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<th>Insular ornamental metalwork AD 300 - 500: 'Military Style' inspired art in Ireland and Britain</th>
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<td>Author(s)</td>
<td>Gavin, Fiona</td>
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<tr>
<td>Publication Date</td>
<td>2014-09-30</td>
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<td>Item record</td>
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Insular ornamental metalwork
AD 300 – 500:
‘Military Style’ inspired art in Ireland and Britain

Volume I of II

Fiona Gavin

This thesis is submitted to the National University of Ireland, Galway for the Degree of PhD in the School of Geography and Archaeology

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September 2014

This research was facilitated by a scholarship from the Irish Research Council for the Humanities and Social Sciences
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Abstract

The first dedicated examination, analysis and contextualisation of a corpus of Insular metalwork characterised by highly-accomplished, reserved fine-line ornament. Comprising mostly silver and copper-alloy dress-fasteners, such as select disc-headed pins, hand-pins, proto hand-pins, zoomorphic penannular brooches and miscellaneous mounts, their shared attributes of exquisite artisanship, remarkable finesse, crisp lines, miniature fields of ornamentation and the use of precious metal sets them apart from contemporary and later Insular ornamental metalwork. It is argued that technically, stylistically and artistically, these objects constitute a distinct corpus and represent a largely unrecognised artistic oeuvre, that represents an Insular rendition of provincial late Roman art of the fourth and early fifth centuries AD, and can be designated the Insular Military style. Microscopic and scientific analysis confirms the distinctness of the corpus and, when married to existing typologies, confirms the tightness of its chronological range.
Acknowledgements

I would like to express my sincere and considerable thanks to the many people who have provided invaluable assistance and guidance during the long period in which this thesis has been in preparation. First and foremost I would like to extend my sincere thanks and gratitude to Conor Newman for his constant encouragement throughout this endeavour. The project could not have been completed without his mentorship, enthusiasm and friendship. I am also indebted to Professor John Waddell, Dr. Kieran O’Connor, Dr. Noel McCarthy, Dr. Paul Mullarkey, Angela Gallagher, Sandra Getty and my fellow postgrads past and present for their friendship and advice over the last number of years.

I would also like to express my gratitude to Dr Andy Halpin and Raghnall Ó Floinn (NMI) for facilitating my access to the material over the years. Sincere thanks are also due to Dr Sonja Marzinzik and Virginia Smithson (BM), Susan Fox (Roman Baths and Pump Room Heritage Services), Angie Irvine (Rugby Art Gallery and Museum), Steve Minnitt and Simon Jones (Somerset County Museum), Lindsey Allason-Jones (Newcastle Museum of Antiquities) and Dr. Martin Goldberg (National Museums of Scotland, Edinburgh). Thanks are due to Dr. Roger Bland and Dr. Daniel Petts for introducing me to the PAS and more importantly, teaching me how to use it effectively.

I must however reserve my greatest thanks for my husband, Aengus; my son, Damon; my parents Peter and Mary and my sisters Lorraine, Corinna and Aoife. Their unwavering love, support and patience encouraged me through to the end and it is to them that this thesis is dedicated.
Abbreviations

The following abbreviations are employed in this thesis:

BM        British Museum
LIARI     Late Iron Age and Roman Ireland
NMI       National Museum of Ireland
NMMS      National Museums of Scotland
PAS       Portable Antiquities Scheme
RCAHMS    Royal Commission on the Ancient and Historical Monuments of Scotland
XRF       X-ray Fluorescence
Glossary

**Anglo–Saxon**
The catch–all term that denotes the Germanic culture formed from the cultures of Germany and northern Scandinavia which was introduced and intermixed in Britain. The use of the term here refers to an archaeological culture and not genetically separate peoples.

**Beading**
A row of small circular or semi-circular shapes that are often used in imitation of granulation.

**Clavate**
In plant ornament, a club-shaped leaf that is thicker towards one end.

**Cladogenic**
Branching evolution.

**Colonia**
A new town created by an act of Government composed of plots of land allotted to retiring legionaries. The population of the town was therefore almost entirely composed of Roman citizens.

**Embossing**
The process of producing relief ornament by the use of dies.

**Entasis**
A slight convex swelling on a pin-shank.

**Falcate**
In plant ornament, a curved sickle or hook-shaped leaf.

**Flux**
A chemical cleaning agent which facilitates processes such as soldering and tinning by removing oxidation from the metal surface, sealing out air to prevent further oxidation and facilitating amalgamation with the metal substrate.

**Foederati**
During the later Empire, a *foederatus* identified barbarian tribes (the Franks, Vandals, Alans and the Visigoths) who were subsidised by Rome in exchange for providing warriors to fight in the Roman armies. Barbarian tribe who had a treaty or *foedus* with the Imperial Government allowing them to settle in depopulated frontier areas of the Empire bringing land back into cultivation and acting as guards against their less-favoured fellows.
Germanic
Pertaining to the cultures of Antiquity outside of the Roman spheres of influence in northwest Europe. Sometimes called 'Free Germania'. The use of the term here refers to an archaeological culture and not genetically separate peoples.

Kerbschnitt
A late Roman method of decorating metalwork with deeply recessed and sharply defined classical patterns similar in form to and perhaps originating from woodcarving. The patterns are usually contained in ornamental friezes of either geometric or vegetal designs and are usually found on late Roman military belt-sets from the Western Roman Empire.

Maniakion
Metal collar or torc worn by the Roman Imperial guard in Late Antiquity.

Mansio
A mansio (from the Latin word mansus the perfect passive participle of manere "to remain" or "to stay") was an official stopping place on a Roman road, or via, maintained by the central government for the use of officials and those on official business whilst travelling.

Metalworking
When the term metalworking is used, the expansion ‘non-ferrous’ metalworking is intended, specifically silver and various alloys of copper.

Muids
Extensive Gallo-Roman cemetery in the département of Eure – see Böhme (1974, katalog 181).

Niello
A lustrous blue/black inlay material composed of metal sulphides which is inlaid or fused into a recess in the metal substrate.

Notitia Dignitatum
An official listing of all Roman civil and military posts dating to the fifth century AD. It survives as a 1551 copy of the now-missing original and is the major source of information on the administrative organisation of the late Roman Empire.

Opus interrasile
From the Latin opus (=work) and interrasile (= openings). It is a metalworking technique that involves creating a style of openwork decoration by piercing a sheet of metal with a chisel or other sharp tool.
Opus Signinum
A Roman paving technique for covering walls and floors, made of a waterproof mixture of lime, sand and crushed terracotta, occasionally decorated with small coloured tiles.

Quatrefoil used
From the French, literally meaning four leaves or petals where the design or ornament is divided by cusps into four lobes.

Repoussé
The process or the product of ornamenting metallic surfaces with designs in relief hammered out from the back by hand.

Silver Plate
Tableware and other utensils derived from plates of worked silver.

Temenos
Sacred space or boundary.

Triclinium
The dining room within a Roman house, often featuring an arrangement of three couches in a horseshoe shape.

Typology
A sequenced, chronologically ordered classification.

Vandykes
Distinctive V-shaped tool mark produced by employing a scorper to remove the background to receive a broad expanse of enamel inlay.

Whorl
A coil growing from a spiral usually in fine-line relief.

X-ray Fluorescence
A rapid and accurate method of identifying elements by their characteristic x-ray emission; the composition of the sample is obtained by converting the x-ray intensities into concentrations using appropriate algorithms. However, each type of sample must be individually calibrated.

Zeitgeist
Spirit of the times; drift of thought and feeling in a particular age.
Introduction

This thesis examines the evidence for Insular Military Style art in Ireland and Britain. The term ‘Military Style’ was coined by Böhme and first used in his analysis of the Vermand Treasure (2000, 78) to describe a distinctive Late Roman art style executed in Kerbschnitt and punched ornament and occurring most commonly on Provincial Roman military garniture. The Insular ‘Military Style’ is defined by highly accomplished, crisp, fine-line decoration which has been skilfully and painstakingly chased and engraved by hand. The style employs a grammar of evolved classical, vegetal and geometric motifs executed in miniature friezes, framed by punched or traced borders. It is found on a range of existing dress ornaments that reflect the beaded decoration, panelled ornament and classical motifs of late Roman militaristically-inspired *personalia*. Where applied it elevates the object into the realm of prestige good because the quality of the workmanship is so special and, of course, because of the use of precious metal, which speaks to the socio-cultural milieu in which this art style circulated and performed. Indeed, the Insular Military Style oeuvre is *characterised* by the use of silver and it comprises the earliest known corpus of silver from Ireland, the significance of which has not been explored until now. The *oeuvre* stands head and shoulders above other contemporary metalwork. It is simply exquisite.

While important contributions to the study of these artefact types have been made by Stevenson (1955), Kilbride-Jones (1937; 1980a, Kilbride-Jones 1980b), Graham-Campbell (1991), Laing (1993; 1997) and Youngs (1989, 2005, 2007, 2011), their work has tended to focus on typology and dating, with commentary restricted to the cultural context of British specimens, thus paying comparatively little attention to the situation in Ireland where this material also occurs. Howard Kilbride-Jones (1980b) noted that select brooches of his Type B1 formed a distinct class, the standard of workmanship and general finish of which is far above those of any of his other groups and significantly, he also identified saltires, triple annulets and ladder patterns as trademarks of the series. Raghnall Ó Floinn (2001) discusses late Romano-British influences upon Irish metalworking styles and the context and distribution of hand-pins and Class I zoomorphic penannular brooches (suggesting connections between the Irish midlands, the Severn Valley and northern Britain), but
does not explore their decorative ancestry. He argues convincingly for a transmission of first artefacts and then skills from the middle and lower Severn region to the east midlands with a secondary spread into the rest of Ireland from there. Conor Newman (1995) identified this art-horizon in Ireland and suggested that its appropriate art historical horizon was Late Roman Provincial. This thesis develops his hypothesis. It will be argued here that the Insular Military Style is the product of the strategic use by Insular élites of Provincial Late Roman motifs, designs and metals to proclaim and affirm status and power during the social and political instability of the fourth and fifth centuries AD, and that this is a trend shared with other metalwork from North western Europe.

The mere existence of this material gives rise to the key research questions of this thesis: what are these objects; how many of them exist; what is their ancestry and that of their ornamentation; what are they made from; what date are these objects; what was their socio-cultural context? In addition to addressing these quite basic questions, the aim of this work is to test an existing hypothesis first advanced by Conor Newman (1995, 24) that this corpus of Insular metalwork rightfully belongs in the fourth and fifth centuries AD, that the form and motifs evident in the decoration of these objects derive from the so-called 'Military Style' of late Provincial Roman art and that in developmental terms this oeuvre predicated the appearance of the so-called 'Ultimate La Tène’ style of the seventh century.

The first step towards addressing the above questions is to generate a catalogue of the corpus in Ireland and Britain on which that understanding can be based. The corpus is the product of an extensive search of museums, private collections and archaeological databases in Ireland and Britain, together with a study of previously published material. The starting point was the known corpus of silver and copper alloy dress pins and select brooches from Kilbride-Jones’s type B1 brooches from Ireland and Britain, the details of which were scattered across a variety of sources, both published and unpublished. The most useful corpora were Susan Youngs’s *The work of angels* (1989), Lloyd Laing’s *A catalogue of Celtic ornamental metalwork in the British Isles, c. AD 400-1200* (1993), Kilbride-Jones’s *Zoomorphic penannular brooches* (1980a), and Lasariona Duignan’s unpublished thesis *A contribution to the study of hand-pins* (1970), all of which contained well-illustrated catalogues. The study also drew on papers by Hilary Cool (1990), Conor
Newman (1995), Raghnall Ó Floinn (2001), Andy Heald (2001) and Susan Youngs (2005), as well as catalogues from auction houses such as Bonhams. Online repositories including the Portable Antiquities Scheme (PAS) in England and Wales, www.excavations.ie in Ireland and the Royal Commission of Ancient and Historical Monuments of Scotland (RCAHMS) were also consulted.

The next task was to examine at first hand as many of these specimens as possible, both visually, and microscopically. This necessitated visiting museums throughout Britain and Ireland to conduct a ‘hands-on’ examination of the material and to become intimately familiar with the form and decoration of each object and of the corpus generally. Each object was examined microscopically and visually and then recorded (e.g. measured, weighed, photographed and drawn) by the writer. Some objects held in private ownership were not available for inspection e.g. Cat No’s 13, 27 and 28. The penannular brooch from East Ravendale, Lincolnshire (Cat. No. 24) is a recent addition to the corpus and unfortunately it was not possible to arrange to examine it prior to submission of this thesis.

In total, thirty-one objects decorated in the Insular Military Style were identified and these serve as a good reflection of the essential qualities of the style. A catalogue such as this can never be definitive as new specimens will almost certainly be discovered in the future. The objects identified thus far fall into three broad categories (i) projecting-headed pins viz. proto-hand-pins, hand-pins and disc-headed pins, (ii) zoomorphic penannular brooches and (iii) ornamental strips/mounts. Within these categories, projecting-headed pins are the most numerous types (Table 1).

This study utilises art-historical methodologies, the application of the natural sciences and other traditional archaeological methodologies, together with study of the social context and performance of this art as a cultural signifier. Art-historical analysis including the definition of stylistic roots and the identification of visual references drawn from a range of forms and media across the late Antique West has been employed. The social and cultural contexts in which this art style circulated, the practices and aims of its artisans, and the ambitions and resources those élites who commissioned and wore it are also considered.
The chronological range of this study is not arbitrary; rather, it is based on two significant finds from Southern England *i.e.* the proto hand-pin from Oldcroft, Gloucestershire and the brooch recovered from the sacred spring at Bath, Somerset. (Cat. Nos 1 and 22). The Oldcroft hoard (Johns 1974, 297; Rhodes 1974) provides a *terminus ante quem* of AD 359 for the associated coins and if the pin is contemporary with the deposition of the hoard (and there is nothing art-historically to suggest that it is not), then the pin may date to at least the first half of the fourth century AD. Gerrard (2007, 159) re-visited the dating of the destruction of the temple complex at Bath and using documentary, stratigraphic and artefactual evidence alongside a series of new radiocarbon dates he has determined that veneration and deposition at the sacred spring head ceased following the demolition of the temple around AD 450 and certainly before AD 500, suggesting that the brooch could not have been deposited later than AD 500. The decision to extend the opening date back to AD 300 was based on two factors; (i) The Oldcroft pin shows evidence of wear so it may have been in circulation for several decades prior to deposition. (ii) To allow for the possibility of new finds.

This is a small corpus of objects - just thirty-one have been identified – and these are widely distributed across Ireland and Britain. As is the case with many prehistoric metal artefacts from Ireland, the vast majority of these are

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
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<tbody>
<tr>
<td>Ornamental Mounts/Strips</td>
<td>3</td>
</tr>
<tr>
<td>Zoomorphic Penannular Brooches</td>
<td>6</td>
</tr>
<tr>
<td>Disc-headed pins</td>
<td>8</td>
</tr>
<tr>
<td>Hand-pins</td>
<td>8</td>
</tr>
<tr>
<td>Proto-hand-pins</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 1 Insular Military Style Objects
unprovenanced. For example, of the fourteen objects with Insular Military Style decoration from Ireland, seven formed part of antiquarian collections before being handed over to their respective museums and are provenanced as ‘unlocalised’ within Ireland with no recorded find spot. Some are only attributed to a general area such as the celebrated royal site of Teltown (sic Yelltown; Cat. No. 16); a parish, such as Castletown Kilpatrick, Co. Meath (Cat. Nos 2,11); a landed estate, such as the Derk estate at Treanmanagh, Co. Limerick, or the Bond property at Newtownbond, Co. Longford (Cat. Nos 17, 5) while others are provenanced to a river, as in the case of the zoomorphic penannular brooch found in the bed of the River Greese in the grounds of Kilkea Castle (Cat No. 26) or the anthropomorphic mount recovered from the River Shannon near Athlone (Cat. No. 30). In fact, not a single Insular Military Style object from Ireland has come from a secure archaeological context.

The high proportion of unprovenanced and poorly contexted finds relates to the fact that many were found during the nineteenth century when there was less interest in the provenance and find circumstances of archaeological objects, and possibly less opportunity to record these details. A number of objects were formerly part of antiquarian collections or passed through the hands of collectors who, all too often, did not record the provenance or exact find spot. The distribution in Ireland reflects this situation and as a result, the Irish map largely charts instances of local antiquarians taking note of chance finds. In Britain, four specimens were found on Late Roman sites; the Bath Brooch, the Tripontium pin, the Denton pin and the Welton-le-Wold pin (Cat. Nos 22, 10, 8, 3), however none comes from a closed and secure context. Others are either stray or metal-detected finds and, as such, the context of their discovery offers little or no information pertinent to their dating. The three specimens from Scotland all come from hoards deposited in prehistoric burial mounds *viz.* Norrie’s Law, Fife and Gaulcross, Banffshire (Cat. Nos 9, 7).

As there are very few independently dated objects on which to secure a chronological framework. Consequently, dating has tended to rely on art-historical and typological comparisons with later, independently dated objects for which the fine line style appears to provide good comparanda. However, determining how an object was made can also provide valuable information as technologies and methods of production evolve over time, and can be chronologically and regionally specific.
Therefore, identifying and mapping the stages of production of the metal base, and any inlays and overlays has played a significant role in this thesis. Elemental mapping of the bulk composition of the objects was also employed through XRF analysis of Insular Military Style objects held in the collection of the National Museum of Ireland. This was supplemented with existing XRF data on objects from Britain. The purpose of this analysis was to (i) facilitate comparisons with other contemporary silver and copper alloy objects in southern Britain and Scotland (ii) determine if a specific alloy composition was associated with the Insular Military style (iii) determine the composition of inlay materials used (iv) supplement existing dating evidence as alloy composition is sometimes characteristic of the period in which it was used.

Certain technologies and techniques are also unique to the corpus and in fact they define it, perhaps even more than the art style (see Chapters Four and Five). Consequently, technique and quality of workmanship played a significant role in determining which objects were included in the corpus, and which were excluded. Post-depositional changes or transformations can affect perception of the ‘quality’ of a specimen (Schiffer 1987, 143-197), and some specimens are heavily worn and their decoration is much abraded. In such instances inclusion in the corpus is based on close examination and appraisal of the workmanship as well as the writer’s interpretation of the quality and fineness of the ornament when it was first executed. Detailed micro-photography has also been used where possible. This is a non-destructive and relatively inexpensive technique that allows for detailed examination of worked surfaces. It can highlight tool marks that indicate how the metal was worked and decorated, and it can also assist in identifying any remaining traces of the original inlays and overlays. This methodology also facilitates ongoing study of the objects outside of the laboratory setting.

**The concept of Late Antiquity**

Late Antiquity encompasses the chronological period from c. AD 250 to 800 and represents ‘a distinctive and quite decisive period of history that stands on its own’ (Bowersock et al 1999, ix). Simon Esmonde Cleary (2001, 97) has advocated the use of the concept of Late Antiquity to describe the Roman to post-Roman period in
Britain and the applicability of this concept to Ireland is readily apparent. As with other territories across the Provincial west (whether part of the Empire or the *externae gentes*) both islands experienced to a greater or lesser extent, a breakdown of the established order, shifting centres of power, and the emergence of new socio-cultural and political identities. The merit of applying the concept of Late Antiquity to the Insular Military Style is that it accommodates similar material culture manifestations and socio-cultural processes across Western Europe, allowing the identification of *comparable* trends. The strategic use Roman *militaria* as status symbols, for example, is a phenomenon which has been noted among élites in northwestern Europe as crossbow brooches and belt fittings which had originally served to denote authoritative military and administrative rank devolved into ornate, fashionable, dress accessories of wealthy aristocrats. It will be argued that they may have performed socially as analogues of Roman symbols of high office and élite status, adding, *inter alia*, an Irish perspective to recent research and debate by scholars of the Provincial Roman West on the concepts of ‘identity’ and ‘style’ as a means of expressing power and status (Jundi and Hill 1998; Swift 2000b; Eckardt and Crummy 2005; Carr 2006). Indeed Insular art style makes so much more sense when viewed in this broad sense, as a Late Antique style.

**Style**

In the context of art-historical analysis, ‘style’ refers to formal variations in material culture that is particular to certain groups (Hicks 1993, 3). These characteristic formal variations are also specific to time and place, and as such, style can be can be used as an effective tool to secure a chronological framework for material culture (Sackett 1982, 63; Conkey 1990, 6). Style also involves choice among various alternatives of visual representation and it may also be interpreted as the aesthetic representation of the culture, and ideologies of the society that produced and used it (Hicks 1993). A preference for certain designs, patterns or imagery, geometric, vegetal or zoomorphic, can define a style as can the decision to emphasise certain elements over others (Hegmon 1992, 517–18). In this thesis for instance, styles are used to denote chronological periods such as Late Antique or a particular place of

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1 The application of the concept of Late Antiquity has its opponents due to its foundation within paradigms of Roman cultural and social continuity (see *e.g.* Faulkner 2004, 5-12).
origin e.g. Sösdala Style. Suzuki (2000) contends that the concept of style (defined as patterned variation in material form) is relational; it is based on relating an object or an attribute of that object, to a set of comparanda. Accordingly, an object or attribute ‘lacks stylistic significance insofar as it is taken in isolation and consequently not imbedded in a class…’ (ibid. 2000, 12). Therefore an object attributed to a particular style does so in contrast to objects belonging to other contemporary styles e.g. without Nydam style there could be no Sösdala style, or Insular Military Style etc. (see also Pollington et al 2010, 37).

Identifying technical similarities in the production and ornamentation of certain objects also allows them to be assigned to a specific style. According to proponents of this view, a style emerges when a group chooses a particular production method from several possible options, based upon technological traditions and limitations (Sackett 1990). In this concept of style, the visual traditions, training and skill of the artisan all place limitations on the form, decoration and ‘style’ of personal ornaments. Style is not solely dictated by the requirements of artistic tradition and preference however, but also by technical aspects of its production. For instance, the technologies and techniques employed on Insular Military Style are material-sensitive, and they are limited by the shape and form of the object. Different techniques are employed on copper-alloy and silver specimens; deep engraving and chasing is only found on objects manufactured from silver while copper alloy specimens engraving is noticeably more shallow (see e.g. the Treanmanagh and Teltown disc-headed pins, Cat. No’s 17, 16) and the use of chased decoration is more restricted. This is because copper alloy is ‘harder’ and less amenable to chasing. Style in this case is an unconscious behaviour rather than a deliberate signalling act with stylistic messages being read rather than transmitted (Schiffer 1999).

Style and identity
While Polly Wiessner (1990, 127) agrees that style plays a passive part in information transmission, she maintains that style may also be manipulated assertively through individual agency. Moreover, she contends that the concept of style is of singular importance in understanding the social construct of identity, serving as a medium by which social relations are identified, negotiated and
maintained, and communicating relationships within and between groups (Wobst 1977; Wiessner 1983, 1984, 1985; Jenkins 2008, 4-5, 17, 82). Messages regarding self or group identity and affiliation, class, rank, gender, religion, and political affiliation can all be transmitted stylistically, and such signals are most commonly read and displayed through personal ornaments and dress (Jundi and Hill 1998). Objects of personal adornment are particularly suited to this task because they are ‘eye-catching’ and typically worn in prominent positions of the body e.g. the head or chest (Wobst 1977). Accordingly, dress accessories, provide an ideal means to explore how groups and individuals mobilise and manipulate style as a social and cultural identity symbol. Indeed, the existence of regionally-specific dress ornaments within individual provinces or even small districts within the Roman Empire is well attested (See E. Swift 2004, 217-218) and distinctive personal ornament types served as cultural identity symbols throughout Late Antiquity (Suzuki 2000, 19). The late fourth and fifth century AD was a period that witnessed social stress and instability particularly in southern England. In Ireland, fresh exposure to the Classical world also brought cultural and political change, serving as conduit for the transmission of new stylistic elements and re-energising Classical elements already present in Insular la Tène art. Situations such as this can often give rise to a heightened awareness of cultural identity and the appropriation of material culture for its expression (Hodder 1991, 187; Jones 1997, 110; Suzuki 2000, 19). In both regions, new identities were formed, new dress ornaments were adopted and worn and new art styles emerged. Wiessner has termed this phenomena ‘emblematic’ style. Recent anthropological studies have demonstrated that emblematic styles generally appear at critical junctures in local/regional socio-political arenas when changing social contexts and relations impel groups and individuals to project their social or personal identity (Curta 2005, 102). During such periods of social and political upheaval, style becomes especially important and style is manipulated to suit changing social, cultural or individual contexts (Weissner 1985:162; Binford 1989:54-55).

Style also distinguishes between members of a particular social group and those who are ‘other’. This method of differentiation may have been significant during times when social and cultural identities were increasingly fluid (Suzuki 2000, 19; Hunter 2007, 286). Indeed, Gillian Carr (2001, 117) argues that the use of “mutually recognizable but hidden devices” in items of personal adornment could
serve to construct identities by signalling to members of the same group, while at the same time concealing the meaning from non-members. An uninitiated individual looking at a projecting disc-headed pin or zoomorphic penannular brooch in the Insular Military Style would be struck by the ambiguity of design caused by the reserved fine line ornament, the confusion between background and foreground. The fluid, almost shape-shifting style would have created distance between the emitter and receiver. Visual devices such as these could proclaim a shared identity to fellow group members or shield such information from those not conversant with the art style. Messages transmitted through material culture can be controlled and manipulated by dominant individuals or groups attempting to create and/or legitimise positions of power (Wobst 1977; Wells 2001). Consequently, élites tend to take an active role in the development and mobilisation of style (Hegmon 1992, 529; Jones 1997, Hedeager 2011, 51). Thus, an art style is a reflection of the society which produced it and its art expressions function as a medium to describe that society, its ideology and its structure.

The terms used to describe archaeological cultures in Ireland, Britain and the wider Late Roman Provincial West are inherently problematic because they were first used to describe what were assumed to be distinct, genetically related groups of individuals. ‘Germanic’ for example has been universally applied to immigrants as though they migrated en masse across north Western Europe during the fourth and fifth centuries AD. In actuality, these so-called ‘Germanic’ immigrants did not constitute a homogenous group and were composed of diverse, ethnically and culturally distinct populations such as the Franks, the Lombards, the Visigoths, and the Ostrogoths who were spread over a wide geographical area. Likewise, the term Celtic has been applied indiscriminately to pre-Roman/indigenous peoples in Britain and Ireland (see Megaw and Megaw 1998, 432-5; Green 1996, 3). However, indigenous peoples in Ireland and Britain were by no means a homogenous group with a shared Celtic heritage. Though they did share some common cultural traits with so-called Celtic Continental peoples, particularly in relation to art, ritual and religion, they most probably had no ethnic sense of being part of a greater Continental Celtic civilization. In fact, ethnic and cultural identity during this period was complex and fluid and it was possible for individuals to hold several different identities at once and to switch between them. Notwithstanding these issues
however, in the view of the writer general terms such as ‘Celtic’ and ‘Germanic’
though problematic have some validity and are too useful to abandon, particularly
when applied to art and archaeology. In this text terms such as Celtic, Roman or
Germanic should be understood to refer to archaeological cultures with a wide
variety of traditions, styles and beliefs and not to genetically separate peoples.

**Terminology**

This study encompasses the period AD 300-500 in Ireland and Britain. The
nomenclature generally employed to describe this time frame refers to spatiality and
cultures rather than dates. While the terms ‘late’ and ‘post’ Roman can be used in the
context of southern England, they cannot be applied to Ireland when this period is
more commonly known as the later Iron Age. Likewise, examples from Scotland
date to a period when Roman rule no longer applied and the term ‘Iron Age’ is more
commonly used. In order to avoid confusion and circumvent this disparity, dates and
date ranges will be used where possible and terms such as Late Roman or Iron Age
will be qualified by including the region *i.e.* later Iron Age Ireland when they are
used. The use of terms such as ‘Ireland’ and ‘England’ should only be interpreted in
the sense of modern administrative regions, not as regions in which distinct nations
or peoples *e.g.* ‘the Irish’ or ‘the English’ lived. As the style was current on both
islands and it is impossible to determine definitively where the objects were made,
the style is termed Insular (See Redknap 1991, 29).

The corpus of proto hand-pins, hand-pins and disc-headed pins will be
referred to collectively as projecting-headed pins. Where objects can be localised to
a particular place their name is prefixed by the name of that place, for example the
‘Denton Pin’. Museums use a variety of conventions to refer to finds (accession
number, registration number etc.). To avoid any terminological ambiguity and in
order to standardise identification throughout the text of both thesis and catalogue,
all of the specimens from the corpus have been assigned a unique catalogue number
and are referred by that number in the text (*e.g.* Cat. No. 3). Where objects are in a
fragmentary condition as in the case of the anthropomorphic mount from the river
Shannon, or the silver fragments from Norrie’s Law, then the object is given a single
entry number in the catalogue and each fragment is listed and described separately.
within that entry *e.g.* Cat. No. 31 (a). Reference to the location and accession number of comparanda will be cited in the footnotes. Cross-referencing between chapters is by the chapter and section number (*e.g.* 2.2.1), and to catalogue entries by the number (*e.g.* Cat. No 1). To avoid confusion any references to footnotes are prefixed with 'note' (*e.g.* note 6). References to figures, plates and tables in this thesis are capitalised and refer to the chapter and section number (*e.g.* Figure 6-3, Plate 7-1); fig. is used to refer to figures in other texts, except where abb. is used for *abbildung(en)*, taf. for *tafel* and pl. for plate. For ease of use, figures and plates included in the text may in certain instances be duplicated in one or more sections of the thesis; however each plate will be listed as a separate entry in the list of plates.

Unless otherwise indicated, all photographs were taken by the writer with the kind permission of the holding institutions with whom the copyright rests. Images taken from the PAS have been reproduced here under a CC BY-SA licence. The line drawings in this thesis interpret the motifs and decoration by depicting the raised ridges of the fine-line relief ornament and where appropriate, selective blacking-in has been used to highlight individual motifs. Where frames and borders have been omitted, this is in order to focus on the main decorative frieze. There is often a great variation in size between the panels of ornament featured on this corpus and some of the comparanda introduced therefore in order to achieve the greatest possible visual impact when comparisons are being made, these have not necessarily be reproduced to scale.

The local distribution maps for Ireland were produced using data sets supplied by Ordinance Survey Ireland (OSi). Unfortunately, small scale digital mapping data for the United Kingdom were not available at the National University of Ireland, Galway, therefore the local distribution maps for Southern England were produced using the Ordinance Survey of Great Britain’s OpenData county boundaries and coastal outline maps,² together with data and overlays relating to roads, settlements and resources acquired from the Pelagios project.³

The thesis itself comprises eight chapters and begins with an introductory discussion of Late Antique art and the dominant trends that characterise this

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² [https://www.ordnancesurvey.co.uk/opendatadownload/products.html](https://www.ordnancesurvey.co.uk/opendatadownload/products.html)
internationalised style. This is followed by a detailed appraisal of Böhme’s Military Style, a provincial *oeuvre* that enjoyed a widespread distribution across north Western Europe during the fourth and fifth centuries AD, primarily due to its association with the Roman army. Chapter Two explores the concept, origins and development of Insular Military Style-inspired art in Ireland and Britain in terms of its decorative elements, and its stylistic roots. It also includes a gazetteer of the motifs and devices that serve as hallmarks of this style. Chapter Three considers the form and function of the objects on which this style occurs. The second part of the chapter addresses the performative principles at play in this corpus, enquiring into how this material lent itself to the imperative to be prestigious. The technology and techniques involved in the creation of an art style are also key elements in determining the context in which it performed; therefore, a detailed appraisal of the various manufacturing processes employed in the small-scale production of high status metalwork is provided in Chapters Four and Five. It is intended that this will provide new and hitherto unexplored insights into fine metalworking in the Insular world. The significance of the first appearance of silver in the Irish archaeological record is also discussed in detail. Chapter Six addresses the spatial distribution of Military Style Art in Ireland and Britain and includes commentary on the contexts in which it is found. The biases, limitations, and constraints that affected analysis of the significance of the distribution are also considered. An analysis of the social and performative context of Insular Military Style art in Ireland is provided in Chapter Seven. This material also occurs on late Roman sites in Britain suggesting communities in the Irish east Midlands, and along the eastern littoral, were particularly amenable to new socio-cultural influences, both material and religious. They were also well-acquainted with Roman customs, playing a pivotal role in what appears to have been regular and routine contact with the Roman world. It is through such interaction and exchange that styles, ideas and innovations were received and transformed by indigenous communities here and served as an active agent for change. A full interrogation of the social and performative context of this material in Britain is beyond the scope of this thesis and must await a further study. It is suggested that objects in the Insular Military Style may have carried explicit religious and cosmological associations, fulfilling a definite purpose within belief systems in late Iron Age Ireland; therefore, Chapter Eight will venture to a degree into the fascinating realm of symbology, exploring the symbols, motifs and patterns
of this art. Following the summation a catalogue of Insular Military Style art is provided in Appendix I which contains detailed account of the form and decoration of each object together with corresponding plates and figures. Appendix II contains the raw data obtained during XRF analysis of the objects held in the collection of the NMI by Dr. Paul Mullarkey.
Chapter 1 - The Art of Late Antiquity

From the third century onwards, a suite of distinctive cultural trends and aesthetic tastes emerged across the provincial Roman west and its bordering territories. Among provincial élites there developed a common appetite for sophisticated and ostentatious personal adornment. Finely-ornamented, precious metal dress accessories became an important element of status display for both men and women. Indeed, by the fourth century AD, the ownership and exposition of elaborate and expensive personalia played an increasingly important role in the construction and maintenance of the élite identity (Janes 1998, 22-7; E. Swift 2009, 146).

Artistically, this was a period of vitality and innovation. It witnessed the emergence of a new, predominantly non-figural style characterised by increased abstraction, the stylisation of traditional, naturalistic vegetal motifs, and a marked preference for formal pattern and geometric designs (Henig 1995, 136; plate 1-1). The resultant ornamental friezes were visually striking, and almost gluttonous in their use of geometric, vegetal and spiraliforms, including shaded triangles, rows of running spirals, vine scrolls, tendrils, rosettes, peltas, palmettes, six-pointed interlaced stars, stepped patterns, swastikas, saltires and marigolds. Set within panel-based compositions, the grids of ornamentation at times well-nigh covered the decorated surfaces. On metalwork, perhaps the most dominant visual trend was a general shift away from plastic, three-dimensional modelling to flat modelling and heavy surface patterning (see e.g. Riegl (1985 [1901], 185, 199). In fact, an emphasis on surface texture and contrast became a major stylistic element of Late Roman design, and was achieved using techniques such as opus interrasile and Kerbschnitt. These techniques were often employed in combination with gilding and niello inlay to create tonal patterns of shade and light on the metal surface (Plate 1-2). Overall, the decorative effect was intentionally brash and ostentatious, in marked contrast to the subtle elegance, and more restrained ornament of preceding centuries.
A general perusal of artistic output from this period reveals these same stylistic elements across a variety of media, from clothing, traditional wall-hangings and carpets, to mosaic pavements, carved wooden and stone furnishings, prestige silver plate and accessories such as brooches, hairpins and so on, not only in the north-western provinces but in fact across the entire extent of the Roman Empire (Plate 1-1). This was especially apparent in terms of personal attire where brightly coloured clothing, and ostentatious personal ornaments in precious metal were employed to emphasise religious or secular power and social status. This speaks to a desire (or a social necessity) to mobilise a formulaic Late Antique style among the upper echelons of society, not only within the Empire but also in its neighbouring territories beyond the north-western frontier.

Simon Esmonde Cleary (2001, 97) rather succinctly describes Late Antiquity as being ‘like a cloisonné enamel, there may be separate cells of different colours but

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4 Most of the surviving textiles from this period come from late Antique Egypt; a region which provides optimal climatic conditions for their preservation and one that was also a large-scale producer of cloth at this time (Elsner 2004, 282).
when seen together, they reveal pattern or image’ and this metaphor can equally be applied to regional art expressions during this period. Drawing on a common repertoire of motifs artisans practising in different media across a wide geographical area contributed to an internationalised oeuvre whose aesthetique was shaped by colour, light, abstraction, and an appetite for richly-textured, relief surfaces (Forsyth 1951, 237-8; Henig 1995, 139, 170; Elsner 2004, 287; Manley 2007, 429; Plates 1-2. 1-3). Indeed, the art and material culture of the later Roman Empire featured a blend of influences drawn from many artistic traditions such as the Classical Greco-Roman world, European Celtic art, Germanic styles from the Rhineland and southern Scandinavia, Sarmatian art and the art of the Steppes, and eastern Mediterranean and north African styles, all of which contributed to the oeuvre termed ‘Late Roman’ (Pollington et al 2010, 74).

While a broad unity in élite style has been identified across the Empire, local demands, tastes, traditions and the idiosyncrasies of local craftsmen and workshops all contributed to emergence of distinctive provincial styles. Of these, Military Style art emerged as the most widespread of the western provincial oeuvres, its popularity due in no small part perhaps to its association with military equipment and its widespread diffusion throughout the Empire by the Roman army (see below). The Military Style in turn inspired a number of broadly contemporary, localised, regional art styles such as the Quoit Brooch Style (Ager 1985; Inker 2000; Suzuki 2000), the Scandinavian Sösdala Style (Kubitschek 1911; Forssander 1937) the Nydam Style and the Insular Military Style (Newman 1995, 23-25; Gavin and Newman 2009, Gavin 2013a). Each of these distinct, contemporary styles employs standard provincial Roman motifs, and participates in the general oeuvre of late Antique art; they also feature subtle variations in content, style and technique. The internationalism observed in these regional oeuvres can be attributed however to Classical, Late Roman influence, and specifically official Imperial metalwork.
1.1 The Military Style

The latter half of the fourth and early fifth centuries AD witnessed the emergence of a new and distinctive provincial Roman oeuvre that Böhme (2000, 78) christened ‘Military Style’ art. The Military Style is closely associated with the Roman army and occurs predominantly on Kerbschnittgarnituren or metal fittings viz. buckles, counterplates, strap ends etc. on official belt-sets or cingulum (Bullinger 1969, Böhme 1974, Sommer 1984). These Kerbschnittgürtelgarnituren were fashionable from the reign of Valentinian I, AD 364-375 to Honorius, AD 393-423 (Böhme 1986, 486). Decoratively, the major features of this style are formal, classically-inspired arrangements of geometric and vegetal designs executed in Kerbschnitt with border animals executed in round relief. As the style developed it became increasingly elaborate with beading and panelled Kerbschnitt ornament employed in combination with other techniques, such as niello inlay and gilding.

Military Style art occurs in Britain, across Belgium, northern France and north-western Spain; it follows the Rhine northwards from Cologne and south along the Danube through Austria and Hungary with outliers in the Baltic States, southern
Romania, and Italy (ibid. 1961, 11-2). Like others before him, Böhme observed that the style was initially transmitted by the movement of troops along the borders of the Provincial Roman north-west and its neighbouring territories (Behrens 1930, 285; Bullinger 1969, 78; Hawkes and Dunning 1961, 11-2). Although this style enjoys a widespread distribution across the Empire, the highest concentration, and probable place of origin is in northern Gaul, in an area between the Seine and the Rhine, thence its frequent designation as the Late Roman Military Style (Ager 1985, 13; Evison 1965, 58-9; E. Swift 2000, 202).

1.2 Late Roman Belt Sets

Belts were not a normal part of civilian dress in the Roman world, however, an elaborate, heavy belt-set or cingulum formed part of standard Roman military equipment and was worn as an eye-catching insignia of office by soldiers. Indeed the cingulum played an essential and prominent role in the visual identification of military service (Böhme 1974, 90, 97; taf. 4:27; Hoss 2011, 29-30). The Notitia Dignitatum, an official administrative document dating to the beginning of the fifth century AD depicts belt-sets amongst objects of official Imperial metalwork which were being produced by military factories during this period (E. Swift 2003, 51). Typically, belts were made of a broad strip of leather mounted with decorated metal counter-plates and stiffeners as well as a frontal buckle, a narrow strap pull-through tucked up under the wearer’s right hip, and a pendant strap end (Figure 1-1; See also Bishop and Coulston 2006, 220–224; Clouston 2013, 468; Hunter and Painter 2013 figs. 7.21-22; 12.1-3, 15.3, 15.14). In addition to the attached ‘flashy’ metal fittings, evidence preserved on contemporary mosaics and wall-paintings suggests that the leather belt itself was often dyed an ‘eye-catching’ red (James 2004, 61; Hoss 2011, 34). From the fourth century onwards belts became even wider, typically between 25mm to 50mm across, and consequently they could accommodate larger, and more elaborate metal fittings.

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5 Notitia Dignitatum. Edited by Otto Seeck. Frankfurt: Minerva, 1962. An official listing of all Roman civil and military posts dating to the fifth century AD. It survives as a 1551 copy of the now-missing original and is the major source of information on the administrative organisation of the late Roman Empire.
Figure 1-1 Reconstruction of belts of the fourth/fifth century AD (left), *Kerbschnitt* type belt fittings (right). After Bishop & Coulston 2006, fig. 12.
Some specimens held up to eight metal fittings made of bronze, silver, silver gilt and more rarely, gold, decorated with geometric and vegetal patterns executed in Kerbschnitt (Plate 1-3). The variety in elaboration and metal composition underscored the status implicit in such belt-sets (Jones 1986, 566; Leahy 2007 134; E. Swift 2000b, 185-204; Halsall 2007). The distinctive cingulum also had a close visual affinity with the decoration on military textiles, specifically long-sleeved tunics and cloaks associated with military dress. These were typically decorated with round, appliqué panels of tapestry weave (orbucli), positioned on the skirts and shoulders of tunics, and the hems of cloaks. Their patterning reflected the ornament of the metal plates and fittings on contemporary belts (Bishop and Coulston 2006, 224-225; Sumner 2009, 52-70, figs 44-47).

Plate 1-3 Bronze Kerbschnitt belt set, dated to the second half of the fourth century from Vireaux-Molhain, Dép. Ardennes, Grab 22. © Charleville-Mézières, Collection J.P. Lémant.

