mention of the rock of Edinburgh as a fortress occurs in an old Welsh poem, the Gododdin of Aneurin, dating from the end of the 6th Century.	<a href="http://canmore.org.uk/site/52068">http://canmore.org.uk/site/52068</a>	Ralston and Armit 2003, 224
West Dunbartonshire	Alt Cluth, Dumbarton Castle	Fort, Early Medieval	<a href="http://canmore.org.uk/site/43376">http://canmore.org.uk/site/43376</a>	Alcock and Alcock 1990; Alcock et al. 1992; Alcock et al. 1993
North Ayrshire	Buiston	Crannog, possibly 7 <sup>th</sup> century	<a href="http://canmore.org.uk/site/42950">http://canmore.org.uk/site/42950</a>	Crone 2000
South Ayrshire	Dundonald	Iron Age Fort.	<a href="http://canmore.org.uk/site/41970">http://canmore.org.uk/site/41970</a>	Caldwell and Campbell 2004, 88-92

Dumfries & Galloway	Whithorn	Monastic Settlement. Evidence of metalworking from moulds and crucibles. Silver residue evidenced.	<a href="http://canmore.org.uk/site/6329">http://canmore.org.uk/site/6329</a> 8	Hill 1987A; Hill 1997B
Dumfries & Galloway	Trusty's Hill, Anworth	Fort with evidence of metalworking. 6th/7th C.	<a href="http://canmore.org.uk/site/6364">http://canmore.org.uk/site/6364</a> 1	Toolis and Bowles 2017
Dumfries & Galloway	Mote of Mark	Evidence of Metalworking Present. 130 crucible fragments displaying high status items created at this site. (6th-7th C).	<a href="http://canmore.org.uk/site/6491">http://canmore.org.uk/site/6491</a> 1	Laing and Longley 2006; Curle 1914

## Appendix 29

## Crucibles from Dunadd, Argyll and Bute, XRF analysis results

Crucible Type	Bronze	Gunmetal	Copper Alloy	Silver	Sil
A	854	429 888 1232 1518		425 600	
B				1514	
C	1378/1	211 550/1 1030/1	952/1 1004/3	466 697 911/1 1169/1 1282 1315/3 1506/1	
D			1830/3	1434 1576/3	
E	303 884 1261 1625	192 816 1378/2	1315/2		

Data Source: Bayley 1984

## Appendix 30

## Clay Moulds from Mote of Mark and their Contexts

	Context	Boss	Interlace curvilinear panel	Other curvilinear panel	Other curved panel	Other decorated panel	Interlace rectilinear panel	Other decorated rectilinear panel	Other rectilinear panel	Plain panel	Penannula r brooch
1a	Pre-rampart	0	0	0	0	0	0	0	0	0	0
1b	Interior earliest stratified	0	0	0	0	0	0	0	0	0	0
2	Rampart	0	1	0	0	1	0	0	0	0	0
3a	Earliest occupation	0	0	3	6	0	1	1	5	0	0

<b>3b</b>	Late stratified occupation	0	0	1	0	0	0	0	1	1	0
<b>4</b>	Latest occupation	0	0	1	1	0	0	0	0	0	0
<b>5</b>	Post-occupation	0	0	0	0	0	0	0	0	0	0
<b>6 and 8</b>	1913 assemblage and backfill	8	21	8	9	2	7	3	5	0	6
<b>7</b>	Topsoil	0	0	2	0	0	0	0	0	0	0
	<b>Total</b>	<b>8</b>	<b>22</b>	<b>15</b>	<b>16</b>	<b>3</b>	<b>8</b>	<b>4</b>	<b>11</b>	<b>1</b>	<b>6</b>