Kerbschnitt belt-fittings had two main functions; they served to stiffen the belt and prevent curling of the leather, especially given the number, and weight of attachments typically found on cingula. They also signaled Roman military identity. After the reign of Valentinian (364–375AD), distinction between military and civilian authoritative roles became increasingly blurred. The wearing of ornate Kerbschnitt buckle plates and belt fittings spilled over into broader Roman society and were no longer the sole prerogative of the military (MacMullen 1980, 49-76; Sommer 1984, 87-101; Jones 1996, 566; E. Swift 2000a, 201; 2009, 169-79; Gardner 2007, 209-29). The cingulum came to mark Imperial service, and civil government officials (vicarii) as well as military officials wore belts as part of a uniform or the
insignia of one if they were in civilian dress. By the end of the fourth century, belt sets served a dual role in the Roman world and performed as an index of authoritative military and administrative rank (Bishop and Coulston 2006, 162; See also Ager 1987, 29; 2007, 141). It has also been suggested that by the fifth century AD, the cingulum had devolved into a fashionable dress accessory of wealthy élites and had become part of Late Roman civilian dress in general (Heurgon 1958:23; E. Swift 2000a 43-4: 108; Ager 2007, 141), possibly under the influence of military fashion in a society which had to some extent itself become militarised (See Wild 2004, 303; E. Swift 2000a, 202, 219). Both the cingulum and its Military Style decoration effectively communicated the affiliation and status of the wearer across regions (Wobst 1977, 317-319). Positioned prominently on the body, these belt-sets were active elements in the construction of a powerful, Imperial identity in terms of its physical experience, and its visual signification (Wobst 1977; Wiessner 1984, 194, 277; James 2004, 257, cited in Hoss 2011, 34). The notion that identity is constructed and negotiated through the use and experience of objects and will be discussed in greater detail in Chapter Three.

1.2.1 Late Roman Belt Sets from Britain and Ireland

The majority of Late Roman belt-fittings known from Britain are local types made in Insular workshops, and though based on Continental models, British buckles differ markedly from Continental Late Roman belt-fittings in that they are not executed in deep Kerbschnitt-technik (Pollington et al 2010, 75). They are, however, Late Classical in style and inspiration although some are decorated with human heads and birds rendered in an indigenous, ‘Celtic’ style (see e.g. Hawkes and Dunning 1961, 54, fig 18 (k)). These buckles are found predominantly in the civilian zone of Britain, to the south and east of the Fosse Way with three notable concentrations, in Lincolnshire, around the Severn Valley and in Northern Kent, areas that were militarily sensitive and at risk from potential seaborne attacks (Figure 1-2; Leahy, 2007; White 2007, 154). Late Roman belt-fittings occurring in Britain were first discussed, and classified by Hawkes and Dunning (1961) who divided them into Types I to IV, and suggested that they provided evidence for the settlement of Germanic foederati in Britain during the fourth century AD (ibid. 1961, 16-18). Their types IV and V include Kerbschnitt, Late Roman provincial belt-fittings decorated in Böhme's Military Style, however, a comparatively small number of
these elaborate types have been found in Britain (Böhme 1974, 357-62, maps 11-12; Sommer 1984, 129, Böhme 1986, 472). Continental Kerbschnitt metalwork is mostly confined to the southeast and around Dorchester where it occurs selectively both in Late Roman burial contexts, and in early Anglo-Saxon cemeteries (Böhme, 1986: 471-2, abb.1 & 3; Welch, 1999, 31; Barber and Bowsher, 2000: 206-8, Grave B538).

The forms are datable to c.AD 400 rather than any later suggesting that these belt fittings are associated with government officials and officers in Imperial service such as members of the Comitatenses or Germanic foederati (Mattingly 2006, 248-9). Though most soldiers returned home on completion of their twenty-five or thirty years’ service, it has been suggested that examples in south eastern England from early Anglo-Saxon adult male burials may represent those who fought, died, and were buried in there, and others who chose to remain and settled in the area (Hawkes and Dunning 1961: Schön 1999, 94-5).

The Late Roman army was divided into two broad classes of soldiers, the limitanei who were garrison troops stationed on the frontiers and the mobile field army, the Comitatenses. Leahy (2007, 30-31) argues that these British-made buckles were unlikely to have been part of the equipment of the élite comitatenses and that their absence from Hadrian’s Wall, suggests that they were not worn by the limitanei. They have been interpreted as the trappings of a Romano-British army, styled in the Roman fashion but without access to the standard, official issue Military style militaria issued to Imperial troops. Leahy contends that they formed part of the uniform of ‘buecellarii’, warriors/soldiers who served as the henchmen of local magnates (ibid. 2007, 31). This is significant in that it implies that there was a functioning military apparatus in place during the fifth century, that military metalwork was still being issued, and that there was an army of sorts in place. Significantly, these buckles attest that the mobilisation of Romanised symbols of status, identity, and officialdom was still practiced and still important in Britain during this period (ibid. 2007, 140; White 2007, 154, fig. 25).
Leahy’s distribution map (2007; Figure 1-2) is interesting in that the south west, west Midlands and the environs of Lincolnshire exhibit marked concentrations of fourth century and later, locally-manufactured metalwork related to official-issue Roman fittings. This suggests that a vocabulary of material culture derived from Roman antecedents, may have been important to groups in these regions. It is perhaps significant then that Insular Military Style art also occurs in these same areas, with small but perhaps significant concentrations in the south west, and in and around Lincolnshire (see Chapter Six).

1.3 Military Style Art

Military Style art is predominantly associated with three-dimensional, Kerbschnitt (chip-carved) relief ornament. Also described in the literature as Keilschnitt, the
multi-faceted, glittering, ‘flashy’ surface was reflective and distracted the eye. The origins of *Kerbschnitt* decoration is the subject of some debate. The patterns of wedge-shaped troughs resemble those created by chips cut in the process of woodcarving, and this had led some commentators to suggest that *Kerbschnitt* work is derived from a Germanic woodcarving technique (Behrens 1930, 285). Others such as von Petrikovits (1976) have argued that the technique was derived ultimately from the Middle East before being adopted by Roman stone masons during the second and early third centuries AD. Indeed, many essential elements of Military Style art, such as the use of *Kerbschnitt* geometric patterns, stamped borders and panelled compositions imitate designs current in Late Roman masonry (See Ager 1985, 13 and footnote 45), suggesting that ornament in this media may have supplied the prototype that inspired the metalworkers of Northern Gaul.

Similarly, Romano-British stone tables found across *Britannia Prima* in the counties of Avon, Devon, Dorset, Gloucestershire, Gwent, Hampshire, Somersetshire and Wiltshire are also decorated with panels of geometric and vegetal chip-carved designs (Solley 1979, 169-80; Figure 1-3). Decorated wooden artefacts are known from early fifth century burials at Fallward, Lower Saxony where Late Roman-derived geometric motifs decorate elaborate containers and furniture including a remarkable ceremonial chair (Høilund Nielsen 2003; Schön 1999; Webster 2011, 465; Plate 1-4). The chair dates from the early fifth century AD, and it was found in association with other chip-carved wooden artefacts, including a footstool, a bird-shaped container and *Kerbschnitt* belt fittings (Hansen 2010). Regardless of its origins, the key observation is that the technique was widely used on the military equipment and *Kerbschnitt* work is synonymous with the Late Roman Military Style.
Figure 1-3 Chip-carved designs from Romano British stone tables. After Solley 1979, fig. 2.

Plate 1-4 Late fourth/early fifth century wooden ceremonial chair from Fallward, Lower Saxony. From Hansen 2010, 90, fig. 26.
The westwards expansion of Roman Imperial control led to the recruitment and subsequent Romanisation of foreign auxiliaries from diverse regions of the Empire. Military Style metalwork has been found chiefly in sepulchral contexts equated with Germanic comitatense, laeti or foederatti who made up a sizeable proportion of the Roman forces in Northern Gaul and were imported to defend the Empire’s borders there (see e.g. Stickler 2007). Consequently, Kerbschnitt decoration has been interpreted as a Germanic form by some. The belt fittings it decorated were similarly seen as Germanic types (Behrens 1930, 285; Werner 1930, 53; 1950, 23; Hawkes and Dunning 1961; Bullinger 1969) and the widespread distribution and use of such fittings was understood to represent the barbarisation of the Roman army. However, this concept of the barbarisation of the army along the limes has been largely discredited, and it is increasingly believed that comitattensian troops or German foederatti serving in the army wore standard military issue metalwork (Mattingly 2006, 251). ‘Military Style’ belt-sets are now considered to represent officially-issued equipment that defined regular Roman troops in an ethnically-mixed army and local government officials (Goldsworthy 2003, 209).

Chip-carved belt-fittings are thought to have been fabricated in military ateliers, possibly at large-scale state-run factories or fabricate in Roman Gaul (Böhme 1974, 97), or perhaps in private Late Roman workshops leased to the state (Dawson 1990, 10–13). Ager (1985, 13) suggests that this latter is most likely particularly as the civilian population of the towns and industrial areas of northern Gaul remained largely indigenous during this period. Production in state-run fabricate would account however for the level of uniformity, and also the well-organised, and large-scale production, and distribution of Military Style art across the Late Roman Provincial West (Knight 2007, 39-40).

Art historical analysis of the decorative elements suggests that in the main, Military Style art is classically inspired, and it is ultimately of Roman rather than Germanic origin (Inker 2006, 4). Profiled border animals are characteristic of Late Roman Military equipment (Plate 1-5). Buckles frequently feature pairs of moulded animal heads either at the ends of the loops, or flanking the tongue rest, or single animal heads at the ends of the tongues (Böhme 1974: 55-62, fig.16; Sommer 1984: pls. 5, 1-2; 6, 1-2, and 6:7, 5; 38, 4; and 74, 1, cited in Ager 2007, 141) such as on the buckles from Vermand, Colombier-sur-Seulles and Sedan, France (Evison 1965,
fig. 26 and pl. 9b, c) and from Ballinrees, Co. Derry (Mattingly and Pearce 1937, pl. 4). Profiled animals are also a feature of belt plates. Some are moulded in great detail while others are highly-stylised, mythical hybrids such as the two long-snouted creatures that decorate the edge of a Kerbschnitt belt-fitting from the Ballinrees hoard (Sommer 1984, 65 cited in Marzinzik 2013, 176). Sommer (1984, 70, fig. D) contends that the placement of animal on the peripheries of belt-fittings is a Germanic contribution to the decoration convention, derived from early Germanic buckles. More recently, James (2004, 251) noted that buckles with paired, confronted animals are known from Parthian and Sassanid armies, and that possibly, eastern regions of the Empire and not the north may have inspired this zoomorphic decoration. Regardless of the origin of the impetus to depict animals on Military Style objects, they are always depicted naturalistically and many derive from Classical mythology.

Plate 1-5 Late Roman belt plate with border animals; Museo Archeologico Nazionale di Aquileia, Dimensions 68 x 59mm. From Mackensen 2008, 319, fig.8, no. 3.

1.3.1 Principle Motifs
The Late Roman Military Style employs a range of standard provincial Roman motifs. Many are derived from Classical plant ornament, e.g. rosettes, palmettes, spirals, scrolls and peltae (Figure 1-4; Pollington et al 2010, 80; Moreland 2001, 31). Indeed, Ellen Swift (2009, 162-3) notes that a number of the motifs employed on
Böhme’s Military Style are simplified renditions of Greco-Roman architectural motifs such as laurel wreaths, guilloches and wave patterns. The designs often include pelta shapes which were popular on military metalwork for several centuries possibly because of the pelta-shaped shield they recall. In deference to late Antique principles of design and style, the various patterns and motifs are arranged according to definite rules of symmetry, in either square, or circular friezes of geometric or plant-based designs, that are set out regularly (Haseloff 1974, 3).

Overall, the decorated surfaces are clearly defined and each zone is separated from the next by dividing lines or punched borders creating a visual effect which can be likened to more monumental forms such as mosaic pavements (Plate 1-6; Schorsch 1986, 23), suggesting perhaps that the geometric patterning and scrollwork of the Late Roman Military Style is a mimesis of the patterns of contemporary mosaics and textiles. In contrast to the Classical originals from which they derive however, the plant motifs are often highly-stylised, and are markedly geometric in form (Evison 1965, 53). In fact, Military Style art characterised by a more abstract interpretation of ornament and designs executed in the Kerbschnitt technique lend themself to geometric, angular patterns rather than naturalistic designs. Riegl (1985 [1901], 231-

Figure 1-4 Common Military Style motifs. After Böhme 1974, 54, abb. 14.
4) makes an interesting observation in this regard and argues that visually, the actual motifs executed in *Kerbschnitt-technik* were of secondary importance in the intended aesthetic effect. *Kerbschnitt* designs are confusing and not easily discernible at first glance and Riegl maintains that the main visual characteristic of this style was the reflection of light and the creation of a scintillating surface, thus creating a strong visual contrast between the metal and the fabric or leather background it was set against.

While the technical aspects of punched ornament will be discussed in Chapter Four, it is the patterns created using this technique that are of relevance here. Ager’s (1985) gazetteer illustrates the variety of stamped and repoussé patterns used on fourth and fifth century Romano-British, Late Roman, Pannonian and late fourth to sixth century Germanic metalwork. Figure 1-5 illustrates that the range of punch-patterns featured on Böhme’s Military Style were both complex and diverse. Punched decoration was used to create beaded borders such as the borders of double dotted tooled beading on the belt slide from the Ballinrees hoard (Plate 1-8), simple geometric patterns such as saltires and also to represent scales and feathers on zoomorphic forms.

Figure 1-5 Stamped and repoussé patterns used on fourth and fifth century Romano-British, Late Roman, Pannonian and late fourth to sixth century Germanic metalwork. After Ager 1985, fig. 14.
Plate 1-6 Copper alloy buckle with panels of chip-carved scroll decoration. City of London, Smithfield © Trustees of the British Museum.


6 British Museum register no. 1856,0701.1470
Plate 1-8  Ballinrees hoard: (top) Silver-gilt mount, rectangular with chip-carved scrolls and beaded and arcaded borders; niello inlaid; from mouth of sword-sheath. (centre) Silver-gilt fragment of buckle-plate with chip-carved rosette, 6-pointed star and tendrils & niello inlaid with beaded border. (bottom) Silver-gilt belt-slide decorated with chip-carved rosette and ends with punched saltires. © The Trustees of the British Museum.
Technological novelty induces aesthetic appetites and new decorative styles are often born from the invention and adoption of new materials or techniques. The increasing availability of silver (a relatively soft metal which is particularly amenable to hand-engraving) in the north-western provinces and the development of increasingly complex moulding techniques facilitated the production of the deeply faceted, ‘flashy’ effect that characterises Military Style art. Effects of light and shadow were achieved by the depth of the chip-carved facets and by the use of niello inlay. In terms of craftsmanship, examples range from the quite ordinary to the sublime. The majority are cast in copper alloy and are mass-produced (Plate 1-9; Behrens 1930, 293-4), though some exceptional pieces are made in precious metal and are entirely hand-wrought (Forsyth 1951, 238; Schorsch 1986, 20-3; Marzinzik 2013). Among the most accomplished chip-carved silver gilt and niello-inlaid pieces are the three spear shaft fittings and buckle in the Vermand Treasure, from northwest France (Forsyth 1951, Schorsch 1986, Böhme 2000; Plate 1-7) and the equally fine mount, scabbard bridge and buckle contained in a hoard of Late Roman Hacksilber and coins Ballinrees, Coleraine, Co. Derry, northern Ireland, coin dated to c. AD 407-411 (Böhme 1986; Mattingly and Pearce 1937; Forsyth 1951; Kent & Painter 1977, 125-6; Plate 1-8).

Plate 1-9 Late Roman Kerbschnitt belt set, Kent, England. Late fourth/early fifth century AD. British Museum register no. 1942,1007.5. © The Trustees of the British Museum.
1.4 Late Roman Hairpins of Böhme’s Type Muids

In the later Roman period, Germanic men were actively recruited to join the Roman legions as *comitatense, laeti* or *foederati*. Upon completion of their service, many of these men returned home with elaborate belt-sets, buckles and scabbard fittings in addition to Roman coins. These objects and the art that decorated them were synonymous with Imperial military and administrative power. It is likely that the objects themselves and the artistic grammar associated with them were quickly adopted and adapted by élites beyond the Roman frontier (Inker 2006). By such means, Military Style art spread from *militaria* to items of female jewellery including so-called *tutulus* fibulae from both the Elbe-Weser triangle and northern Gaul (Böhme 1974, 13-15) and also a small group of especially splendid silver-gilt hairpins of Böhme’s Type Muids. The ornament of these latter has strong parallels with the *Kerbschnitt* decoration and patterns found on fourth and early fifth century Provincial Roman military metalwork such as scabbard mounts from Samson, Abingdon and a buckle from Grave 43, Krefeld-Gellep (*ibid.* 1974, 34–35; cat. no. 103, taf. 77, 1-2). These provincial pin-types are broadly distributed from the Seine to the mouth of the Elbe (*ibid.* 1974, 55-63, 73-5) and although they were clearly intended for a civilian rather than a military clientele, they might be products of the workshops in Northern Gaul; Van Es proposes that the Entre-Sambre-et-Meuse district is the most likely place of manufacture and origin (Van Es 1967, 123 and note 7).

These Late Roman Provincial pins are significant in the context of this thesis as Newman (1995, 24) has suggested that the decoration of Insular projecting disc-headed pins is an analogue of these heavily-ornamented late Roman pins. These are rare pin-types; just four examples are known from Xanten/Dodewaard, Asselt, Limburgs, Netherlands, Gilton, Kent and Ommeren (Van Es, 1967: pls XXIV & XXV; Bohme 1974: 35-36, fundliste 9 [typ Muids, 355] and karte 9). They are long (typically 300mm+) and biconical-headed and sepulchral evidence confirms that they functioned as hair ornaments (Böhme 1974, 23). The ornate shaft is divided into narrow and wide bands rather than panels of rich, naturalistic vegetal friezes, wave vine tendrils, and ring and dot motifs; these are divided and framed by chased, beaded borders. Van Es (1967, 124) suggests that the majority of the decoration
owes its character to the 'Mediterranean taste for foliate ornament' at the end of the fourth century.

Plate 1-10 Hair pins of Böhme’s Type Muids from Xanten/Dodewaard (left), Asselt (centre) and Ommeran (right). From Van Es 1967, pls XXIV & XXV.

The silver-gilt pins from Xanten/Dodewaard and Asselt (Plate 1-10, left, centre) are both old, river finds; one was dredged from the Rhine near Xanten or from the Waal
near Dodewaard, the other came from the River Meuse between Asselt and Neer (Böhme 1974, 284, cat. no.107, tafs. 86, 17). The former shows a more or less naturalistic decoration (foliate motifs combined with punched ornaments). The Asselt pin has a much more rigid and conventionalised decoration and features an arrangement of four adorsed V-shaped scrolls (Van Es 1967, 125 terms this the *fleur-de-lis* motif), executed in Kerbschnitt-technik which has strong parallels with the decoration of a spear shaft mount from Vermand, dated to c. AD400 (Böhme 1974 no. 192, plates 137, 5; *Error! Reference source not found.* 1-7). Significantly perhaps, this same arrangement occurs on a number of projecting disc-headed pins in the Insular Military Style, however, on these indigenous pin-types the scrolls are arranged in groups of three instead of four (see Chapter Eight and Plate 2-13). The pin from Ommeran (Plate 1-10 right) features a punched saltire motif with arrangements of dots in the interstices – again, this motif is mirrored on the Insular corpus of pins.

1.5 The Quoit Brooch Style, the Scandinavian Sösdala and Nydam Styles and the Saxon Relief Style

The fifth century AD witnessed the emergence of a number of regional *oeuvres* within and beyond the north European Roman frontier that were inspired by Late Roman Military Style metalwork, and produced by and for the mixed successor populations in these regions after the withdrawal of Roman rule (Webster and Brown 1997, 215). Though all of these styles draw on the same late Roman vocabulary, the effect is quite different and regionally distinct (Alkemade 1997; Jörgensen *et al.* 2003; Reynolds-Brown *et al.* 2000; E. Swift 2000a; Scott and Webster 2003). This is important in that while it reveals the long-standing influence of Roman motifs on the ‘grammar and display’ of power in the northern Barbaricum, it also reveals a conscious effort to adapt and modify those motifs in accordance with localised visual and artistic taste. While each style is unique, the motifs and decorative techniques and execution reveal a close affiliation with Late Roman styles (Haseloff 1981; Kristoffersen 1999 cited in Halsall 2007, 382). An ‘arc of cultural exchange’ extended around the fringes of the north western Empire, incorporating Wales, northern England, Scotland and Scandinavia as well as Ireland (Armit 2013, 288) and these regions interacted in every way imaginable with the Roman world.
Consequently, regions beyond the Frontier were well-acquainted with the stylistic vocabulary of the Late Roman Empire, and, in particular, metalwork that pertained to social status and political legitimacy. This would have exerted a powerful influence on the local artisans who created distinctive regional styles such as the Quoit Brooch style, the Scandinavian Sösdala and Nydam styles and the Saxon Relief Style, mobilised on brooches from north Germany (Salin 1904; Haseloff 1981; Inker 2006). These important styles (that preceded Salin’s Style I) will be briefly rehearsed here as they are contemporary with the Insular Military Style, and they emerged from the same stylistic root.

1.5.1 **Saxon Relief Style**

The Saxon relief style is contemporary with the short-lived Quoit Brooch style and was the first truly Germanic style to appear in Britain. It originated along the *limes* in northern Germany during the early fifth century AD (Böhme 1974, 18; Inker 2006), appearing on non-military items such as brooches, principally *Stutzarmfibeln*, equal-arm and saucer brooches (Plate 1-11; Bakka 1959, 8–9), Germanic brooch types that are clearly derivatives of Roman Crossbow and disc brooches (Bohme 1974 15 , 28).
The Saxon Relief Style is regarded as a derivative of Late Roman Provincial ornament, particularly the *Kerbschnittgarniture* discussed above. In fact, Dorothee Bruns (2003, 49) contends that the decoration of equal-arm brooches is probably the *closest* successor in terms of style and decoration to Late Roman Military Style art and that the *Kerbschnitt* scrollwork and animal friezes can easily be traced back to the decoration of Roman military belt equipment. Indeed, *Kerbschnitt* ornament is central to the style, and geometric motifs and semi-naturalistic animals cast in high round relief on the border, form the principle elements (Suzuki 2000, 58). Significantly however, the equal-armed brooch is not a Roman type but is an example of a Saxon cultural identity symbol ornamented in a Late Roman style.

1.5.2 *Sösdala Style*

Scandinavian *Sösdala* style is also strongly influenced by Late Roman Military Style art. The style is named after the *Sösdala* hoard of horse harness fittings, bridle and saddles discovered at *Sösdala*, south Sweden in 1929. *Sösdala* style ornamentation occurs on belt sets (*e.g.* buckles and strap-ends), sheet brooches (*Blechfibeln*) and pelta-shaped, shield-shaped, and biconical pendants. This *oeuvre* is characterised by stamped decoration and profile animal heads derived from the ornamentation on punched, late Roman belt fittings (Kubitschek 1911; Forssander 1937; Suzuki 2000, 59). Late Roman-style punched ornament was applied to a plain cast surface creating regular symmetrical geometric designs and the entire surface is often covered with a complex ornament of stamped motifs (stars, multi-centric rings and half-circles, filled in triangles, rectangles, dots and stylised stars). The style also features the limited use of shallow *Kerbschnitt* designs *viz.* rosette motifs, niello inlay and occasionally mercury gilding. Another characteristic motif is that of paired animal heads in profile, most commonly, drooping horse heads (Plate 1-12). Most of the objects decorated in *Sösdala* style are made of silver, gilded silver (more rarely), bronze inlaid with silver and occasionally gold. This speaks again to the social *milieu* in which these styles circulated and performed (Voss 1954, 172–4; Fabech 1994, 169; Bitner-Wróblewska 2001). The style has a short chronological range and is dated from the late fourth to the early fifth centuries AD.
Plate 1-12 Horse harness with Sösdala Style decoration. Image © Ch. Fabech. Lund University Historical Museum.

1.5.3 **Nydam Style**

The Nydam Style (named after the famous sacrificial weapon deposit at Nydam in southern Jutland) also dates to the early decades of the fifth century AD making it contemporary with the Sős MLA Style (Haseloff 1981, 16). Likewise, Nydam Style shares many of the artistic and technological traits found on Late Roman military Style art including vegetal and geometric motifs such as palmettes, spirals, and stars as well as zoomorphic imagery e.g. human figures, birds, animals and coiling fish tails (Plate 1-13; Suzuki 2008, 258). Late Roman influence is readily apparent in both the style and execution of these motifs that employ techniques such as Kerbschnitt, punching and niello inlay (Voss 1954, 176–7; Haseloff 1981, 8–17). This is a heavily contoured, and reflective “cast” metal style, where the mainly geometric designs are executed in exceedingly crisp Kerbschnitt-technik and the sloping surfaces are occasionally gilded. However, unlike most Kerbschnittwerk, Nydam Style surfaces have a thin flat section at the apex of the relief where a line of incised niello was inserted.

1.5.4 **Quoit Brooch Style**

A style derived from Late Roman Provincial Military Style metalwork developed in Britain. Termed the Quoit Brooch Style, the complex of objects includes Quoit brooches (and despite the name) other brooch types as well as buckles and belt fittings of Late Roman type, tear-shaped pendants, scabbard fittings and other decorative mounts (Plate 1-14; Evison 1965, Suzuki 2000, Inker 2000; Webster 2011, 465). Chronologically it is likely that the style spans from the early to the late fifth century AD. Like the Insular Military Style, it comprises a small corpus of objects; just thirty-nine are known to be decorated in this style (Evison 1968; Haseloff 1974, 5; Dickinson 1979, 51). Geographically the style is limited to south-eastern England with a concentration in the modern counties of Kent and East and West Sussex, coinciding with the province of Maxima Caesariensis (White 2007, 197; See Figure 6-2).

The Quoit Brooch style is characterized by light engraved sometimes gilded geometric decoration such as tendril scrolls, palmettes, triangles, dots, circles, D-shapes and S-scrolls; semi-naturalistic processional animals some modelled in three dimensions viz. quadrupeds, sea creatures, and by human masks (Suzuki 2000, 1;
Webster 2011, 463). It developed out of Late Roman material, specifically, official issue belt fittings in the Military Style. Quoit Brooch Style also appears to have been influenced by early fifth century prestige metalwork including a decorated bangle from the Hoxne hoard (Whitfield 1995, 98, fig. 12), and the speckled animals on a belt set from Fallward, North Germany (Schön 1999, 95). Some specimens are made of silver-gilt, others of tinned copper alloy, and the decorative elements are executed by punching and very shallow Kerbschnitt. This is sometimes supplemented with gilding, silver-plating, wire-inlay and occasionally glass or stone settings. These decorative surface overlays were also commonly employed on Late Roman Military Style metalwork (White 2007, 197). The design itself is comprised of strict zones containing geometric and zoomorphic decoration (Plate 1-14). These are never found combined. Individual zones may be framed with a decorative border e.g. beading, while the outer margin is enclosed by a further edge or rim. Though the Quoit Brooch style draws on the vocabulary of Late Roman Military Style art, the effect it creates is very different to the high–relief, brilliantly-faceted Kerbschnitt surfaces of this Roman oeuvre. Quoit Brooch style features two-dimensional punching, engraving and shallow chip-carving; a form of decoration which has its closest technical parallels in the milieu of Late Roman Britain, and not in the deep chip-carved three-dimensional designs found on the Late Roman Military Style (Inker 2000). The lighter stamping and engraving is also reminiscent of the decoration on some of the fifth century Roman-style buckles discussed above that were perhaps issued by civil authorities in southern England as a local substitute for the ‘official’ dress fittings (Hawkes and Dunning 1961).

For whom and by whom Quoit Brooch Style metalwork was produced has been much discussed (Leeds 1936; Hawkes and Dunning 1961; Evison 1965). Due to its localised distribution in south–east Britain and it has been argued to have a Gallo–Roman, Jutish or Frankish origin however, consensus now favours that this art style emerged within a British milieu, and represents an indigenous corpus of Late Roman metalwork, produced in Romano-British workshops in its distribution zone of south eastern Britain (Ager 1985; Inker 2000; Webster 2011, 464-5). Suzuki (2000, 84) suggests that the production of Quoit brooch style items was initiated and supported by a population south of the Thames who mobilised Romano-British traditions as part of their socio-cultural identity, and for whom an identity linked to
the trappings of Roman power was also important (see also Loveluck and Laing 2011, 537–8). Inker (2006, 77; 81) has associated Quoit Brooch Style with warrior culture based on its relationship with military metalwork and has argued that the brooches worn by women may have represented shields, complementing male Roman-style belt sets and also, reflecting their military rank (Plate 1-15). Perhaps a similar mimetic may be applied to objects in the Insular Military Style (see Chapter Three). Significantly in the context of this corpus, Quoit Brooch Style decoration provides good evidence for the continuation of Romano-British metalworking techniques, traditions and products persisting into the fifth century AD.

Plate 1-14 Silver and gilt quoit brooch from Sarre, Kent, 5th century AD. © Trustees of the British Museum.

Plate 1-15 Copper alloy and silver buckle and belt plate decorated in the Quoit Brooch style, British Museum register no. 1970.4-6.26. © Trustees of the British Museum.
1.6 Summary

While the Scandinavian Nydam and Sösdala styles, the Saxon Relief Style and the British Quoit Brooch Style are distinctive regional developments, each style clearly owes its origin to Late Roman, Military Style metalwork (Salins 1904, Hasleoff 1981, Inker 2006). Elements derived from Late Roman *militaria* such apotropaic animal and mask decoration from military belt sets were adapted and adopted, altering form and probably meaning in these new contexts (Haseloff 1981, 132-41; Dickinson 1991, 39-40). Geometric motifs such as stars, egg and dart borders, key patterns and scrollwork derived from Classical art also entered the repertoire of these styles (Jorgensen et al 2003, 292, 408). Similarities between Late Roman chased ornament and the punched decoration of the Quoit brooch style and the Sösdala style have been noted. Likewise, both the Nydam style and the Quoit Brooch style both feature shallow *Kerbschnitt* designs (Bakka 1968, 13). The late fourth and early fifth centuries AD marked a complex period in which identities were under constant flux, adapting to new cultural and political impulses. Regional art styles began to reflect these changes in social organisation as groups began to assert and affirm their identity by mobilising distinctive personal ornaments that served as insignia of a quasi ‘heraldic’ nature (Parker Pearson 1999, 83-5; Curta 2005, 102), conveying information about position, prestige and access to resources (Wiessner 1985, 162; Binford 1989, 54-55).

The similarities observed in these styles have not been attributed to specific connections between Southern England and Scandinavia, rather they have been interpreted as evidence that all of these styles emanated from the same root *viz.* late Roman Military Style art (see also Inker 2000, 47-8). This not only reveals the long-standing influence of Late Roman motifs on the grammar of display and power in the north-western *Barbaricum*, it also reflects a conscious attempt to adapt, and modify those motifs (Halsall 2007, 382). Changing social contexts and relations during the fourth and fifth centuries AD impelled élite groups and individuals to project their social identity and construct and maintain power relations through the mobilisation and conspicuous display of close imitations of Late Roman Military Style art (E. Swift 2003, 106).
Chapter 2- Insular Military Style Art in Ireland and Britain

The westward expansion of the Roman Empire during the first century AD had a twofold effect on Insular art. By bringing these two worlds; the Mediterranean and the Insular Celtic; into direct contact with one another, those elements of Celtic art owing their ancestry to Classical art were enlivened, and permitted to do so by a social context that was itself becoming increasingly Romanised. There emerged accomplished forms of Insular art, such as the Bann Disc, the Petrie Crown, the Cork horns (O'Kelly 1961; Raftery 1984, 269, 73) whose decoration epitomises the re-classicisation and re-invigoration of Insular Late La Tène art. Before the identification of this corpus, which has involved re-dating many of the pieces from Ireland and Scotland, there existed an unexplained hiatus between late La Tène art and the appearance of the Ultimate La Tène Style in the seventh century. In the absence of evidence to the contrary, Günther Haseloff (1958, 101) had to concede that the latter appeared ‘suddenly’ and without precedence. One of the initial aims of this study, therefore, was to test the hypothesis first advanced by Conor Newman (1995, 24) that this corpus of Insular metalwork, distinguished by highly accomplished and exquisitely-crafted fine-line ornamentation, rightfully belongs in the fourth and fifth centuries AD and not, as previous commentators had suggested, the later sixth or earlier seventh century. Newman postulated that the form and motifs evident in the decoration of these objects derive from the so-called 'Military Style' of late Provincial Roman art and that in developmental terms this oeuvre predicated the appearance of the so-called 'Ultimate La Tène’ style of the seventh century. This hypothesis was developed but not accredited, by Laing in his exploration of the Roman ancestry of Early Medieval ‘Celtic’ art (Newman 1995, 23-5; Laing 2005, 169).

As outlined in Chapter One, Late Roman metalwork provided an endless supply of motifs and techniques for emergent regional oeuvres such as the Scandinavian Sösdala and Nydam styles and the Saxon relief Style from North Germany. The emergence of the Quoit Brooch Style in south eastern Britain is particularly significant in the context of this corpus. It confirms that there was a
desire among Insular élites to mobilise aspects Late Antique aristocratic culture that drew heavily on Imperial secular and military emblems and thema. It also demonstrates that Insular artisans were capable of absorbing and mastering these styles (see e.g. Gannon 2003, 182-3). It will be argued here that the footprint of late Antique art extends to a small corpus of highly accomplished élite metalwork from Ireland and Britain, designated here as the Insular Military Style.

Groups and communities across the Late Roman Provincial West were intimately familiar with the Roman vocabulary of power expressed on official Imperial military metalwork. Élites from beyond limes in Ireland, northwest Germany and southern Scandinavia interacted with the Roman world through trade connections, diplomatic contacts, and client kingship and were also well-acquainted with this style. The Ballinrees hoard for example demonstrates that Irish élites had ownership of late Roman Military Style metalwork of the highest calibre (Mattingly and Pearce 1937; Bateson 1973, 42, 63-4, 73-4; 1976, 171-3; Raftery 1994, 215-7; Marzinzik 2013). Some may even have served in the Roman army and received military belt sets marking their status (Hawkes and Dunning 1961; Schön 1999, 94-5) while others may have acquired such metalwork through booty or exchange (Inker 2006). As has been recognised elsewhere (Alkemade 1997; Jörgensen et al. 2003; Reynolds-Brown et al. 2000; E. Swift, 2000a; Scott and Webster 2003), it is through such exposure that classically-inspired, Military Style art began to permeate regional styles in the late and post Roman period. Élites consciously strategically imitated aspects of this vocabulary of power on their own ornament types to affirm élite status and in some cases to legitimise newly emerging polities created to fill the vacuum left by the declining power and influence of Rome (Hedeager 2011 50-58 ; Wells 2012, 45-56).

2.1 Insular Military Style Art
Cognate expressions of this high aristocratic culture is manifest in this corpus of metalwork, whose shared attributes of exquisite artisanship and the use of precious metal sets them apart from contemporary and later native ornamental metalwork (Newman 1995, 23-5). Characterised by a combination of crisp, fine-lines and faceted, angular and curvilinear ornament, the panelled friezes are made up of evolved classical, vegetal, and geometric motifs, often framed by beaded borders.
The fields available for decoration are quite tiny, so that the ornament is miniaturised and compressed into small decorative frames. Perhaps significantly, these are the earliest instances of panelled composition and formal framing of motifs on Irish metalwork known to the writer. These are hand-crafted, possibly commissioned pieces, each one unique. Microscopic examination of the worked surfaces has revealed that the decoration was applied post-casting; in all instances the background was cut away, leaving the crisp, fine-line design in low relief. The recesses were then inlaid with red enamel, or more rarely, niello, providing a colourful contrast to the main relief design (Gavin and Newman 2007; Gavin 2013a, 420-422). Indeed the corpus reflects what Elsner (2004, 287, 293) terms ‘exquisite miniaturisation’, describing a fashion for intricate, ornate, small-scale deluxe work that was popular among élites in Late Antiquity, particular during the fourth and fifth centuries AD. Although they share a decorative vocabulary, and have certain stylistic affinities with contemporary and later personal ornaments in bronze, including developed hand-pins, zoomorphic penannular brooches, zoomorphic pins (Kilbride-Jones 1980a, 7, figs 2-4), latches (Youngs 1989, no. 21) and a rare group of enamelled armlet terminals (Youngs 1989, nos 25, 26), by comparison these are crudely-executed and markedly less accomplished (Plate 2-1). Consequently, such metalwork is not considered part of this prestigious Insular oeuvre.

In terms of design strategy, the ornament is presented in a fashion that respects the overall morphology of the object and proportions of the space available or designated for decoration. Decorative zones are either defined by the outline of the area they decorate e.g. the crescentic plate on a pin head, or they are artificially framed. The choice of motif appears to have been dictated by the shape of the field to be decorated, for example the circular field of disc-headed pins favours radiating motifs such as adorsed V-shaped scrolls while the arc-shaped lower plate of the hand-pin series is suited to running arrangements of scrolls and palmette derivatives with flanking volutes (see e.g. Plate 2-13). The framing of ornamental motifs is a defining characteristic of the Insular Military Style and perhaps significantly, this corpus features some of the earliest instances of formal framing of motifs in metalwork occurring in Ireland. Chased ornament, either punched annulated or ladder patterns, is employed to define individual friezes. Generally, a single motif fills the entire field. Decoratively, frames serve three main functions; they provide a
neutralising border against the surrounding background, separating motifs from neighbouring ones, and, perhaps most importantly, focusing attention on and highlighting the significance of the motifs and design contained therein (Trilling 2003, 59; Wells 2013, 57).


One of the main characteristics of Military Style Kerbschnitt is its extraordinarily deep, crisp, angular, faceted ornament that was designed to be ‘flashy’ and light-reflecting. While true Kerbschnittwerk is not a feature of the Insular Military Style, textured surfaces are. These were created using crosscut, ribbed decoration by engraving a series of parallel lines and then engraving across these again diagonally, resulting in a scintillating surface that is particularly eye-catching (Plate 2-3). Alternatively, zones of chased beading are employed as a texturing device (see e.g. Gibson 1950, Brett 2005). Faceted or chamfer-edged ornament occurs on the vertical edge of the hand-pin from Castletown Kilpatrick, Co. Meath and the pin barrel of an unlocalised zoomorphic penannular brooch, provenanced to Ireland (Cat. Nos 11, 25 Plate 2-3).
Plate 2-2 Cross-cut chamfer-edged ornament on the vertical edge of the hand-pin from Castletown Kilpatrick, Co. Meath and the pin barrel of an unlocalised zoomorphic penannular brooch, provenanced to Ireland (Cat. Nos 11, 25)

Plate 2-3 Engraved and cross-cut decoration on the Shannon Mount (Cat No. 31b).

2.2 Fine-line Style

Reserved fine-line style is thought to have been introduced into the Irish artistic repertoire from Roman Britain during the second century AD (Jope 1955, 42-3; Newman 1995: Ó Floinn 2001; Warner 1987) and it’s crisp lines are one of the most characteristic elements of Insular Military Style art with spiraliforms and vegetal motifs executed in fluid and curvilinear, reserved fine line ornament dividing chamlevé enameled fields. Early fine line style as defined by Warner (1987, 19) sits proud of the metal base and is rounded in profile and does not act as a field
Figure 2-1 Fragment of an enamelled bronze bowl from Bradley Hill, Somerton, Somerset. Pentagonal panel featuring palmette with opposing volutes, terminating in falcate-shaped leaves with dots (indicated). After Fowler 1983, 238, fig. 102.

separator for enamelling. It occurs for example on the Bann Disc, Petrie Crown and Cork Horns (O’Kelly 1961; Raftery 1984, 269–73). Warner (1987, 20) suggests that a reserved form of fine-line style was introduced into Ireland from Roman Britain in the second century AD (see also Jope 1955).

Fine-line designs featuring palmettes with volutes, elliptical and falcate-shaped leaves occur on enamelled vessels from Bradley Hill, Somerset (Fowler 1983), Linlithgow, West Lothian (Anderson, 1884-5), and Braughing, Hertfordshire (Kendrick 1932, 169) indicating that indeed, fine-line reserved ornament was circulating in Britain from as early as the second century AD (Fowler 1983, 238-9; Warner 1984, 20). The design on the bowl from Bradley Hill (Figure 2-1) is executed in fine line style, reserved against a polychrome, champléve enamelled background and features zones of vandyked ornament, running S-scrolls and
palmettes with flanking volutes.\textsuperscript{7} This suggests that fine-line, vegetal ornament was circulating in south west Britain, specifically in Somerset, where objects in the Insular Military Style also occur and significantly, where the impetus to apply decorate enamelled fine-line decoration select projecting-headed pin and penannular brooch types emerged (Graham-Campbell 1991, 228; Ó Floinn 2001, 2-4; Youngs 2007, 81). Indeed Fowler (1983, 240) hints at but does not develop the point that the decoration on her F2 penannular brooches (which are broadly contemporary with the Insular Military Style corpus) such as scrolls and foliate patterns are very similar to the ornament of these second century bowls (Fowler 1963, 105). Fowler (\textit{ibid.}) also notes that but for the dates for its deposition and manufacture, the bowl from Bradley Hill (Figure 2-1) could be dated later in tune with latchets and hanging bowls.

\subsection*{2.3 A Lexicon of Insular Military Style Motifs}

In the course of this study a number of confusing and contradictory descriptions of motifs and designs have been encountered. For example, terms such as ‘pelta’ and ‘palmette’ are often used interchangeably in the literature to describe the same motif and though both are ultimately derived from Classical models of the Mediterranean world, morphologically, these are two quite different motifs with different pedigrees. Accurate and consistent description is central to any study and in the view of the writer this lack of consistency encountered in the course of the literary review was utterly confusing and created an obstacle to a proper understanding of the ornamental vocabulary. Furthermore, some designs and motifs encountered appear unique to this corpus and have not as yet been described, catalogued or named. In order to remedy these issues and provide the reader with a lucid, descriptive account of Insular Military Style art and its components, a ‘grammar’ or morphology of the art has been compiled by isolating, illustrating and commentating on the form of each of the component motifs (both principle and minor).\textsuperscript{8} The provision of a grammar of Insular Military Style art will permit it to be more easily read, described and understood. Consideration will also be given to how and where individual motifs

\textsuperscript{7} This motif is termed the ‘lyre-palmette’ pattern by MacGregor (1976, xviii).

\textsuperscript{8} Given the variation in size between the various motifs on this assemblage and in order to achieve the greatest possible visual impact when comparisons are being made between different motifs, they will not necessarily be reproduced to scale. A detailed record of the dimensions of each object is contained in the catalogue in Appendix I.
were deployed and combined on the objects. It is intended that this evaluation will highlight any regularising tendencies that may be considered as being ‘trademark’ or unique identifying design strategies of the Insular Military Style oeuvre. Furthermore, this dossier of the motifs, patterns and design strategies of the Insular Military Style will enable the identification of prototypes within the wider corpus of Late Antique art. It will also assist in the identification of objects decorated in this style. The ultimate aim of this exercise then is to shed some light on the influences that prompted the emergence of this Insular art style and inspired its development during the first half of the first millennium AD.

2.4 Foliate Motifs

Early Celtic art and the work of Insular artists is defined by what Jope (2000, 222) calls ‘undertones of allusion to natural forms’, suggesting that vegetal ornamental devices had a particular resonance in the Insular symbolic world (Freedberg 1989, 55). Insular Military Style art marks a continuation of this tradition in that it also preferences natural, vegetal forms over figural forms, featuring a number of plant motifs that are derived from classical floral designs. Indeed the palette is dominated by a medley of stylised and semi-naturalistic leaf-and-spiral designs, and while the geometricisation of the ornament can at times conceal its vegetal nature, some of the motifs are surprisingly naturalistic. In nature, leaves spring from stalks, stems and tendrils. Likewise in Insular Military Style art, stylised leaves or lobes are often depicted emerging from fine-line whirls, scrolls and spirals (see Jope 2000, 344-6) while occasionally, they occur in cladogenic compositions (Plate 2-5). With some minor variation, the stylised leaf forms found on this corpus occur in four basic shapes; clavate (club-shaped), falcate (hook-shaped), cordate (heart-shaped) and elliptical. Each has a distinct pattern of usage. Elliptical foliate motifs are the most versatile and occur in both engraved and relief compositions (Plate 2-4). Clavate and falcate-shaped lobes are always presented in relief, occurring as an inner terminal to scrolls and spirals; falcate leaves are always pierced by a single drilled dot. More complex, cordate-shaped motifs occur as the central element of palmette derivatives or as an adjunct to tendril scrolls and always have three dots superimposed on the ‘leaf’. The quite specific group of leaf shapes employed on these objects suggests
that specific plants may have been intended to be represented such as ivy by cordate shaped leaves and perhaps mistletoe by the slender falcate forms (see Chapter Eight).

Plate 2-4 Elliptical foliate motifs in relief on the Treanmanagh Pin, Cat. No. 17 (left) and the Shannon Mount, Cat. No. 30 (right). Engraved elliptical leaves on the Kilkea Brooch, Cat. No. 26 (below).

Plate 2-5 Panels from the shaft of the Londesborough pin, Cat. No. 15 featuring berried leaf motifs in twining and cladogenic compositions.
2.4.1 *Berried Leaf Motifs*

Among the leaf-types identified above, the cordate/heart-shaped form is particularly connected with late Roman art. Ivy, an evergreen plant with thick, glossy dark-green heart-shaped leaves and clusters of blue-black berries and serpentine qualities is a common ornamental motif on mosaics, silverware and sculpture of the late Antique period (Brett 1939, 38; Ross et al 2005, 157). The plant is generally depicted by triads of fruits/berries superimposed on stemmed, heart-shaped leaves with examples occurring on a silver-gilt disc from Nordrhein-Westfalen, Köln (Plate 2-6), and the decorated handle of the Prickwillow patera (Toynbee 1964: pl. xxlv, b). Stemmed, cordate-shaped leaf and tendril scrolls with drilled depressions presented singly or in triads superimposed on either falcate or cordate-shapes have been interpreted by the writer as depictions of fruit and leaves (Plate 2-3). This motif is exceptionally true to the Classical original. Outside of this corpus however the only other occurrence of berried leaf motif on metalwork from Ireland known to the author occurs on a zoomorphic penannular brooch from Knowth, Co. Meath ⁹ that unfortunately lacks contextual dating as it is from a re-deposited context (Plate 2-7; Graham-Campbell 1991, 227).

⁹ NMI reg. no. E70:4036
While the plant motifs on the earlier sword scabbard style and Turoe stone are highly stylised and have been reduced to the basic elements of the original classical form, here the similarities to coherent, naturalistic Classical motifs of leaf, fruit and berry are immediately apparent. For example, the composites of sinuous, fruiting ivy occurring on the Londesborough pin (Plate 2-5) appear analogous to the \textit{rinceaux} of vine, ivy and twining plants found amongst the traditional \textit{emblemata} of Classical Greco-Roman art. A more stylised rendition fills the U-shaped lower plate of the pin from Norrie’s Law, Fife where a triad of spirals terminating in clavate-shaped lobes has been further embellished with engraved lentoids in the interstices (Plate 2-8).

\textbf{2.4.2 Palmette Derivatives and Peltae}

A range of Greek and Etruscan vegetal motifs including the Hellenistic palmette and the pelta were introduced into Celtic art during the fifth century BC. Though the
terms pelta and palmette are often treated as synonymous in the literature they however are two quite distinct motifs. Named after the Greek shield of this characteristic form, a pelta is formed when two curves or roundels diverge to meet the inner side of a humped curve; stemmed variants are also known (Bruce-Mitford 1960, 206; Jope 2000, 382). Thus defined, it occurs only twice on this assemblage on Cat. No’s 23 and 24 (Plate 2-9).

The palmette on the other hand, was an especially dominant motif in Jacobstal’s Early Style Celtic art; where it its crisp, classical shape was transformed into softer, more free-flowing curves (Jacobstal 1944, 88-90). Devolved versions of Classical palmettes are a notable component of Insular Military Style art; the leaves of the Classical palmette have vanished and only the stemmed, cordate-shaped outline remains flanked on either side by a pair of undulating tendrils emerging from its base. These tendrils may end in spirals, flaring, squared-off trumpet shapes or clavate/falcate-shaped lobes, the variants of which occur both with and without a central drilled dot.

When they occur on this corpus, palmettes typically feature a central stemmed cordate-shaped leaf or palmette fan superimposed with a triplet of drilled dots. The proto hand-pin from Tripontium, Warwickshire (Cat. No. 10) features a central C-scroll in place of a fan, however, the presence of flanking tendrils mark it as a devolved palmette. Warner (1987, 20) notes that Classical devolved palmettes

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10 In common with Duignan (1970, 43 note 2) the writer prefers the descriptor tendrils rather than scrolls or volutes to describe the flanking elements since the ancestral palmette was a floral design and the leitmotif of the corpus in general is vegetal.
appear in the Irish artistic repertoire from the second century AD from Roman Britain. Devolved Classical palmettes, identical in form to those featured on this *oeuvre*, also occur on select Romano-British metalwork for instance on a small silver mount decorated with fine line spirals from Traprain law (Curle 1920, 70; figs 8, 9; Burley 1956, no 269), a crescentic mount from Attworth villa (Erskine et al 2008, fig. 20) and also on a copper alloy enamel-inlaid, ring-headed pin from Little Cornard, Sussex (Martin et al 1997, 213, fig. 50, D; Plate 2-10).

![Plate 2-10 Central cordate-shaped leaf superimposed with a triple dot motif and flanked by curling tendrils terminating in expanded, falcate-shaped lobes on an enamel-inlaid, copper alloy projecting ring-headed pin from Little Cornard (a,b), Length 38.50mm, Width: 15.80mm (ext. width of head), Width: 11.80mm (int. width of head) © Trustees of the British Museum. Silver Mount from Atworth Villa (c). From Erskine et al 2008, fig. 20. Silver plaque (d) from Traprain Law featuring spiraliforms with falcate-shaped terminals. After Curle 1920, 70, pl. XXXVI.]

Importantly, there are no obvious *comparanda* for this exact motif on contemporary or later Irish metalwork suggesting that this form of devolved classical palmette entered the Irish repertoire from Roman Britain.

2.4.3 *Falcate Lobes with Dots; Problems with Interpretation*

A foliate interpretation of falcate lobes with single dots as berried leaves is however, likely to be controversial. The motif is variously described in the literature as an ‘eyed-roll’, ‘beaked eyed-roll’ (Warner 1987, 20) and ‘dodo-head’ (Stevenson and Emery 1964, 206) while a crested variant is described by Fowler (1963, 128) as an ‘eyed-peak’. Implicit in these descriptors is the inference that these are essentially ornithomorphic forms and the motif is generally interpreted as a stylised bird head in
profile (Megaw and Megaw 1989, 366; Jope 2000, 115). However, unlike the ‘crested birds heads’ featured on the Bann disc and the Petrie crown (Figure 2-2; Raftery 1983, no’s 792, 821) and the ornithomorphs found on later copper alloy hand-pins, and latchets dating from the sixth and seventh centuries (Fowler 1963, fig. 9, 5; Leeds 1933, fig 32b), in the opinion of the writer, if the falcate-shaped motifs of the Insular Military Style are ornithomorphs, they are not convincingly so and the interpretation of the narrowed, curling tip as a ‘beak’ is subjective at best.

![Figure 2-2 Crested bird head motif from the Bann Disc. After Warner (1987), fig. 1](image)

Art historically, Catherine Johns (1974, 295-7; 1996, 145) has noted that the devolved palmette on the Oldcroft pin (Cat. No. 1) is very close in design to Late Iron Age enamelled bronze terrets (see e.g. Plate 4-12). The similar arrangement of a pair of balancing tendril-like scrolls flanking a central roundel indicates a continuation in both design and technique between the late Iron Age and late Roman period in Britain although on the Oldcroft pin, the re-classicisation of the motif is particularly evident as the vegetal intent is more clearly depicted. Further examples of these same falcate lobes with central dots occur as terminals to scrolls flanking devolved Classical palmettes on metalwork from Romano-British contexts, the Traprain Hoard and an incomplete silver, crescentic plate from Atworth Villa that features a variant of the motif with a central palmette flanked on either side by a falcate lobe with central dot (Plate 2-10c). The morphology of devolved palmette motifs on an enamelled bowl from Bradley Hill, Somerset also makes an interesting comparative study (Figure 2-1) as it too features a number of falcate leaves with round dots (in relief in this instance) at their base suggesting that the insular rendition, as it occurs on this assemblage, attempts the same iconography and may also have been intended to be read as a vegetal, foliate motif.
2.4.4 Quatrefoil

Literally meaning four leaves or petals, quatrefoil designs occur frequently on the corpus in compositions of four elliptical lobed leaves or petals, set in relief against an inlay, usually of red enamel. The individual elliptical leaf elements can be either touching or non-touching. The ancestry of this motif is classical late Roman and analogous simple floral motifs and patterns composed of four radial ‘petals’ occur on both fine silverware and gold jewellery of the period including several pieces from the Traprain Treasure and the Balline Hoard. A quatrefoil also forms the central motif on one of the silver bowls from Sutton Hoo (Carver 1998, 133, fig. 83) and on a fourth century circular silver plate from Mâcon, east-central France (Baratte and Painter 1989, 185-7 no. 133). Radially symmetrical quatrefoil designs are also particularly common on mosaic pavements, reflecting perhaps the geometric tendencies of the late antique period (Brett 1939, 38; Haseloff & Roth 2005, 45) with examples occurring on the border of the fourth century Triclinium mosaic of Dionysiac scenes from Saint-Leu and another from Sousse, Tunisia (see E. Swift 2009, plate 16).

Plate 2-11 Quatrefoil on the central bead of the hand-pin from Norrie’s Law, Fife (Cat. No. 9).
Plate 2-12 Berried leaf motif with flanking tendril scrolls viewed from the perspective of the wearer
(a) Oldcroft pin, (b) Shank panel, Londoeshorough pin, (c) Proto hand-pin, Castletown Kilpatrick, Co.
Meath, (d) Panel from angle of shank, silver disc-headed pin provenanced to Ireland, (e) Proto hand-
pin, Welton le Wold, Lincolnshire. After Youngs 2005, fig. 3.
Warner (1987, 63) notes that the quatrefoil was a ‘British’ motif that appears for the first time in Irish art on the corpus of decorated bone plaques from Loughcrew (Crawford 1925; Raftery 1983, 235-8). Non-touching ‘seed-shaped elements’ are also found on Insular metalwork such as the Dowris latchet, the Stoneyford toilet implement, and an openwork escutcheon from Eastry (Newman 1995). On this corpus, quatrefoils occur for example on the central ‘finger’ of the silver hand-pin from Norrie’s Law, Fife (Plate 2-12; Cat. No. 9), and on the forehead of the anthropomorphic mount from the River Shannon (Cat. No. 30a).

2.4.5 Spoked star
The so-called spoked or rayed star features a number of geometric rays projecting from a centre. Usually positioned prominently these rayed motifs may represent solar/astral symbols. The pin from Gaulcross, Banffshire (Cat. No. 7) has a nine-rayed motif on its central bead while the specimen from Tripontium, Warwickshire (Cat. No. 10) has eight spokes similarly positioned (See Chapter Eight, Plate 8-6). Similar ‘star’ designs occur in representations from the Notitia Dignitatum and may represent a connection between the designs on the pins and Late Roman military insignia (Plate 2-13; see e.g. Inker 2006, fig. 30e).

Plate 2-13 Shield patterns from the Notitia Dignitatum (Ueda-Sarson, 2002).
2.5 Scrolls and Spiraliforms

Simple scrolls have a virtually limitless potential of permutation. Their inherent transformatory potential enables them to be compressed and adjusted to suit the outline of the field or indeed, the fancy of the artist (Plate 2-14, top, centre). Typically, each terminal swells to a falcate lobe, pierced by a single drilled dot. These S-shaped scrolls and curves with their expanded terminals formed ambiguous creatures/plants that were intended to attract attention and engage the viewer in fascination and puzzle-solving in what Gell (1998) describes as visual enchantment (see Chapter Eight). It is therefore unsurprising to find an elaborate and ambitious variety of scrolled tendrils and spiraliforms featured on this assemblage. Single S-scrolls are typically presented in paired compositions. A simpler variant, the C-scroll, has also been noted as part of a palmette derivative and in an adorsed arrangement of three on the disc-headed pin from Broxbourne. Arrangements of three adorsed V-shapes with inward-turning scrolls are one of the preferred motifs of the disc-headed pin series though the motif is often erroneously referred to in the literature as a pelta (See above). Based on contemporary comparanda, the motif is perhaps more correctly interpreted as a bud flanked by scrolled tendrils or leaves (Plate 2-14. (bottom)). This vegetal interpretation is supported by its occurrence as a simplified fruiting vine scroll on examples of Byzantine gold work dating to the sixth and seventh century AD (Brown et al 2000, fig. 11.7).

The motif also occurs as a component of the so-called floriate cross or Ankerkreutz which is made up of an arrangement of four, adorsed V-shaped scrolls. Anna Gannon (2003, 165) describes the ‘floriate cross’ design as a pleasing arrangement for a round shape and a common motif on Late Roman chip-carved metalwork and notably the military belt fittings. Böhme (1974, 23) has dated this motif to his Zeitstufe II (380–420AD) of the later fourth /early fifth century AD where it typically occurs in adorsed arrangement of four V-shaped/C-shaped scrolls set within a circular frame (Welch and Myres, 1975).

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11 Klein-Pfeuffer (1993, 141) interprets the pattern as heart-shaped.
That such prototypes were circulating in Roman Britain is evidenced by a strap-end from Ixworth (Hawkes and Dunning, 1961 fig. 23g) and another from Wall, Staffordshire (Plate 2-15). Although the arrangement is imitated on Continental Germanic and Anglo-Saxon applied and saucer brooches, on these the pattern is generally rather simplified in comparison, with the lozenge shapes round the centre replaced by just round bosses. A variation of this ornament occurs on disc–headed pins though here, the adorsed motifs are arranged in groups of three. In contrast to later Anglo-Saxon renditions, these are exceptionally true to Late Roman prototypes suggesting that the intent was to imitate this arrangement as closely as possible (Plate 2-14, bottom; Plate 2-15).
Plate 2-15 Copper-alloy strap-end from Wall, Litchfield, Staffordshire with a circular body bordered by eleven three-dimensional beads. The central design of four, inward-facing V-shaped spirals arranged to form a cross shape or foliate cross. The design is executed in Kerbschnitt. Dimensions Length: 50.4 mm, Width: 38.3 mm, Thickness: 5.9 mm.\textsuperscript{12}

2.5.1 \textit{Fiddlehead Scrolls}

Single, lobe-ended scrolls, termed ‘fiddleheads’ by the writer because of their strong resemblance to young fern fronds, occur in simple, paired arrangements and also in more complex, antithetic compositions where the stems of each pair are linked through a slender, elongated trumpet-shaped junction creating a crossed-scroll variant. Regardless of the configuration, these single scrolls all terminate in falcate-shaped lobes pierced by a single drilled dot.

\textsuperscript{12} PAS WMID5951
2.5.2 **Spirals**

Spirals are composed of one or more curved lines that revolve around a central point creating a whorl-like configuration that results in an easily discernible pattern, rather than a confusing swirl of lines. The adaptability and scope of spiraliforms motifs to create complexities of line and texture has been exploited to great effect on this assemblage. A double running spiral in a form true to Classical art fills the lower plate of the silver hand-pin from Castletown Kilpatrick (Cat. No. 11). This is a recurring motif on Late Roman silver plate and a good example can be found acting as a border on the central roundel of a silver dish from the Mildenhall Treasure (see Henig 1995, fig. 80). An unlocalised silver disc-headed pin, provenanced to Ireland (Cat. No. 14) features an exceptionally elaborate pattern of spiraliforms and expanded trumpet scrolls (Plate 2-14 top, centre).

The most common manifestation of the spiral motif is the triple spiral or triskele. Like the palmette, the triskele too has enjoyed a long period of currency in Insular art and on this assemblage triskele-based designs are most frequently employed on projecting-headed pins and circular mounts, occurring in both simple and more complex forms. Simple triskeles are made up of three curving, scroll-ended, projecting arms that radiate from a common centre and terminate in falcate lobes or trumpet shapes. More complex arrangements occur on a silver mount from the Fosse way, Warwickshire which features double-spiral radiates and lobed flanking whorls.
The most ambitious rendition occurs on the Newtownbond pin (Cat. No. 5), a complex design based on a pair of spiral-limbed triskeles that interlock to create a dominant, central double spiral. A lateral scroll has been used to fill the area between the ‘legs’ of the triskele (Figure 2-4).

2.6 Geometric Motifs

During the third and fourth centuries AD, abstract, geometric forms such as saltires, triangles, lozenges, etc. became noticeably more fashionable on prestige metalwork, particularly fine silverware. This development is also paralleled in mosaic decoration (E. Swift 2009, 111, 114; Baratte 1989, 177) suggesting that this phenomenon is part of a Late Roman vogue for geometric compositions.

2.6.1 The Saltire

The X-motif or saltire (also referred to as the St. Andrews Cross and the crux decussata) is simple to execute and has a long history of use (Donovan 1933, 378; Guy 1981, 273; Thomas 1981, 221). The saltire is thought to have been introduced into the Irish repertoire from Roman Britain (Newman 1995, 23-4). On this corpus saltires occur as simple, incised X-motifs and in more elaborate, beaded forms (Figure 2-6). Other variants are bisected laterally by a medial line (Figure 2-5). The recurring association of pyramidal arrangements of punched annuletts with saltires is also a notable characteristic of this corpus, occurring on three of the brooches (Cat. Nos 23, 25, 26). The same associations occur on the verso of many silver hand-pins, including specimens from Tripontium, Warwickshire, Long Sutton, Somerset, Castletown Kilpatrick and Denton (Cat. Nos 10, 12, 11, 8). A derivation of the motif continues on later hand-pins of sixth and seventh century date from Ireland.
Likewise, the *verso* of a copper alloy hand-pin from Craigywarren Bog, Skerry, Co. Antrim (Youngs 1989, 24, no. 5) features a saltire with a multitude of dots in the interstices. The triple dot motifs are also contained in three of the quadrants of the cross on a cross–carved slab from Lemanagh, Co. Offaly, the fourth quadrant having four dots (Kelly 1988, 93, Fig.31b).

![Figure 2-5 Saltire bisected with median line with punched annulets in the interstices, (Cat. No. 14).](image)

### 2.6.2 Annulets and Dots

Punched annulets and drilled dots are employed widely across the corpus. These most commonly occur singly, in association with saltires, superimposed on cordate or falcate leaves or in arrangements of three, disposed pyramidally and forming a triple annulet motif. Configurations of 3+2+1, 4 +1 and 3+1 are less common (Figure 2-7). The triple annulet occurs as both a stand-alone motif or more commonly in composite arrangements in association with simple or beaded saltires (see below). Stand-alone specimens occur for example on the angle of the shank of the Londesborough pin (Cat. No. 15), on the central ‘finger’ of the Newtownbond pin (Cat. No 5), and on a heavily silvered zoomorphic penannular brooch terminal from Caistor, Lincs (Cat. No. 27). On others such as the Newtownbond pin and the Castletown Kilpatrick pin, the verso of the pinhead is peppered with triplets of annulets, pyramidally disposed. Punched annulets also occur in a vertical, linear arrangement on the shank of the Londesborough pin, at the base of the nib-shaped panel of decoration (Cat. No. 15).

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13 My thanks to Mrs. Susan Youngs for drawing my attention to this addition to the corpus.
Figure 2-6 Beaded saltires, all variants; A, B Londesborough Pin (Cat. No. 15); C Unlocalised zoomorphic penannular brooch (Cat. No. 25); D Unlocalised zoomorphic penannular brooch (Cat. No. 23); E Newtownbond pin (Cat. No. 5).

Triple dots also occur on Middle La Tène (c. 300 BC) Insular and continental decorated sword scabbards providing intriguing evidence of a possible pan-European symbolic and stylistic link (Raftery 1984, 101-4; 1987, 14-5; 1994, 490, fig. 7; 2006, 124, fig. 24).
The same motif occurs on the British corpus of decorated mirrors dating to between the second century BC and the first century AD (Joy 2008, 83, fig. 5.3). Clusters of three dots/annulets in a pyramidal arrangement also occur on late Roman silverware and belt-fittings, most commonly in association with devolved vine scrolls suggesting that the motif was intended to depict fruit/berries (Plate 2-11). Annulet punch-work has also been identified as a new, Roman-inspired decorative element on first century native pieces from Britain viz. the Brecon mirror and tankard handles from the Seven Sisters hoard (Davis and Gwilt 2008, 166, figs. 9.11, 9.12).

Figure 2-7 Stamped and repoussé patterns used on fourth and fifth century Romano-British, Late Roman, Pannonian and late fourth to sixth century Germanic metalwork. After Ager 1985, fig. 14.

The range of punch-patterns featured on the insular corpus is comparatively restricted and less varied than those used on Böhme’s Military Style produced in northern Gaulish workshops that are considerably more complex and diverse. Only five, basic punch-marks appear in the Insular Military Style oeuvre (Figure 2-7, no’s 1, 2, 3, 37, 38) where they have been employed to frame the main decorative zones of the design by means of beaded borders and to create simple motifs such as single and triple annulets. A selection of two-dimensional punch-patterns similar to those of the Insular Military Style do however feature extensively on Romano-British prestige metalwork from the fourth and early fifth century AD, most particularly on Late Roman fine silverware but also on brooches, belt-fittings, finger rings etc. Indeed the close similarity of the chased patterns and their careful arrangement

14 Joy (2008, 83) has termed this the ‘tri-roundel’ motif.
between guiding lines suggests that these two groups may have been more or less contemporary.

2.6.3 Running Bird’s Foot

Though sometimes described in the literature as a design of parallelograms and punched annulets with beading (Duignan 1970; Stevenson and Emery 1963-4), the running bird’s foot design occurs on the vertical edge of the hand-pin from Norrie’s Law (Cat. No. 9). The same motif occurs on the so-called ‘knife fragments’ from Norrie’s Law (Cat. No. 31a-g). A Late Roman date for the motif is suggested by its occurrence on a small, decorated bronze band from fourth century levels at the Shrine of Apollo, Nettleton, Wiltshire (Wedlake 1982, 207, Fig. 86, no. 13). While the motif may of course simply represent an instance of pleasing geometric patterning, comparanda from Late Roman Britain suggests that this configuration may represent a stylised plant motif. A similar running birds-foot design can for example be found on altars depicted on the Corbridge lanx (Brendel 1941) where it is intended as a foliate design, the forked line being representational of branches and the punched dots/annulets fruit (Plate 2-16).

Plate 2-16 Running ‘birds-foot’ motif on the vertical edge of the Norrie’s law pin (right) and on one of the small altars featured from the Corbridge Lanx. Images © National Museums of Scotland and Trustees of the British Museum.

2.6.4 Vandykes

The term vandyke describes a pointed, V-shaped motif that is generally inlaid with enamel. The enamelled field was created either in the mould or by graving or
gouging out a section of the metal substrate using a tapered, triangular-sectioned graver. Bands of vandykes most commonly occur on a select (qua British) corpus of Provincial Roman enamelled vessels including the Braughing cup from Hertfordshire (Henry 1933, fig. 25. 2) and the Linlithgow patena from West Lothian (Anderson 1884/5). On these Romano-British examples each individual ‘vandyke’ is arranged in a series of colourful, regularly-spaced and well-separated, pointed V-shapes on the metal surface. Patterns are formed by repeating rows of the motifs, or via rows of alternating motifs running in bands from left to right and top to bottom; the lines of repeating triangles imitate patterns found in contemporary mosaics and sculpture (see e.g. Dunbabin 2006, pl. 97; Solley 1979, 169, fig. 2).

Figure 2-8 Vandyke patterns and designs found on Insular Military Style metalwork.
Plate 2-17 Top, left to right: Londesborough Pin (Cat. No. 15); Unlocalised silver disc-headed pin (Cat. No. 14); centre left to right: Unlocalised silver disc-headed pin (Cat. No. 14) panel 6, panel 4, panel 1; Treanmanagh Pin (Cat. No. 17); Unlocalised bronze disc-headed pin (Cat. No. 19).
In an Irish context, vandykes motifs are unique to the Insular Military Style and are peculiar to projecting disc-headed pins (Plate 2-17). They occur in panels along the shank, in the angle of the shank or along the vertical edge of the disc-head. In contrast to Romano-British enamelled vessels however, Insular Military Style vandykes are more closely-spaced and generally, the actual V-shaped cut is obscured by the enamel inlay. This suggests that the reserved ground between the cuts was intended to constitute the main design e.g. elongated Y-shapes, apex-to-apex triangles and lozenges (Figure 2-8) while the vandyke was executed as a means to hold the enamel in place (see Chapter Five). On silver specimens it was possible to achieve this effect with relative ease due to the maleability and ‘softness’ of the metal. However, as can be seen on Plate 2-17, the technique was less successful on harder, less yielding copper alloy (see Chapter Four).

2.6.5 Wheat/Chevron Motif
Strings of inverted V-shaped motifs or chevrons occur on an unprovenanced silver disc-headed pin (Cat. No. 14; Plate 2-18). These vertical arrangements of chevrons are reminiscent of the wreaths of stiff olive leaves in a herringbone formation found on select Provincial Roman enamelled vessels, a design that is thought to have ultimately derived from *terra sigillata* (Forsyth 1950, 301).

Plate 2-18 ‘Wheat’ motif on panel three of an unlocalised silver disc-headed pin, provenanced to Ireland (Cat. No. 14).
Similar patterns also occur on a chip-carved, wooden ceremonial chair from Fallward, Lower Saxony (Plate 1-4). A similar foliate interpretation may be intended by this design. It may also be intended to represent an ear of ripe, two-rowed barley or wheat.

2.6.6 **Linked Triangles**

Rows of linked triangles with a centrally placed dot occur on the Shannon mount (Cat. No 30a, b) and around the collar of an unprovenanced spear butt (Raftery 1984, Pl. 33:2). This is reminiscent of the decoration of some silver fragmented mounts from Norrie’s Law (Graham–Campbell 1991, 253; Stevenson and Emery 1964, fig. 1) which also feature arrangements of parallelograms and triangles with dots (Cat. Nos 31a-g).

![Plate 2-19 Triangles with central dots on the Shannon Mount, Cat. No. 30b.](image)

2.6.7 **Tricorne/Concave-sided Triangles**

The tricorne is however one of the most common decorative motifs employed on the heads of pins and brooches; it also occurs on the ‘cheeks’ of the anthropomorphic mount from the River Shannon, near Athlone (Cat. No. 30a). Tricorne motifs occur for example on the central finger of the Castletown Kilpatrick hand-pin (Cat. No. 11), and on the terminals of select zoomorphic penannular brooches *viz.* Cat. No’s 23 and 26. The motif is composed of three lentoids, engraved in a triangular arrangement creating a curved triangle composed of three inward-curving arcs in relief in the centre (Jope 2000, 384). Termed the ‘spherical triangle’ by Kilbride-Jones (1980, 26), these predominantly occur in opposed pairs, and often
feature a central drilled dot which can at times appear disproportionately large in relation to the relief tricorne, to the point on occasion that it almost obliterates it (Plate 2-20). Tricornes or concave sided triangles occur on contemporary Irish metalwork such as select latchets (see Youngs 1989, 42; Woodmartin 1903, 165) and on the base of the hook of the Bann escutcheon (Bruce-Mitford 1983).

2.7 Figural Imagery
One of the key philosophical concepts inherent in Celtic designs was a tradition of multivalence and ambiguity. Although Celtic art incorporated many Classical and Oriental motifs, narrative or figurative art was not among those and in general, there is no attempt at pictorial naturalism or realism (Jacobstal 1942, 308). Natural representations of living creatures are exceptionally rare and vegetal and geometric forms tend to dominate artistic expression. The Bath brooch (Cat. No. 21) however is stylistically unique and therefore noteworthy in that it features mimetic and naturalistic representational images of a fish and birds on each of its terminals. On the right is a predatory bird observing a fish, possibly a salmon while on the left, a predatory bird is depicted in profile looking over its shoulder at a jagged, linear feature (Henig in Cunliffe 1988, 23 no. 48, Pl. xvii; Laing 1987, Fig. 18; Gavin forthcoming).
Plate 2-21 The Bath brooch.

The bird on the left terminal is standing with its head and curved beak inclined towards the fish below. On one leg the talon is extended and touches the body of the fish. The wings are splayed out slightly from the shoulders in a predatory stance. The tail is not visible. The second bird is standing in a non-flight position. The bird’s chest is prominent and curved and its body is rendered with small, reserved, upwardly curved lines following the contours of the body and wings, suggesting feathers. Martin Henig (cited in Graham-Campbell 1991, 228) contends that there are parallels for such designs in the art and enamels of Britannia and indeed, broadly contemporary and remarkably similar predatory bird-and-fish scenes occur on an enamelled disc from Wroxeter (Thomas 1963, 71, fig. 11(9)). This same device is rehearsed on a small rectangular sheet-bronze belt-plate with repoussé ornament, recovered from the Thames (ibid. fig. 11(10)). Skilled artisans, such as gem cutters and moneyers, occasionally turned their hands to the decoration of ornamental metalwork, especially when skilled smiths were in short supply and/or when the services of the very skilled were eagerly sought after. Such an individual may have been responsible for the unique panels of naturalistic fish and birds depicted on the Bath Brooch which pays more than a passing resemblance to Roman intaglios (Martin Henig cited in Spratling 1972; see also Burford 1972, 57-67).

2.8 Insular Military Style Motifs - Summary

Insular Military Style art is characterised by a combination of crisp, fine-line curvilinear ornament. The miniature, panelled friezes are made up of abstract Classical plant and geometric motifs, framed by beaded borders. Textured, beaded or
chamfered surfaces are also a hallmark feature. Skillfully engraved freehand, the palette of motifs includes palmettes and palmette-derivatives, peltae, triskeles, spiraliforms, Classical scrollwork (C-scrolls; V-scrolls S-scrolls and tendril scrolls), geometric motifs (triangles, trumpets; lentoids, tricornes, quatrefoils, rosettes, chevrons), rectilinear patterns, and triple annulets disposed pyramidally. Motifs such as single punched/drilled dots and annulets are also a significant component of this art. Most of these elements are absent from or are exceptionally rare on contemporary Irish metalwork, viz. quasi-naturalistic berried leaf forms and so-called vandyke patterning. The decoration of the Bath brooch (Cat. No. 22) is entirely Late Classical in its decoration and features naturalistic renditions of birds and a fish.

This use of Late Roman forms and motifs formed a key part of the aesthetic response by local élites to a changing political world. The possibility that the form of dress ornaments in the Insular Military Style, and their design components (panelled ornament, polished beads, geometric and vegetal motifs) might reflect an awareness of the decoration of these Late Roman official insignia places the corpus in a classicising, and perceived ‘official’ context. Significantly, the concept of designs such as these though geometrical, and stylised, is much closer to Classical ideals than the more abstract geometric designs of the Late Roman Military style. These ‘flashes of naturalism’ suggest that, like the Quoit Brooch Style, Insular Military Style art may also have drawn some inspiration from Romano-British proto-types.

2.9 Summary- A Military Style?

Late Roman Military Style art is known to have enjoyed a wide distribution across the Roman Empire, and though originally confined to the Kerbschnittgarnituren of Germanic mercenaries, the appeal of this style resulted in its replication on civilian dress ornaments. This thesis set out to test Conor Newman’s (1995) hypothesis that Provincial Roman Military Style provided the impetus and inspiration for the emergence of Insular Military Style art.

What is certain is that the groups and individuals who commissioned and wore these objects were certainly au fait with the Late Roman vocabulary of power (Webster 2011, 463). On this corpus of Insular Military Style art as with the Late Roman Military style the influence of Classical art is paramount. The surface
embellishment of each style is exceptionally true to provincial Late Roman art and late Antique style; the ornament is arranged and executed in a Classical style, the component motifs are each drawn from the Late Roman repertoire and it is clear it was produced by artisans working in a Roman tradition (see also Evison 1965, 76-77; Haseloff and Roth 1995, 46; Newman 1995; Laing 2005; Gavin and Newman 2007; Gavin 2013a). Common to both the Insular and Böhme’s Military Style are punch-patterns and classically-derived vegetal and geometric motifs, and designs. Perhaps the most obvious of these shared design configurations is the separation of motifs into individual bordered friezes creating grids of ornament on the decorated surface, a design strategy that was widely employed in Military Style art. There are also some notable differences. Insular Military Style art does not suffer from the ‘horror vacui’ characteristic of the Late Roman Military Style. In fact, the ornament on the Insular Military Style is more restrained and being confined to particular zones, and panels, the polished plainness of the remaining parts of the object is emphasised.

Figure 2-9 Gold ring with ‘Celtic’ faces from the Thetford Treasure. The ring band has been decorated with overlapping punched annulets After Johns and Potter 1983, fig. 11.

Both Evison (1968, 240) and Ager (1985, 17) contend that the ornamentation of Late Romano-British bronze and silverwork was too crude to have provided the
background for the development of accomplished styles such as the Quoit Brooch Style, however, quite exceptional Romano-British treasures such as those from Thetford (Johns and Potter 1983), and Hoxne (Johns 2010), readily attest to the virtuosity and excellence of Romano-British artisans during the period AD 300 to 500. For instance, a gold ring with human faces in relief on the shoulders from the Thetford Treasure (Figure 2-9) provides interesting, and contemporary fourth century parallel. While the form of the ring and bezel are Roman in concept, the human faces with their almond-shaped eyes, straight-slit mouths and up-swept hair are quintessentially Celtic. Interestingly, the band of the ring has been decorated with a line of overlapping punched annulets similar in style to those which feature on each of the silver disc-headed pins (Cat. Nos 14, 15; Johns and Potter 1983, 86). Indeed, the most convincing prototypes for Insular Military Style art have been in prestige metalwork viz. enameled vessels, silver plate, jewellery and mosaics from Roman Britain. Moreover, the consistency and closeness of form and style suggests that Insular Military Style art developed contiguously with these and is unlikely to represent a revival of Late Roman art. In particular, striking similarities can be observed between the embellishment of Insular Military Style enamelwork and Romano-British enameled vessels both in terms of motif and design, for example the use of reserved fine-line ornament, palmette derivatives, tendril scrolls, vandykes and olive wreaths. Both assemblages circulated in southern England, and the decoration of both can be said to have been influenced by the vegetal and geometric iconography of Late Roman silverware. As comparatively large numbers of silver objects in this style, including some of the earliest objects such as the Oldcroft pin (Cat. No. 1) occur in the heart of Britannia, this corpus should perhaps be placed in the context of late and sub-Romano-British prestige metalwork.

Insular Military Style is but one of a number of regional, late Roman-inspired art styles that emerged during the fourth and fifth centuries AD. Though in the main these ‘micro’ styles were executed in the tradition of Late Roman provincial art, specifically the Military Style, and their embellishment is ultimately drawn from the Classical repertoire, they also retain some distinctly native elements. Likewise, the Insular Military Style combines red Celtic-style enamel with Roman silver which suggest that the style appealed to indigenous élites in who, though late Roman in their aspirations, still favoured enamelwork (see e.g. Moore 1978, 324-5). As such
Insular Military Style art is best described as a syncretistic bricolage of indigenous and late Roman aesthetics. The distinct local flavour of La Tène style material in Ireland has been highlighted by Barry Raftery (1984, 335; 2006, 277) and can be understood as the deliberate utilisation of exotic and luxurious material culture by an elite group within that society. Likewise, the Insular Military Style appears to have served as the trappings of an élite and exclusive stratum of Irish society who maintained contact and connections with groups of élites in southern England. Inker (2006, 2) has argued that these groupings identified with the martial prowess of the Roman Military and in the context of the period AD 300-500 in Ireland and Britain, it is suggested here that such badges were constituted by Insular art styles such as the Insular Military Style and the Quoit Brooch Style.
Chapter 3 - The Objects: Form, Function and Date

This thesis is about an art-style and its context and implications. The types of objects upon which Insular Military Style art occurs are also clearly relevant. This chapter will consider, briefly, these types, paying particular attention to typological considerations of relevance, such as, for instance, the types of zoomorphic penannular brooches and pins upon which it is found, whilst not straying into too detailed a critique of the admittedly difficult typology per se of zoomorphic penannular brooches and projecting headed pins.

The types of objects, notably the dress fasteners upon which Insular Military Style is found speak to social context and cultural pedigree. The second part of this chapter will consider, therefore, the performative principles at play in this corpus, enquiring into how this material lent itself to the imperative to be prestigious. Insular Military Style art is found on objects of display associated with the person viz dress-pins, zoomorphic penannular brooches as well as on a small number of mounts/ fittings possibly associated with horse gear. Thus far, the style has only been identified on fine metalwork with no known examples in wood, textiles, tattoos, pottery or bone. Academic interest in these dress ornaments has rarely strayed beyond their use as dating type fossils and consequently discussion has tended to focus on typologies, classification and dating.

However, typology is not the only means by which material culture can be understood, aspects such as function, meaning and the role these objects played in the societies in which they circulated are also important (Tilley 1989; Nieke 1993; Gannon 2007; Newman and Bourke 2013). Here I will discuss each of these three object types in turn, focusing on their morphology, function and date and considering also their ‘life histories’ and the role they played in marking identity in the fourth and fifth centuries AD.

15 The term dress-pin is preferred as it is uncertain whether all pins served the same function; some may have been worn in the hair, others to fasten clothing.
3.1 Zoomorphic Penannular Brooches

Penannular brooches first appear in the archaeological record in Europe around 400 BC with simple forms known from around the third century BC in Britain. By the fourth century AD, Insular penannular brooches had become quite distinct from their simple Roman prototypes; the terminals were larger, more elaborate and were distinctly and deliberately zoomorphicised, featuring highly-stylised renditions of a head, ears, eyes and a snout (Newman and Bourke 2013, 201). Early forms are found scattered across fourth century sites within the province of Britannia and beyond the limes and in Scotland and Ireland (see e.g. Kilbride-Jones 1980b, fig. 52, Nos 3, 21). Enamelled zoomorphic types developed in the environs of the Severn Valley region of western Britain and spread to eastern Ireland where the form was rapidly and widely adopted and developed and ultimately became a symbol of status and kingship (Savory 1956, 41, 49; Fowler 1963; Kilbride-Jones 1980b; Graham-Campbell 1991, 228; Ó Floinn 2001, 2-6; Youngs 2005; Youngs 2011). While brooches of penannular form are known from the Continent during this period (White 1988, 22), zoomorphic types are purely Insular and have no parallels of significance outside of Ireland and Britain (MacKreth 2011, 241).

3.1.1 The Distribution of Class I Zoomorphic Penannular Brooches

All seven brooches (five complete specimens and two terminals, Cat. Nos 22-8) in the Insular Military Style are zoomorphic and penannular. All except one are of copper alloy; the one silver specimen is represented by a brooch terminal from Caistor, Lincolnshire (Cat No. 25). Plain silver Class I brooches are known from Kirton, North Lincolnshire 16 and there is an intriguing fragment of a silver zoomorphic penannular brooch from near Cherhill, Wiltshire one terminal of which features an incised saltire motif on the snout and punched annulets on the verso (Hinds 2011; Plate 3-1). Regardless, all seven belong to Graham-Campbell’s (1991) Class I type. In Britain, Class I brooches are concentrated in the Votadini territory around Hadrian’s Wall, in the lower Severn Valley around the Bristol Channel in the lands of the Dobunni and in Lincolnshire. Clusters also occur in the Irish East Midlands (Ó Floinn 2001, 2-4). There is no evidence for production in Ireland.

16 PAS SWYOR-EC09E8.
leading to the suggestion that they are imports from the lower Severn Valley (*ibid.* 2-3).

Enamelled examples of Class 1 brooches remain more common in Ireland. Enamel inlay occurs on ten of the twenty Irish examples of Class I brooches, whereas just six out of thirty-five British Class 1 finds are enamelled. Until relatively recently (see *e.g.* Henig cited in Graham-Campbell 1991, 228), Kilbride-Jones’s (1980b, 76) view that enamelling indicates an Irish origin has influenced the cultural attribution of these brooches. However, there is a growing body material of very early date from south west Britain, specifically in an area around the Severn Valley and in Lincolnshire, which revives the possibility that Class I enamelled brooches developed in this region during the fourth century AD with the result that both plain and enamelled variants were available as export models to Ireland (Graham-Campbell 1991, 228; Ó Floinn 2001, 2-4; Youngs 2007, 81-2). Specimens decorated in the Insular Military Style constitute a sub-set of Class I zoomorphic penannular brooches (see below).

3.1.2 **Military Style Zoomorphic Penannular Brooches: Morphology**

Insular Military Style brooches feature long, slender pins that are attached to the hoop by means of a barrel-shaped setting and do not extend far beyond the hoop. The dimensions of the pins suggest that these dress ornaments were intended to fasten thin, finely-spun fabric and with hoop diameters ranging from 57.3mm to 93.0mm they could have accommodated a relatively large swathe of cloth suggesting that they may have been primarily used to fasten cloaks (Johns 1996a, 150-1). The hoop is invariably circular in section and is bounded by defining groove that runs along the outer and inner circumference. Zones of close-set, chased ribbing and punched beading decorate the front of the hoop; the *recto* of the hoop is always plain and undecorated (Plate 3-4). This too suggests that these brooches were affixed to fine fabric and that the underside was left plain in order to allow the smooth rotation of the hoop when fastening, and also to prevent the material snagging. On some such as the specimen from the River Greese at Kilkea Castle, Co. Kildare (Cat. No. 26),

17 Cat. No 22, Bath Brooch, max. diameter of hoop 71mm, length of pin 83.5mm; Cat. No 26, Kilkea brooch, max. diameter of hoop, 57.3mm, length of pin 73.5mm; Cat. No 25 Unlocalised, Ireland, max diameter of hoop, 73mm, length of pin 80mm; Cat. No 23 Unlocalised, Ireland, max. diameter of hoop, 93.0mm, length of pin (incomplete) 92.3mm.
repeated fastening of the brooch has distorted the circularity of the hoop so that the terminals do not sit evenly in the same plane (Youngs 1995, 128). Two terminals from different brooches, e.g. a silver specimen from Caistor, Lincolnshire (Plate 3-2), and a copper alloy example from Loughborough, Leicestershire (Cat. Nos 27, 28) are recent metal detecting finds. These feature deep, sub-triangular terminals; enamel inlay and fine-line chased and beaded designs, including on the silver specimen the ubiquitous triple annulet motif which will be discussed in detail in Chapter Eight.