Source: Laing and Longley 2006, 50-74

## Appendix: 31

### Early Medieval Metal Working Sites:

District:	Site:	Information:	Canmore ID:	Source:
Shetland Islands	Tronda, Burland	Metal Working Site, Late Iron Age. A series of small hearths together with an anvil stone and widespread evidence of hammer scale were found in the interior. (2000).	<a href="http://canmore.org.uk/site/243431">http://canmore.org.uk/site/243431</a>	Moore and Wilson 2000; Moore and Wilson 2002
Shetland Islands	Scalloway	Broch, Iron Age. Metalworking Debris Recovered.	<a href="http://canmore.org.uk/site/995">http://canmore.org.uk/site/995</a>	Sharples 1998; Mackie 2002, 88-89
Orkney Islands	Brough of Birsay	Evidence of Metalworking, suggestive of a fortified centre of power for a chieftain of the EM Period. Prestige metal goods, mostly in bronze, iron and lead, were created here and may suggest a link to other sites of power in this era such as Dunadd, due to similarities between moulds from both sites. Evidence for the making of mostly brooches, finger-rings and dress-pins, implying patronage by	<a href="http://canmore.org.uk/site/1796">http://canmore.org.uk/site/1796</a>	Ritchie 2003; Curle 1982; Clarke et al. 2012, 101-102; Laing and Laing 1987, 211-221

		wealthy individuals. 16 moulds for penannular brooches were recovered from this site. The smallest brooch has similarities of design and ornamentation with a sword chape from St Ninian's Isle.		
Orkney Islands	Sanday, Pool	Broch, Iron Age, Later Viking Activity.	<a href="http://canmore.org.uk/site/3422">http://canmore.org.uk/site/3422</a>	Hunter 2007
Orkney Islands	Aikerness , Broch of Gurness	Evidence of metalworking at the site including clay moulds.	<a href="http://canmore.org.uk/site/2201">http://canmore.org.uk/site/2201</a>	Hedges 1987, 163-165
Orkney Islands	Tankerenss, Mine Howe	Metalworking Site, Iron Age/Late Iron Age. Roman material discovered together with other material (2000). Trench 'E' revealed industrial waste including moulds, slag, furnace linings and evidence for bone and antler working.	<a href="http://canmore.org.uk/site/2998">http://canmore.org.uk/site/2998</a>	Card et al. 2000; Card and Downes 2003
Highland	Portmahomack, Tarbat	Evidence for Metalworking including over 50 crucible fragments, some with silver residue.	<a href="https://www.york.ac.uk/archaeology/staff/sites/tarbat/bulletins/bulletin7/research.html">https://www.york.ac.uk/archaeology/staff/sites/tarbat/bulletins/bulletin7/research.html</a> <a href="http://canmore.org.uk/site/15662">http://canmore.org.uk/site/15662</a>	MacDonald and Laing 1973, 138; Carver and Spall 2006, 102-103
Highland	Craig Phadrig	Evidence of Metalworking, clay mould for the escutcheon of a hanging bowl. A mount of this design has been found on a fragmentary hanging-bowl from Castle Tioram in Argyll and may have been produced at Craig Phadrig.  Possible site of St Columba's visit to the King of the Picts, Brideison, who reigned 555-584 AD. A massive Pictish chain was	<a href="http://canmore.org.uk/site/13486">http://canmore.org.uk/site/13486</a>	Laing 1975; Noble et al. 2015; Adomnán 1995