All brooches in the Insular Military Style are of Graham-Campbell’s Class I type, however not all Class I brooches are decorated in the Insular Military Style (Plate 3-3). Howard Kilbride-Jones (1980b 43, 45-6) observed that his type B1 brooches, comprised a distinct class, the standard of workmanship and general finish of which is far above those of any of his other groups. As the corpus grows it is emerging that the Insular Military Style is not restricted to his B1 brooches. Regardless, brooches from this corpus exhibit degrees of regional variation in the form and decoration of the terminals. Those from southern Britain typically feature a lentoid-shaped enamelled field on the snout, and the ‘forehead’ of the ‘beast’ holds a sub-circular enamelled field (See Cat. Nos 21, 27; Youngs 1995, fig. 1).

Two unusual variants from Loughborough, Leicestershire (Cat. No. 27) and Caistor, Lincolnshire (Cat. No. 26) respectively, feature more elongated heads, sub-triangular enamelled fields on the ‘forehead’ of the ‘beast’ and fine line reserved ribbon ornament on the snout. They do not belong to the B1 category per se but are decorated in the Insular Military Style. Brooches in this style provenanced to Ireland invariably feature lentoid and tricorne motifs (Cat. Nos 22, 23, 25). The clustering of these different forms in different regions of Ireland and Britain suggests that while the idea of enamelled Class I brooches may have originated in southwest Britain, once transmitted the form and decoration was adapted to suit local tastes.
Plate 3-1 Silver zoomorphic penannular brooch from near Cherhill, Wiltshire.\textsuperscript{18}

Plate 3-2 Silver zoomorphic penannular brooch terminal, Caistor, Lincolnshire.

\textsuperscript{18} PAS WILT-809E32
Plate 3-3 Insular Military Style brooches provenanced to Ireland; Cat. No. 26 (top) max diameter of hoop 57.3mm; Cat. No. 23 (centre) max diameter of hoop 73.0mm; Cat. No. 25 (bottom) max diameter of hoop 73.0mm.
Close dating of Insular Military Style brooches is fraught with difficulties (see White 2007, 21). Kilbride-Jones (1980b, 43-7) dated his type B1 brooches to the third century on stylistic grounds, a date which is regarded as too early by most commentators (see e.g. Graham-Campbell 1991; Youngs 2005, 130). Youngs dates what she terms ‘large Class I brooches’ to 450-500 AD (Youngs 2005, 130). Leahy (2007, 54) has dated the example from East Ravendale to the fifth/sixth century based on other brooches from the locality. MacKreth suggests that brooches with ribbed and partially ribbed hoops with a diameter of over 40mm and pins which project beyond it are indicative of a mid-fourth to mid fifth century date (1986, 30; 2011, 144–159 158–9; see also Youngs 2011, 259). Most commentators agree that as a group, Class I brooches date generally to the fifth century AD and this dating rests on the assumption that plain and enamel-inlaid types with reserved, fine-line decoration are contemporary (Newman 1995; Youngs 1995, 128).

Plate 3-4  Band of Grooves and beading on the hoop of the Kilkea Brooch Cat. No. 26.

3.2 Projecting-headed Pins

Dress-pins viz. proto-hand-pins, hand-pins and disc-headed pins (hereafter referred to collectively as projecting-headed pins) comprise the majority of this corpus. These are indigenous rather than Roman pin-types, with an Insular Iron Age pedigree, all sharing the same basic morphology of a pinhead offset at a right angle from a tapering shank that terminates in a sharp point. Complete pins range in length from 60.5 mm to 328 mm with maximum shank diameters ranging from under 2.8 mm to 6.8 mm. In some instances the shank is slightly ‘hipped’, and features a swelling or ‘entasis’ in the centre; other specimens are recurved at the tip. These differential shank morphologies suggest to the writer that the dress pins did not serve a uniform
function but were put to a variety of uses from fastening garments, headdresses and fixing hairstyles in position (see below).


Plate 3-5 Heads of silver proto-hand-pins. From left to right: Castletown Kilpatrick, Co. Meath, head diameter 11mm, Cat. No. 2; Unprovenanced, head diameter 12.2mm, Cat. No 4; Newtownbond, Co Longford, head diameter 19.3mm, Cat. No. 5.

Projecting-headed pins occur in Ireland, Scotland and England (Stevenson 1955; Laing 1975, 322–3; Youngs 1989, 22-7). Morphologically, proto hand-pins feature a crescentic or U-shaped plate surmounted by a semi-circular arc of plano-convex beads and fillets (Plates 3-5, 3-7). Hand-pins also have a crescentic plate but the arcuate arcade has changed to three tube-like fingers arranged in a straight line. On both types there is a clear division between the lower plate and the upper arcade of beads or ‘fingers’. Copper alloy hand-pins dating to the sixth and seventh century mark the last stage in the development of these types and are found almost exclusively in Ireland and Scotland. These later examples can have four or more tubes or fingers held above a solid lower plate; the plate and the digital arcade are joined and sometimes pierced by a small, circular opening (Plate 3-6).
The developmental origins of the projecting-headed pin series are uncertain and have seen extensive debate (Wilde 1861; Smith 1905; Stevenson 1955, Fowler 1963, Kilbride-Jones 1980a, 193; Laing 1993, 35-7; Youngs 2005). Initially, Wilde (1861, 559-60, fig. 455) grouped all of these projecting-headed pin types together in his ‘hammer headed’ pin class. His classification was later refined by Reginald Smith (1905, 344-354; 1913, 281-9, fig 169) who coined the term ‘hand-pin’ and distinguished between hand-pins, with a pin head that resembled a fist with the fingers bent forward and what he termed ‘hammer-headed’ pins (disc-headed pins) and proposed a typological progression from swan’s neck pins to ibex-headed pins to hand-pins, and suggested that disc-headed pins marked the final stage in the typological evolution of the series, in the eighth century AD. While such is no longer tenable, most scholars agree that so-called ‘proto hand-pins’ played a leading role in the genesis of hand-pins proposing, for example, that the arcades of beads of proto hand-pins evolved into the row of projecting ‘fingers’ of hand-pins, although when or how this development occurred is uncertain. In their turn proto hand-pins had evolved from undecorated corrugated, beaded, rosette and half-rosette-headed pins.
broadly dating to the second and fourth centuries AD (Stevenson 1955; Burley 1956, 219; see also Foster 1990, 153-54). *Pace* the suggestion that disc-headed pins mark the final stage in the typological evolution, however, Ó Ríordáin argues while a connection between disc-headed pins and hand-pins is suggested by their morphology there is insufficient evidence that they represent the final development of the hand-pin type. He suggests that they may represent a parallel development earlier in the series under the influence of the prehistoric sunflower pin or may be an independent variation of the forerunner of the hand-pin – the ibex-headed pin (Ó Ríordáin 1947, 95-6).

The criterion for distinguishing between hand-pins and proto-hand-pins is confusing and inconsistent. While some commentators have focused on decoration (Kilbride-Jones 1980a, 193-7; Laing 1990, 39-42; 1993, 35-70), most have tended to focus on form, specifically the morphology of the upper digital/beaded arcade. Stevenson (1955, 289-91) for example noted a distinction between ‘true’ hand-pins and earlier proto-hand-pins on the basis that ‘the proto-hand-pin has beads above the plate while the hand-pin has ‘bars like fingers’. Burley refined the distinction describing proto-hand-pins as having beads set in an *arc* above the plate while hand-pins featured fingers set horizontally along the straight upper margins of the plate (Burley 1956, 170; see also Fowler 1963, 125; Duignan 1970, 7). More recently, Youngs (2005, 250) suggests that in order to distinguish between the beads of a proto hand-pin and the tubular fingers of a hand-pin:

A fingers length should be twice that of the thickened plate (the measurement taken at ‘4 o’clock’ on the plate because the end of the shank obscures the lowest point) with some uncontroversial exceptions where the plate is extremely thick and projecting fingers are clearly fully developed tubes.

Proto hand-pins and hand-pins decorated in the Insular Military Style are linked by their use of silver and reserved fine-line ornamentation. Each features the characteristic arched arcade of between three and six ‘beads’ or a horizontal arcade of elongated ‘fingers’ and these morphological similarities place them in the wider corpus of projecting-headed pins.
Nonetheless, decorated proto-hand-pins do not comprise a particularly uniform group; there is considerable variation, for instance, among the pins from Oldcroft, Gloucestershire, Castletown Kilpatrick, Co. Meath, Newtownbond, Co. Longford, Welton-le-Wold, Lincolnshire, Tripontium, Warwickshire, and an unprovenanced specimen that have all been classified as proto-hand-pins (Plate 3-5). Indeed, the traditional methods of differentiation between these pin-types outlined above often struggles to find close formal similarity where there is limited evidence of such. While stylistically and technically they form a coherent corpus, there are subtle differences in form and decoration and each specimen is entirely unique. Indeed, one of the issues with trying to fit objects into typologies is that this approach often fails to identify the importance of uniqueness.
Subtle diversities are a hallmark of the style. Rather than indicating typochronological development, variations in form may reflect the abilities of the individual artisans who crafted each object or indeed their ability to adapt the design to suit the taste of the individual who commissioned the piece (see Seaby 1964, 70). Dissimilarity of form does not always imply non-contemporaneity. There is indisputable archaeological evidence for the simultaneous manufacture of dissimilar forms of the same object types from the Covesea Cave, and particularly from Helgö, which produced evidence for two workshop sites producing at least two hundred and eleven different types of Relief or Square-headed brooches, each of which combined different form elements resulting in different but contemporary brooches (Lundström 1972, 158).

Proto hand-pin types are known to have been in circulation in southern England from as early as the second and third centuries AD. An example from Gloucestershire with a plain lower plate is illustrated by Johns (1974, 295, fig.1) and another with simple incised decoration is known from Wroxeter (Barker et al. 1997, 212, fig. 311). Barker (ibid.) refers to another example from Cirencester. A number of elements of the design of these early, simple types are anticipated in Insular Military Style art. For example, an unusual and important ring-headed pin from the River Thames at Hammersmith (Raftery 1984, fig. 90.5; Figure 3-4) features not
only the recurved shank of a ring-headed pin but also some elements which later became hallmarks of later projecting-headed pins. It has been interpreted as a hybrid between the two pin types; the scrolled arcade speaks to the horizontal digital or beaded arcades of the hand-pin series while the heavily ornamented lower plate, dominated by red inlay also reflects the decoration on these later pins.

Figure 3-2 Ring-headed pin from the River Thames at Hammersmith. After Raftery 1984, fig. 90.5.

3.2.1 Disc-headed Pins

Disc-headed pins are the largest and heaviest of the projecting-headed pin series.\(^{19}\) They are also the most visually striking and accomplished members of this corpus, and may be viewed almost as pattern books of the Insular Military Style (Plate 3-8). Just eight decorated examples are known and all are ornamented in the Insular Military Style. Six are made of copper-alloy and two of silver. Both of these are provenanced to Ireland and represent, at least in an Irish context, a considerable investment in the ostentatious display of silver. Just one Insular Military Style disc-  

\(^{19}\) The Londesborough pin is the most substantial projecting-headed pin known, measuring 328mm and weighing 116.9g. However, Samuel Lewis (1837) describes an intriguing pin from Pallaskenry, Co Limerick: ‘In a quarry near the town was found an ancient silver bodkin, weighing 5oz. 2dr., now in the possession of Sir Aubrey de Vere, Bart.’. Its weight suggests it may be another of these substantial disc-headed pins; unfortunately its present whereabouts are unknown.
headed pin is known from outside of Ireland; a specimen found in the course of dredging the River Lee in Broxbourne (Cat. No. 20). The decorative palette of disc-headed pins is dominated by geometric and stylised plant motifs arranged in four distinct zones: in (i) the central roundel of the disc; (ii) around the circumference of the disc head; (iii) following the angle of the shank, and (iv) on the recto of the shank.

Some examples feature a plain, undecorated shank while on others the ornamentation extends in a series of narrow, rectangular panels almost halfway along the length of the shank, broken by bands of incised and punched ornament and terminating in a nib-shaped panel. In an almost symbiotic relationship between form and decoration, the vertical designs lead the eye along the shank, accentuating and emphasising the elongated, slender form of the pin, creating a schematic representation of a pin on the shank (Plate 3-9). An example from Atworth villa, Wiltshire dated to AD 364-78 features a disc-head offset from a long, tapering shank.20 The pin is heavily corroded but appears to have inlaid wire decoration on the disc-head and running down onto

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20 Length 187mm, depth (head) 12mm, diameter (disc) 7.5mm.
the shank (Youngs 2008, no 23, 78-9). As discussed above, the environs of the Severn Valley has been identified as a core area for the dissemination of zoomorphic penannular brooches and possibly hand-pins to Ireland (see e.g. Ó Floinn 200, 2-3). Controversially perhaps, Youngs (ibid. 79) has suggested that this pin from Attworth Villa in the same general region, may be a ‘proto disc-headed pin’, ancestral to the fifth century pins from Ireland.

Plate 3-9 Panels of chased and engraved ornament on the shank of the Londesborough pin (Cat. No. 15) terminating in a nib-shaped panel.

3.3 Insular Military Style Brooches and Pins; How They Were Worn

Almost all of these objects entered the archaeological record as the result of unexpected loss or deliberate deposition in watery contexts or in hoards (see Chapter Six). Therefore, today they are encountered in isolation, divorced from their original purpose and context of use. Evidence for the wearing of penannular brooches is preserved in the law tracts and historical sources such as the Annals dating from the seventh to the twelfth century AD and also in pictorial representations on stone monuments. With regards to the corpus of dress pins, we cannot determine what

21 Wiltshire Heritage Museum Accn no. DZSWS: 1971.7.22.
precisely they were used for (e.g. whether they were cloak, hair, or headdress fasteners). In these instances, function must be approached though analogy and the use of ethnographic examples.

The manner in which personal ornaments were used in social contexts is codified in the early Irish law tracts. These suggest that rank was made visibly apparent in material possessions (Boyle 2004, 85). For example, the Senchas Már describes the various brooches and metals appropriate to the sons of kings while in fosterage and has been cited as evidence of hierarchical ornamentation not only in relation to the metal base but also in terms of the motifs and inlay employed (Henry 1965, 102; see also Nieke 1993, 128):

*ocus deilge óir ocus glaini do beth indte ac macuibh rígh Érenn ocus rígh cóicidh, ocus delge airget do macuibh rígh túaithe ocus mórthúaithe; nó comuminund dealg do mac cach rígh ocus in eacor-sín uile isin dealg-sín*

And brooches of gold, having crystal inserted in them, with the sons of the king of Erin, and the king of a province, and brooches of silver with the sons of a territory, or a great territory; or the son of each king is to have a similar brooch, as to material; but that the ornamentation of all these should appear in that brooch.

In the gloss, O’Donovan observed that brooches were ‘carved or ornamented according to the rank of each king, but the ornaments which distinguished these brooches from each other are now unknown … It is probable that the brooches of the different ranks were distinguished by the nature of the inlaying or the variety of the carving’. While this quotation is not taken from the eighth century Senchas Már itself, but from the accompanying Middle Irish commentary which is probably of eleventh or twelfth century date (Etchingham & Swift 2004, 47), Nieke (1993, 128-9) argues that there may indeed have been sumptuary laws which governed the wearing of brooches of particular design and decoration. Moreover, this form of gradation according to rank and status finds an analogue in the cingula worn as a

badge of office in Late Roman Britain, in which the splendour of the Kerbschnitt fittings were varied according to rank (Hawkes 1974, 390 cited in Heald 2005, 219).

The 7th or 8th century Irish law tract Bretha Étgid (Judgments of Inadvertence) discusses the penalties for injuries caused by the pin of a brooch (Kelly 1988, 150). It states that men are exempt from liability if they wear their brooch on the shoulder and women if they wear theirs on the breast. This difference in male and female attire is supported by contemporary pictorial representations on stone monuments which show penannular brooches being worn by men and women on the shoulder or breast respectively and functioning as cloak fasteners (see also Trench-Jellicoe 1999).

Plate 3-10 Male figure wearing penannular brooch, White Island, Fermanagh (right); detail from the Hilton of Cadboll Stone, 8th cent., Scotland (left).

The Pictish slab from Hilton of Cadbol, Easter Ross, features a female figure on horseback wearing a penannular brooch horizontally on her breast while the male figure at White Island wears a penannular brooch worn on the shoulder (Plate 3-10). While these iconographic depictions may be potentially illuminating in relation to brooch-types and their social significance in the Medieval period, they can only be taken as general indicators for social context and practices in the early centuries AD.
3.3.1 *Dress Styles in Iron Age Ireland: The Evidence*

It has been suggested that the introduction of the penannular brooch to Ireland may be associated with changes in clothing, perhaps related to the introduction of linen (Soderberg 2013, 78; Fitzgerald 2006, 38-40). However, in actuality there is no firm evidence that the adoption of penannular brooches implies a change in styles of dress or if they were incorporated into pre-existing indigenous styles of dress. Only a small number of surviving textiles are known to date to the first five centuries AD and these are generally too fragmentary to provide useful information on dress during this period (Fitzgerald 1997, 251). However, art historical and textual parallels may permit a degree of educated guesswork to be applied. Descriptions in the *Táin Bó Cuálnge* mention a style of dress consisting of a léine or tunic and a brat or cloak (Kinsella 1969, 228). The brat or cloak was worn over the léine and appears to have functioned as a symbol of social status. Descriptions in the *Táin Bó Cuálnge* describe cloaks as being very large, capable of being wrapped around the body five times. The *brat* was secured on the breast by either a bronze, silver or iron brooch or pin depending on the individual’s social status and wealth (Mytum 1992, 137-9 cited in Fitzgerald 1997, 252). The cloaks of élites are described as being brightly coloured; descriptions of purple, crimson, yellow and green cloth dominate the literature; speckled, variegated and striped are referred to also (Dunleavy 1999, 18). Those of lower ranks were grey. They are also described as being ornately decorated with a fringe or decorative border of embroidery or appliqué (see note 9 above). The stylised cloaked figure of St. Matthew on fol. 21v of the Book of Durrow may in fact represent the earliest depiction of such a cloak (see Newman 2005, 220, and pl. 1).²³ Interestingly, Late Roman military cloaks and tunics also featured decorated appliqué panels whose patterns were intended to enhance and reinforce the symbolism and imagery on accompanying personal ornaments (Bishop and Coulston 2006, 224-225; Sumner 2009, 52-70, figs 44-47).

3.3.2 *Function of Dress-pins*

Pins are considered the most common form of dress fastener in Iron Age Ireland (Newman 1995) although they are assumed rather than proven to have functioned solely to fasten clothing (see also Allason Jones 2010, 82-83). In the wider

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²³ My thanks to Conor Newman for drawing my attention to this.
Provincial West, pins are gender specific artefacts, found predominantly in association with female burials (Johns 1996a, 147) however, given the lack of contextual evidence it cannot be determined whether projecting-headed pins formed part of male or female attire (Allason-Jones 1995, 24; 2005, 121; Johns 1996a, 149). While all specimens share a basic morphology of a decorated pinhead mounted at a right angle to the shank, the pins vary widely in terms of size and shank dimension. On some specimens, the shank gradually tapers along its entire length to a sharp point while on others for example the pins from Newtownbond, Co. Longford, and Denton, Newcastle-upon-Tyne, (Cat. Nos 5, 8) an obvious swelling or *entasis* beginning about one third along the shank has been noted. This may have functioned to strengthen the pin shank or alternatively it may have helped retain the pin in its intended position and function more effectively whether it was employed to secure cloth or hair. Given that select Roman hairpins share this trait perhaps indigenous pins with this shank morphology may have served to secure the pin in place in the hair.

The curvature of the shank on the examples from Tripontium, Warwickshire, and Gaulcross, Banffshire (Plate 3-11; Cat. Nos 7, 10) suggests that these specimens may have functioned primarily to fasten cloth; the curvature at the lower end of the shank would have prevented the pin from working its way loose from the cloth when in position and moreover, it would have made it easier to insert the pin through the fabric in the first instance (Newman 1995, 17; Johns 1996a, 154). Pin size has been correlated with function (see e.g. Newman 1995, 17). Smaller pins would have been unable to secure as much fabric as larger specimens suggesting that these may have may have served a purely decorative role. Regardless of size however, pins are not well-suited to securing cloth.
A long, copper-alloy pin from Loughnaglack _Crannóg_, Co. Monaghan dated to the early sixth century AD featured a _sureté_ (Figure 3-3). The pin was inserted into a 31 mm long tapering tube made from sheet copper alloy that would have helped to secure it in position. A similar fastening device was noted by the writer on an unlocalised hand-pin of seventh century date; the _sureté_ was in the opinion of the writer, a later, possibly modern embellishment. While it is possible that dress-pins from this corpus may also have been fitted with similar fastening devices, there is no evidence, either artefactual or use-wear related to support this.

![Figure 3-3 Pin with sureté from Loughnaglack crannog, Co. Monaghan. After Ross 1991, fig. 7.2.](image)

3.3.3 _Use/wear patterns on projecting-headed pins_

In addition to the surface scratches and dents which are almost certainly the result of normal day-to-day usage, interesting use/wear patterns can be discerned on the corpus and analysis of these can also give an indication of how these pins were used. Observations by the writer of the differential wear patterns on proto hand-pins, hand-pins and on disc-headed pins suggests these pin types may have served different functions. Viewing the pinhead as a clock face, the areas of heaviest wear occur at

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24 National Museum of Ireland acc. no 1965:338 (a&b).
25 National Museum of Ireland acc. no 1880.88.
the twelve, three, and nine o’clock positions along the vertical edge of the disc head (Figure 3-5).

The wear to the vertical edges of the pin head suggest that it either tilted to the side when in position or that it was deliberately positioned at an angle. A further area of wear typically occurs at approximately one third distance along the shank, just below the zone of panelled decoration. This suggests that disc-headed pins may have been worn with both the decorated pinhead and the decorated upper third of the shank on display. Indeed on several specimens, the shank has been deliberately squared, suggests that these pins were intended to lie flat (see e.g. Cat. No.16). Disc-headed pins are long, unwieldy with substantial shanks and in the opinion of the writer, if a sharp pin of these dimensions, (300 milimeters +) was inserted into anything other than a heavy, tightly woven textile, it would present a serious danger to the person. Moreover, the heavy disc-shaped head causes the pin to twist and turn from side to side as the weight shifts suggesting to the writer that the pin would quickly work its way down through any fabric it fastened, leaving just the small pinhead visible and hiding the decorated shank. It appears to the writer that the nib-shaped terminal indicated the depth of penetration that was intended when the pin was fixed in position.

The wear patterns observed on disc-headed pins suggests that these were worn with just the lower half of the shank inserted into hair or fabric, allowing the head to rotate freely from side-to-side, thus wearing the outer edges of the pinhead. Significantly perhaps, disc-headed pins show little or no wear at the six o’clock position. This is in marked contrast with proto hand-pins which are often heavily worn at this point (Figure 3-4), which suggests that they were fixed in manner that caused material they fastened to ‘bunch’ or gather under the pin head.
Figure 3-4 Areas that typically exhibit the highest degree of wear on proto/hand-pins.

Figure 3-5 Areas that typically exhibit the highest degree of wear on projecting disc-headed pins.
3.3.4 Dress-pins as hair ornaments

The use of pins of varying length to fasten items of clothing, if indeed this was the case, was an indigenous tradition; the ubiquitous Provincial Roman pin, on the other hand, was instead, worn as a hair ornament (*acus crinalis* or *acus comatoria*). Indeed, there are ample art historical representations on coins, statuary intaglios, funerary portraits, and manuscript illuminations to suggest that pins were typically employed to hold hairstyles of varying complexity in place and/or to hold head coverings such as veils or bonnets in position (Allason-Jones 2005, 109). Hair-pins were decorative objects that served a practical function but they were also worn as jewellery, and by virtue of their function they are generally considered to have formed part of female attire. Typically, the shaft of the pin was the functional element while the pinhead served as an embellishment and was often highly decorated (Riha 1990, 95–6). The rapid growth in popularity of hairpins in Roman Britain is directly related to the spread of Roman styles of dress. The size and number needed depended on how the hair was worn. In the early Roman period, a fashionable hairstyle required one or more long hair-pins while in the late Roman period, shorter pins were used. During the first and second centuries AD, hairstyles were elaborate and piled up on top of the head and the fashion was to allow pins to project above the hairstyle thus displaying their decorated heads. By the third and fourth centuries AD hair was more commonly worn in simpler styles and closer to the head therefore the securing pins did not need such long shafts (Cool 1983, 105; Johns 1996a, 139). For example, the burial of a young Roman woman from York of late third to early fourth century date contained hair that was plaited, and held in a loose knot at the back of the head by two jet pins (MacGregor 1985, 113, Plate 3-12). This simple, basic coiffure was particularly popular during the fourth and fifth centuries AD when it was the only female hairstyle to be approved of by the early Christian fathers (Johns 1996a, 138-9).

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26 Smaller pins may have been used to secure a bonnet or headdress (Allason-Jones 2005, 109) or a headband (*vitta*) such as an example from grave 323 at Lankhills, Winchester which was held in position by a short copper alloy pin (Clarke 1979: table 2[67] & 317).
Plate 3-11 Silver hand-pin from Tripontium, Warwickshire (Cat. No. 11) featuring a curve in the shank that probably served to secure the pin in position.

Plate 3-12 Preserved auburn hair from a female burial in York dating to the late third to early fourth centuries AD. The hair is styled in a loosely wound bun that was held in position at the back of the head by two canthus-headed pins.
In his treatise *De virginibus velandis* Tertullian (12:3-4) commented negatively on the practices of women who ‘dye their hair and fasten their hair with *more wanton* pin’ and instead, he advocated a simple hairstyle and a veiled head as the most suitable for a Christian woman; Linus, the successor of St Peter also ‘decreed that women should cover her head when entering a church’.

Painted funerary portraits from Roman Egypt may provide some evidence as to how long dress pins may have been worn in the hair. Painted on either wooden panels or on linen shrouds, such have been found in cemeteries in almost all parts of Egypt, from the coastal city of Marina el-Alamein to Aswan in Upper Egypt. Most of the portraits can be dated from the early first century AD to the mid third century AD. Their patrons were a wealthy local élite influenced by Hellenistic and Roman culture but deeply rooted in Egyptian religious belief (Borg 2010, 1). The young woman (Error! Reference source not found.) known as the ‘Jewellery Girl’ is lavishly adorned. Her hair has been arranged on the top of her head and is held in place by a pin of pearls and garnets. The portrait has been dated to AD 110–20 based on her coiffure (Kleiner 2010, 228). Though located in Egypt and at some distance from the British province, these head and shoulder portraits of Provincial Roman men and women, bedecked in their jewellery and personal ornaments can offer a guide as to how long dress pins may have been worn. With the caveat that representation at death may depict an ideal rather than an actual appearance, it is more likely than not that elaborate hairstyles depicted are almost certainly copies of the styles worn in the Imperial court. These styles would have been transmitted to the provinces through the Roman officials and their wives and coins featuring the empress and statues and busts of the Imperial families. Therefore the mode of dress depicted may be described as Provincial Roman. While it is difficult to establish whether these are representative of life in provincial Roman Britain (See E. Swift 2011), similar jewellery is known from Roman Britain and it is possible that some Romano-British women may have copied these Imperial models and worn their hair in a somewhat similar way with ornate hairpins (See also Cool 1983, 18-20).

Modern and ethnographic analogies suggest that long, weighty projecting disc-headed pins could have functioned more effectively as hair sticks (Plate 3-14), securing hair in a coil or bun at the back of the head. Generally hair sticks are inserted at a high angle to prevent the stick working its way out of the hair.
Pins of Böhme’s Type Muids from Xanten/Dodewaard, Girton and Asselt (Böhme 1974, 34-5) provide the best comparanda for the disc-headed pins from this corpus. The sepulchral contexts in which these have been found suggest that these long, decorated dress pins were worn at the back of the skull, possibly protruding over the ear and that they secured an elaborate hair style or perhaps a headdress. The projecting-headed pins from this corpus may perhaps be folded into this milieu (see also Bennet et al 2010, 178-87).

Plate 3-13 Jewellery Girl. From Kleiner 2010, pl. 67.
The appearance of other long, enamel-inlaid indigenous dress pin types during the post-Roman period in southern Britain viz examples from Cassington, Oxfordshire, Wroxeter, Shropshire, Ickham, Kent and Cannington, Somerset suggests the emergence of strong, regional identities associated with the wearing of long, dress pins across southern Britain during the fifth century AD (Barker et al. 1997, 211-2, fig. 310; White 1998, 106-7, fig 53.1; 2007, 154, fig. 57, Nos 1-3). A specimen from Ickham measures over thirty inches in length and represents an extraordinary example of this fashion (Plate 3-15). Pins were not commonly employed as dress fasteners in the Roman world suggesting perhaps that the mobilisation of overtly indigenous pin types may mark a specific desire by certain groups and individuals to project a clear and unequivocal message regarding affiliation and identity during what was a period of intense social and political change. If projecting-headed pins were primarily female dress ornaments, their elaborate decoration may perhaps indicate that women, particularly those rising to positions of prominence during the fourth and fifth centuries AD were vehicles for the construction of social identities for their kinsmen who also displayed their status through the adornment of their

27 My thanks to Susan Youngs for providing me with images of this pin.
female kin in Military Style inspired art. A comparable phenomenon has been noted in relation to broadly contemporary equal arm brooches the decoration of which was also inspired by Böhme’s Military Style art (E. Swift 2000a, 230; Bruns 2003; Hinton 2005, 12; Inker 2006, 4 cited in Pollington et al 2010, 100).

3.4 Ornamental Fixtures and Mounts

Three mounts bearing Insular Military Style decoration can be identified. These are decorative rather than functional pieces of metalwork, that served either as binding strips or ornamental attachments used to embellish objects such as saddles, weaponry and perhaps even items of attire and were secured either by rivets, solder or some form of organic adhesive agent such as resin.

The bronze mount recovered from the River Shannon near Athlone is in two curved and tapering U-shaped fragments, decorated with bands and panels of
engraved ornament (Cat. no 30a and b; Plate 3-16). The larger piece has a hollow cast human head fixed to one end with a decorated rivet with a second rivet hole at the wider end. The second fragment is smaller and wider and also has a single rivet hole at one end (Kilbride-Jones 1980a fig. 74; Youngs 1989, 30, no. 13; Kelly 2001, 268, fig. 24.6). A fragment of a similar binding strip with simple, incised decoration was found in the excavations at Garranes, Cork (Ó Ríordáin 1941-2 fig. 4, 341). The close similarity of these curved mounts to those found in association with the remains of a sixth century saddle just a short distance up river at Hillquarter, Co. Westmeath (Jansen 1981; Kelly 2001) indicates that curved U-shaped mounts such as these may also have embellished a saddle (see e.g. Gilmour 2004). Seven, U-shaped, silver mount fragments from the Norrie’s law hoard are similar in size and ornamentation to the Athlone fragments and they may have served a similar purpose (Error! Reference source not found.).

It has been suggested that in the period after Roman rule in Britain, the diminished institutions of land, labour and agriculture provided only an élite minority with the considerable economic resources necessary to breed, train and feed quality riding animals. The quality and rich decoration of these mounts suggests that equestrianism may have been a high status activity during the fourth and fifth centuries AD (Fern 2005, 61-3, 66; see also O’Kelly 2001; Gilmour 2004). A prototype for the decoration of the River Shannon mount is provided by a series of fifth and sixth century anthropomorphic bone pendants from Lavret, Côtes du Nord and Lanmeur, Finistère, Brittany (Figure 3-8). These feature the same cross-cut and saltire-based ornament on the ‘body’ of the object (Guigon 1985, 121).
Plate 3-16 Anthropomorphic mount from River Shannon.

Figure 3-6 1 and 2, Lanmeur, Finistère, 3 Lavret, Côtes du Nord. Drawing by Yvan Onnee. After Guigon 1985, fig. 1.
Like these decorative strips, the circular, enamel-inlaid silver disc and beaded frame found in a roadside trench section between Chesterton and Prince Thorpe, on the Fosse Way, west of Leamington Spa, Warwickshire, is almost certainly part of a larger, composite piece (Plate 3-18). Bruce-Mitford concluded that the disc was unlikely to have come from a hanging bowl and based on art historical comparisons with the Oldcroft pin (Johns 1974, 295; Cat. No. 1) he dated the disc to the fourth century AD (Bruce-Mitford 2005, 433). The concave verso suggests that it was attached with solder or some form of an organic adhesive, possibly resin which suggests that it may have functioned as an appliqué of some sort however, the type of object to which it was attached cannot at present be resolved.
3.5 A Cultural Biography of Objects in the Insular Military Style

Kopytoff (1986, 62-91) proposes a ‘cultural biography of things’ examining the way that function changes, and objects drop in and out of usage, experiencing a series of ‘lives, deaths and even reincarnations’, communicating different meanings at various junctures from their creation to the point when they are finally discarded, recycled, lost or ritually deposited (Joy 2009, 543-4). Their meaning and particular resonance at any given time is dependent on the manner and the context in which they are employed. Accordingly then, the life history of an artefact is not just limited to its use-life from its creation to its destruction, or to the record of its successive owners. Rather, it can best be understood as a record of an artefacts ‘trajectory through time’, encompassing transformations in form, function, and changes in significance resulting from use in new cultural contexts and association with different individuals during the various stages of its existence.

Artefact biographies or ‘life histories’ are therefore a useful perspective from which to consider this corpus as the various phases through which each of these personal ornaments passed through are intimately interrelated with their use by Insular society. From their transmission to Ireland to their ultimate deposition as casual losses or in hoards, their life history has much to tell us about the complex socio-cultural interactions which occurred between groups in Southern Britain and Ireland during the period AD 300 to 500. As dress ornaments, these objects are not merely utilitarian; they are also visually and socially significant, and play an essential role in the social world. Aspects such as positioning on the body, form, colour, texture, motifs and designs all function as vehicles of meaning, allowing the wearer to circumscribe their sense of self. Because they are embedded in social relationships, they develop a social identity that is connected with the identities of individuals and groups, indicating belonging or social difference. They also provide a medium through which social, political and religious affiliations are constructed and maintained and play a central role in the forging of such relationships by objectifying the existence the relationship (Strathern 1988, 176; Munn 1986, 15; Nieke 1993; Mark 1994; Thomas 1999, 93). It is by such means that objects are ‘enlivened by transactions’ and invested with a symbolic value encoded in their material, their form, their usage and circulation (Appadurai 1986, 5, 17).
To delve into the personal life of an object involves an attempt to trace the potential significance that this object had for its owner, a significance that was expressed in the manner in which the object was used, cared for and disposed of (Appadurai 1986; Parini 2007, 158). For some objects experience an extended period of circulation and their life history can be shown to have continued far beyond their initial disposal or loss. Objects may be recovered, either accidentally or deliberately after many years and subsequently reused in a variety of ways. In such cases their reuse or ‘after life’ can be motivated by factors other than the object’s practical function or material value (Eckardt and Williams 2003, 141-2).

In this regard, Insular Military Style dress ornaments from beyond the limes in and Ireland and Scotland almost certainly experienced a different ‘life history’ to those circulating in Roman Britain (E. Swift 2003, 56). The differences in the significance and meaning ascribed to them there is apparent from the contexts, and the condition in which they have been found. For instance, silver specimens from Ireland exhibit signs of prolonged circulation, heavy wear and repair unlike their counterparts in Britain, none of which have been repaired. Worn, repointed and repaired, these objects almost certainly acquired further meaning through time, serving perhaps as mnemonic devices for specific events and familial connections before they were finally deposited, possibly centuries later. The heavy wear patterns noted also reinforce the notion that silver was a rare and locally exotic material in Ireland prior to the Viking age and that replacements of a similar kind were not readily available there.

Other specimens show evidence of modification to extend their functional lives. For example, an unprovenanced silver proto-hand-pin (Cat. No. 4) has been re-worked into a ring. The shape and size is entirely unsuited for wear as either a finger ring or bracelet which suggests that it may have served as a purse ring (Error! Reference source not found.). Romano-British penannular brooches were also occasionally reused during the Anglo-Saxon period (White 1990, 131-2) and while

28 In relation to the Castletown Kilpatrick pins, the shank of NMI P634 is a later copper-alloy replacement while the other (NMI 7.w.24) has evidence that the lower third of its shank was remade and then soldered back into position. The pin from Long Sutton shows evidence of a similar repair though it is modern (Pers. comm. Simon Jones, 2009). The use of rivets to repair an ancient break on the Londesborough pin so as to preserve the ornament suggests that these pins were valued for their aesthetic and symbolic qualities.
some served their original function as dress-fittings, others were re-formed and given new uses in female dress and mortuary rites as purse frames, as amulets or simply as part of a collection of interesting *objets trouvé* carried within a purse as part of a girdle group suspended from a belt (Meaney 1998; Walton Rogers 2007, 134-5). For instance, Susan Youngs (cited in Scott, 2011) suggests that the brooch terminals from Caistor, Lincolnshire and Loughborough, Leicestershire (Cat. Nos 27, 28; Plate 3-20) may have circulated as in Anglo-Saxon territories during the sixth century as amulets (see e.g. Hirst 1985, 87; Evison 1987, 119).

One of the most important attributes of silver jewellery in determining social status was weight. Ornamental plate is often found marked with its weight in pounds and ounces suggesting that part of its value lay in its weight in solid silver and not just its artistic merit: decorated silver may ultimately have been viewed as bullion; a *realisable* asset (Oliver 1996, 131; Reece 2007, 113, 127). Indeed, silver was a common method of storing wealth in antiquity. This practice may have implications for the limited number of silver Insular Military Style objects which survive in the archaeological record particular as many may have been melted down as bullion and recycled. The presence of deliberate cut marks on the Londesborough and Denton pins (Cat. Nos 8, 15; Plate 3-19) strongly suggests that at some stage in their ‘life histories’ they functioned as bullion and were destined for the melting pot; such cut-marks were employed to determine the nature and purity of the alloy (Strong 1966, 74; Luckner and Oliver, 1977, 13). The Londesborough pin now measures 328.0mm but originally it was even more substantial. At some point the pin was broken (or deliberately cut) and then mended and moreover, a series of cut-marks are clearly visible on several sections of the shank, suggesting that, in common with the Denton pin (Batey 1996); the pin was most likely being cut into a suitable size for the smelting crucible.

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29 Grave 67 from the sixth century cemetery at Portway, Hampshire contained a Romano-British penannular brooch which was reused and placed at the waist as part of the girdle group (Cook and Dacre 1985, 94-5, fig.1).
Plate 3-19 Cut-mark on the Londesborough Pin, Cat. No. 15 (left); Neat cut mark on the shank of the Denton Pin, Cat. No. 8 (right).

Plate 3-20 Unprovenanced silver proto-hand-pin (Cat. No.4) which has been wrought into a ring.
Plate 3-21 Copper alloy brooch terminal from Loughborough, Leicestershire (Cat. No. 28) which is believed to have circulated as an amulet during the Anglo-Saxon period.

3.6 Insular Military Style and Élite Identity

Insular Military Style art did not exist in a vacuum; it played an active role in social intercourse and formed part of the costume and overall appearance of indigenous élites, proclaiming their status, ethnicity, gender and/or group membership. The style and form of a personal ornament, how and where it is worn as well as the material ornamentation and symbology all play an important role in how the Insular Military Style performed as an index of élite status. These latter will be discussed in Chapters five and eight. Here I concentrate on form only.

If we are to begin to understand why the magnificent brooches of the Early Historic period were created we must try to understand not only their technology, craftsmanship and art styles but – more importantly – the information they carry about how they were used in the negotiation of contemporary social relations (Nieke 1993, 133).
Dress ornaments, particularly finely decorated examples are generally accepted to have functioned as élite objects for symbolic display and indicators of social status in both Britain and Ireland (ibid.1993, 128-34; Youngs 2007, 86-9; Dark 2000, 133). The wearing of personal ornaments bearing Insular Military Style decoration could be interpreted not only as signifying the status of the wearer but as articulating the relationship of the wearer within a greater socio-cultural/political system, in this instance the late and post-Roman world of the fourth and fifth centuries AD (Janes 1996, 153). They may have provided a means of declaring status outside personal familiarity or they may have signified inclusiveness in wider group identities when displayed by individuals travelling outside of personal territories of power. Such personalia may also have served as legitimising insignia of emergent native power bases in a changing world. The deployment of personal ornaments to reinforce status and identity within groups facing significant change or threat, or where reaffirmation of allegiances is necessary is well attested. Throughout the wider provincial Roman west, similar militaristic pretensions have been noted among civilian élites. Items which were used to denote rank and authority in the late Roman Provincial West, both militarily and administratively, were the crossbow brooch and the military belt set. By the fourth century, the belt set and crossbow brooch were both firmly established as dress accessories of élite males and were used to establish official status and rank in both civilian and military contexts as civilian officials took on nominal military status (E. Swift 2009, 145).

Insular Military Style does not appear on mundane objects; instead it is restricted to objects of exquisite craftsmanship and distinction that were intentionally designed to be visually striking and desirable, proclaiming the status, identity and membership of those élite groups in fourth and fifth century Ireland and Britain who commissioned and wore them. Though clearly not of Imperial issue per se, these objects nevertheless operated mimetically within an aristocracy, most likely a warrior aristocracy, for whom status was measured by military prowess and ostentation (Fitzpatrick 1989, 28). They are a reflection of what Thomas (1995, 1) has termed ‘power-dressing, arising from a need to impress’. Élite manipulation strategies such as the control of material goods and manipulation of ideology and style are often central to the definition of rank and the exercise of power in complex societies. Élites are often the most visible members of society and as a social group
they are defined by exclusive access to exotic goods and lavishly decorated objects (Chase and Chase 1992, 3-5) and, displaying social status in this manner was important as a means of confirming and reinforcing position within the social hierarchy (Adams 1970, 492; Sivonen 2006). Indeed, the distribution, production and ownership of such goods are generally conceived off as being entirely élite controlled. Élite objects also tend to survive and as a consequence it is élite responses to significant social, economic, political and religious change that are often most apparent in the archaeological record. That these dress ornaments were integral to the composition of appearance and identity at a local level is evidenced by two specimens in particular; a freshly-cast projecting disc-headed pin (Figure 4-3) which formed part of an élite material assemblage at Garranes, Co. Cork (Ó Ríordáin 1942) and a proto hand-pin from Tripontium, Warwickshire (Cat. No. 10) which was uncovered from the destruction levels of a well-appointed mansio occupied into the early fifth century AD (See Lucas 1991: 2005). The fine, colorful wall paintings and hypocausted triclinium attest to the wealth and status of the occupants (see Chapter Six).

Safety-pin fibulae with a coiled pin and catch were the established brooch form in Ireland during the Iron Age (Raftery 1994, 128, 138). Penannular brooches were completely different in form and concept (Youngs 2011, 259), and consequently, the rapid and widespread adoption of penannular brooches and projecting-headed pins in Ireland during the fifth century is a noteworthy phenomenon. This significant change in material culture may represent a localised manifestation in the Irish east midlands of a wider phenomenon that J.D. Hill (1997, 96-107) has termed the ‘fibula event horizon’. Hill argues that in the socio-political turmoil of the immediate pre-conquest period of Britain, particularly southern Britain, personal identities became increasingly problematic, fluid and contested. A period of social change led to the emergence of ‘new strategies of representing the body’ and a changed concept of the individual with an increased interest in appearance and the marking of individual and group identities through material culture, particularly personal ornaments (ibid. 103; see also Hunter 2007, 289). This material culture is not a passive addendum to society; rather it plays an active role in creating and maintaining socio-cultural institutions, practices and identities and constitutes a form of non-verbal communication. Then as now, personal ornaments have contributed to 'visual identity', performing as badges of affiliation and
proclaiming individual and/or group membership (Jundi and Hill 1998, 131). Hence, change in material culture through the appropriation of 'new' and/or ‘exotic’ dress ornament types, and their introduction into particular contexts may reflect and contribute to, the re-negotiation of practices, institutions and identities. Given the level of change and possible instability that occurred in the Insular world during the fourth and fifth centuries (see Chapter Seven), widespread changes in identities and the material correlates of these might be expected. The role of objects of personal adornment in this has been rather succinctly summed up by Jundi and Hill (1998, 131) who concluded that in the context of rapid social change;

Personal identities became a more unstable and contested arena as old identities of gender, age group and ‘tribe’ were possibly challenged and replaced. Dress and appearance may have helped to create and signal new social differences, and became an arena that may have perpetuated more ways to exhibit social and cultural identities.

Perhaps Insular Military Style dress ornaments could be interpreted in this way, as a type of material culture appropriated to create and maintain practices, institutions and identities in a changing world.

The large dress ornament types from this corpus, *e.g.* zoomorphic penannular brooches and disc-headed pins supplanted smaller, less elaborate safety-pin brooches and ring pins suggesting that size and visibility also played a role in the socio-cultural performance of these objects in Ireland. Large disc-headed pins for example provided a comparatively large surface area for decoration and as such they were especially suited to carry the swathes of lavish ornament and colour that were part and parcel of élite identity in Late Antiquity. With hoop diameters of up to 93mm and pins exceeding 300mm in length, these dress ornaments are comparatively large (Plate 3-3) and invite the question as to whether it was the dress fastener type, the use of precious metal or the quality of decoration that conveyed status and/or identity or if size was also a factor (see *e.g.* Jundi and Hill 1998, 129; Carr 2006, 30).  

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30 Jundi and Hill (1998, 129-9) for example cite the increased visibility of thistle/rosette brooches dating to the first century AD in Britain in contrast to earlier wire-made brooches.
3.7 Insular Military Style and the Vocabulary of Power

Art historical analysis allows valid assumptions to be made about historical and behavioural aspects of socio-political institutions, not least because precious metal jewellery of this calibre ‘performed’ by imparting encoded messages concerning the social positioning and cultural aspirations of the wearer. Dress ornaments such as brooches and pins are especially important about conveying information about the wearer to others, as they are generally worn prominently on the torso or head and are therefore immediately visible to anyone in one’s purview (Wells 2008, 64-66; 2013, 49). That dress and display were used to convey and construct social, political and ideological meanings during the fourth and fifth centuries is axiomatic, however the reason why these particular types were chosen for the mobilisation of this style is more opaque. Though an Insular type, both proto and ‘full’ hand-pins may reveal in their design, international traditions. As beaded forms, indigenous rosette-headed pins and proto-hand-pins were amenable to mimicking and appropriating the iconography of Late Roman forms such as crossbow brooches and prestige silver plate (see below). Juxtapositioning elements of dress ornaments and prestige metalwork that played an integral role in the Roman vocabulary of power and status would almost certainly have conferred an aura of Romanitas on the wearer, proclaiming their privileged connections with Rome and making them stand out among their own local society.

Silver proto hand-pins typically feature an arcade of between four and six beads over-arching a decorated crescentic plate while silver hand-pins are characterised by a horizontal row of three elongated, rounded and highly polished beads. It has been suggested that this beaded design may have its antecedents in the so-called ‘Northern Boss Style’, a Northern British style that dates to the end of the first century AD (Leeds 1933, 110-1; See also Fig. 32 (g)); however, there are other possible Late Roman sources worthy of closer consideration.  

31 A copper alloy collar decorated in the Northern Boss Style was found on Lambay Island, National Museum of Ireland register no. L1947:195.
3.7.1 **Silver Plate**

Although they are more commonly referred to as ‘fingers’, fresh typological possibilities arise when they are viewed as elongated beads. Large, beaded rims are characteristic of silverware of the late fourth and early fifth centuries AD (Plate 3-22) where they provide a background to more delicate, naturalistic ornamentation (Lang and Holmes 1983). As in the case of southern Scandinavia where, according to Evison (1965, 77 cited in Ager 1985, 14), local craftsmen mimicked the large pearled rims and beaded ornament of late Roman silver plate, it is possible that the arcades of beads on proto hand-pins and hand-pins respectively are the result of motif transference from one decorative context to another, in this case from the borders of Roman silver plate to the decorative arcading on ornamented pins. Suzuki (2000, 84) argues that shape is, ‘one of the most salient attributes in perceptual terms, ranking highest in the visibility category’. The outline shape and not the decorative surface details therefore is often the first peculiarity that people notice. Indeed, human beings are remarkable good at capturing and processing the form or shape of an object (See e.g. Hupfauf 2003, 34). Consequently, the adaptation of a particular shape has greater potential than nearly any other feature for signalling one’s identity and position in society. The prolific use of beading on élite Roman metalwork would have ensured that such decoration would have been readily understood as an index of status and conflated with such in the mind of the viewer (E. Swift 2009, 162; see also Dickinson 1991).

3.7.2 **Crossbow Fibulae**

Crossbow fibulae were an international late Roman type and were in vogue as sumptuous Imperial gifts from c.AD 280 to the mid-sixth century. They were particularly popular during the mid-fourth century AD. They are characterised by a P-shaped bow, balanced by a transverse bar at the head which creates the ‘crossbow’ effect and an extended foot (Johns 1996a, E. Swift 2003, 16). At the head of the bow and at each end of the crossbar are three large knobs; these may be smooth and round or they may have a pointed head resembling an onion. On the most prestigious examples, these ‘knobs’ typically rest on a collar or circlet of tiny beads (Plate 3-24). Crossbow brooches occur in gold and silver but more commonly in gilt copper-alloy or plain copper alloy. The vast majority are unique (identical crossbow brooches are rare) however there is also a strong familial similarity across the type suggesting that
their production and use was controlled. While some types of Romano-British brooches may be gender neutral, the crossbow brooch is strongly gendered as a masculine object and perhaps unsurprisingly, they show a distributional bias towards military sites. Indeed they are thought to have developed from the P-brooch, a brooch-type that featured a curved bow large enough to hold the folds of a military cloak (E. Swift 2000, 4). As with elaborate Kerbschnitt belt-sets, crossbow brooches acted as badges of military and civilian authority as evidenced by the number of late antique art-historical sources including manuscripts, sculpture, silver plate and mosaics that show high-ranking army officials wearing crossbow brooches (Heurgon 1958, 23). The Diptych of Stilicho for example was created around AD 400 and shows the general Stilicho wearing a large, ornate crossbow brooch on his military tunic. Likewise, the so-called missorium of Theodosius, made to celebrate the decennalia of the emperor in AD 388 also features a figure wearing a crossbow brooch. Archaeological finds confirm this close connection between the wearing of crossbow brooches and the state: an ornate crossbow brooch was also found in the burial of the Frankish king Childeric. Illustrations on late Roman coins also depict emperors distributing crossbow brooches (James 1988, 58-64).

While the fashion for crossbow brooches was not transmitted to Ireland, it is possible that these brooches may have inspired aspects of the decoration of hand-pins and proto hand-pins. The polished beads or ‘fingers’ often rest on a circlet or collar of tiny beads (Plate 3-23) or are framed by a line of punched beading e.g. the pins from Welton-le-Wold, Lincolnshire (Cat. No. 3), Norrie’s Law, Fife (Cat. No. 9), Gaulcross, Banffshire (Cat. No. 7), Denton, Northumberland (Cat. No. 8), Long Sutton, Somerset (Cat. No. 12), Tripontium Warwickshire (Cat. No. 10), Denton, Northumberland (Cat. No. 8), the unlocalised Wace pin (Cat. No. 4) and possibly the pin from Chilton Trinity (Cat. No. 6). This embellishment of the polished beads/fingers may represent mimesis of similar embellishment occurring on the knobs of contemporary crossbow brooches. There are later precedents for this type of military derivation. For example, a military belt found in Austria at

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32 In Britain, the largest collection of crossbow brooches comes from the military fort at Richborough (Bushe-Foxe 1928, 1932, 1949; Cunliffe 1968).

33 There is just one crossbow brooch provenanced to Ireland. It was formerly part of the Petrie collection and is of Collingwood’s (developed) group T. It has been dated to the fourth century AD (Coffey and Armstrong 1913-16, 174).
Iuenna/Globasnitz, mounted with cloisonné plaques and a silver-inlaid iron buckle shows that high-status Late Roman belts were still being re-interpreted in the Ostrogothic period c.AD 493–536 (Adams 2010, 101-2; see also notes 219-20). In an Irish context, the imitation belt mounts on the Moylough belt shrine (Youngs 1989, 58-9) may also reference Late Roman buckles that were still circulating in the 8th century.

Plate 3-22 Hacksilber beaded rims from the Ballinrees hoard. © The Trustees of the British Museum.
Plate 3-23 Norrie’s Law Hand-pin featuring intermediary fillets ornamented with delicate, miniature punched beads creating a faux-filigree effect.

3.8 Zoomorphic Penannular Form: Late Roman Militaristic Associations

Zoomorphic penannular brooch terminals are formed of two matching, stylised animal heads that are ‘adorsed relative to one another’ with each head looking backwards along a serpentiform body. Backwards-looking animals are a common motif in Scythian zoomorphic art, as well as in Thracian, Etruscan, provincial Roman and Germanic art while the concept of the ‘bicephalous beast’ is a recurrent theme in later Prehistoric and Early Medieval art (Newman and Bourke 2013, 202). Animal heads are also characteristic of Late Roman Military equipment, such as on the buckles from Vermand, Colombier-sur-Seulles and Sedan, France (Evison 1965, fig. 26 and pl. 9b, c) and from Ballinrees, Co. Derry (Mattingly and Pierce 1937, pl. 4). They are generally confined to the buckle loop and to strap ends where the terminals are often decorated with animal heads in profile (Plate 3-25; see also Pollington et al. 2010, 94). This shared zoomorphic symbolism may have also been significant in association of this style with the trappings of Roman power. Youngs (2007, 86) suggests that the Roman practice of awarding miniature torcs as military honours and the wearing of neck rings or maniakion as badges of office, when coupled with the Celtic tradition of wearing torcs as markers of élite status (Eluère 1987) may have inspired the adoption and wearing of brooches of penannular form by some local ruling élites in Britain and Ireland in the late fourth and fifth century AD.

However, penannular brooch types are known have circulated Gaul and the Rhine frontier during the late fourth century where they appear to have functioned as signs of military rank (White 1988, 22). Indeed, there is sepulchral evidence to suggest that such brooches were worn singly on the shoulder by males buried with ‘Military Style’ belt buckles and other military equipment (Keller 1971, 55-6) suggesting that this type of brooch may have been used by some as a fastener for the chlamys or military cloak (White 1990, 127). Art historical evidence suggests that penannular brooches were worn by high status individuals to fasten cloaks or other items of clothing, a practice that Nieke (ibid.) has argued was taken from the Roman world and, given the militaristic association of the penannular form in Late Antiquity, it is possible that brooches in the Insular Military style may also have served as a form of insignia (Plate 3-26).

Plate 3-26 Fragment of glass largito plate found during excavations in the Roman Forum. The central figure is wearing a penannular brooch (indicated) as a cloak fastener. From Leader-Newby 2004, pl. 1.17

3.9 Summary

From about the fourth century AD, elaborate forms of zoomorphic penannular brooches and projecting-headed pin types appear in the archaeological record; initially in Southern Britain, and later in Ireland. These may have acted as a highly
visual reference to political alliances and connections with powerful élite groups in southern Britain, supporting the local ruler’s position of power in Ireland (See e.g. Hedeager 1992, 87-90, 152-62). The visibility of these dress ornaments may have actively expressed aspects of identity to others and helped to negotiate both individuals and groups through cultural instability (Jundi and Hill 1998, 126). The movement from lightly decorated, sprung pin brooches and ring pins reflects a general trend away from simple, utilitarian dress fasteners towards more elaborate, colourful badges of affiliation and identity, observable across the Late Roman Provincial West where heavily-ornamented, ‘flashy’ belt-sets and brooches were typically worn as emblems of status and insignia of office, both civilian and military. As such they played an important communicative role in what Margaret Conkey (1990) has termed beyond-the-household forms of social interaction (see also Curta 2005).

In emulation perhaps of Roman traditions of social organisation and power, this period witnessed the increasing use of embellished jewellery in élite dress in Britain and Ireland. The combination of exquisite craftsmanship and use of precious metal and their comparative rarity strongly suggests that these objects acted as important indicators of élite status (MacKreth 2011, 240-1); the attractive and exotic combination of red enamel and silver or tinned bronze would not easily have escaped notice and would have served as an eye-catching badge of status and group affiliation. However, the fact that they are ornamented with motifs and patterns drawn from the stylistic cannon of Imperial military and civilian authority viz. Late Roman Military Style art is also significant and suggests that these dress ornaments may have been worn by individuals who wished to socially emulate military dress and in a form of imitatio Imperii, associate themselves with the trappings of Roman military organisation and militaristic, masculine power. Indeed, there is a body of evidence from the Continent that militaristic symbolism became incorporated within the dress and was used in the construction of élite identities (E. Swift 2000b, 230; Wacher 2006, 3–40). It has been suggested that penannular brooches were worn by élites as insignia of status and/or office (Nieke 1993, 128; Janes 1996, 129, 134-5, 153). If this was the case in Late Antique Britain it may go some way towards explaining why these brooches were so readily adopted in Ireland, particularly if they were identified as markers of power and authority, political and social identities,
ethnicity and status among communities in southern Britain with whom élites in Ireland had established relationships (see Chapter Seven).
Chapter 4 - Insular Non-ferrous Metalworking: Ores, Alloys, Technology and Techniques

Certain technologies are distinctive of the Insular Military Style, and they are more or less peculiar to it; in fact, they define it, perhaps even more closely than the art style itself. Previous approaches to ornamental metalwork from the fourth and fifth centuries AD have tended to gloss over how metal objects were made and instead have focused predominantly on chronology and typology (see e.g. Duignan 1970, 1973, Graham-Campbell 1991; Ó Floinn 2001; Youngs 2005, 2007, 2011; MacReath 2011). In the view of the writer, this creates an unnecessary divide between artefact, art and technology. Metal technology, techniques and the products that externalise them constitute the material conditions of a culture. They also give visible expression to that culture, and can act as a valuable source of information about technical innovation through socio-cultural interaction. Consequently, supplementing traditional stylistic and art-historical analyses with an analysis of the technical aspects of fabrication and decoration can help to establish a more secure contextual and chronological framework for this corpus.

A dedicated study of the technology employed in the creation of these objects is beyond the scope of this research, however it is possible to provide a useful general treatise on the range of metalworking processes employed in the production of Insular Military Style metalwork through close examination of the finds which provide both direct and indirect evidence for them. To this end, a detailed and technical study of the corpus was undertaken, investigating its *chaine operatoire* or life cycle from the procurement and processing of raw materials through to their fabrication, decoration and finishing. The validity of using these processes and techniques as chronological indicators will also be discussed. The decorative and fabrication techniques identified will be compared with techniques employed on prestige metalwork from Roman Britain and the wider Provincial Roman West. Late Roman metalworking techniques such as the hand-carving and chasing of designs into silver of high purity and the use of advanced cupellation processes are chronologically distinctive and can help to provide a more secure chronology for this corpus and map the spread of technical innovation throughout the Empire.
While the tools employed in fine metalwork are rarely identified in the archaeological record, tool marks and specific archaeological tools can be linked. Their ‘footprints’ on the metal can readily be attributed to certain functions and it is possible to reconstruct the toolkit used on these objects based on microscopic study of the marks and impressions that remain on the worked surface (Lowery et al 1971, 167, 172; Strong 1966, 11; Armbruster 2011, 420-423). An increasing number of scientific methods are being employed in the study of metal artefacts, including optical microscopic examination, scanning electron microscopy (SEM), X-ray fluorescence (XRF), inductively coupled plasma atomic emission spectrometry (ICP-AES) and lead isotope analysis. Such techniques can also assist in determining the tools that were employed, the composition of the various alloys used and the mechanical properties of the metal; whether it is hard, malleable, brittle etc.; and the possible source of the ores (Baratte 1989, 21). X-ray analysis is also useful and can reveal features hidden within hollow objects, decoration obscured by corrosion and different thicknesses of metal. Hidden tool marks and decorative elements removed from the surface by wear can also be revealed by x-ray radiography (Armbruster 2011, 423). Indeed, the natural sciences have proven of particular value when applied to the particular problems of provenance and dating encountered in the study of unprovenanced objects.

For the purposes of this study, objects were visually inspected and then subjected, where possible, to a more detailed examination under low-magnification, optical binocular microscopy. In addition, the National Museum of Ireland kindly facilitated the examination and micro-photography of objects from their collections under high magnification (up to x20). XRF quantitative analysis of the Irish corpus was initiated by this research and undertaken in the National Museum of Ireland. This has been supplemented where possible with published specialist analyses from Britain (Table 4-2). The primary aim of this analysis is to add an Irish dimension to the growing corpus of data on Insular silver and copper alloys from the fourth and fifth centuries AD. It is intended that this data will shed further light on the alloy compositions and technology employed in their manufacture, particularly in relation to material from Ireland.
4.1 The Significance of Silver

Thus far, Insular Military Style art has only been identified on silver and copper-alloys. Copper alloy continued to serve as the prestige metal in Ireland during the early centuries AD; its occurrence in Britain also represents the continuation of an earlier metalworking tradition. No examples of gold work in the Insular Military Style have been identified.34 Silver was the metal of preference with eighteen of the thirty-one specimens contained in the corpus being made in silver and significantly, these objects comprise the earliest known corpus of silver occurring in Ireland suggesting the appearance of this new and locally exotic metal must have been of some moment.

Silver was used throughout the Roman world in the production of coins largely but also in the manufacture of high quality tableware and somewhat less frequently for prestige personalia such as hair-pins, rings, brooches, earrings etc. For example, of the four hundred and forty-five extant brooches found at Richborough, only eight are of silver (Bayley and Butcher 2004, 26). Several reasons may be proposed for the comparative rarity of silver jewellery. Silver is particularly vulnerable to oxidation and this may have limited its survival archaeologically (Calinescu 1996, xiv) while more practically, silver of the purity used in antiquity tended to stain the skin. There is no one explanation for the value and prestige traditionally attached to silver (Etris 2004). It is an intrinsically attractive metal which when smooth and polished, has the ability to reflect almost all of the light which falls on it. The bright, pure white colour and texture of silver, whether by itself or embellished with gilding or niello, was highly valued by the Late Roman aristocracy as evidenced by the number of silver hoards buried in Late Antiquity throughout the Empire.35 In fact, the fourth century was a ‘golden age’ for the production of silverware across the Roman Empire. The magnificence of the wealth of some of the hoards from Britain, for instance the Hoxne treasure (Johns and Bland 1993) permits a glimpse into the wealth of late Roman Britain, where, in common in common with the rest of the Empire, élite status appears to have centred on the

34 A gold ring (Johns and Potter 1983, no. 9) from the fourth century Thetford Treasure decorated with a ‘Celtic’ human head provides evidence of the ownership and display of gold ornaments by Insular élites during this period.
ownership and lavish and conspicuous display of this precious metal (Elsner 1998, 102-3; Henig 1995, 143; Oliver 2004, 24). Prior to the Roman conquest of Britain, silverwork of high quality rarely occurred north of the Mediterranean; a finger ring from Park Brow, Sussex dating from the fourth century BC is the earliest piece of decorative silver known from Britain (Stead 1985, 18). From the first century BC onwards, however, Roman silver increasingly began to circulate beyond the limes through trade, raiding or diplomacy (Strong 1966, 127). In Britain, the first century BC witnessed the first use of recycled Roman silver coinage to manufacture native types viz the silver torcs, bracelets and brooches found in hoards from Snettisham (see e.g. Rainbird Clarke 1954; Stead 1991; Meeks et al 2008). No pre-Roman silver is known from Ireland or Scotland.

4.2 The Procurement of Silver

Large-scale silver working was a relatively late development in Europe as deposits of silver that could be worked without further refinement, are rare. The only major source of metallic silver in north-west Europe occurs at Kongsberg, Norway where slabs of nearly pure silver are found, however, this resource was not exploited until the seventeenth century. As natural occurrences of native silver such as these are so uncommon, this precious metal has had to be extracted from ‘fertile’ or argentiferous lead ores (galena, cerussite and jarosite) by the process of cupellation, since at least the third millennium BC. Galena (Lead sulphide Pb S), the most common of these ores, can contain as much as twenty per cent silver and is found both as surface deposits and in deeper strata requiring mining. After mining, an initial crude ore was obtained by smelting and then cast into silver-bearing lead ingots. Relatively pure silver was then extracted by cupellation, a process by which all of the additional elements (lead and other base metals) were oxidised and absorbed by the crucible or hearth used for the purification of the ore (Deraisme and Barrandon 2008, 844; Henderson 2000, 213; Strong 1965, 3).

The importance of silver as a prestige metal and marker of status in the Roman world is well attested (see above), and the Empire went to great lengths to exploit any commercially viable silver-bearing deposits within its territory. During the Roman period the cupellation (de-silvering) of lead was practised extensively in more northerly regions of Europe as lead sources in Britain (particularly North
Wales, the Peak District and the Mendips), Switzerland and Germany were exploited. Indeed, the extraction of silver was often the main economic reason for mining and smelting the lead in the first place (Bayley et al 2001, 18-19; Ogden 1982, 24). Evidence from Britain also suggests that this process initially took place under the strict control of the military (Salway 1981, 633-4). As any lead ore represented a likely source of silver, the Romans often referred to lead mines as silver or silver-lead mines however, not all were exploited as such. In fact, many of the silver-bearing lead ore deposits from Roman Britain did not have their silver content removed as it was commercially unviable.

Although the exploitation of argentiferous lead resources in southern Britain is well attested to both historically and archaeologically, there is no known archaeological evidence for the exploitation of deposits of either copper, lead, zinc, gold or silver ores in Ireland or Scotland during the first half of the first millennium AD.\(^{36}\) Argentiferous galena does occur in relative abundance in Ireland and there is some circumstantial evidence to suggest that these indigenous resources might have been exploited at an early date. Kinahan (1889, 56) recorded *sic* ‘ancient’ silver workings at Silvermines, Garrynane, near Nenagh, Co. Tipperary, Milltown, Co. Clare; Tynagh, Co. Galway; Ballygallion, Co. Kilkenny and Killarney, Co. Kerry (See Table 4-1). As many of these mines are situated on argentiferous lead lodes, Kinahan (1889, 6) believes that the process of cupellation may have been known and practiced in Ireland from an early date though he provides no evidence to support this supposition. It is also suggested that a number of easily accessible surface deposits in Sligo and Waterford may have been exploited during the Early Historic period. However, as yet, no systematic programme of analysis has been undertaken to determine the sources of the copper and silver used in any early historic Irish metalwork, nor has there been any archaeological investigation of any of the possible mine locations listed in Table 4-1. Given the lack of evidence for the exploitation of Irish silver resources and the fact that the majority of the silver objects contained in the corpus occur in southern England, the chronological and socio-cultural horizon of this material can only really be examined through the prism

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\(^{36}\) Although there is evidence for copper smelting at Ross Island, the workings have been dated to the seventh and eighth century AD, outside the chronological range established for the *floruit* of Insular Military Style metalwork.
of the exploitation of silver in Roman Britain and the exploitation of other possible sources of silver such as re-used bronze-debased coinage and *Hacksilber.*

### 4.2.1 Silver Hoards from Ireland

A number of silver hoards dating from the first to the fourth centuries AD are known from Ireland. Two late second century hoards of Roman silver denarii were found on the northern Irish coast at Flower Hill and Feigh Hill Mountain, Co. Antrim (Bateson 1973, 44-5). A silver hoard from Balline, Co. Limerick was discovered in 1940 and consists of ingots and fragments of silver plate. Early in 1854, a small farmer digging peat in the townland of Ballinrees, west of Coleraine, Co. Derry found a collection of coins and Hacksilber including fifteen hundred silver siliquae, the latest being of Constantine (AD 407-11), a bowl, ingots of both official Roman and Insular type, pieces of *Hacksilber* from vessels or containers and spoons (Plate 4-1: Mattingly and Pearce 1937; Ó Riordáin 1947 43-53, 77-8; Bateson 1973, 171-3; Raftery 1994, 214-17; Marzinzik 2013, 175-180). There were also fragments of silver gilt fittings from a military belt of exceptional quality, decorated in the Late Roman Military Style and similar to those found in the sarcophagus of ‘chef militaire’ in the Late Roman cemetery III at Vermand, Dép. Aisne (Forsyth 1951, Schorsch 1986, Böhme 2000).

The hoard from Ballinrees weighs 9.5kg in total so it is quite substantial. The silver was cut into conveniently sized pieces which correspond roughly with Roman units of weight. It possibly constituted a political or diplomatic gift to a local chief or may represent a single payment for direct service, *i.e.* military service (see Chapter Seven for a full discussion on the socio-cultural and political significance of this hoard). Ireland did not have a coin-based economy during this period so the coins contained in these hoards were not used as currency but rather, as high-value prestige goods that were locally exotic in terms of both metal base and iconography (Hunter 2013a, 25, note 62).

*Hacksilber* is generally found outside of the Empire where it probably provided raw material for craftsmen. The earliest Insular evidence for the recycling of *Hacksilber* comes from Traprain Law, a fifth century hoard of scrapped late

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37 Purposefully fragmented silver from Late Roman assemblages (See Johns 1996b, 229-230).
38 Sommer (1984, 93-5) suggests that they were made for a Germanic mercenary who served as a high-ranking military officer of the *comitatenses* on the Continent, or perhaps even for the Imperial guard whereas Halsall (2010, 141-55) argues that they were the property of a Roman officer.
Roman plate and silver coins (Hunter and Painter 2013; Curle 1923). Ten crucibles containing traces of silver have been found on the site and these are probably linked to the presence there of Roman Hacksilber (Hunter 2013b, 7). Interestingly, there is no evidence for silver refining at Traprain, just silver recycling. There is no evidence that the Roman Hacksilber and coins found in Ireland were recycled and/or reused at this time though this would seem to have been an obvious practical use for it. It appears that in an Irish context at least, Roman silver was used only for deposition and there was no interest in fashioning this bullion into dress ornaments locally.

Plate 4.1 The Ballinrees Hoard. Image © Trustees of the British Museum

4.3 Cupellation

The large-scale extraction of silver from argentiferous lead took place in hearths. These were lined with bone ash or calcareous clay creating a ‘cupel’ or cup of absorbent material with a melting temperature of 1670°C. When heated under oxidising conditions to a temperature of 1000°C the lead was oxidised and separated from the melt creating a litharge of lead oxide (PbO) which was readily absorbed or ‘wicked’ into the porous lining material leaving pure metallic silver on the surface. These impregnated hearth linings or litharge cakes were often quite substantial,
measuring up to 600mm across and 60mm in thickness and, on account of the lead content, were very heavy for their size. These were subsequently re-smelted to give lead (Bayley 1991, 120; Bayley et al 2001, 19-20; Söderberg and Gustafsson 2006, 29). For small-scale refining, a similar process took place in small ‘cupels’ e.g. ceramic crucibles lined with bone ash (Bayley and Butcher 2004, 145, pl.2).

4.3.1 Archaeological Evidence for Cupellation

The catalogue of Roman lead pigs listed by Dearne (1990) indicate that there must have been a reasonably extensive lead and silver mining industry operating in the Roman period. Where available, elemental analyses record compositions that are typical of silver obtained through cupellation of lead silver ores with some copper added. Large litharge cakes (Plate 4-2) providing evidence for this process have been found in the Mendips and Welsh Borders for example at Pentrehyling Fort, Shropshire (Bayley and Eckstein 1998) and at Thetford, Norfolk while small litharge cakes, typically produced during the extraction of silver from debased alloys, are more commonly found on urban sites (Bayley et al 2001, 20). Lead pigs, some weighing 200lb or more, found in the Roman province of Britain bear inscriptions stating that they were cast from the residue of the cupellation process and several ingots of fourth century date record the names of factories e.g. BMCP, whereas others are stamped with Imperial marks including the maker’s name and the mine from which they originated. A specimen from Hampshire was stamped ‘NERON AVE EX KIAN III COS BRIT EX ARGENT CNPASCI’ indicating that it was produced in 60 AD, in Wales, perhaps as a by-product of silver extraction (Strong 1965, 6). However, according to Tylecote (1964, 37) lead mines in Britain during the Roman period were often ‘optimistically’ referred to as silver mines as in reality they were capable of producing relatively low and economically unviable amounts of silver. He maintains that the inscription EX ARG was often a reflection of this optimism rather than a statement of fact. He concludes that whereas the silver-rich deposit in the Mendips, Devon, Cornwall and Flint were worth de-silvering and double axe-headed ingots are known from fourth and fifth century contexts in Roman Britain, in the main, Britain was a silver-importing country.
4.3.2 *Hacksilber*

Imperial Rome viewed precious metal ores and deposits as valuable assets and as such they were claimed monopolies of the State. Although the production of the metal may have been leased out to private companies, access to all Roman-produced silver appears to have been centralised and was most probably under official control. Silver coinage, for instance, was forbidden from crossing provincial boundaries in private hands and similar sanctions may have applied to freshly smelted silver and *Hacksilber*. Therefore silver may have been readily available only in provinces that produced it, or in provinces to which the State sent it as imperial benefactions or through state-sanctioned trade (Painter 1993; Reece 2007, 113). Although the melting down of debased silver coinage to recover the silver was technically an illegal activity (The Theodosian code 9.21 6: describes that extracting silver from coinage was punishable by death), evidence for the cupellation of silver were found in Leicester and a large silversmith’s establishment at Silchester (Wacher 1997, 67).

At Causeway Lane, Leicester, cupellation residues rich in copper, lead and tin suggests that silver was being extracted from debased silver coins (Connor and Buckley, 1999, 307) and at Highcross street where a series of hearths were found
which may be associated with the refining of debased silver coinage. While at
Silchester further evidence was found for the refining of alloyed or debased coinage
(Tylecote 1986, 60; Boon 1957, 188). The presence of silver finger ingots and coins
in the so-called jeweller’s hoard from Snattisham, Norfolk suggests that both were
part of this particular smiths stock of raw material (Johns 1996a, 214; Johns 1997).
Furthermore, there is supporting evidence for large-scale trade in Hacksilber with
territories that bordered the Western Roman Empire, particularly Scandinavia where,
for example, at Gudme, Denmark, local silversmiths supplied their workshops
through organised trade with the Roman Empire (Jørgensen et al 2003, 14). Once
outside of the Empire however, silver could circulate without Roman restrictions.
Indeed, for smaller workshops operating outside of Imperial control that did not have
ready access to freshly smelted metal, Hacksilber and indeed coinage probably
represented a significant source of raw material (Johns 1996a, 188; Oliver and
Luckner 1977, 13). The cupellation of argentiferous lead containing few base metal
inclusions as outlined above was a relatively simple process and silver that had been
alloyed with pure copper could also be easily purified using the same technique.
However, the ease with which cupellation could be performed greatly depended on
the composition of the bullion, a factor which is often overlooked in discussions on
the use of Hacksilber (Johns 1996b).

Silver from different origins with unknown additions of copper, tin and other
metallic impurities, most probably represented the most readily available source of
raw material. However, the re-working of such material presented particular
difficulties for the smith as the presence of tin, in particular, led to the formation of
oxides with high melting-points which tended to clog the porosity of the hearth, thus
rendering the separation of litharge and silver metal difficult if not impossible.
<table>
<thead>
<tr>
<th>County</th>
<th>Locality</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clare</td>
<td>Milltown, Tulla.</td>
<td>Mine with native silver worked in ancient times. Oaken shovels and large iron picks suggest that the mine is not as old as some others.</td>
</tr>
<tr>
<td>Galway</td>
<td>Carhoon, Tynagh.</td>
<td>A very ancient mine, possibly one of the silver mines mentioned in the early Annals.</td>
</tr>
<tr>
<td>Kilkenny</td>
<td>Ballygallion, Inistioge.</td>
<td>A very ancient mine, supposed to be the Argetros (Silverwood) of the Annals when silver shields were made, A.M. 3817.</td>
</tr>
<tr>
<td>Kerry</td>
<td>Lough Leane, Killarney.</td>
<td>Nennius, who wrote in the ninth century mentions the mines here.</td>
</tr>
<tr>
<td>Tipperary</td>
<td>Garrane, Toomavara.</td>
<td>Adjoining the meaning of Kilnafinch there is a very ancient mine, supposed to be the Rosargid (Silverwood) of the Annals.</td>
</tr>
<tr>
<td></td>
<td>Silvermines, Nenag.h</td>
<td>Very ancient mine with native silver associated with lead and in some lodes, copper.</td>
</tr>
<tr>
<td></td>
<td>Garrykennedy, Lough Derg.</td>
<td>Ancient lead mine containing stone and wood implements.</td>
</tr>
</tbody>
</table>

Table 4-1 Ancient Silver Mines in Ireland (After Kinahan 1889).
Therefore, when using *Hacksilber* and coinage as a raw material, silversmiths needed a reliable method for refining it before use. The advent of the so-called Xanten process provided a simple, yet sophisticated, chemical method for refining such debased silver to a very high degree of purity (Söderberg and Gustafsson 2006, 29).

### 4.3.3 *The Xanten Process*

During excavations in the *Colonia Ulpia Traiana*, Xanten, North west Germany, evidence for a hitherto unknown process of silver refining was found in the remains of a small workshop in the craft centre of the settlement, in layers dating from the second century AD (Rehren and Kraus 1999, 265, 272). Using a two-stage technique referred to as the ‘Xanten process’, the silversmith was able to refine bronze-debased silver to an exceptionally high level of fineness. The initial refining process involved the re-use of litharge from a previous cupellation which was fused with sand in small ceramic crucibles forming a lead oxide slag. Debased silver scrap or coins were then

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39 Colonia refers to a new town created by an act of government composed of plots of land allotted to retiring legionaries. The population of the town was therefore almost entirely composed of Roman citizens.
added to this lead-silica ‘bath’. The tin and zinc from the debased silver went to the slag while any copper, silver and lead sank to the bottom of the crucible forming a ‘bullion regulus’ which was allowed to solidify in the crucible (Plate 4-3). The crucible was then smashed to recover the regulus and the copper-silver metal was then re-cupelled in the usual fashion outlined above to recover pure silver (Rehren and Kraus 1999, 265-271).

Analysis of the inlays on both the Londesborough pin and the Oldcroft pin by Stapleton, Freestone and Bowman (1999) and Freestone (2001) confirms that the metallurgical slag produced in small-scale operations such as those discovered at Xanten was itself recycled and, through a process of raffination was then used to manufacture a colourful glassy matrix which served as a red ‘enamel-type’ inlay in the Late Roman/late Iron Age period in Ireland and Britain (see Chapter 5). Therefore, it seems likely that both the fine silver and red inlays which characterise this corpus are the products of small workshops producing their raw materials on-site using this Provincial Roman process for refining debased coinage.

4.3.4 The Compositional Analysis of Metals

Compositional analysis of alloys can play an important and essential role in the study of ornamental metalwork. Analysis of alloy composition can provide very useful information regarding technical aspects of the metalwork such as natural or intentional alloying, colour preference and mechanical properties such as hardness, resilience or ease of engraving as the intrinsic properties of the metal will invariably have a direct bearing on the basic processes chosen to shape and work the metal. Analysis of the elementary compositions of metal alloys can also assist in identifying the provenance of ores and reveal information regarding the alloying processes used to produce different objects, the organisation of production, and the circulation of precious metals in the Insular world during the fourth and fifth centuries AD - factors that play a fundamental role in the examination of Insular Military Style metalwork (see e.g. Bayley 2004).

4.3.5 Silver

Pure silver is too soft for general use and was therefore commonly alloyed with varying amounts of copper or one of its alloys, usually about five per cent by weight, in order to produce a harder metal suited to the manufacture of jewellery (Rehren
and Kraus 1999, 263): small percentages of copper have little or no effect on the colour of silver and the resulting alloy remains soft enough to be cut easily (Strong 1996, 12). Remarkably tight standards of alloy compositions are detectable during the Late Roman period and compositional analyses reveal that these standards were strictly adhered to. Whereas modern ‘sterling silver’ is 92.5% pure (925 parts of pure or ‘fine’ silver to 75 parts of alloy, usually copper, (Maryon 1971, 11), analyses of Late Roman ornamental silver using energy-dispersive X-ray fluorescence invariably show exceptionally high purity, with an average percentage of 95-98 % fineness. Examination of Roman ornamental tableware has shown that these percentages remained at a consistently high level of fineness, even during periods of crisis (Baratte and Painter 1989, 22).

In contrast, metallographic analyses of some of the earliest use of silver in Britain indicates variability in the purity of the silver used. Following contact with the Roman world, from the mid-first century BC the Iceni (located in Norfolk, Suffolk and north-east Cambridgeshire) for instance began to use silver to manufacture coins, torcs and other ornate native personal ornament types including pins, brooches and bracelets using a copper-rich silver alloy, sourced, it would appear, from recycled (though unrefined) Roman silver coins which were highly debased during that period (Dennis 2006, 49-54). Likewise, Pictish period silver too is often debased with copper and other metals (Campbell 1996, 96).

4.3.6 Analysis of the Silver Corpus
Recent compositional analyses conducted by this research on the Irish silver corpus have revealed a relatively consistent, though unusual, alloy composition (Table 4-3; Figure 4-1). Overall the silver content of most of the specimens is relatively high, with only one pin showing less than 82% Ag to Cu. The results suggest the existence of two distinct grouping within the corpus, high purity silver 95-98% and silver with a purity range of between 82-91%. The tin levels observed are consistent with the use of scrap bronze rather than pure copper when alloying the silver. Likewise, the presence of metallic zinc suggests that scrap brass or gun metals may also have been

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40 This in contrast to the considerable fluctuations in the purity of the silver used in coinage which was often highly debased with brass or bronze.
deliberately added to the melt. Significantly, the ratio of copper: tin: lead is notably high in lead. Leaded bronze is usually in the range 5-15%, but the copper: lead ratio observed in these silver alloys (which is often at a ratio of 1:1 and higher) represents an unfeasible level for use in a casting alloy as lead is insoluble in the alloy at such levels. A possible interpretation is that lead was deliberately added along with bronze/brass to the silver in separate proportions (P. Mullarkey, pers. comm. 2010). As we have a limited understanding of alloying processes from this period, it is difficult to argue definitively whether the inclusion of these metals was intentional or accidental. However, highly-accomplished metalworkers would have had the skill to select the correct alloy for particular uses. For instance, the addition of lead to the crucible mix allows the metal to be engraved more efficiently resulting in the removal of ‘chips’ of metal rather than long ‘shavings’. Microscopic examination of the worked surfaces by the writer has revealed that the background has indeed been removed in a series of sharp, angular chips suggesting that this particular alloy facilitated the crisp, hand-wrought, fine-line relief ornament that is a hallmark of the Insular Military Style. The use of such alloys may also relate to functionality: long, tapering pins such as these would have been subject to significant stresses in the course of day-to-day use, and pins made of these alloys would be more resilient than those of higher-purity silver. In contrast, it is significant then that the smallest pins are made of very pure silver, typically 90-98% pure (see e.g. Cat. Nos 3, 8). This suggests that alloy compositions may have been tailored to suit specific object types.

Whereas compositional analyses of a number of objects from the corpus have been undertaken in Britain, these did not form part of a structured programme (Table 4-2). However, by amalgamating the few results which are available and comparing them with investigations of Late Roman ornamental silver, it is apparent that for both, the metal base is typically of high purity silver (few alloys have a silver content of less than 85%), although this phenomenon was not apparent until the silver objects were drawn together and studied as part of a corpus. This preference for the use of high purity silver cannot be for aesthetic reasons only as the colour and texture of debased silver and fine silver would have been virtually indistinguishable to the naked eye. It therefore appears that only fine silver and therefore malleable silver allowed the best expression of the artistic skill and ingenuity needed to produce both Insular Military Style silver personalia. Notwithstanding, silver of this
purity is quite difficult to work, and consequently, production was likely to have been limited to highly specialised artisans, further increasing its cachet (Painter 1988). The inherent malleability of silver allowed it to be skilfully cast, shaped or formed into a variety of complex shapes and also provided an amenable medium for hand-worked incised, chased, and engraved decoration of the delicacy and complexity which is a feature of this distinctive collective of ornamental silver work. A difference in the alloy compositions, particularly minor elements such as gold inclusions, implies that there was no single source for the silver. This may be for operational reasons as substantial pins such as the disc-headed types, would have been highly susceptible to damage and distortion in the course of their every-day usage if manufactured of soft, high-purity silver.

<table>
<thead>
<tr>
<th>CAT. NO.</th>
<th>SILVER</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 8 Denton pin</td>
<td>95-98%</td>
<td>Cogg 1999</td>
</tr>
<tr>
<td>No. 3 Welton-Le-Wold</td>
<td>96%</td>
<td><a href="http://finds.org.uk/database/artefacts/record/id/49655">http://finds.org.uk/database/artefacts/record/id/49655</a></td>
</tr>
<tr>
<td>No. 6 Chilton Trinity</td>
<td>87-91%</td>
<td>Simpson &amp; La Niece. BM file no 7385-35, 2007</td>
</tr>
<tr>
<td>No. 9 Norrie’s Law pin</td>
<td>92%+</td>
<td>Martin Goldberg (pers. comm 2009)</td>
</tr>
<tr>
<td>No 7. Gaulcross pin</td>
<td>70%</td>
<td>Martin Goldberg (pers comm 2009 )</td>
</tr>
<tr>
<td>No. 15 Londesborough pin</td>
<td>82.4%</td>
<td>Marzinzik 2013 188, note 84</td>
</tr>
<tr>
<td>No. 1 Oldcroft pin</td>
<td>83.5%</td>
<td>Marzinzik 2013,188, note 84</td>
</tr>
</tbody>
</table>

Table 4-2 Silver content taken from published and unpublished sources in Britain

Although it is impossible to generalise on the basis of the analysis of six objects, it appears that smaller objects tended to be of high purity while those that were more substantial and more heavily decorated were made of an alloy.