		discovered nearby at Torvean in 1808.		
Highland	Learnie, Rosemar kie	Metal Working Site. Bloom refining and smithing was potentially taking place in the cave.	<a href="http://canmore.org.uk/site/293466">http://canmore.org.uk/site/293466</a>	Birch et al. 2018; Wood 2006
Highland	Old Town of Leys, Culduthel	Evidence for metalworking (Iron Age). Crucibles, slag, metalworking debris recovered from the site in 2005 when preparing for a housing development.	<a href="http://canmore.org.uk/site/163581">http://canmore.org.uk/site/163581</a>	Murray 2006; Murray 2007
Moray	Burghead	Burghead Fort (Pictish), Evidence for Metalworking discovered 2019. Finds from this trench included fragments of crucibles and other metalworking evidence.	<a href="http://canmore.org.uk/site/16146">http://canmore.org.uk/site/16146</a>	Noble et al. 2020; Johnson 2002
Moray	Birnie	Evidence of Metalworking at the Site.	<a href="http://canmore.org.uk/site/158983">http://canmore.org.uk/site/158983</a>	Hunter 2007; Hunter 2000
Aberdeen shire	Rhynie, Barflat	Metalworking Evidence, Pictish. Late Roman amphorae, crucible sherds, mould fragments, evidence for metal working and iron smelting.	<a href="http://canmore.org.uk/site/281408">http://canmore.org.uk/site/281408</a>	Noble and Gondek 2014; Noble and Gondek 2011; Noble et al. 2020
Perth & Kinross	Dundurn, St Fillan's Hill	Hillfort with evidence of metalworking. A Pictish stronghold.	<a href="http://canmore.org.uk/site/24873">http://canmore.org.uk/site/24873</a>	Alcock et al. 1989
Perth & Kinross	King's Seat, 'Fort of the	Evidence of metalworking present; moulds & crucible fragments recovered from trench 4 (2017).	<a href="http://canmore.org.uk/site/27172">http://canmore.org.uk/site/27172</a>	Cook et al. 2018; RCAHMS 1994, 57,



	Caledonians'			74, 89, 158
Fife	Clatchard Craig	Evidence of Metalworking, silver ingot, clay moulds and other debris, Roman Samian pottery	<a href="http://canmore.org.uk/site/30074">http://canmore.org.uk/site/30074</a>	Close-Brooks 1986; RCAHMS 1933, 4-6
East Lothian	Traprain Law	Crucibles Recovered: Evidence of smelting silver	<a href="http://canmore.org.uk/site/56396">http://canmore.org.uk/site/56396</a>	Cree 1923; Cree 1924; Cree and Curle 1922; Hunter 2022; Hunter 2022; Hunter 2013; Hunter and Painter 2013
Western Isles	Dunan Ruadh, Pabbay	Broch, Iron Age.	<a href="http://canmore.org.uk/site/21383">http://canmore.org.uk/site/21383</a>	Foster and Pouncett 2000
Western Isles	Eilean Olabhat, Griminish, North Uist	Evidence of Metalworking Silver Present on This Site.	<a href="http://canmore.org.uk/site/10063">http://canmore.org.uk/site/10063</a>	Armit et al. 2009; Gilmour 2000
Western Isles	Cnoc a' Comhdhalach, North Uist	Mould Fragment	N/A	Campbell 2007

Western Isles	Dun Cuier, Barra	Broch, Iron Age.	<a href="http://canmore.org.uk/site/9710">http://canmore.org.uk/site/9710</a>	Young 1954; Young 1955
Western Isles	Loch Na Beirgh, (Traigh na Berie) Lewis	Cellular Building, Iron Age	<a href="http://canmore.org.uk/site/4100">http://canmore.org.uk/site/4100</a>	Harding and Gilmour 2000
Western Isles	A' Cheardach Mhor, South Uist	Wheelhouse, Iron Age	<a href="http://canmore.org.uk/site/9949">http://canmore.org.uk/site/9949</a>	Armit 1996, 31, 147, 155; Young and Richardson 1960, 135-173
Argyll & Bute	Midross, Loch Lomond	Iron smelting bloomery.	<a href="http://canmore.org.uk/site/281535">http://canmore.org.uk/site/281535</a>	Rennie 2005
Argyll & Bute	Dunollie Castle	Evidence of Fine Metalworking	<a href="http://canmore.org.uk/site/23027">http://canmore.org.uk/site/23027</a>	Lock and Ralston 2016; Alcock and Alcock 1987
Argyll & Bute	Dunadd	Evidence of Fine Metalworking.	<a href="http://canmore.org.uk/site/39564">http://canmore.org.uk/site/39564</a>	Lane 1994; Lane and Campbell 2000; Clarke et al. 2012, 85-87
Argyll & Bute	Iona	Early Christian Monastery founded by St Columba. Moulds for metalworking discovered.	<a href="http://canmore.org.uk/site/21649">http://canmore.org.uk/site/21649</a>	Reece 1981; Hamlin 1988