The composition of the copper alloy used to debase the silver is quite interesting nonetheless. The levels of zinc suggest that brass as well as bronzes

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41 Compositional percentages for the minor alloy elements were not made available to the writer.
added to the melt. These results permit the observation that even at 82% fineness, the silver was still soft enough to be heavily worked post-casting; deep, heavy engraving of the surface of the silver to create the design and to receive enamel inlay is a decorative technique which is quite unique to this corpus. The overarching conclusion arising from this assessment of the silver alloy composition is that the objects were made from specific and controlled metallurgical compositions and function as well as style had a bearing on the metal and decorative techniques used.

Figure 4-1 Compositional analysis of silver specimens held in the National Museum of Ireland

Due to the large percentage of silver contained in the alloy, a dual axis chart format has been chosen as the most effective method to display the metal composition. The axis on the right shows the silver content percentile while that on the left shows the alloy elements detected.
<table>
<thead>
<tr>
<th>CAT. NO.</th>
<th>ARTEFACT</th>
<th>FIND SPOT</th>
<th>COMPONENT</th>
<th>% COPPER</th>
<th>% TIN</th>
<th>% ZINC</th>
<th>% LEAD</th>
<th>% GOLD</th>
<th>% SILVER</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAT. NO. 14</td>
<td>DISC-HEADED PIN</td>
<td>UNLOCALISED</td>
<td>PINHEAD SHANK</td>
<td>4.6</td>
<td>2.2</td>
<td>0.1</td>
<td>4.5</td>
<td>1.6</td>
<td>86.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.6</td>
<td>2.2</td>
<td>0.1</td>
<td>5.8</td>
<td>1.4</td>
<td>84.0</td>
</tr>
<tr>
<td>CAT. NO. 4</td>
<td>PROTO HAND-PIN</td>
<td>UNLOCALISED</td>
<td>PINHEAD FACE OUTER BEAD (RIGHT) SHANK</td>
<td>3.7</td>
<td>&lt;0.1</td>
<td>0.2</td>
<td>4.3</td>
<td>0.9</td>
<td>90.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.0</td>
<td>&lt;0.1</td>
<td>0.2</td>
<td>3.5</td>
<td>0.9</td>
<td>90.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.8</td>
<td>&lt;0.1</td>
<td>0.2</td>
<td>3.4</td>
<td>1.0</td>
<td>90.0</td>
</tr>
<tr>
<td>CAT. NO. 11</td>
<td>HAND-PIN^43</td>
<td>CASTLETOWN-KILPATRICK, CO. MEATH</td>
<td>PINHEAD FACE PINHEAD EDGE OUTER 'FINGER' (LEFT)</td>
<td>3.2</td>
<td>4.7</td>
<td>0.2</td>
<td>6.4</td>
<td>0.8</td>
<td>83.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.1</td>
<td>4.1</td>
<td>0.2</td>
<td>7.0</td>
<td>0.7</td>
<td>83.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.2</td>
<td>4.7</td>
<td>0.2</td>
<td>8.5</td>
<td>1.0</td>
<td>80.8</td>
</tr>
<tr>
<td>CAT. NO 5</td>
<td>PROTO HAND-PIN</td>
<td>NEWTOWNBOND, CO. LONGFORD</td>
<td>PINHEAD EDGE CENTRAL FINGER SHANK</td>
<td>3.2</td>
<td>&gt;0.1</td>
<td>0.0</td>
<td>3.0</td>
<td>2.1</td>
<td>90.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.4</td>
<td>&lt;0.1</td>
<td>0.0</td>
<td>3.1</td>
<td>1.8</td>
<td>90.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.8</td>
<td>&lt;0.1</td>
<td>0.0</td>
<td>2.8</td>
<td>2.0</td>
<td>91.4</td>
</tr>
<tr>
<td>CAT. NO. 2</td>
<td>PROTO HAND-PIN</td>
<td>CASTLETOWN-KILPATRICK, CO. MEATH</td>
<td>PINHEAD RECTO OUTER FINGER (RIGHT) UPPER SHANK^44</td>
<td>3.2</td>
<td>0.9</td>
<td>0.6</td>
<td>6.2</td>
<td>0.8</td>
<td>87.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.9</td>
<td>0.9</td>
<td>0.7</td>
<td>6.7</td>
<td>0.8</td>
<td>86.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.0</td>
<td>1.0</td>
<td>0.7</td>
<td>6.3</td>
<td>0.6</td>
<td>86.3</td>
</tr>
</tbody>
</table>

Table 4-3 Compositional analysis of silver specimens held in the National Museum of Ireland.

^43 Shank is later replacement – No measurements taken.
^44 Upper shank only - lower section is replacement.
These silver pins were clearly produced by artisans with similar skills and a mutual Late-Antique orientation; the precision, delicacy, minutia and complexity of their hand-wrought ornamentation suggest limited production, possibly in small specialist workshops by craftsmen that were skilled in silversmithing and in the art of late Roman Britain. The work is individualistic in style and execution; by their very nature, objects of this type would have been impossibly time-consuming and wholly unsuited to large-scale manufacture for general markets. Moreover, microscopic study of the worked surfaces by the writer has revealed nuanced differentiation and variation in technique and ability which suggests that each object was created by a different hand suggesting that each may be the individualistic interpretation of a prototype.

Plate 4.4 Unlocalised silver disc-headed pin provenanced to Ireland (Cat. No. 15)

The corpus of silver projecting-headed pins were, in the opinion of the writer, most probably made and decorated in southern Britain. There is as yet no proof that the silver pins found in Ireland were actually fabricated there; in fact the evidence seems to suggest otherwise. The two-dimensional punching, engraving and shallow chip-carving of the Insular Military Style has its closest technical parallels.
in Romano-British prestige metalwork. The tiny notches visible around the panels of this pin – chiselled out to retain the inlay – are a characteristic feature of Late Roman silverwork: the same technique is evident, for example, on a fourth-century niello-inlaid silver crossbow brooch in the British Museum (Plate 5-12)\(^{45}\) Further evidence is provided by the fine punched ornament employed along the outside edges of the main ornamental zones to encase, and thus enhance, the relief of the main design (Plate 4-4). Typically, the decorative borders were created by a row of punched annulets or half-annulets set between a pair of framing lines. Late Roman silver also employs arc, dot, and annular punching to create decorative bands and textured surfaces. Following their analysis of punch-marks on items from the Thetford Treasure, Johns and Potter (1983, 66-7) observed that the creation of beaded ornament and/or textured surfaces using this technique is ‘stylistically in the spirit of the fourth century’ and demonstrative of a Late Roman date. It bears an extremely close relationship to late Roman work (see also Henig 1995, 165-70).

In fact, the cumulative evidence suggests that the entire manufacturing process, from sourcing the raw materials to the fabrication and decoration of each artefact, was carried out in a skilled and rigorously controlled fashion by an accomplished and well-equipped artisan, trained in Late Roman silversmithing techniques and fabrication methods. It is doubtful whether, at such a remove from the workshop traditions of Late Roman Britain, Irish artisans could have made these objects.\(^{46}\) However, perhaps working in a more familiar medium, Military Style was translated into bronze in Ireland; and not just the ornamental style but also to an equivalent standard of excellence to those in silver. There exists an assemblage of copper alloy objects that achieve remarkable finesse in reproducing the same repertoire of motifs and designs as occurs on the silver pins (see below).

### 4.4 Copper and its Alloys

Though iron, silver and even gold were also used, most Roman brooches were made from copper alloys. The common alloys were bronze (copper + tin), leaded bronze

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\(^{45}\) British Museum register no. PRB 1881–1–25, 1.

\(^{46}\) Graham-Campbell (1991, 228) makes a similar observation in relation to the ornamentation of the Bath brooch (Cat. No. 22). He suggests that given the skill with which the naturalistic ornament has been executed, the design was most likely created by a craftsman skilled in, and familiar with Romano-British art, and enamelling and is unlikely to have originated in Ireland.
(copper + tin + lead) and brass (copper + zinc), though up to a quarter of brooches were made of other copper alloys containing different amounts of tin, zinc and/or lead, such as gunmetal (copper + zinc + tin). Each alloy has a distinct colour so the alloy used would have been obvious to all. Pure copper is soft and ductile and in its pure state is entirely unsuitable for use in ornamental metalwork. Alloying copper in measured proportions of tin, zinc or lead increases the hardness, strength and durability of the metal, and reduces the melting temperature; each resultant alloy has its own colour character and working character (Untracht 1975, xiv). In fact there were limitless compositional possibilities open to those alloying copper and in reality, the re-use and mixing of scrap metalwork probably accounts for many of the copper alloys in circulation during this period. The common alloys of copper are bronze, (an alloy of copper and tin), brass \(^{47}\) (an alloy of copper and zinc), and gunmetal (an alloy of copper with tin and zinc). While these names provide convenient shorthand when discussing metals of different compositions, the three classes are by no means distinct and marked variations in composition have been observed (Bayley et al 2001, 15).

Bayley (2004, 14) has assigned compositional boundaries to the various alloy names in current usage which allow precise labels to be applied when the metallurgical composition of an object is known (see Table 4–4). Where the precise alloy has not determined by analysis, a general fabric assessment was made by the writer using visual observation (e.g. silver, copper alloy). In common with the approach adopted by the National Museum of Ireland copper-alloy programme this study also follows the latest terminology proposed by Justine Bayley (Bayley and Butcher 2004, 14). Copper/tin alloys are called bronzes and copper/zinc alloys brasses, depending on the relative proportions of the alloying elements. Gunmetal is defined as bronze with a low percentage of zinc. Leaded alloys are those which contain more than 8% lead which has been

\(^{47}\) Traditionally, brass is an alloy of copper and zinc while bronze is an alloy of copper and tin although in the literature, these terms are often used interchangeably.
added to affect the working properties of the alloy. If the lead value is less than 4% it may be a contaminant rather than an intentional addition. When the amount lies within these values it is added in parenthesis, as it is not possible to determine if the addition is deliberate or accidental.

4.4.1 Bronze, Brass and Gunmetal

Based on the vast numbers of finds, it is certain that bronze was the material most commonly used for personal ornaments in the Insular world during the first millennium AD. The major constituent in bronze is copper which, in a pure, unalloyed state is an extremely soft and ductile metal. The addition of tin hardens and toughens the metal and makes it more resistant to corrosion, and these mechanical properties increase as the proportion of tin is increased up to 13.2% although tin levels are typically in the range of 5-12% (Bayley and Butcher 2004, 25-6). Brass, an alloy of copper and zinc was effectively a Roman introduction and was first produced in Britain during the late 1st century BC. The addition of zinc to copper produced a harder metal with greater mechanical strength which was particularly suitable for casting, stamping and cutting. Brass has a yellow golden hue and a more brilliant sheen than bronze, attributes which made it more valuable than copper or bronze. In fact, it closely resembles gold and brass was initially used mainly for the manufacture of ritual objects and personal ornaments as well as military fittings and coins (Henderson 2000, 213; Carr 2003, 113-25). Although modern brasses containing up to 36% zinc are known to have excellent cold-working properties, the composition of Roman brasses could not be easily regulated therefore typical Roman brass is mainly or exclusively copper with a zinc content of 10% to 25% (Bayley and Butcher 2004, 25-6). Pure zinc could not be extracted until after the Middle Ages, therefore Roman metalworkers incorporated zinc with copper using the relatively crude process of smelting known zinc-bearing ores with either pure copper, or copper bearing ores. Alloys of bronze and brass could also be mixed together to produce a mixed alloy containing copper, zinc and tin. The term gunmetal is often used to denote this particular mixture i.e. copper with significant amounts of both tin and zinc (Bayley and Butcher 2004, 25-6).

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48 Research by Keates (2002) shows that the colour and luminosity of metals may also have been used to constitute ritual contexts and identities.
Compositional analyses of copper alloys from Britain have highlighted a Roman innovation that first appears during the first half of the first century AD involving the addition of between 0.5 and 3% lead to the alloy which even at these low levels markedly improves the alloy’s malleability. Such an alloy was eminently suited for producing highly decorated objects that required significant amounts of work post-casting; (ibid. 2004, 16). The presence of lead values of between 1.4 and 3.1% in objects examined in the National Museum of Ireland’s programme of analysis suggests therefore that the smith may consciously have chosen a malleable alloy (Figure 4-2, Table 4-5) that was tailored to facilitate chased and engraved decoration. There is a body of evidence to suggest therefore that copper alloy production was a highly sophisticated metalworking tradition during the first half of the first millennium AD, where the choice of alloy composition was informed by the proposed method of fabrication and decoration, the intended colour of the metal and by the operational requirements of the object being made (Craddock 1975, 1978 1-16, 1978b, 4-5: Craddock et al in Oddy 1986; Dungworth 1997, 901-2). In short, the choice of alloy was dependant on the nature of the end product.
Colour is as much a part of an object as its form or design and variation in the compositions of alloys would have influenced the colour of the finished object. It is instantly noticeable and as such, can be employed to signal associations and identities (Wobst 1977; Wiessner 1983, 1984, 1985; Jenkins 2008, 4-5, 17, 82). Keates (2002) has argued that the colour and luminosity of metals was used to constitute ritual contexts and identities in Copper Age Italy. There is also evidence from Roman Britain where Roman Colchester-type brooches were made of brass while locally produced Colchester derivatives were made of bronze. The different alloy compositions would have resulted in subtle colour differences between both types and Carr (2001) has hypothesised that those of bronze may perhaps have been used to signal an association with pre-Roman manufacturing traditions and perhaps more importantly, to signal an indigenous British identity. Conversely, those individuals wearing brass may have chosen to associate themselves with the Roman world.

<table>
<thead>
<tr>
<th>METAL</th>
<th>ZINC:TIN RATIO</th>
<th>Absolute VALUES of alloying elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brass</td>
<td>Zn&gt;4Sn (greater than 4 to 1)</td>
<td>Zn≥8%</td>
</tr>
<tr>
<td>Brass/Gunmetal</td>
<td>2.5Sn&lt;Zn≤4Sn (less than 4 to 1 Greater than 2.5 to 1)</td>
<td>Zn≥8% or Sn≥3%</td>
</tr>
<tr>
<td>Gunmetal</td>
<td>0.67Sn&lt;Zn≤2.5Sn (less than 2.5 to 1 Greater than 0.67 to 1)</td>
<td>Sn≥3%</td>
</tr>
<tr>
<td>Bronze/Gunmetal</td>
<td>0.33Sn&lt;Zn≤0.67Sn (less than 0.67 to 1 Greater than 0.33 to 1)</td>
<td>Sn≥3%</td>
</tr>
<tr>
<td>Bronze</td>
<td>Sn≥3Zn</td>
<td>Sn≥3%</td>
</tr>
<tr>
<td>Copper</td>
<td></td>
<td>Zn&lt;3% and Sn&lt;3%</td>
</tr>
<tr>
<td>Copper/Brass</td>
<td>3%≤Zn&lt;8% and Sn&lt;3%</td>
<td></td>
</tr>
<tr>
<td>Leaded Alloys</td>
<td>Pb&gt;8%</td>
<td></td>
</tr>
<tr>
<td>(Leaded) Alloys</td>
<td>8%≥Pb≥4%</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.4 Copper Alloy Compositions. After Bayley and Butcher 2004.
<table>
<thead>
<tr>
<th>CAT. NO</th>
<th>ARTEFACT</th>
<th>FIND SPOT</th>
<th>COMPONENT</th>
<th>% COPPER</th>
<th>% TIN</th>
<th>% ZINC</th>
<th>% LEAD</th>
<th>ALLOY</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>ZOOMORPHIC PENANNULAR BROOCH</td>
<td>HOOP</td>
<td>VERSO LEFT TERMINAL</td>
<td>84.0</td>
<td>12.4</td>
<td>0.5</td>
<td>1.6</td>
<td>Bronze</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>83.0</td>
<td>13.2</td>
<td>0.5</td>
<td>1.8</td>
<td>Bronze</td>
</tr>
<tr>
<td>25</td>
<td>ZOOMORPHIC PENANNULAR BROOCH</td>
<td>HOOP</td>
<td>VERSO LEFT TERMINAL</td>
<td>84.0</td>
<td>12.3</td>
<td>0.9</td>
<td>1.6</td>
<td>Bronze</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>85.0</td>
<td>12.6</td>
<td>0.6</td>
<td>1.6</td>
<td>Bronze</td>
</tr>
<tr>
<td>30(a)</td>
<td>ANTHROPOMORPHIC MOUNT</td>
<td>RIVER SHANNON</td>
<td>STRIP</td>
<td>89.0</td>
<td>7.2</td>
<td>1.3</td>
<td>1.4</td>
<td>Bronze</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NEAR ATHLONE</td>
<td>HEAD (NOSE)</td>
<td>82.0</td>
<td>11.0</td>
<td>0.5</td>
<td>3.1</td>
<td>Bronze</td>
</tr>
<tr>
<td>30(b)</td>
<td>ANTHROPOMORPHIC MOUNT</td>
<td>RIVER SHANNON</td>
<td>STRIP</td>
<td>90.0</td>
<td>6.2</td>
<td>1.4</td>
<td>1.2</td>
<td>Bronze</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NEAR ATHLONE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>DISC-HEADED PIN</td>
<td>UNLOCALISED</td>
<td>PINHEAD RECTO</td>
<td>84.0</td>
<td>12.1</td>
<td>1.5</td>
<td>1.5</td>
<td>Bronze</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(TOP)</td>
<td>86.0</td>
<td>10.0</td>
<td>1.7</td>
<td>1.4</td>
<td>Bronze</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SHANK (MID)</td>
<td>87.0</td>
<td>9.1</td>
<td>1.6</td>
<td>1.2</td>
<td>Bronze</td>
</tr>
<tr>
<td>17</td>
<td>DISC-HEADED PIN</td>
<td>TREANMANAGH CO. LIMERICK</td>
<td>PINHEAD (ABRADED)</td>
<td>82.0</td>
<td>14.0</td>
<td>0.67</td>
<td>3.0</td>
<td>Bronze</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SHANK (ABRADED)</td>
<td>84.0</td>
<td>12.0</td>
<td>0.70</td>
<td>2.3</td>
<td>Bronze</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SHANK (NICK)</td>
<td>85.0</td>
<td>11.0</td>
<td>0.66</td>
<td>2.0</td>
<td>Bronze</td>
</tr>
</tbody>
</table>

Table 4.5 Copper alloy compositional analysis conducted on specimens from the corpus held in the National Museum of Ireland
4.5 Techniques of Scientific Analysis

Over the last thirty years, modern scientific analytical methods have increasingly been employed in the study of ancient metalwork. Although there is a growing corpus of scientific analyses of Late Roman silver, copper alloys and enamels, there are relatively few published specialist analyses of metalwork bearing Insular Military Style decoration. While stylistic groupings have long been used to suggest possible areas of production, scientific analysis of the raw material itself can also be employed, particularly in the identification of the source of ores used in antiquity.

Lead occurs in a range of ancient materials including lead, silver, copper alloys, pigments, glasses, glazes and bones. Therefore lead isotope analysis can be used in a range of archaeological and technological contexts. The isotopic signature of lead is characterised by the ratios of isotopes present and reflects the conditions under which it was formed and the geological processes it was subjected to. As a result, individual ore deposits are characterised by distinctly different patterns of lead isotope composition (Henderson 2000, 14). Data sets are available for most of the major mining regions, particularly the copper and galena mines in Britain and Germany which are known or thought to have been exploited in antiquity, while Röhl (1995) has compiled a series of data sets for lead bearing deposits in Ireland. While the comparison of data sets obtained from various silver sources exploited during the Late Roman period with those obtained from analyses of Late Roman ornamental silver could prove interesting and informative, unfortunately surprisingly few ancient silver artefacts from northern Europe have been subjected to such analysis (ibid. 31). Consequently, although these could in theory, be used to determine the source of the ores used in the manufacture of these metal artefacts and their inlays, and connect objects with particular mines, there is insufficient reference material available to permit a full evaluation of the Insular Military Style silver circulating in Ireland and Britain (ibid. 29). However, should such a programme of analysis be undertaken, it would at the very least provide definitive evidence for the early exploitation of silver-bearing galena deposits in Ireland. Although analytical studies such as these may assist in localising metal ores used in the manufacture of artefacts, this will almost certainly prove to be of limited value in establishing the locality of, or indeed identifying the products of individual workshops. Metal is easily recyclable, therefore one of the most expedient sources of metal will always
be the re-use of scrap metal. Furthermore, as a precious metal, silver has always been traded and could travel great distances from its point of origin therefore it is particularly improbable that any programme of analysis would detect a group of silver objects all made from uncontaminated or unalloyed silver from a single mine.

4.6 Fabrication Methods

Two main fabrication methods have been observed; objects from the corpus were either cast in moulds or wrought by means of cold forging. When casting, two main types of clay mould were likely to have been used; *cire perdue* investment (lost wax) moulds and composite moulds with one or more sections. When casting small objects such as pins and brooches, such moulds would normally have been made of fired clay although occasionally, other materials such as steatite were employed. Open moulds, composite moulds and *cire perdue* or investment casting were all in use during this period.

4.6.1 One-piece Clay Moulds

Casting by the *cire perdue* process using one-piece clay moulds has been widely practised for over four thousand years; smiths from Egypt and ancient India were probably the first practitioners. The technique was primarily used to create objects of complex shape. The process began by first modelling an archetype or model of the finished object in wax using simple tools which were first heated and then used to shape and carve the wax into the required form (Untracht 1975, 359). The model was then invested or coated in a thick mantle of clay and several channels or gates were made in the mantel from the pouring hole to various parts of the object to ensure that the molten metal was distributed to all parts of the mould as quickly as possible. Other channels or vents were created to allow the air to escape as the molten metal was introduced. The clay/wax assemblage was then heated until the wax melted and ran out thence the ‘lost wax’ method. The resultant hollow clay mould was then heated further until all of the wax remnants were burned out and the mould itself was partially fired, allowing it to withstand the shock when it was subsequently filled with molten metal. This was then poured into the mould, filling the space left by the wax and allowed to cool and solidify and then the mould was broken to remove the casting (Bayley *et al* 2001, 16; Brown 1976, 27). As each process resulted in the destruction of both model and mould, it was necessary to create a new wax archetype.
for every new casting. This permitted the smith great freedom in the model design, allowing each individual piece to be designed according to the needs and indeed taste of the person commissioning it. It also afforded the artisan the opportunity to perfect both the form and design prior to casting (Brown 1976, 25).

Due to the delicate and somewhat complex geometry of projecting-headed pin, casting in this type of investment mould has been presupposed, mainly due to the fact that no two objects bearing Insular Military Style decoration are identical: each is entirely unique. Following detailed binocular microscopic examination by the writer no evidence was found that the ornamental detail was on the putative wax model. Indeed, much if not all of the decoration appears to have been applied post-casting using a variety of chasing and engraving tools as outlined below. Consequently, the complex shape of many of these objects and the delicacy and intricacy of their decoration (which in all cases noted by the writer was applied post-casting) cannot be assumed to be the product of the cire perdue method.

4.6.2 Composite Moulds
Composite moulds were formed in two or more sections. An original archetype or pattern of metal (typically lead), wood, horn or bone was worked into the desired shape. This was then pressed into a lump of clay and locating marks were made along the edge. Another piece of clay was pressed over the pattern. The two valves of the mould were then separated, the pattern recovered, the mould was reassembled, and then sealed (luted) with an outer mantle of clay before being fired and used. If the clay used to create the mould was fine enough, then very detailed ornamentation could be reproduced in the metal. Two different methods of joining the parts of the mould together have been identified. One method, which has been observed only on the disc-headed pin from Garranes (Ó Ríordáin 1942), was to place the two halves of the mould together so that they met along the central axis of the pin (Error! Reference source not found.). This method was used frequently in Provincial Roman workshops. The second method of making piece moulds was with one half forming the front and the other half the back of the object (Lamm, 1980, 106-109).

While the same pattern or archetype may have been re-used many times, the reason for having a mould that could be taken apart was not so much that the mould itself could be reused but so that the pattern could be easily removed for future use
(Bayley 2004, 118). In any case, unlike metal or stone composite moulds, which were more durable and could be used many times over, clay did not usually constitute a robust mould fabric and detail, especially fine detail, was liable to be damaged during the process of removing the casting. Stone moulds of steatite and chlorite are well known from the Roman and migration periods where they were used for casting jewellery and objects with Kerbschnitt patterns, or possibly for the manufacture of wax or lead archetypes of these for use in the cire perdue process. Following examination of a number of such moulds in the Research Laboratory of the British Museum it was determined that such moulds were most likely to have been used for direct casting as it would have been difficult to make wax or lead flow down the fine pour-channels, and equally difficult to remove the archetype without causing damage (Higgins 1976, 59; Schorsch 1986, 36). An example of one half of a stone mould is held in the Hunt Collection Museum.\textsuperscript{49} This double-sided stone (?) mould features impressions for three different penannular artefacts, one of which is purported to be a Class I brooch (Plate 4-5). The multiple impressions on two faces of the same side of the mould and the lightly incised pour lines which appear to be non-functional suggest to the writer that it was perhaps manufactured in relatively recent times as a ‘curiosity’.

4.6.3 \textit{Multi-partite Moulds}

The problem of casting objects with under-cuts, previously only thought possible using the lost-wax method, is technically achievable by dividing the mould up into many pieces. As with two part moulds discussed above, the different parts are held together by an outer mantle of clay. Although there is no direct evidence to support the hypothesis, the complex hand-pin shape could easily have been produced through the use of such multi-partite mould as evidenced by the manufacture of clasp buttons with a pronounced undercut at Helgö, Central Sweden, using this process (Lamm 1980, 108-109).

\textsuperscript{49} Register no. HCA 686
Plate 4-5 Stone double-sided mould from the collection of the Hunt Museum, Limerick, object number HCA 686. The mould impression top right is purported to be that of a type B1 brooch.\(^{30}\)

numerous finds from workshops across the Provincial Roman West including Roman Britain, Scotland and indeed Ireland suggests that casting in composite moulds was the preferred method during the first millennium AD and that in general, artisans preferred to work with permanent, reusable models rather than wax models (Johns 1996a, 190). Despite the commonly-held assertion that these complex objects could only have been produced in *cire perdue* investment moulds, all of the available evidence for the casting of pins suggests the use of composite moulds which are more generally associated with large-scale production. Hand-pin moulds from Loch na Beirgh, Lewis (Harding and Gilmore 2000, 62-3, table 2; Harding 2000, 25-6), Loch Olabhat, North Uist (Armit 1996, 176), Traprain Law (Burley 1956, 170; fig. 3, nos 118-19) and Upper Scalloway, Shetland (Campbell 1998, 161) are all piece moulds. There is however evidence that some later penannular brooches and their pins were cast using the *cire perdue* method (Youngs 1989, nos. 188 and 193),

\(^{30}\) My thanks to Michael Ann Bevivino for drawing my attention to this object and for the use of the images.
suggesting perhaps that no one method of casting dominated and that a variety of casting methods may have been used.

4.6.4 *Cold Forging*

The basic shape of certain objects from this corpus means that they were almost certainly cast in a mould (see above), while others such as the curved strips from the River Shannon near Athlone (Cat. Nos 30a, 30b) were wrought rather than cast. A strip of bronze appears to have been hammered to the required thickness, before being formed into a semi-circular shape perhaps using a former such as the Scalloway example (Sharples 1998, 163) or a bick iron of the type from Vimose (Christensen 2005, 66). Interestingly, a penannular brooch found in an unfinished stage of manufacture at Garranes was cold forged from a bar of bronze. Once wrought into a basic penannular shape, file marks indicate that files were then used to fashion the rounded portion of the brooch, while the terminals were then flattened by hammering (Ó Ríordáin 1942, 93-4). While not part of the corpus *per se*, the brooch is of similar form to examples bearing Insular Military Style decoration (Kilbride-Jones 1980b, no. 59) suggesting that some brooches of penannular form were wrought rather than cast prior to decoration.

4.6.5 *Finishing, Polishing and Smoothing*

These objects have been expertly finished and show evidence of having been subjected to a considerable level of final polishing. It seems likely that files were used to finish and smooth surfaces and create a well-finished appearance, by removing casting seams and the uneven ridges (burrs /arars) thrown up around each cut during the engraving process (see *e.g.* Jacobsthal 1944, 130-1 ;Spratling 1972, 253-4, 355). There is some archaeological evidence for the use of small files in fine metalworking, for instance Tomtlund (1978, 16) describes three small files from Helgö which may have been used to finish objects such as pins.⁵¹ Fine striations and scratches visible on the surface of the Londesborough pin also suggest that a file was used to shape the broken pieces prior to riveting (  

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⁵¹ The important entrepôt and production centre at Helgö, located on the small island of Lilliön, lake Mällar, central Sweden provides evidence for a large, centralised metalworking industry dating from the fifth to the eighth centuries AD (Holmqvist 1961, 1964, 1970, 1972, 2008).
Plate 4-9). Coarse abrasives and whetstones were almost certainly employed to grind, scrape, file and polish the surface since these uses are known from ethnographic sources (Fremont 1920). Alternatively, the surface could have been burnished with a hard tool such as steel, quartz or agate. Finer abrasive, such as soft haematite (also known as ‘jewellers rouge’) were also used as polishes evidenced by the faceted nodules found at the Coppergate site in York (Bayley 1991, 119). Although the finishing and final polishing of the surfaces was intended to remove all traces of manufacture, areas which were not meant to be seen often retain evidence of file marks, solder lines and casting seams which can prove invaluable in the identifying the full range of ancient metalworking processes and techniques employed.

![Plate 4-6 Norrie’s law pin (Cat. No. 9). An overspill of solder (indicated) is impressed with a punched annulet suggesting that the pinhead was attached to the shank post-casting.](image)

**4.6.6 Soldering and Riveting**

Solders may be defined as ‘any metal or alloy whose melting point is lower than that of the metal or alloy to be soldered which may be run between the parts to be joined to fasten them together’ (Untracht 1982, 166). This exceptionally simple technique was used to effectively join together composite pieces of metalwork and the evidence suggests that it was employed on some of the silver objects contained in the
Small amounts of scrap silver produced in the course of engraving may have provided the raw material. Surfaces to be joined were first cleaned and filed to ensure a good fit and were probably held together with iron binding wire. Both the solder and silver were then coated in borax which acted as a flux, preventing oxidisation of the surfaces during heating. The solder and metal were heated to the melting temperature of the solder, which was then drawn by capillary action throughout the joint, and adhered to the oxide-free surfaces. Heating could have been effectively applied using an oil lamp and a blowpipe, a method still in use in India today (ibid. 167). When heated sufficiently, the solder actually penetrated the material and in effect alloyed itself to the metal being soldered creating what is technically termed a ‘hard soldered joint’ which almost matched the quality and strength of the metal itself and which would have been capable of withstanding the stress of the extensive cold working which was to follow (Maryon 1949, 107). When cool, any superfluous solder could be filed away leaving little more than a hairline join visible on the surface.

Hard solder for silver are usually composed of silver alloyed with copper while hard solder for bronze were usually composed of copper alloyed with tin or zinc. Theophilus recommended a solder composed of two parts silver to one part copper. Roman silversmiths most likely used an alloy of this sort although these compositions were often varied either to alter either the melting point of the solder or the colour of the solder (Maryon 1949, 108). Wilson (1971, 93) notes that when soldering, care must be taken to ensure that the pieces to be soldered are not held too closely together or else the solder, when fused, would run along the angle of the joint instead of entering it. Should this occur, although the work will superficially appear to be perfectly soldered, the joint will be weak and will separate if any strain is placed upon it. Effective soldering therefore requires that the joint should be fitted just close enough to allow the molten metal to run along the joint by capillary action. Solder is also evident on the verso of the pin from Norrie’s Law (Plate 4-6; Cat. No. 9). Punched annulets on the solder overspill and the area surrounding it suggest that the solder is contemporary with the manufacture of the pin and is not a recent repair. An unusual line or crease present in the angle of the shank on select silver pins suggests that some are composite pieces, i.e. the head and shank were cast.
separately; this mark may represent the point where the two components were soldered together (Plate 4-8).

Plate 4-7 Silver hand-pin from Chilton Trinity, Somerset. The shank has broken on the angle of projection suggesting that this point may mark a point of weakness. Image © Trustees of the British Museum.

Plate 4-8 Crease line in the angle of the shank on the silver pins from Castletown Kilpatrick (left) and Newtownbroad (right), Cat. No’s 2, 5. This point is also marked by a punched annulet in both instances.
An alternative explanation is that the shank was heated and bent at this point post-casting creating a distinct crease mark in the metal. For example, the pin from Chilton Trinity (Plate 4-7) Cat. No. 6) is broken at this point suggesting that it is a particular point of weakness, perhaps caused by an imperfect join as outlined above. As the cumulative evidence thus far suggests that the highest levels of artisanship were lavished on these pins and that all visible surfaces were polished and finished to a high standard once the decoration of the pin was complete, the deliberate retention of this crease or solder line in the angle of the shank may mark an area that was considered to be significant. For instance this area is often accentuated by either a single or triad of punched annulets (See Chapter Eight). Solder has also been used to effect repairs on the shanks of the proto hand-pin from Castletown Kilpatrick (Cat. No. 2) and the pin from Long Sutton, Somerset (Cat. No. 12).

4.6.7 Rivets

Although silver can be welded together by hammering at temperatures above 500°C riveting was the preferred method for creating major joins (Sherlock 1976, 14; Craddock 1989, 171). Rivets were employed on the expansion terminals of select latchets (see Greene 1998 46–7), and also on a coiled bronze armlet from Ballymahon, Co. Meath where they were used to effect repairs (Rynne 1964, 69, Youngs 1989, no. 27). A rivet was also used on the bronze anthropomorphic strip from the River Shannon (Cat. No. 30a), possibly to create a sense of animation by allowing the head to move from side-to-side. A combination of riveting and heavy filing was employed to repair the Londesborough pin in order to preserve as much of the ornament as possible (Plate 4-9). As this was the preferred method of joining large pieces of silver in Roman Britain it suggests that this repair may be ancient, at least contemporary with the pin (Susan Youngs, pers. comm. 2008).
Plate 4-9 A repair effected on the shank of the Londesborough pin (Cat. No. 15) using a combination of heavy filing and riveting.

4.7 Archaeological Evidence for Toolkits

Insular Military Style metalwork infers the skilled use of a wide range of implements, however, only a small number of identifiable metalworking tools survive in the archaeological record. For example, at Silchester, cupellation furnaces and shops where silver objects were made and sold have been identified but nothing in the way of tools or how the craft was practiced was found. In fact, Bayley (1991, 121) has noted that there are few finds from England that can be associated with metalworking before the period AD 700 and Craddock’s (1989) survey of Irish metalwork reached a similar conclusion. This lack of tangible evidence for fine metalworking implements is partly due to the intrinsic value of the tools themselves (Sherlock 1976, 11). Tools needed for fine metalworking are small, portable and were most likely highly-prized, personalised and used until they were completely worn out, damaged or beyond use at which point they were probably used as scrap.

Craddock (1989 170-213) listed the tools and utensils most commonly associated with fine metalworking during the Early Medieval period viz cupels for refining precious metals, moulds and fragments of moulds for objects such as pins and brooches, small ingot moulds and crucibles for melting and pouring small quantities of decorative material such as enamel. Small hammers are also required for fine metalwork.
metal and consigned to the crucible. The failure of excavators to recognise such tools may also play a part. Hammers, files, awls, punches and chisels are all tools which can be identified with metalworking, however, archaeologically they are rarely found in a recognisable state and quite often such objects are difficult to definitively identify as metalworking tools, unless they are accompanied by debris from the manufacturing process (Lowery 1971, 168; Coatsworth and Pinder 2002, 41).

The dearth of direct evidence notwithstanding, individual tool types which may have been employed in the decoration of this corpus can be identified using two information sets; fine-metalworking tools found in the course of archaeological excavations whose function can be matched with tool marks on worked surfaces and analysis and documentation of visible tool marks on the worked surfaces, to suggest tools which may have been used (Armbruster 2011, 421). Modern craft manuals such as those by Maryon (1971), Untracht (1976) and Wilson (1984) are also of invaluable assistance in determining the geometry of ancient toolsets as, although stylistic changes occur over time, many of the basic practices and tools employed in fine metalworking have changed very little over the last two millennia. Indeed, many of the tool marks on ancient ornamental bronze and silver can be easily and accurately reproduced using the basic small tools of the modern jeweller (Lowery 1971, 169-70; Lowery et al, 1971; Maryon 1971). These manuals can also be of value in identifying implements found in the course of archaeological excavations as fine metalworking tools.

A group of metalworking tools including small anvils, bick-irons and a pump drill were found deposited ritually in a bog at Vimose, Denmark. These include types that are still used today for fine, delicate work, particularly when working precious metals (Christensen 2005, 66). Bick-irons are generally used for bending pieces to form parts of a circle or for ‘truing up’ a circular piece but may also have served many additional tasks in workshops. An example was found in the seventh to eighth century ringfort at Garyduff, Co. Cork while a possible specimen was found at Moynagh Lough, Co. Meath (Coatsworth and Pinder, 2002, 45-6). Such a tool may have been employed in the cold-forging of the anthropomorphic strip from the River Shannon (Cat. Nos 30a, 30b).
Evidence from tool marks suggest that pump-drills or drillstocks were widely used in antiquity (Coglan 1975, 102), and they remain the preferred tools used by jewellers for drilling precious metals, as the slow speed of the drill allows controlled piercing of the material to be drilled (Plate 4-10(a)). Pump-drills are simply constructed, and they have the great advantage of only requiring one hand to operate, which leaves the other hand free to do the work (Maryon 1971, 65). The drill consists of a shaft fitted with a drill-bit at the end, and a cross handle, string and horizontal fly wheel to increase momentum (Plate 4-10 (a)). The drill bit typically used for such work was straight-edged, and had a small, central guiding-point. Modern jewellers have noted that pump drills are most comfortable to use when held vertically suggesting that they are particularly suited for use on small objects set on a workbench or some other similar support (ibid., 66, fig. 59; Untracht 1982, 252, fig. 4:80).

The shaft was fitted through a central hole in the cross handles while a string or cord ran through the top of the drill and was attached at either end of the cross handle. The drilling action was initially started by twisting the shaft so that the bowstring wound around it. The momentum was continued by first depressing the cross handle
(causing the string to untwist) while the momentum of the fly wheel allowed the string to re-twist on the up stroke creating a simple but effective drill. On the Vimose example (Plate 4-10(b)), the end of the drill head still holds the remains of a ferrule of copper or copper alloy that probably held a fine-pointed drill bit made of hardened metal. The point, cross handle and string are missing (Sandars 1968, 163). A chalk disc, which may have served as the flywheel from a pump-drill (Stead 1996, 9) was found in an early first century AD burial at Whitcombe, Dorset. Indeed, perforated discs made of stone or other suitably heavy material are commonly found on Iron Age sites (e.g. Cunliffe 1984, 425) and while these are often interpreted as spindle-whorls, the possibility that they may be flywheels from pump-drills merits consideration.

Plate 4-11 Drilled dots on the Castletown Kilpatrick proto hand-pin, Cat. No 2.

Although few parallels have been found for the Vimose pump drill in the archaeological record, evidence for the use of such a tool is preserved on the worked surfaces of fine metalwork. For example, a pump-drill was used to produce the recesses on a horesbit from Killeevan, Co. Monaghan (Graves 1857, 422-3) and also on terrets from Britain dating to the first and second centuries AD. On this corpus, concave, drilled dots on objects such as the Oldcroft and Castletown Kilpatrick proto hand-pins (Plates 4-11; 4-12; Cat. Nos 1, 2) could only have been produced using such a tool. A tiny depression on the base of the drilled cell marks the point where
the drill bit was placed and served as an unintended anchor point the enamel inlay (Plate 4-12; See also Chapter Five).

Plate 4-12 Copper alloy terret from the Westhall hoard and the Oldcroft pin. Conical depressions on the base of the enamelled cells (indicated) suggesting the use of a pump drill is clearly visible on both. © Trustees of the British Museum.

4.7.1 Scalloway: Small File, Former and Miniature Tool Set

Excavations at Upper Scalloway, Shetland uncovered a number of iron tools in contexts that were dated by the excavator to the end of the fifth century AD (Sharples 1998, 163-4). Tools which may be associated with fine metalworking included a small file, a former, similar to an example from Garannes (Ó Riordáin 1941) and most interesting, a miniature toolset. This was originally suspended from a large, copper alloy ring in a similar manner to Roman miniature toilet and chatelaine sets. Both of the iron tools though small, appear well made and functional. The first, a small, pointed iron bar has been interpreted as a fine, miniature punch for decorative work. There is evidence that the punch was used as the preened-over edges present on its broad end are diagnostic of hammer blows. The second item is one arm of a miniature set of tongs or pincers which may also have been used in delicate metalworking.
The tools, the presence of hand-pin moulds and evidence for silver working on the site all suggest that small-scale production of high status metalwork took place here. Moreover, this unique miniature tool set may provide physical evidence for the types of tools that created the crisp, delicate ornament on Insular military Style metalwork (Plate 4-13).

4.8 Toolmarks and the Examination of Worked Surfaces
The descriptive terminology typically employed in discussions of bronze and silversmithing techniques is endemically flawed. Terms such as chasing and engraving are used interchangeably although in reality they describe entirely different processes. Maryon (1971) has made a formal distinction between chasing and engraving; chasing displaces, deforms or rearranges the surface of the metal but no material is removed while engraving involves the removal of metal by cutting into the surface. Visually, it can often be difficult to differentiate between these, and often this distinction is only apparent following microscopic examination of tool marks on the worked surfaces (Johns 1996a, 190).
Paradoxically, poorly executed pieces are often a more valuable source of information on the making and decoration of an object than more expertly crafted objects. For example, the poor retention of inlays results in empty cells which reveal both the techniques used to carve out the cells themselves and the various (unsuccessful) attempts to retain the original inlays in place are now clearly visible. Errors such as these are also an indication (Plate 4-14) that the ornament in question was executed by hand, post-casting: if the design had been moulded in relief on a wax model, there would almost certainly have been ample opportunity to remedy such errors prior to casting.

4.9 Chased Decoration
The term ‘flat chasing’ is used to cover a variety of different ornamental affects achieved with the aid of hammers, various punches and blunt chisels. Chasing tools do not remove material but compress it, and drive it aside. When the worked surface is examined under magnification, chased decoration can easily be distinguished from engraving by the slight ‘walls’ raised on either side of the metal displaced by the action of the punch (Coatsworth and Pinder 2002, 47). Operationally, the punch was held perpendicular to the metal surface and when struck on its end with a hammer it created a narrow channel, depression or outline in the metal whose configuration
corresponded with that of the tool employed (Johns 1996a, 190; Maryon 1971, 119, 149).

This type of tool was first employed in the Near East c. 500 BC and was soon in use in Greece and the Balkans (Williams and Ogden 1994, 19). These were bespoke tools, manufactured in the workshop according to the specific needs and operational requirements of individual smiths who made them (Plate 4-15). As each smith would have made their own distinctive set of implements, the marks on worked surfaces can act, not only as fingerprints of the individual tool used and also as a hallmark of the work of a particular workshop or individual artisan.

4.9.1 **Tracers, Beaders and Hollow Ring Punches**

Small blunt chisels or tracers could be tapped with a hammer to produce lines, borders and/or surface texture while simple punches or beaders featuring solid, rounded heads were used to create small hollow depressions or dots (sometimes called *pointillé*) on the surface of the metal. However, the most commonly used type was the ring-tool or hollow ring-punch used to produce the punch marks depicted above (Plate 4-16). Different effects could be achieved by varying the force of the hammer blows (Bullinger 1969, 15) and when struck with sufficient force, the same punch could be used to create a raised, perfectly round bead on silver and ‘soft’ alloys of copper (Strong 1966, 19).
4.10 Engraving

This is a technique which has a long history of use in the decoration of surfaces in ornamental metalwork. With engraving, the metal is cut or lifted from the surface and this method can be employed to create individual motifs, textured surfaces or to hollow out a cell or recess to receive an inlay (Maryon 1971, 64-5). A selection of fine engraving-tools (tracers, gravers/ burins and scorpers) were used to model the surface decoration in relief and to add fine detail to this collective. In view of slight irregularities noted in the curved lines and spirals it seems that the designs and motifs were not compass-drawn but were set out, free-hand on the surface.
Short, cutting tools such as these would have been fitted with a wooden handle and the cutting face shaped to a variety of sharp, acute cutting angles (Plate 4-17). Modern craft manuals suggest that the optimum angle on the cutting face of the graver should be about 45º as if it is greater more force will be required in engraving and it will produce an excessively deep cut: if the angle is less, although the graver will cut better, the point will dull more easily and will not remove as much metal. These engraving tools were probably pushed into the metal using hand pressure rather than being struck with a hammer; silver and bronze were relatively soft metals and iron/steel tools would cut them relatively easily (Coatsworth and Pinder 2002, 49). The use of engraving tools on metal can easily be determined through microscopic examination of the worked surfaces. In general, each individual tool mark is clearly defined and striated bands or lines are clearly visible on the base and the sides of each cut (Schorsch 1986, 36). A little roughness or burr is also visible alongside and at the end of each groove cut (Maryon 1971, 119).

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53 Modern engraving tools are generally no longer than 125.0mm in length (Coatsworth and Pinder 2002, 49)
It is an absolute requirement that engraving tools must be sharp and harder than the metal to which they are being applied (Codina 2007, 38). While silver can be worked to a certain extent with bronze implements (Williams and Ogden 1994, 29), through experimentation Lowery et al (1971) have determined that bronze tools are virtually ineffective for any form of surface working on bronze, and that steel or carbonised steel tools are required. Engraving employs a sharper tool which actually cuts out the metal and this technique was not widely practiced in northern Europe until the advent of iron and steel tools. While there is no conclusive evidence as yet that steel was produced as a result of the deliberate manipulation of either smelting conditions or the types and ratios of raw materials, there is evidence from the Iron Age in Britain that steely portions of blooms from bloomery furnaces were deliberately selected for the manufacture of certain types of tools. Another method was to surface-carbonise or harden iron objects by heating them on a bed of charcoal. This process allows carbon from the charcoal to enter the outer surface of the iron, creating a ‘shell of steel’ (Bayley et al 2001, 13).

4.10.1 **Scribers**

A simple form of shallow groove engraving can be produced by simply scratching or lightly incising designs and patterns on the metal with various fine-pointed tools or scribers. These hard points were held in the manner of a pencil and used either to draw heavily on the surface of the metal or to lightly sketch patterns on the surface as a guide prior to the execution of the main design (Meeks et al 2008, 25). This tool could not be used to make deep or broad marks, its use was particularly prevalent on harder, copper alloys as it was easier to execute than deeper forms of engraving on a harder metal type. For example on the Treamnanagh pin (Plate 4-18) where the ornamental panels on the shank are contained within a lightly incised ladder pattern which was clearly executed freehand using such a tool (Strong 1965, 10).
Tools such as gravers or ‘burins’ are employed to cut and deepen the outline of a pattern by pushing the point along just below the surface and removing the metal. Alternatively, the work could be turned and pushed against the graver whilst it was kept more or less still (Lowery et al 1971, 172; Maryon 1971, 153). Either method will cut away the metal leaving deeply grooved channels. No tools for engraving have been found in Ireland or Britain, however, Wemer (1981, 46), identified six gravers in his analysis of the assemblage of goldsmiths, silversmiths and carpenters’ tools from Helgö. The evidence for the use of such tools is preserved on the worked surfaces and is exemplified by the engraved lines and cross cuts of the Shannon mount (Cat. No 30b; Plate 4-19).

Scorpers are short, rigid cutting tools used for the removal of metal. When used in short, percussive strokes they were exceptionally effective at cutting away the background and hollowing out and shaping the interior of cells intended to receive an inlay (Maryon 1971, 153).
They were sharpened to a variety of points (flat, round, half-round, knife-edged) depending on the use for which they are intended. For example, if a flat scorper is rotated quickly from side to side and at the same time pushed forward, the process creates a roughened surface with distinctive angular troughs and ridges creating a well-keyed ground, suitable for inlaying and leaving the principal design in relief on the surface, formed by untouched areas between the cuttings (Maryon 1971, 154).

4.11 Annealing

During mechanical working processes such as chasing and engraving, the repeated, forceful action of various tools (e.g. hammers, punches, gravers and scorpers) not only permanently changes the external shape of the metal but also sets up internal stresses which cause the crystalline structure of the metal to distort due to the compression of its molecular structure. This hardens the metal making it difficult to work and also creates stresses in the metal making it liable to crack and split. Annealing, or subjecting the metal to heat, allows the metal to reshape itself and restores its malleability, thereby returning the metal to a workable state (Bayley 1991, 118). Annealing is a function of time and temperature and every metal has a correct annealing temperature which is considerably below its melting temperature. For silver the annealing temperature is 593-649°C, depending on the level of copper content, while for the various alloys of copper it can range between 372-781°C, again depending on the nature of the alloy composition. Lower temperatures may be used to the same effect, however the object will require more prolonged heating (Untracht 1975, 13). The process did not require the use of sophisticated technical equipment. The object to be annealed was most likely placed in a pan resting on a bed of
charcoal while the relatively simple method of ‘colour judgement’ carried out in a
darkened area, allowed the correct annealing temperature to be determined; for
example, silver emits a distinctive pink glow when it has reached the correct
annealing temperature (Sherlock 1976, 13; Untracht 1975, 246).

4.12 Decorative Techniques as Chronological Indicators
Tools themselves are notoriously difficult to date on morphological criteria as an
efficient tool may have had an extensive chronological range of use (Christensen
2005, 59). However, their manner and mode of use is quite distinctive and as such,
common or similar tool marks can, and have been used to provide an objective
method of demonstrating contemporaneity of objects. In addition to stylistic
interpretations of decoration, the technology and techniques employed in the
fabrication and decoration of an object is an important guide to the cultural
milieu in which it was made (See Inker 1998, 2000, 2006, 2).

When it occurs in Ireland during the first five centuries AD, silver is
restricted to a finite range of objects viz projecting-headed pins decorated in the
Insular Military Style. This alone provides a very persuasive argument in favour of
their representing a corpus per se. They reflect a mastery of almost all of the basic
skills used in the decoration of contemporary Late Roman prestige metalwork. While
some may have been cast with the rudiments of decoration, microscopic examination
has revealed that any casting decoration was subsequently heavily worked by hand
as the condition of the surfaces (especially in areas where inlays have been lost) are
most certainly not as cast. In fact, the evidence suggests that many if not all Insular
Military Style artefacts were initially cast without decoration, the exquisite fine-line
ornament being laboriously and skilfully worked by hand into the metal post-casting.
The adoption of this technique produced a crisp, sharp appearance to the ornament
and one that contrasted visually with the somewhat more mellow reliefs obtained by
cast decoration. Similar tools and techniques were used across the corpus and tool
marks on the worked surfaces indicate the use of drills, gravers, various hollow
punches, borer, drills, gravers, chisels, scorpers and files and polishers to finish the
surface. Objects contained in the corpus are typically made from thick silver or
bronze ranging from 3mm to 9 mm in thickness and so are particularly suited to
these heavy, cold-tooling techniques.
Insular Military Style is one of essentially two dimensional punching, engraving and more rarely, shallow chip-carving and this form of decoration has its closest technical parallels in the milieu of Late Roman Britain. It shares many aspects of the technology and technique of Romano-British prestige metalwork including the use of various hollow punches, blunt chisels and solid beaders to create bands and textured surfaces. Shallow chip-carving has been noted on the vertical edge of the Castletown Kilpatrick pin (Cat. No. 11), and also on the barrel of Cat. No. 25 (Plate 4-20). A variation on this technique appears in much miniaturised form on the vertical edge of the Denton pin (Cat. No 8).

Although chased ornament and borders of beaded lines were features of earlier Hallstatt art (Jacobstall 1944, 67; pl. 34), the technique does not appear to have been widely adopted by Irish artisans until the early centuries AD. The earliest example known to the writer occurs on a Type 1a ring-headed pin from Co. Antrim which features two punched beaded borders on the pinhead (Raftery 1983, 149-50, no. 396, fig. 132). Punched ornament has also been employed to provide surface texture on the head of a baluster-headed pin from Ballyeagh, Co. Kerry (see Newman 1995, 18-9, fig 2 a, b). Prolific punched decoration is a defining feature of Insular Military Style art where it is employed to create simple motifs such as triplets of annulets or dots, decorative beaded borders, and saltires. In some instances, the ornamentation is rather complex, with several different punches and chasing techniques being employed on the same object (e.g. Cat. No. 15). The process also allowed a level of
individuality and the tools, being forged in individual workshops would also have differed from workshop to workshop. But the basic principle remained constant. Following their analysis of punch marks on items from the Thetford Treasure, Johns and Potter (1983, 66-67, 72) observed that such developed punch work is ‘stylistically in the spirit of the fourth century’ and demonstrable of a Late Roman date.

Late Roman silver plate shows a preference for chased beaded designs and motifs and beaded rims. Similar beading is also found on the terminals of crossbow brooches, objects which also acted as symbols of authority and prestige. This late Antique predilection for beading is also reflected in the Insular corpus occurring on some of the more elaborate silver hand-pins where, on the junction between the upper horizontal arcade and the lower crescentic plate the ‘fingers’ appear to rest on a collar or circlet of beads. This type of ornament is closely paralleled by the granulation found at the terminals of contemporary cross-bow brooches. Whereas with granulation, the grains were separately made and applied, here a similar effect was achieved by striking a hollow punch with sufficient force to achieve a raised and perfectly round, two-dimensional, silver bead. Variations in the consistency and the spacing between beads have been observed on a number of specimens and these misalignments and variations in spacing provide further evidence that such decoration was applied post-casting. The engraved and punched technique employed to produce beading on the Insular corpus finds its closest parallel on Late Roman Military Style belt sets and on prestige silver plate.

On Insular Military Style metalwork, punch marks function as a secondary decorative device and are usually employed along the outside edges of the main ornamental zones to frame and enhance the relief of the main design. Typically, the decorative borders were created by a row of punched annulets set between a pair of incised framing lines. The clearest example appears on the verso of both the Norrie’s Law (Cat. No. 9) and Newtownbond pins (Cat. No. 5) where two parallel lines were engraved into the surface, and these then served as frames and guide for the punched ornament that was then executed between them. As Inker (2000, 43) notes, accuracy

54 The most impressive and expertly executed example of this faux filigree effect appears on the Norrie’s Law pin (Cat. No. 9).
is paramount to create the visual effect of beading and each punch mark must be equidistant from its neighbour to achieve this. In a variation of this technique, two parallel construction lines are again engraved into the surface of the metal and either a half-annular punch or small chisel are used to punch between the lines as evidenced by the decorative border on the shank of the unlocalised silver disc-headed pin (Cat. No. 14) and silver penannular brooch terminal from Caistor, Lincolnshire (Cat. No. 27).

Engraving and chasing copper alloy, a harder and less yielding metal, presented its own difficulties and some of the techniques employed on silver did not translate across to this baser medium. The engraved lines and punched annulets on the verso of some B1 penannular brooches,\(^{55}\) for instance, are shallow and less bead-like than those of the silver pins, suggesting that bronze was less amenable to punched ornament (see e.g. Cat. No. 25, Plate AI- 57, e,f). Likewise, attempts to replicate vandykes in copper alloy were not entirely successful (see e.g. Cat. No’s 16, 17). Elsewhere, the smith used scribed lines in an attempt to mimic a beaded border, as for example on the shank of the Treanmanagh pin (Plate 4-18). The Bann Disc, Petrie Crown and Cork Horns, however, testify to the virtuosity of Irish craftsmen working in copper alloy.\(^{56}\) In the case of all copper alloy specimens, the decoration was executed by hand, post-casting, using the same combination of engraved and chased ornament noted on the silver specimens. Furthermore, tiny toothed projections are also observable around the inner circumference of an unprovenanced disc-headed pin (Cat. No. 19) where tiny nicks were employed to retain the enamel inlay using the same technique to retain niello inlay on silver (Cat. Nos 10, 14). This is the only instance known to the writer of the use of this technique on Irish copper alloy work. The indebtedness of this corpus of copper alloy objects to the silver ones may in fact be illustrated by the fact that many of them show distinct signs of tinning; reflecting what may have been a desire to mimic also the colour of the more exotic silver.

\(^{55}\) See Newman 1995, 23-5 for discussion.
\(^{56}\) O’Kelly 1961; Raftery 1984, 269-273
4.13 Place of Production

At the outset of this research it was hoped that close examination of the worked surfaces might allow the work of individuals or indeed workshops to be isolated, however, following microscopic study of the worked surfaces, strong technical and stylistic arguments can be made to support the view that these objects are not the product of a single workshop (contra Youngs 1989). Although these objects were produced by artisans with similar skills and a mutual direction of art, they are unlikely to represent the products of the same workshop or indeed region, rather, the fine degrees of differentiation are indicative of contemporary manufacture in diverse areas (Werner 1970; Capelle and Vierck 1971; Hines 1984; Campbell 2009, 263). Curta (2005, 124) suggests that the dissemination of objects can be attributed to three types of movement (1) movement of the objects themselves through gift–giving or trade; (2) movement of models of objects, including templates for the reproduction of ornamental patterns; and (3) movement of craftsmen, carrying manufactured objects or models.

Indeed the evidence of the vernacular law codes, though referring to a later period, implies that craftsmen did indeed travel to the patron who employed them, at least during the eight century. These sources may however preserve earlier traditions regarding the obligations due to fine metalworkers. When referring to the status and rights of the highest kings, the eighth-century tract Críth Gablach mentions that every craftsman who makes goods for a lord or for the church, half maintenance (compulsory hospitality) is paid in respect of each according to the good(s) which he makes, ‘cach dán dogní aicdi flatha nó ecalsa folongar lethfholug a míad cháich asa aicde dogní’ (Binchy 1941, 19 §33 ). A fragment from another pre-ninth century tract which refers to payments discusses that the maintenance of lucht naeladna (people of craft) lasts ‘in airet béte ag denum na haicde’, for as long as they are making the manufactured objects (Binchy 1979, 2107, 36-7 cited in C. Swift 2013, 10).

4.14 Archaeological Evidence for Production

As discussed above, evidence for workshops in Ireland and Britain during the period AD 300-500 is sparse, as is evidence for artefacts used in the metalworking process itself in the form of moulds, crucibles, tuyère and hearth lining or indeed the tools
used to execute the decoration (Campbell 1996, 123). As a consequence, evidence for the manufacture of objects in the Insular Military Style is exceptionally rare and is limited in the main to the projecting-headed pin series. Fortuitously for this study, this ‘sparse evidence’ includes fragments of a projecting disc-headed pin from Garranes, Co. Cork (Ó Riordáin 1942). The significance of this find is marked by the fact that these fragments represent the only known evidence for the manufacture of projecting-headed pins outside of Scotland. The enclosure at Garranes is traditionally identified as Rath Raithleann or Raithliú, a royal site of the Uí Echach Muman, associated with Eóganacht Raithlind. The evidence for highly accomplished metalworking at Garranes is in keeping with this élite status. Moreover, the third quarter of the fifth century AD represents the floruit of Eochu, which corresponds with the latter end of the date range proposed for this style (Wailes 1982, 7–8; 1995; Kelly 2010, 47, 50).

Ó Riordáin’s excavations revealed extensive metal-working debris and he argued that:

All the evidence of the finds points to a specialised occupation of craftsmen engaged in metal-working and allied pursuits (1942, 141) … [it] was occupied during the latter half of the 5th and the early part of the 6th centuries by a community of craftsmen who had trade relations and interchange of artistic motifs with Gaul and Britain (ibid. 143).

Among this evidence were five fragments of a projecting disc-headed pin, fresh from the casting mould (Figure 4-3). Casting seams are visible on the front of the disc-head and directly opposite on the back; these casting seams continue down the sides of the pin and are clearly due to molten metal having entered the joints at the sides where the two halves of the mould came together. This unusual casting technique is typical of provincial Roman workshops and provides evidence of far-ranging contacts and the exchange of technology and techniques at this site (Laing 1985, 269-70).

There is some evidence for the small-scale melting of metals and the fabrication of artefacts in Scotland. Evidence for the production of hand pins is known from Loch na Beirgh, Lewis; Eilean Olabhat, North Uist; Upper Scalloway, Shetland; Gurness, Orkney and Scatness, Shetland. At Loch na Beirgh, Lewis, two-
piece moulds for undecorated hand-pins and proto hand-pins were found in contexts dating from the third to the fifth centuries AD (Harding and Gilmour 2000, 62-3, Table 2; Harding 2000, 25-6).

Figure 4-3 Unfinished projecting disc-headed pin from Garranes. Overall length, 80.0mm, diameter of face 15.0mm, thickness of circular head 5.0mm. Found in black deposit site D under large kerb stones. After Ó Ríordáin 1942, 95-6, no. 352, fig. 3.

The workshop discovered at Eilean Olabhat, dating to AD500 provided rare evidence for a workshop engaged in the manufacture of fine metalwork during this period (Armit 1996, 176). Metalworking debris uncovered included one hundred and fifty fragments of clay moulds for small pins, penannular brooches and significantly, a hand-pin with fingers in a straight line along its top. Pieces of tuyère and other metalworking by-products suggested the working of bronze and precious metals including silver. At this site there was however no formal kiln and it appears that a simple cobble-lined bowl hearth was sufficient for the small-scale production of highly-specialised metalwork in bronze and silver (ibid. 177). Significantly, while there is evidence for the manufacture of silver hand-pins in Scotland, there is no

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57 Also known as Loch na Berie
known site or equipment evidence for the working of non-ferrous metals in Ireland during this period.\textsuperscript{58}

Moulds from sites scattered across the Northern and Western Isles of Scotland clearly illustrate that simple and elaborate pin-forms were being made during this period and that different hand-pin types existed contemporaneously. At Loch na Beirgh, Lewis one of the moulds was for a large, possibly five-fingered specimen with a horizontal digital arcade (Figure 4-4). At Eilean Olabhat, North Uist (Armit 1996, 176) a mould was found for a pin with four fingers, whereas at Upper Scalloway, Shetland, (Sharples 1998, 161) and Gurness, Orkney the hand-pins had three fingers. Youngs (1989, 25-7) suggests that the presence of more than three fingers may be indicative of a later date in the generally accepted sequence of hand-pins however, radiocarbon dates from Scotland suggest that this sequence may need to be revised.\textsuperscript{59} The Upper Scalloway mould has been assigned to the sixth or seventh century AD (Sharples 1998, 171) whereas the Loch na Beirgh mould is radiocarbon dated to the third to fifth centuries AD (Armit 1996; Heald 2001, 690).

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{hand_pin_mould}
\caption{Hand-pin mould from Loch na Beirgh, Lewis. After Heald 2001, 690. Scale 1:1.}
\end{figure}

All known evidence for the production of hand-pins during the first half of the first millennium AD is concentrated in the Northern and Western Islands of Scotland This is curious given that no decorated examples have been found there; these are distributed at some distance away in Southern England and in the Irish East

\textsuperscript{58} Moulds and crucibles from Feerwore and Rathgreeen, Co. Galway may have an early date (Comber 2008, 134)
\textsuperscript{59} Duignan suggested as early as 1973 that in her opinion, the number of fingers was devoid of chronological significance (Duignan 1973, 220).
It might be suggested that these areas were acting as production centres for the distribution of plain, undecorated specimens to other parts of the British Isles, the decoration being applied there in specialist workshops according to the specifications of the commissioner but this would seem unlikely. Moreover, these Scottish sites have little evidence for trade and exchange unlike the imported ceramics and glass found in quantity at later production sites such as Dunadd further south (Heald 2005, 229-30).

4.15 Summary

The objects are clearly not mass-produced as the delicacy, minutia and complexity of ornamentation featured on many of them would have been almost impossibly precise and time-consuming to manufacture for general markets. Moreover, the decorative evidence such as the variety of motifs employed is suggestive of an individualistic style rather than the generality of decoration found on more mass-produced, contemporary metalwork in Roman Britain. This may reflect a continuation of the individual character of prestige, so-called Celtic metalwork from the earlier Iron Age in Britain and Ireland.

Although some variations in technique and ability are evident, in general, the work is technically sophisticated and was evidently produced by a well-equipped artisan with access to a good many different tools, and who had detailed knowledge of decorative techniques and fabrication methods current in the Provincial Roman West during the third and fourth centuries AD since many of these techniques do not appear in contemporary native work (Strong 1966, 67). The spatial distribution of Insular military Style art (see Chapter Six) suggests southern England as the place of origin and possible production, at least in relation to the silver examples, however, the attested exchange of specialist skills and techniques among high status metalworkers and their patrons makes it difficult and dangerous to assume a place of manufacture from archaeological provenance alone (Harding 2007, 238). The techniques of decoration employed are similar to those found on Roman silver and, when coupled with the lack of other Insular parallels and the complexity of many of the techniques employed the cumulative evidence makes it unlikely that these were merely copies of Late Roman techniques but rather that these silver objects were
made by silversmiths trained in the workshops of Late Roman Britain (Inker 2000, 38, 51).
Chapter 5 - Applied Decoration

The aesthetic value of applying colour, vibrancy and contrast to ornamental metalwork has long been exploited by Insular artisans. From the fifth century BC the natural red/pink hue of coral, *Corallium rubrum* played an increasingly prominent role in the decoration of fine metalwork (Champion 1976, 29; Jope 1995, 403). This was quickly joined by an ever-increasing array of man-made vitreous and metallic-based forms of applied decoration including enamel and niello inlays, silvered, tinned or gilded surfaces and occasionally, attached decoration in the form of inset glass ‘gems’. The genesis of Insular Military Style art marks a continuation of this well-established Insular tradition with most examples invariably featuring one, or more of these forms of applied surface decoration.

Following Henry’s (1936, 1954, 1965) publications on Insular enamelling, Bateson’s (1981) study of Roman-period enamels from Britain, remains the most comprehensive treatise on the subject. Since then, research on inlay and overlay techniques and materials from the first five centuries AD has been limited to a small number of disparate archaeometric projects, some of which have fortuitously included objects from this corpus. Some recent discoveries from Britain have also been scientifically evaluated by the PAS. While individual assessments such as these are useful, until contextualised and drawn together in a structured and focused manner the analysis of individual objects can only ever make a limited contribution. To this end, Chapter Five provides a comprehensive treatise on the full range of surface decoration employed on the Insular Military Style. Beginning with an outline of the various methods employed, it will discuss the composition of inlays, the sourcing of raw materials, the choice of metal substrate, the method of application and the methods used to retain the inlays in place.

5.1 Methods and Examination

Due to a number of factors including the wear and tear of everyday use, damage and corrosion associated with deposition in the ground or in water, poor conservation and

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60 Although Bateson (1981, 60-1) mentions silver and bronze hand pins, he accepted their traditional post-Roman date and consequently excluded them from his corpus of Roman period enamel. Henry (1954, 1965) did not have access to the results of modern scientific analysis when writing, nor was she aware of more recent discoveries from Late Roman contexts in Britain.
inadequate storage conditions, applied decoration often has a poor survival rate and often only minuscule, microscopic, traces remain *in situ*. Moreover, as many of these objects are in effect ‘national treasures’ as such, permission is unlikely to be granted for the removal and destruction of even a portion of the remaining inlay material as demanded by more quantative methods of analysis such as AAS, even in instances where there is sufficient material available for sampling. As a result, the present investigation has relied on equally effective non-destructive forms of analysis including visual and microscopic examination of the decorated surfaces and, where possible, specialist XRF analysis. While scientific analyses such as XRF can elucidate the chemical constituents and mechanical properties of applied decoration, the value of simple optical examination should not be under-estimated. This basic methodology is particularly useful in instances where there is insufficient inlay material available for scientific analysis and, when properly employed can provide a good, general overview of material characteristics including colour, the effects of weathering, and the efficacy (or not!) of the various methods employed to ensure that the applied decoration adhered satisfactorily to the metal substrate Microscopic examination allows for a more detailed examination of decorated surfaces and this methodology is particularly effective in instances where only minute traces of applied decoration remain *in situ*.

![Figure 5-1](image)

Inlay types identified visually, microscopically and through surface XRF analysis on objects decorated in the Insular Military Style.

Applied decoration identified during visual and microscopic examination of the corpus was subjected to non-destructive specialist analysis using a non-dispersive
XRF spectrometer. Inlays and surface decoration were identified on the basis of the quantitative values returned. The dominant form of applied decoration is enamel inlay and this is true of both silver and bronze objects (Figure 5-1). Niello was less commonly applied and though it has been suggested that niello inlay might be present on the anthropomorphic mount from the River Shannon (Cat. no 30a), niello could not be positively identified (contra Youngs 1989, 27). Tinning is the dominant form of applied surface decoration and naturally, it is only featured on bronze specimens. Often objects feature more than one form of applied decoration, usually a combination of tinning and enamel. Instances of artificial surface patination using a hitherto unknown lead/tin/zinc compound have been noted on Cat. Nos. 17, 23, 30a.

5.2 Inlay Types

5.2.1 Enamel
Opaque red glass, commonly referred to as enamel, is the most common form of applied decoration and has been identified on some 65% of the assemblage. Enamel has been variously defined as a ‘colourful, vitreous material applied as a surface decoration to metalwork’ (Maryon 1971), a ‘vitreous substance applied to a metal base and fused to it by the application of heat’ (Bateson 1982) and perhaps most comprehensively by Stapleton et al (1999, 913) who define it as ‘glass or glassy decoration on a metal substrate which has been emplaced by heating to the plastic condition, irrespective of the precise nature of the bond with the underlying metal.’ The defining characteristics of ‘true’ enamel then are that it is vitreous in nature and that it is set in place by the application of heat. Traditional enamel is made from a compound of flint or sand, red lead, soda and potash which, when melted together, produces a colourless glass with a blue or greenish tinge. The resultant soda-lime-silica matrix, known as a flux or frit, provides the base from which coloured enamels are made. Metallic oxides of lead and copper are then added to the molten flux to create the desired colour and also to scatter the light and render the glass opaque. Once cooled, the resultant slabs of coloured enamel are broken up and rendered into a fine powder using a mortar and pestle or rubbing stone before being washed and spread onto the metallic base using a spatula or possibly even a knife blade. This was heated in an enamelling kiln or over an open fire assisted by the use of bellows or a
blowpipe until the powdered enamel softened sufficiently to flood the area it was intended to fill (Hughes 1972; Maryon 1971, 169; Henderson and Freestone 1991).

In general, most metals can be enamelled although the melting point of the metal substrate must be higher than that of the inlay that is being applied to it. When attaching the enamel to the metal substrate the enameller had to consider both the chemical composition and the relative melting point of both inlay and metal. Enamel glass melts in the range of 650-700 °C which is at least 100 °C below the melting point of the most common alloys used in Insular metalworking during the early centuries AD (Bateson 1981, 109; Bateson and Hedges 1975, 185). Enamel, with its lower melting point must ‘wet’ the metal thereby making two separate parts, the metal base and the vitreous inlay, come together to form a secure and permanent bond. The addition of lead reduces the surface tension and viscosity of the enamel glass producing a well-flowing, well-wetting glass (Bateson and Hedges 1975, 187-9; Hughes 1972). Lead also allows the enamel to remain softer for longer, increasing the working period of the enamel (Henderson and Freestone 1991, 65). On cooling, the difference in thermal expansion must not be as much as to cause detachment or disintegration of the enamel. Indeed, it is best if the rate of expansion of both metal and enamel are closely matched otherwise, after applying the required heat, the enamel can begin to crack or craze if the metal contracts decidedly less than the enamel upon cooling (Bateson and Hedges 1975, 186; Bateson 1981, 74-77). Once fused in place, the enamel was most likely ground down to give a flat surface to the object which was then possibly re-fired to give a ‘fire polish’ appearance, and occasionally traces of this polishing survive in the form of parallel striations on the surface of the enamel (Bayley 1987, 9). To finish, the surface would have been filed smooth and then polished with jewellers rouge.

5.2.2 Metals Suitable for Enamelling

Enamel requires a temperature of more than 650°C to melt therefore all metals which have a melting point higher than this can be enamelled. Copper (1083°C) and its various alloys, including bronze are eminently suitable for receiving this form of inlay. However, alloys of silver require a high degree of skill and technical expertise to enamel successfully. For example, the melting point for pure silver is 960°C while for a silver alloy such as sterling silver (92.5% silver and 7.5% copper) the melting
point drops 799°C. It is vital therefore for the enameller to be aware of the precise composition of the alloy in order to be able to enamel effectively.

5.2.3 Chemical Composition of Insular Enamels

Compositional analyses of ancient enamels have revealed that three distinct types of enamel were in use in Ireland and Britain during the first half of the first millennium AD (Table 5-1). High lead, high copper, ‘cuprite’ or ‘sealing wax’ opaque red glass was typically of Insular Iron Age Celtic metalwork specifically horse-trappings and weaponry (Johns 1996a, 199). Hughes’ (1972) treatise on the opaque red enamel of the Iron Age has established that the brilliant ‘sealing wax’ colour that is so characteristic of Iron Age enamels was produced through the addition of lead to the frit. Lead, when applied to bronze objects, acting on the copper in reducing conditions produces crystals of cuprous oxide giving the enamel its brilliant sealing wax red colour, though one which was quite prone to decay (Bateson 1981, 72). Roman red enamel introduced into Britain around the mid first century AD shares a basic chemical similarity with these opaque red Iron Age enamels and is also derived from soda-lime glass. It is distinguished, however, by significantly lower levels of copper and lead-oxide and features a more extensive colour palate.

<table>
<thead>
<tr>
<th>Enamel Type</th>
<th>% CuO</th>
<th>% PbO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insular Pre-Roman Enamels</td>
<td>5-10%</td>
<td>20-30%</td>
</tr>
<tr>
<td>Roman Enamels</td>
<td>1-2%</td>
<td>&gt;10%</td>
</tr>
<tr>
<td>Xanten type Enamels</td>
<td>9-42%</td>
<td>32-70%</td>
</tr>
</tbody>
</table>

Table 5-1: Copper-oxide and lead-oxide compositions

While visually, there is little to differentiate between these different enamels, compositional analysis has revealed that from the mid-fourth century the red inlay material employed on some Insular metalwork was no longer based upon the colouration of a purpose-made soda-lime- silica glass as described above. As
discussed in Chapter Four, excavation of second-century AD layers at Xanten (Nordrhein-Westfalen, Germany) revealed the existence of a simple yet sophisticated chemical method for refining debased silver to a very high degree of purity (Figure 5-2; Rehren & Kraus 1999, 265–71). Evidence for the re-use of the by-products of this cupellation technique by Insular silversmiths is provided indirectly in the marked compositional similarity between the colourful, glassy crucible slags produced as a by-product of this metallurgical process and the red ‘enamel’ inlays on some Celtic and Anglo-Saxon metalwork (Plate 5-1; Stapleton et al 1999, 919).

A high degree of heterogeneity was noted with objects typically displaying a high lead/silica-oxide composition, and most significantly, they featured negligible amounts of soda, less than 0.2% in most cases (Stapleton et al 1999, 914). These compositions stand in stark contrast to earlier Iron Age and Roman period enamels which generally feature higher silica, and significantly lower lead values (See also Hughes 1987, 10). The lack of soda-lime-silica components makes it unlikely that their production was linked to contemporary glass industries in Ireland and Britain, while their zinc and tin content suggests that they are composed of recycled bronze or metallurgical by-products such as litharge. The earliest evidence of its re-use as an inlay occurs on a set of bronze enamelled pins found in a Roman villa of second/third century date in Wange, Vlaams-Brabant, Belgium (Rehren & Kraus 1999, 272; Wouters 1995, 289–93). In Britain, excavations of first century contexts at Chapel Street, Chichester produced a number of flat-bottomed crucibles that had been used
as parting vessels in silver-refining. The crucibles contained red glass which analysis showed was compositionally comparable with the glassy slags in the silver-refining vessels from Xanten. Justine Bayley (2003, 46-7, fig. 3) concluded that in this instance, the red glass in the crucibles was not a deliberately made red enamel but a by-product of silver refining and that the red inlay was unlikely to have had any association with enamelling on the site since ‘Romano-British enamel was only applied to copper alloys and not to precious metal’. Indeed, enamelling on silver is extremely rare in provincial Roman metalwork as due to its comparatively low melting point, silver was more difficult to enamel than copper alloys (Johns 1996a, 199). Moreover, the thickness of metal required for champlevé enamel tended to favour the use of a ‘cheaper’ metal such as copper alloy (Buckton 1982, 102).

This assemblage of Insular Military Style art includes some outstanding examples of enamelled silver dating to at least the mid fourth century AD suggesting enamelled silver particularly appealed to the taste of indigenous élites who both commissioned and wore it and that enamel was applied to Romano-British metalwork (contra Bayley 2003, 46). The earliest dated occurrence is on the silver pin from Oldcroft, Gloucestershire (Cat. No. 1) for which the associated coins suggest a date around AD 359. A Xanten-type glassy matrix has also been identified on the Londesborough Pin (Cat. No. 15), suggesting that knowledge and use of this inlay and the associated technology spread relatively quickly across the provincial Roman west to Britain and Ireland (Table 5-4; Stapleton et al 1999; Freestone 2001). Being extremely rich in lead oxide (c. 70%) and low in silica (c. 20%), this particular inlay compound had a low melting temperature and was quite free-flowing and fluid in a molten state. These characteristics would have rendered the ‘enamel’ particularly suitable for inlaying on silver and would also have minimised the risks to the delicate ornament during the enamelling process. As noted above, silver has a melting temperature of about 960°C as opposed to 1080°C for copper, a trait that renders it particularly susceptible to damage in the case of accidental heating during the process of applying an inlay. The application of the inlay was the last step in the decorative process prior to the final polishing and finishing of the worked surface and all necessary precautions to preserve the

61 BM 1973.8-1.1. Unpublished analysis by Ian Freestone, 2000. (See also Rehren & Kraus 1999)
laboriously applied fine-line ornament would most surely have been taken. The use of an enamel inlay requiring lower temperatures would have minimised any risk to the delicate ornament during the enamelling process.

XRF analysis of silver and bronze objects from the NMI has tentatively identified the use of a similarly high-lead compound (Table 5-2). Comparison of the analysis of the metal substrate with the analysis of the inlay material allows reasonable deductions to be made, particularly in relation to lead which does not occur in quantity in any of the silver or bronze objects examined. It was determined that the lead values returned must therefore relate to the inlay, and not the metal substrate, suggesting that the inlay is most probably a by-product of the same silver-refining process (Dr. Paul Mullarkey, Pers. Comm., April 2009). Consequently, it may be argued that both the fine silver and red inlays that characterise this corpus are the products of small workshops operating outside of Imperial control or on the periphery of the Empire. For workshops such as these it was economically viable to recover relatively small amounts of silver on site using this for refining debased silver of unknown composition. It is also possible that this colourful accretion was traded inter-regionally for use as an inlay material.

Figure 5-2 Colonia Ulpia Trainna, Xanten.
5.3 Niello

Niello, derived from the Latin *nigellum*, describes a dark, lustrous inlay material with blue/black metallic tones that can be composed of sulphides of silver, copper or lead. Although there is evidence for pre- and post-Roman traditions of niello work, it is widely considered an inlay material of the Roman period: from the first century AD niello was extensively employed as an inlay on gold, silver, silver gilt, gilt or tinned bronze ornamental metalwork, silver plate, *militaria* and horse trappings.\(^6\)

Niello is comparatively rare on gold, silver and bronze jewellery and where present, it appears confined to fourth century AD *personalia* (Healy 1999, 137; Oddy, Bimson and La Niece 1983, 29). Unlike enamel which is vitreous, niello is metallic in base. The production of niello involves a chemical process; specifically, burning metal filings of either copper or silver in the presence of sulphur to form a metal sulphide (Moss 1953, 49). Compositionally, Roman period niello which invariably consists of a single metal sulphide, usually composed of the same metal as that of the object that it decorates *i.e.* pure silver sulphide is usually inlaid on silver and copper sulphide on bronze and brass (Oddy, Bimson and La Niece 1983, 30, 34). There is no technical advantage to this, and its use probably reflects the use of the scrap metal most readily available in the workshop to the craftsman. Raw niello cannot be stored for lengthy periods and it is prone to deterioration, especially in damp conditions; therefore it is likely that, to ensure the best results, niello was made as and when required, by recycling the filings or *lemel* produced in the course of engraving silver and bronze.

When compared to alternative inlay materials such as enamel, there are practical difficulties in achieving a good finish on silver and on copper sulphide niello. Silver sulphide niello could not have been applied molten because when it is melted in air under normal oxidising conditions it decomposes or partially reverts to metallic silver before it reaches its melting point of 861°C. Copper sulphide on the other hand has an even higher melting point of 1108 °C, a temperature which is higher than that of the silver and bronze substrate into which it might be inlaid. Single sulphide niello composed of silver or bronze does however become quite

\(^6\) See La Niece (1998, 49, 52) for a discussion on niello work dating to at least the beginning of the fourth century BC.
malleable and plastic at about 600 °C. Once softened, it can be pressed into the engraved cavities, then its surface was burnished, filed and polished to a reflective, permanent, uniform colour which could range from dark grey to deep black depending upon the alloy composition (La Niece 1998, 54; Maryon 1971, 161-2; Moss 1953, 59-60).

Niello has been identified on two Insular Military Style objects, the proto hand-pin from Welton-le-Wold, Lincolnshire and a silver disc-headed pin provenanced to Ireland (Plate 5-2). Examination of the now empty inlay fields on the silver pins from Newtownbond, Co. Longford, Denton, Newcastle-upon-Tyne and Tripontium (Caves Inn), Warwickshire (Cat. No’s 5, 7, 10) by the writer suggests that these were also originally inlaid with niello. Niello was extensively employed from the first century AD in Roman Britain as an inlay material, and like silver its occurrence in Ireland during the early centuries AD is exceptionally rare; in fact the positive identification of niello inlay on the silver disc-headed pin in the National Museum of Ireland through the XRF analysis initiated by this thesis is particularly noteworthy as this marks the earliest known instance for the use of niello inlay in Ireland. Susan La Niece (1983, 279) has conclusively demonstrated that niello from the first to fifth centuries AD is invariably single sulphide niello, earlier and later niello-types are of mixed sulphides and more technically sophisticated. A clear compositional distinction exists between Roman period niello and later niello compositions. This leads to the observation that the single sulphide niello identified on the Welton-le-Wold pin (Cat. No. 3) suggests that the pin must date to between the first and fifth centuries AD.

\footnote{950°C}
\footnote{La Niece has determined that X-ray diffraction analysis using micro-samples in a Debye-Scherrer powder camera which allows the identification of the sulphide mineral form was the best method of determining the character of these inlays without causing visible damage to the decoration especially when combined with X-ray fluorescence (XRF) or energy-dispersive X-ray (EDX) analysis to confirm the elements present (La Niece 1998, 52).}
5.4 Artificial Patination

An unusual dark accretion was noted by the writer on two bronze specimens from this corpus (Cat. Nos 23, 25, 30a). This was subjected to compositional XRF analysis, conducted to determine if it was an artificial inlay/patination or the product of natural patination processes (Plate 5-7). Dark patinas on Insular metalwork have previously been remarked on by Justine Bayley (2004, 16) who contends that ancient bronze and silver personalia may have been intentionally allowed to darken through natural oxidation as often there is no evidence in the form of wear or reduced relief to suggest that their original, highly polished state was maintained over time.65 XRF analyses of the blackened areas of the two objects from this study suggest that they were deliberately patinated (sulphur is not present and therefore the compound is unlikely to be niello/metal sulphide) using a hitherto unknown compound of lead/tin/zinc that cannot be the result of post-deposition corrosion (Table 5-3). However, that this occurs at specific points on the hoop and pin of the

65 Contrasting bands of light and dark have been observed on a Bronze Age penannular tress ring for example, and in that instance the dark zones were determined to be the result of natural patination of the silver-rich gold substrate (Plate 5-6; Meeks et al, 2008).
brooch, (Cat. No. 25) confirms that in these instances the discolouration is not the result of natural processes such as oxidation. Indeed, when viewed under microscope, the black accretion appears to have been deliberately applied to specific zones on the metal substrate to provide a colour contrast between it and the golden bronze relief decoration. This is supported by the fact that this compound occurs on two unrelated objects, one was part of an antiquarian collection while the other specimen was recovered from a river in the mid-twentieth century. The composition and appearance of the decorated surface is thus far unparalleled on contemporary metalwork.

Plate 5-3 Black inlay on an unlocalised zoomorphic penannular brooch provenanced to Ireland, Cat. No. 25 (left), and the anthropomorphic mount from the River Shannon, Cat. No. 30a (right).

The vogue for black decoration on contemporary Roman bronzes and silver is well attested. Indeed the deliberate surface patination of copper alloys to produce a dark, blackened bronze is known from as early as the Mycenaean period. Roman Corinthian bronzes and modern Japanese shakudo are all produced by similar processes where a specific alloy of copper containing small amounts of gold, silver and sometimes arsenic is immersed in a solution of mineral salts to produce a purple/black surface patination (Craddock 1982, 71-72; Giumlia-Mair 1994, 426-8). It is possible that Insular artisans may have adopted and adapted this fashion into their repertoire using an amalgam of lead/tin and zinc to blacken the worked surfaces of the bronze. Youngs (2007, 91-2) has noted the presence of a dark organic substance, possibly bitumen, inlaid in the stamped decoration of a sixth/seventh century unprovenanced gold hoop from Britain. Similarly, a black organic inlay occurs in the eyes of the hook-mount heads on the great hanging bowl from Sutton Hoo (Bruce-Mitford 1983, 302). This study has conducted the first compositional
analysis on this unusual inlay material and was the first to comment on it. This compound undoubtedly requires further research and its identification here further underlines the importance of this remarkable and exquisite assemblage.