Argyll & Bute	Bruach an Druimein , Potalloch	Evidence of Metalworking Present at the Site.	<a href="http://canmore.org.uk/site/39451">http://canmore.org.uk/site/39451</a>	RCAHMS, 1988, 204; Heald and Hunter 2008, 42
Argyll & Bute	Loch Glashan	Crannog, Iron Age. A small crucible, pieces of slag, whetstones.	<a href="http://canmore.org.uk/site/40047">http://canmore.org.uk/site/40047</a>	Campbell 2005; RCAHMS 1988, 35, 205-208
Argyll & Bute	St Columba's Cave	Cave, evidence for deep occupation.	<a href="http://canmore.org.uk/site/39012">http://canmore.org.uk/site/39012</a>	Tolan-Smith 2001, 200-201
Argyll & Bute	Inchmarnock, Midpark,	Monastic Settlement.	<a href="http://canmore.org.uk/site/40268">http://canmore.org.uk/site/40268</a>	Conolly et al. 2002
Argyll & Bute	St Blane's, Isle of Bute	Monastic Settlement. Finds include an ingot-mould and crucibles and a series of motif-pieces.	<a href="http://canmore.org.uk/site/40292">http://canmore.org.uk/site/40292</a>	Anderson 1900, 307-325; Laing et al. 1998, 551-565
Fife	East Lomond Hill	Iron Age Fort.	<a href="http://canmore.org.uk/site/29881">http://canmore.org.uk/site/29881</a>	O'Grady 2017; RCAHMS 1933, 143-144
Edinburgh, City of	Edinburgh Castle, Dun Eidin	First mention of the rock of Edinburgh as a fortress occurs in an old Welsh poem, the Gododdin of Aneurin, dating from the end of the 6th Century.	<a href="http://canmore.org.uk/site/52068">http://canmore.org.uk/site/52068</a>	Ralston and Armit 2003, 224
West Dunbartonshire	Alt Cluth, Dumbarton Castle	Fort, Early Medieval	<a href="http://canmore.org.uk/site/43376">http://canmore.org.uk/site/43376</a>	Alcock and Alcock 1990; Alcock et al. 1992;

				Alcock et al. 1993
North Ayrshire	Buiston	Crannog, possibly 7 <sup>th</sup> century	<a href="http://canmore.org.uk/site/42950">http://canmore.org.uk/site/42950</a>	Crone 2000
South Ayrshire	Dundonald	Iron Age Fort.	<a href="http://canmore.org.uk/site/41970">http://canmore.org.uk/site/41970</a>	Caldwell and Campbell 2004, 88-92
Dumfries & Galloway	Whithorn	Monastic Settlement. Evidence of metalworking from moulds and crucibles. Silver residue evidenced.	<a href="http://canmore.org.uk/site/63298">http://canmore.org.uk/site/63298</a>	Hill 1987; Hill 1997
Dumfries & Galloway	Trusty's Hill, Anworth	Fort with evidence of metalworking. 6th/7th C.	<a href="http://canmore.org.uk/site/63641">http://canmore.org.uk/site/63641</a>	Toolis and Bowles 2017
Dumfries & Galloway	Mote of Mark	Evidence of Metalworking Present. 130 crucible fragments displaying high status items created at this site. (6th-7th C).	<a href="http://canmore.org.uk/site/64911">http://canmore.org.uk/site/64911</a>	Curle 1914

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