Plate 5-4 Bronze Age penannular tress ring, British Museum register no. 1985, 5-21,1. Image © The Trustees of the British Museum.
<table>
<thead>
<tr>
<th>CAT. NO.</th>
<th>ARTEFACT</th>
<th>COMPONENT</th>
<th>COPPER</th>
<th>TIN</th>
<th>ZINC</th>
<th>LEAD</th>
<th>SILVER</th>
</tr>
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<td>CAT. NO. 14</td>
<td>Silver disc-headed pin</td>
<td>Dec face</td>
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<td>3.3</td>
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<td>8.8</td>
<td>80.6</td>
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<td>Silver proto hand-pin</td>
<td>Lower crescentic plate inlay</td>
<td>2.4</td>
<td>1.8</td>
<td>0.1</td>
<td>77.5</td>
<td>16.8</td>
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<td>CAT. NO. 11</td>
<td>Silver hand-pin</td>
<td>Lower crescentic plate inlay</td>
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<td>3.2</td>
<td>0.2</td>
<td>50.8</td>
<td>42.6</td>
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<td>Terminal inlay</td>
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<td>14.1</td>
<td>0.1</td>
<td>61.9</td>
<td>0.1</td>
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<td>CAT. NO. 5</td>
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<td>Decorated face</td>
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<td>0.0</td>
<td>1.8</td>
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<td>CAT. NO. 30(a)</td>
<td>Anthropomorphic Strip</td>
<td>Shan head nose</td>
<td>82.3</td>
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<td>3.1</td>
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<td></td>
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<td>R. Shan forehead</td>
<td>67.4</td>
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<td></td>
<td></td>
<td>R. Shan forehead ii</td>
<td>41.8</td>
<td>23.0</td>
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<td>8.2</td>
<td>1.3</td>
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<td>CAT. NO. 30(b)</td>
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<td>Inlay strip ii</td>
<td>88.6</td>
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<td>Bronze penannular brooch</td>
<td>Brooch terminal enamel</td>
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<td>6.1</td>
<td>0.1</td>
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<td>5.3</td>
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<td>Head enamel</td>
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<td>92.8</td>
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<td>Side of head</td>
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<td>Head decoration</td>
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<td>0.6</td>
<td>12.0</td>
<td>0.4</td>
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</tbody>
</table>

Table 5-2 XRF Elemental composition of all inlays and overlay noted during visual and microscopic examination of objects held in the National Museum of Ireland, Dublin
5.5 Tinning

After enamelling, tinning is the most common form of applied decoration on Insular Military Style metalwork. Tinning involves the application of thin coating of pure tin or a tin-rich alloy to the metal surface. Due to its low melting point, tin provided the obvious choice to augment the decoration of both plain and enamelled bronze objects. Tin overlay was applied by either rubbing part, or the entire surface of a heated object with a rod of tin, or alternatively by first fluxing, and then dipping the whole object in molten tin (Tylecote 1986; Oddy 1980). Whichever process was employed, tinning was applied after enamel as otherwise the tin would have burned off during the enamelling process. In fact, tinning most likely completed the work on the enamelled object (Bateson 1981, 85). While practically tinning acted to protect the bronze substrate from corrosion, it seems more likely that the popularity of tinning is related to a demand for cheaper imitations of the highly-prized, precious metal, silver. This supposition is supported by Pliny (Bailey 1932, 67, bk 34, 160f) who notes that ‘a method has been devised in Gaul for plating copper articles with pale lead [tin] so skilfully that they can scarcely be distinguished from silver.’

Plate 5-5 Zoomorphic penannular brooch featuring tinning on ‘ears’, Cat. No. 23.
Table 5-3 Elemental composition of a black accretion noted on select bronze specimens in the Insular Military Style

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>ARTEFACT</th>
<th>COMPONENT</th>
<th>COPPER</th>
<th>TIN</th>
<th>ZINC</th>
<th>LEAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat. No. 25</td>
<td>Bronze penannular brooch</td>
<td>Brooch body</td>
<td>84.56%</td>
<td>12.63%</td>
<td>0.55%</td>
<td>1.55%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pin</td>
<td>84.42%</td>
<td>12.03%</td>
<td>0.87%</td>
<td>1.64%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hoop decoration</td>
<td>66.94%</td>
<td>23.28%</td>
<td>0.54%</td>
<td>4.37%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pin Inlay</td>
<td>69.74%</td>
<td>20.69%</td>
<td>0.96%</td>
<td>5.32%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hoop Inlay</td>
<td>63.80%</td>
<td>21.41%</td>
<td>0.57%</td>
<td>8.93%</td>
</tr>
<tr>
<td>Cat. No. 30b</td>
<td>Bronze anthropomorphic mount</td>
<td>strip i rev</td>
<td>88.62%</td>
<td>7.23%</td>
<td>1.292</td>
<td>1.39%</td>
</tr>
<tr>
<td>Cat. No. 30a</td>
<td>Shan head nose</td>
<td></td>
<td>82.37%</td>
<td>11.19%</td>
<td>0.48%</td>
<td>3.10%</td>
</tr>
<tr>
<td>Cat. No. 30a</td>
<td>forehead</td>
<td></td>
<td>67.48%</td>
<td>16.73%</td>
<td>0.39%</td>
<td>6.95%</td>
</tr>
<tr>
<td>Cat. No. 30a</td>
<td>forehead ii</td>
<td></td>
<td>41.87%</td>
<td>22.97%</td>
<td>0.16%</td>
<td>8.20%</td>
</tr>
</tbody>
</table>

Table 5-4 Elemental composition of enamel inlays on the Londesborough and Oldcroft Pins (Cat. No’s 14, 1; Stapleton et al 1999, Freestone 2001)

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Object</th>
<th>SiO²</th>
<th>TiO²</th>
<th>APO³</th>
<th>FeO</th>
<th>MgO</th>
<th>CaO</th>
<th>Na²O</th>
<th>K²O</th>
<th>CuO</th>
<th>ZnO</th>
<th>SnO²</th>
<th>PbO</th>
<th>P²O5</th>
<th>Cl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat. No. 11</td>
<td>Disc-headed pin</td>
<td>16</td>
<td>&lt;0.2</td>
<td>3.3</td>
<td>1.2</td>
<td>0.6</td>
<td>0.3</td>
<td>&lt;0.3</td>
<td>0.8</td>
<td>2.8</td>
<td>&lt;0.2</td>
<td>&lt;0.7</td>
<td>75</td>
<td>&lt;0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Cat. No. 2</td>
<td>Proto hand-pin</td>
<td>c.22</td>
<td>c.2.5</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>0</td>
<td>&lt;1</td>
<td>c.3</td>
<td>c.2</td>
<td>c.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Although many bronze objects from the assemblage show evidence of tinning, in many instances, only microscopic traces remain in situ and it is uncertain how much of the surface area was originally tinned. It remains unclear whether the reserved areas between the enamelled cells, areas which incidentally were an integral part of the design, were also tinned or whether they remained undecorated thus creating a tri-chrome effect of golden bronze, silver/grey tinning and (red) enamel inlay. There is some evidence however that tinning was employed quite sparingly in some instances to accentuate certain areas such as the ‘ears’ on the penannular brooch in Plate 5-5.

5.6 Cell Morphology

While all cell-types on this assemblage have been cut out of the metal base champlévé style, nonetheless, a wide variety of cell types can be distinguished within these based on the manner in which the recesses were prepared viz. stamping, casting, drilling and cutting or engraving. For the most part, the inlay cells are delineated by the designs or patterns they bear. The overall shape of larger cells (interspersed with fine-line relief ornament) is dictated by the morphology of the object they decorate viz. the lower plate on proto hand-pins and hand-pins or the central roundel of disc-headed pins and the sub-triangular zoomorphic terminals of penannular brooches. More regular, rectangular-framed cells occur on objects that have broader tracts of metal available for decoration including the shanks and vertical edges of disc-headed pins. The depth of individual cells is difficult to measure accurately but from the objects examined thus far they range from 0.5mm to 2mm in depth. Perhaps unsurprisingly, hand-cut cells are generally deeper and less uniform than pre-cast examples. Maryon (1971, 184) has calculated that the optimum depth for the recesses is anywhere between 0.5mm and 1.27mm when enamel is to be employed as it is likely to flake off if applied at a greater depth than this.
5.7 Champlevé and Cloisonné

Enamelwork is generally distinguished on the grounds of how the cell is made. Two types predominate, *champlevé* and *cloisonné*. Champlevé cells are cut or lifted out of the ground of metalwork. Alternatively they may be cast as part of the object or stamped into the metal surface. Whichever method is employed, the defining characteristic of *champlévé* is that the cells containing enamel are positioned beneath the surface of the object. The Insular Military Style assemblage reflects the *champlévé* enamelling technique where exceedingly crisp, fine-line decoration circumscribes recesses or cavities that are inlaid with enamel (Maryon 1971, 171). Cloisonné differs in that the cell walls are composed of thin strips of metal soldered on to the surface of the object and the cells are situated above the surface of the metal (Bateson 1987, 3). Bateson (1981, 111) contends that all first to fifth centuries AD enamels, whether from Ireland, Scotland and southern England, have been enamelled in the *champlévé* technique and he distinguished three different *champlévé* techniques based on the manner in which the enamels were placed in the cell, viz. simple, complex and *millefiori* enamels (*ibid.* 88, 91). Following his nomenclature, Insular Military Style inlays are without exception of the ‘simple variety’ with each cell or field holding only one colour of enamel although the object may possess more than one colour.

The simplest method of making cells is to cast them as part of the object, a method that was very much a feature of mass produced Roman-period enamelled objects which were often cast with these hollows ready provided. In fact, Bateson’s survey (*ibid.* 119) noted tool marks on just ten per cent of the objects he examined. This is in stark contrast with the collated evidence for the Insular corpus where cast cells are unknown, and each and every specimen shows evidence of extensive tooling post-casting. When and as the metal cools, or the object cools, the bond between metal and enamel may break on larger cells; the creation of smaller cells therefore helped to retain the enamel in place (see below; *ibid.* 86). Some of the

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66 Both are modern terms which have been applied retrospectively to ancient enamels.
67 Complex enamels feature juxtaposed blocks of enamel in different colours without any metal dividing wall or septum. Millefiori enamel is composed of thin slices of patterned glass cut from a millefiori rod or cane. This is then attached to the metal substrate either by embedding it in enamel or by fusing it directly to the metal by applying heat.
inlaid cells are quite small *e.g.* drilled cells such as those found on the Oldcroft pin (Cat. No. 1) and in general, small cells do not require a holding device other than the cell walls themselves. The drilled, flat-bottomed, circular recesses on terrets from the Westhall Hoard and the Oldcroft pin (Plate 5-8) both feature small, central indentations suggesting that they were drilled out with a straight-edged bit that had a small central guiding point. However, the smooth concave surface produced by the use of a pump drill has proven ineffective at retaining the enamel inlay (Plate 5-9), and despite the diminutive size of the cells, few retain their inlay (Bateson 1981, 84). Indeed, often the only inlay which remains *in situ* is a tiny fragment trapped in the centre of the concavity in the depression or ‘pip’ where the pump drill originally rested on the metal, providing an effective if unintentional anchor point for the enamel inlay.

Other holding devices include vandykes, reserved laurel leaves and reserved zigzag lines in a narrow channel. Engraved designs including scrolls, peltas, tendrils and spirals also functioned as effective, though perhaps unintentional holding devices by creating narrow channels on the surface of the metal (Plate 5-6). Occasionally, deep, narrow grooves were engraved as borders to the main design and these too functioned as inlay cells.
Plate 5-7 Castletown Kilpatrick hand-pin, Cat. No. 11, featuring hand-engraved cells. Note the fragment of degraded enamel in central scroll.

Plate 5-8 Oldcroft Pin, Cat. No. 1, (left) and Westhall Terret BM Register no 1855, 0519.3 (right). Both specimens feature drilled circular cells (indicated).
5.8 Holding Devices

In general, the survival rate of inlays on this corpus is varied and in many instances the enamel/niello is degraded or has fallen out of the cell (Plate 5-7). A number of factors can affect the successful retention of inlays; cells which are too large or too shallow, cells which have no obvious holding devices, the nature of metal substrate, the chemical composition of the inlay and indeed, poor workmanship all affect the retention of inlays (Bateson 1981, 74-77). Moreover, cast metalwork is particularly unsuitable for the long-term retention of enamel, due to the inequalities in texture and minute air holes that are features of cast metalwork (Wilson 1971, 202). It is also suggested that enamel does not adhere well to bronze due to its tin content (Kilbride-Jones 1982). While enamel will hold for a time, especially the ‘soft’, high-lead enamels employed on this assemblage, they will inevitably begin to disintegrate and separate from the metal base in small flakes (Wilson 1971, 202). If the surface holding the inlay has not been treated in some manner, the inlay will not adhere sufficiently and will quite often ‘pop off’ as the metal contracts on cooling. Consequently, smiths devised a number of methods to attach inlays and to retain them in place. While a high survival rate is suggestive of good workmanship,
paradoxically poorly-crafted examples can often provide the best source of evidence for the technology and techniques used in inlay retention. For example, ‘keying’ of the base of the cell can only be established when it has failed to fulfil its function and has fallen away (Bateson 1981, 19-20, 83). It is also possible that some empty cells may never have held an inlay as the object was unfinished, however most prepared cells would have almost certainly held some form of inlay.

‘Keying’ generally refers to deliberate scoring or cross-hatching the base of the cell. A series of criss-cross incisions created a roughened ground which held enamel inlay in place much more effectively than a smooth surface, particularly in large cells (Wilson 1971, 202). Evidence in this corpus for the use of deliberate keying is limited to the debased silver disc from the Fosse way near Leamington Spa (Cat. No. 29). In this instance the thinness of the metal substrate required the use of a relatively delicate keying technique as the depth of metal involved was unsuited to the robust surface treatment observed on more substantial pieces. In all other instances on this corpus, there was no necessity to create a deliberate keyed surface as the process of hand engraving designs with a sharp graver or scorper resulted in sharp, angular troughs, peaks and ridges that were eminently suited to the retention of enamel inlay. All of the enamels featured on this assemblage are opaque. This is most probably for reasons of aesthetic i.e. to ensure that the roughly-cut substrate would not be visible through the inlay.

Surface methods employed to grip or ‘stitch’ an inlay in place are more easily discernible. Bateson (ibid 84) notes that inlays can be fixed or held in place by tiny chiselled notches, what Whitfield (1987, 83) refers to as ‘stitching’ around the edges of inlay fields. Moreover, he suggests that this technique is indicative of British manufacture. Second century enamelled vessels viz. paterae, cups and small bowls, many of which have a known British provenance, present the most useful enamelled objects for comparison with the Insular corpus, particularly in relation to inlay holding devices and techniques. The Linlithgow Patera 68 and the Braughing cup for example feature notched/toothed cell edges (Plate 5-10; Bateson 1981, 50-53). On Insular Military Style metalwork, this same stitching technique is employed on silver disc-headed pins e.g. Cat. Nos 14 and 15 and on an unlocalised bronze specimen

68 National Museums of Scotland register no. FR43
(Cat. No.19); significantly, this is the only instance known to the writer for the use of this technique on copper alloy objects from Ireland.

Applying niello in a softened state (see above) often results in poor adhesion between it and the metal base. Niello is a relatively fragile material which is easily damaged and indeed, much of the original niello is lost from objects which it originally embellished (Johns 1996a, 195). Roman and Insular artisans attempted to overcome this problem by applying niello into deep, narrow channels, typically border recesses or, like enamel, into cells with pre-roughened metal surfaces to provide keying (Plate 5-10) La Niece 1998, 50, 54). In addition to these two methods, visual inspection of a number of examples of Late Roman silver inlaid with niello reveals that tiny nicks were often cut into the uppermost edge of niello-inlaid cells in a further attempt to ‘stitch’ or hold the inlay in place (Plate 5-12). A similar technique has been employed on an Insular silver disc-headed pin (Plate 5-11; Cat. No. 14). Neither method results in a perfect bond with the metal substrate nor consequently; in many instances the niello inevitably works itself loose and is lost.
Plate 5-11 Micro-photography showing tiny nicks or ‘stitches’ that acted as holding devices for the original niello inlay, now lost.

Plate 5-12 Silver and niello-inlaid crossbow brooch in the British Museum. Tiny notches have been employed to hold the niello inlay in place (indicated).

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69 BM register no PRB 1881–1–25, 1
**5.9 Attached Decoration**

There is no extant evidence for the use of attached decoration on this assemblage, however, the hollow, thin-walled, central ‘finger’ on the Denton pin (Cat. No. 8) suggests that it may originally have held a moulded glass gem (Plate 5-13). These were relatively easy to produce and tend to occur in the most readily available colours of glass, a natural light blue-green and light or dark opaque blue (Johns 1996a, 79, 85-6; Strong 1965, 12-3).

Plate 5-13 Denton Pin Cat. No. 8, with hollow central bead which may have originally held a glass inset or gem.

**5.10 Colour Palette**

Although polychrome enamelwork in shades of red, blue, green, yellow, orange, black and white was a feature of the Roman period, this corpus features a limited palate of red enamel inlay with the occasional use of niello (Johns 1996a, 199).

Henry (1965) has argued that the predominant use of red enamel represented lack of technical skill among native artisans. This assertion was based on the premise that these were archetypically Irish objects however it is now accepted that these predominantly silver dress fasteners are Romano-British objects that most likely originated in south western Britain where the process of polychrome enamelling was most certainly known (Ó Floinn 2001, 2).

When considering the colour of an archaeological object it is important to remember that in many instances, objects are no longer their original, intended colour. The patina acquired by copper alloys over time for example can vary from
black to brown to dark green whereas the original colour would have been bright and golden. Inlays would have originally created a colourful, striking effect when both metal and inlay were in their original condition; however the original inlay is often missing or, in the case of red enamel, has degraded which renders it difficult to determine the original inlay colour (Bateson and Hedges 1975, 178; Allason-Jones 2011, 4). Copper oxide, present as the colorant in red enamel in a reduced state suspended in the glass is particularly susceptible to change as it oxidises quite easily. Consequently ancient red enamels have often degenerated to a pale ‘buffish’ green or a dull pea-soup appearance. A white, pale yellow or grey-green weathering product is also characteristic of these enamels e.g. the hand-pin from Tripontium, Warwickshire (Cat. No. 10) whose inlay has weathered to light yellow. All of the extant enamels identified on this assemblage are or were originally, opaque and red, with the exception of the Wace pin (Cat. No. 4) where the inlay appears to be translucent and amber-coloured (Plate 5-14). Although the red enamel now presents in a wide range of shades, it would be fruitless to describe them as in many instances they have been subject to the decay of time and in any case such colour classification would not serve any useful function.

Plate 5-14 The Wace Pin, Cat. No. 4.
5.11 The Significance of Colour

Modern perceptions of colour often tend to view its application as purely decorative, serving to enhance the aesthetic appeal of an object by providing richness, vibrancy and contrast on decorated surfaces. However, attributes such as sparkle, shine and hue, though they are commonplace today would certainly have been perceived as rare and special in the past (Hurcombe 2007, 114-5). These attributes are also part of what Gell (1998) calls, the ‘technology of enchantment’ where brilliance, luminosity and colour were employed to engage the viewer to specific ends. Consequently, the performance and perception of colour in the Late Antique Insular world in terms of its visual impact, symbolic connotations and meanings attached to it are also of relevance to this study. This is, after all, a vibrant, eye-catching corpus.

Colour is an integral part of an object, as important as its form or decoration, and vibrant and contrasting enamel and niello inlays, insets and gilds were employed to great effect to accentuate the natural colour and sheen of the metal base and also, to compliment the crisp, fine-line relief ornament. Panelled friezes of relief design provided a surface on which the reflected light could play while plain, polished areas such as the horizontal arcade of highly polished beads on the hand-pin series or the broad band which typically encircles the central ornamental frieze on disc-headed pins were clearly designed to exploit the reflective qualities of silver (Boardman 1996, 6). Heavily tinned surfaces would have reflected light in an equally eye-catching manner while cross-cut and chamfered ornament was specifically designed to make the surface scintillate and catch the light suggesting that surface embellishment in certain instances was intentionally heliotropic. The dark, lustrous, blue/black metallic tone of niello inlay also performed aesthetically, presenting contrasting shades of light and dark on the surface of metalwork, particularly when set against the brilliant pure whiteness of silver. Contrasts of light and dark epitomised the stylistic spirit of late Antiquity and a variety of methods were employed to achieve this effect on ornamental metalwork (Henig 1983, in Johns and Potter note 6, 30-32; Fulford et al 1989, 225). Opus interrasile, where the metal was pierced and broken up with openings to form see-through geometric and floral designs was commonly employed on silver and gold personalia or alternatively, black and white was obtained with the use of niello (Oliver 1996, 136). In fact, opus nigellum was considered particularly pleasing and was much used during the Roman
period to infill decorative patterns (Strong 1965, 20). On this corpus, the liberal use of red enamel appears to have been employed strategically to great effect on specific zones, usually on the heads of pins or the terminals of zoomorphic penannular brooches, emphasising and accentuating these zones and perhaps reinforcing their symbolism and importance.

Polychrome decoration was commonplace in Roman Britain from the second century AD. However, in Ireland, ornamental metalwork remained monochromatic up to the fifth century. Rather than representing a lack of native expertise, the rigid use of red inlays on this assemblage may refer to its restricted and symbolic use in the past. This restriction has been related to the martial, masculine attributes of the colour red and also its purported dynamic properties and magical powers (Jones and Macgregor 2002; Young 2006, 179; see also Davis and Gwilt 2008, 159). Red has a long and cross-cultural association with ritualistic use. In the Insular world for example, red ochre was employed as body paint in an Upper Palaeolithic burial from the Gower peninsula in South Wales while burials in Bronze Age barrows in Yorkshire also provide evidence for this practice (Grinsell 1975, 26 cited in Puttock 2002, 107; S. Aldhouse-Green 2000). For a visual signal like colour to be effective, it needs to be eye-catching and salient (Guilford and Dawkins 1991; Zahavi and Zahavi 1997). Red is the most common colour signal deployed in nature partly because it is highly contrastive and various studies have shown that humans find red an especially eye-catching colour (see e.g. Humphrey 1976, 95-98; Ratliff 1976; Bradshaw and Rogers 1993). The possible militaristic association of red and the dominance of its use on this corpus are noteworthy and merit further consideration. The meaning of a given colour is held in the world in which it is experienced, and in the affinities it shares with things within that world. In other words, colours can condense meanings and their hue can evoke powerful memories, sensations and emotions (Jones and MacGregor 2002). Red is commonly employed as a metaphor for blood; perhaps because humans experience the world phenomenally through their corporeal bodies (see e.g. Tilley 1999, 31-33). In most cultures, red is also associated with strong emotions such as anger, passion and violence (Gell 1998, 112), and as such it is frequently connected with martiality. In the Táin Bó Cuailnge for example, Fedelm predicts a forthcoming battle with the simple utterance ‘I see it crimson, I see it red’ (Kinsella 2002, 61; see also Giles 2008, 72). It is unsurprising then that
red was often associated with Celtic warrior deities and was included in their names *i.e.* *Dá Derga, Ruad RoFhessa* or *Cocidius* (M.J. Green 1984, 95; Ross 1992, 222-3, 411). The dominance of a single inlay colour *e.g.* red, on this corpus which is suggested to represent the trappings of an emergent warrior aristocracy may suggest that wearing red may have been considered a sumptuary privilege of the ruling, warrior classes and perhaps synonymous with authority.

**5.12 Summary**

A wealth of information may be gleaned by enquiring into the range of chromatic methods and processes employed on the Insular Military Style. Neither enamel nor niello has remained compositionally uniform across the centuries while the various methods and processes involved in their application have altered correspondingly. In general, these inlays and overlay exhibit great precision, delicacy and elegance and are markedly more ambitious and technically skilled than the applied decoration on other contemporary native metalwork. Moreover, a number of these processes are quite unique in an Insular context featuring innovations such as the re-use of high-lead raffination slags as inlay material, enamelling on silver, niello inlay, and perhaps the artificial patination of bronze. All this suggests that Insular Military Style acted as a conduit for the transmission of new technologies, techniques and styles into the Insular repertoire of decorative arts. Consequently, this corpus provides an exceptionally good sample base, not only to advance our understanding of the technical and artistic processes and methods involved in applying such decoration, it also demonstrates the wide-scale dissemination of the products of Late Roman technologies within and beyond the *limes* and, their adoption and use by late Iron Age Irish metalworking industries.
Chapter 6 - The Distribution, Context and Date of Military Style Art in Ireland and Britain

This chapter will consider the distribution of Insular Military Style art in Ireland and Britain, providing a detailed account of the context and date of the few provenanced specimens for which such information is available. The spatial distribution of just thirty-one objects, dispersed across southern England, Ireland and Scotland is difficult to interpret. Small clusters can however be identified in Somerset and Gloucestershire in the environs of the Bristol Channel, in Lincolnshire and in the Irish east midlands. The patterning revealed by the distribution map, such as it is, may reflect pre-existing and well-established interconnections such as political alliances, familial or kinship ties or trading networks between élite groups and individuals on both islands. It may also map groups with access to prestigious resources such as silver. The number of specimens deposited in dry land hoards and watery contexts also merits discussion. The second part of this chapter will consider, therefore, the shared social practices reflected in the practice of ritually depositing fine metalwork in the earth and/or water in the Insular world.

6.1 Limitations and Constraints in the Data

Commentary on the patterns suggested by the distribution map must acknowledge the limitations and constraints that have affected the writer’s interpretation and analysis of its significance. As discussed in the Introduction, not a single object decorated in the Insular Military Style has come from a securely stratified, archaeological context. Consequently, while general trends can be observed, the distribution map such as it is, cannot be said to satisfactorily portray the true extent to which this style may have penetrated the Insular world or indeed, the original context(s) in which this art performed. Even though uncontexted finds are of limited archaeological value, objects found in the course of controlled excavations can also incur problems of origin and manufacture. Small, ornate, precious metal artefacts such as these are highly portable and easily transported over great distances. Moreover, many show signs of repair and are heavily worn, suggesting that they may have been heirlooms, passed on over several generations and possibly moving from place to place before being finally deposited (Calinescu 1996, xii).
Figure 6-1 Distribution of Insular Military Style art in Ireland and Britain.
Therefore, the context in which they are finally found may not necessarily reflect the time and space in which these objects originally circulated. Archaeological visibility can significantly affect our perception of the past and the manner in which new discoveries can quite quickly alter our views is rather strikingly illustrated by a number recent finds from Southern England. These reflect the success of the PAS in encouraging metal-detectorists to report finds and to record them. Within the past ten years for example, new metal detected finds from Caistor, Welton-le-Wold and East Ravendale, Lincolnshire and Loughborough (Cat. Nos 27, 28, 24, 3) have broadened the distribution markedly and they have added an important body of material to this small corpus. It should also be noted that these new additions occur in known ‘hot spots’ for metal detecting activity in Lincolnshire and it remains to be seen whether a similar level of activity would produce a comparable level of new finds in other regions where this style is not yet known to occur. As discussed in Chapter Three, the environs of the Severn estuary have been identified as a primary centre for the development of both Insular Military style and the object types that it decorated viz. Class I zoomorphic penannular brooches, silver hand-pins and proto hand-pins. However, the recent additions to the corpus from Lincolnshire and its immediate environs suggest that the Insular Military Style has a clear spatial relationship with early Anglo-Saxon material and, moreover, that it represents the footprint of a group of Romano-British élites who were, as Leahy describes, ‘hanging on’ in Lincolnshire (Leahy 2007, 82-5). This observation has far-reaching implications for our understanding of the milieu in which this art was made and circulated and the role that it played in élite identity. In Lincolnshire, for example, the distribution of this art and Class I brooches occurs in areas where Anglo-Saxon immigrant groups had settled, suggesting that indigenous élites in these areas would have had good reason to prominently assert their ethnic identity and status (Green 2008, 29).

6.2 General Distribution

Broadly speaking, this art horizon occurs in discrete areas of Ireland and Britain; the Irish East midlands, the Bristol Channel in the modern counties of Somerset and Gloucestershire, and in Lincolnshire (Figure 6-1). Perhaps unsurprisingly, the distribution follows major rivers such as the Severn and Avon as well as the Roman road network across central southern Britannia, northwards to Denton and beyond.
the *limes* into extra-mural Scotland as evidenced by the Norrie’s Law, Fife and Gaulcross, Banffshire hoards. In general, the spatial distribution pattern may reflect localised style preferences and travel along established land, river and sea route ways, and thus it allows us to visualise the network of intercommunication that may have facilitated the dissemination of this style within southern Britain, Ireland and Scotland.

### 6.3 Distribution in England

In England, the distribution appears to follow the Roman road network that radiated out from London, linking major settlements (the civitas capitals and small towns) and ports (Margary, 1973). Contexted examples predominantly occur on sites located on major communication and transport routes, particular the Fosse Way, a Roman road running between the legionary fortresses at Exeter and Lincoln. This suggests that the groups or individuals that used these objects were mobile and used the Roman road network. *Tripontium* in Warwickshire, for example, is typical of the small roadside settlements that were generally located at the junction of roads with river crossings. These functioned as *mansiones* and *mutations*, providing food and accommodation for travellers as well as facilities to change horses (Burnham and Wacher 1990, 36-8). Other settlements such as Bath, Somerset, also located on the Fosse Way, had a primarily religious role.

The greatest concentration of Insular Military Style art occurs in a band that runs through central southern England. Four specimens have been found in the modern counties of Gloucestershire and Somerset, an area synonymous with wealthy villas, Romano-Celtic complexes and temples, productive lead mines and proximity to major Roman roads. Studies of contemporary Roman jewellery and metalwork have unsurprisingly noted a similar clustering around the Bristol Channel area (Allason-Jones 1989; Cool 1983, 1990; E. Swift 2000a). This phenomenon may reflect the large town populations at Gloucester and Caerwent and the trading potential of the Bristol Channel. The Bristol Channel provided access to the Severn estuary, and the rivers Severn and the Avon which in turn gave access to the wealthy villa estates and towns of the Late Roman province of *Britannia Prima* (Allason-Jones 1989, 36) (Figure 6-3) which experienced a particularly high level of prosperity during the first half of the fourth century AD (Salway 1981 276-82, 328-
9). For example, the district around Bath had the highest concentration of Roman Villas in the south-west by c. AD 350 but had none until about AD 270 (Salway 1981, 280).

The area close to and around the Severn estuary also contained a significant concentration of temples such as Lydney Park (Wheeler and Wheeler, 1932), Brean Down (1965), Uley (Woodward and Leach 1993) and Nettleton Scrubb (Wedlake 1982). They were also situated close to major roads, and could potentially have been accessed by large numbers of people. Lydney Park for example, is situated near the main road between Gloucester and Caerwent and Nettleton Scrubb (Wedlake, 1982) and close to the Fosse Way between Bath and Cirencester. Frilford, and the temples at Bourton Grounds (C. Green, 1966; Johnson, 1975) and Elms Farm (Atkinson and Preston, 1998) also appear to have been constructed near road intersections (Figure 6-4). They may perhaps have acted as points of contact between the territories of the Silures, Dobunni, Belgae, Durotriges and Dumnononii (see e.g. Rahtz and Watts 1979; Blagg 1986 15-26), and it is possible that these temple-sites attracted pilgrims from Ireland to the region. Catherine Swift for instance (2003, 54-61) contends that cross-cultural links in religious practice existed between the Irish east midlands, specifically at Newgrange and Knowth and the Roman temple-sites of Lydney, and Uley during the fourth century AD (Wheeler and Wheeler 1932, 23-39; Collingwood and Wright 1965, 304-5).

In the Roman period, south-west Britain was divided between the Dumnonii whose capital was located at Exeter, (Isca Dumnoniorum), and the Durotriges of Dorset and Somerset with their capital at Dorchester (Durnovaria). An outlier of the territory of the Belgae with their capital of Winchester, (Venta Belgarum) seems to have extended north-west to include Bath. All of these civitates together with those of Wales belonged to the fourth century province of Britannia Prima with its capital at Cirencester or perhaps Gloucester, considering its colonia status (Charles-Edwards 2013, 21-2). Britannia Secunda had its capital at York, Maxima Caesariensis was centred on London, and Flavia Caesariensis on the colonia at Lincoln (Figure 6-2; see also Mattingly 2006, 227; White 2007, 36-9).
6.3.1 Somerset and Gloucestershire: Insular Military Style Art from Chilton Trinity, Long Sutton, Oldcroft and Bath in Context

Two silver pins were found in Somerset. The Long Sutton Pin (Cat. No.12) was collected by the antiquarian the Rev. Archibald Turing-Bruce in the nineteenth century; no contextual details were recorded. The pin from Chilton Trinity (Cat. No. 6) was found in September 2006 by metal detectorist Timothy Phillips in a ploughed field. No further details were available to the writer regarding the find spot and there were no associated objects.

The evidence from excavations of numerous towns, villas, farms and temples shows that Somerset was a prosperous, flourishing region during the fourth century AD and this wealth has been attributed to the Mendip mines. The Roman period use of the mines appears to be divided into two distinct phases (Elkington 1976).

Initially, the production process and supply at the mines was under direct Roman control. For example the mine at Charterhouse (Figure 6-3) was controlled by a Roman fort, and other military installations are possible at the Green Ore mines in the Charterhouse valley (Burnham and Wacher, 1990: 208-11, fig. 65). After c. AD 70 mining was contracted to private companies, most likely under procuratorial supervision. This change in organisation may reflect the law passed by Vespasian limiting the mining of British lead ores in favour of Spanish deposits (Todd 1996, 50; Mattingly 2006, 399). The marked wealth and prosperity of the Somerset and Avon areas, as evidenced by the number of villas there, has been linked with the second stage of mining activity (Salway 1969, 148) which marked an increased prosperity not just for the concessionaires but also for other local groups associated with the mines. Indeed, the Somerset area is remarkable for its evidence for the sub-Roman period, whether in the form of cemeteries or of occupied sites. It is probable that continued exploitation of the Mendip mines after the official end of the Roman occupation was responsible for the economic stability of this region.

The occurrence of silver pins in Gloucestershire and Somerset may relate to the Mendip lead mines as there is clear evidence for the extraction of silver from these lead ores during the Roman period. George Boon (cited in Ellis 1988, 32) noted that the silver coinage of the Dobunni and Durotriges is likely to reflect the availability of silver from these mines; the small cluster of silver projecting-headed
pins in this region may have a corresponding relationship to the mines. It has been suggested that the post-Roman earthwork enclosure at Charterhouse was associated with local potentates who derived their power from control of the mines and that this resource may also have acted as the focus for post-Roman trade routes and possible commodity exchange in this region (ibid. 34). Excavations of sites such as Cadbury Castle (Alcock 1995) and Cadbury Congressbury in Somerset (Rahtz et al, 1993) for example revealed a society trading with the Mediterranean as evidenced by the distribution of 6th-century Mediterranean pottery there (Thomas 1986).

The prosperity and proximity to the coast attracted Irish traders and raiding parties there during the period 300-500 AD, at least on a minor scale (Rahtz and Burrow, 1976, 226). There is evidence, for instance to suggest that an Irish raiding party worked its way along the River Avon in 362 AD and that similar parties carried out raids elsewhere in Somerset (Brannigan 1972a; Brannigan 1972b). Contact between Ireland and Somerset has also been considered by Alcock (1970, 60, fig. 17) and Fowler et al (1971, 211) who contend that ‘immigrant Irish may be seen as a new ruling class setting itself up as local tyrants or defenders in Somerset, taking advantage of the final breakdown of the Roman system to seize land and power in a rich area’. Given this observation, it is possible that interconnections between groups from Ireland and Somerset may be responsible, at least in part, for the spread of Insular Military Style art from south western Britain to the Irish east midlands.

The Oldcroft Pin (Cat. No. 1) was found west of the Dean Road, a route way that runs between Lydney and Weston-under-Penyard in Gloucestershire. It was discovered in association with three thousand three hundred and thirty-three coins, and these indicate a deposition date of c. AD 354-359 (Johns 1974, 295; Rhodes 1974, 65-66). Coins are particularly amenable to close dating because they are usually inscribed with the name of a known ruler; this sets them apart from most other archaeological objects and makes them prime evidence for the dating of other objects with which they are found (Oddy and La Niece 1986, 20). However, with coins, only the date of issue is certain, not the length of circulation nor the date of deposition. The coins provide a *terminus ante quem* for the deposition of the hoard but they do not unfortunately provide a firm date for the pin. The wear noted by the writer on the Oldcroft pin suggests that it was in circulation for a period and that it
was not newly made when deposited. Undecorated, copper alloy proto-hand-pins also occur at the ritual site at Lydney, overlooking the Severn estuary and suggest that sections of population in Gloucestershire were wearing dress ornaments of this type.
Figure 6.2 Map of Roman Britain indicating major towns and roads (above). After Millett 1990, fig. 17.; The tribes/civitates of Roman Britain (below). After Millet 1990, fig. 16.
Though the pins from Lydney did not come from closely dated contexts, they are presumed to be associated with the intensive temple occupation there dating to the late third and early fourth century AD and significantly perhaps, the evidence from Lydney suggests that pins were considered as appropriate objects for ritual or votive deposition (see below; Wheeler and Wheeler 1932, figs. 18/63, 18/62).

The Bath brooch (Cat. No 21) was discovered in 1979 during excavations of the impressive temple, sacred spring and bathing complex dedicated to Sulis Minerva at Bath (Aqua Sulis), Somerset (Cunliffe and Davenport 1985). The brooch was deposited, presumably as a votive offering, in the sacred spring that formed part of the inner precinct, one of the central foci of the ritual complex. The complex was located adjacent to the Fosse Way in a loop of the River Avon at a strategic bridging point (Cunliffe, 1988; Jones and Mattingly, 1990: maps 2.5, 2.8 and 2.13; Burnham and Wacher, 1990: 165-76, figs.48 and 49), and features a number of hot mineral springs that were venerated in pre-Roman times. Soon after the Roman conquest the religious use of the site was formalised and monumentalised and a classical temple was constructed. Sulis, the indigenous deity worshipped there was syncretised with the Roman Minerva bringing Roman and indigenous culture together on the site. The hot springs were constrained, piped, and engineered to feed a bathing complex that is without parallel in Roman Britain. By the early third century AD, the site’s fame was such that it was listed in Solinus’ Collectanea rerum memorabilium (Cunliffe 1969; Cunliffe 1995, 16). Veneration at the spring continued into the fifth century AD before coming to an end following the collapse of the buildings in the late fifth century (Cunliffe 1988, 360; Gerrard 2007, 159).

Initially, the brooch was broadly dated to no later than AD 400 based on coins, and offerings from the same context (Henig 1983, 23; Cunliffe 1988, 23; 1993, 288; Gerard 2005, 371-3). However, Cunliffe (1993, 288) later placed the brooch in a post-Roman phase. More recently, Gerrard (2007, 159) re-visited the dating of the destruction of the temple complex, and using documentary, stratigraphic, and artefactual evidence alongside a series of new radiocarbon dates he has determined that veneration and deposition at the sacred spring head ceased following the demolition of the temple around AD 450 and certainly before AD 500.
This evidence provides a more secure *terminus ante quem* for the deposition of the brooch and the dating of the corpus in general.

6.3.2 *Tripontium*

The decorated silver hand-pin found at the settlement of Tripontium by Cave’s Inn, near Rugby in Leicestershire is significant as it one of only three specimens from this corpus that was found in the course of a controlled excavation. Tripontium is situated in a valley close to a small stream, and one hundred meters southwest of the Roman road, Watling Street. The site was established shortly after the Roman invasion in

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Footnote:

70 This is contra Youngs (1995, 130) who argues that the context was not sealed until the collapse of the Roman Building in the second millennium AD.
AD 43, and was occupied throughout the Roman period before being abandoned early in the fifth century AD. The hand-pin was found in Area 3, Building 3, in the destruction levels above Room 9 (Figure 6-4). The courtyard plan of the building and its positioning suggests that it may have functioned as a mansio, or perhaps an administrative building for the settlement of Tripontium. The rooms were finely painted with colourful flower motifs, tendrils, chequered squares, and imitation marble, and the floors were of opus signinum 71 suggesting that this was a high-status building (Figure 6-5). Room 9, was served by a channelled hypocaust, and has been interpreted as a triclinium. 72 Although the pin was not securely stratified, the destruction levels of Area 3 produced over one hundred coins almost all of which are fourth century Constantinian issues. An adjacent stratified feature produced two coins of Arcadius dating to AD 395-408 which were the latest coins found on the site (Lucas 1981, 31, 51; 2005, 8).

6.3.3 Finds along the Fosse Way; Leicester, Loughborough and near Leamington Spa, Warwickshire

Three specimens were found along the route of the Fosse Way and its immediate environs. This was major road which linked Exeter in South West England to Lincoln in the East Midlands via Ilchester, Bath, Cirencester and Leicester. Derived from the Latin fossa, meaning ditch, the road initially marked the western frontier of Roman rule in Iron Age Britain. An enamelled silver mount and beaded frame (Cat. No. 29) were found in a roadside trench section between Chesterton and Princethorpe, west of Leamington Spa, Warwickshire. There were no associated finds and the circumstance in which it was discovered suggest that it may represent a casual loss while traveling along the road (Bruce-Mitford 2005, 433).

71 A Roman paving technique for covering walls and floors, made of a waterproof mixture of lime, sand and crushed terracotta, occasionally decorated with small coloured tiles
72 The dining room within a Roman house, often with an arrangement of three couches in a horseshoe shape.
Figure 6-5 Tripontium, Location of the buildings in Area 3. Find spot indicated. After Lucas 2005, pl. 3.

Figure 6-5 Painted wall plaster, Tripontium triclinium. Image courtesy Warwickshire Council.
A silver proto hand-pin found in a civic garden in Leicester (Cat. No. 13) has an even less satisfactory provenance (Figure 6-6). Leicester was located at the hub of Watling Street and the Fosse Way and is likely to have formed an important focal point for movement. It was also the civitas capital of the Corieltauvi, indicated by its name (*Ratae Corieltauvorum*), and may have formed an important place in the political geography of Roman Britain (Tomlin 1983). The pin from Leicestershire is in private ownership and was examined and authenticated by Lloyd Laing (2000, 49-50). It appears that it was a recent loss and so its original context is unknown. There is even less information available regarding a bronze zoomorphic penannular brooch terminal that was found near Loughborough, Leicestershire by a metal detector user,
and reported to the PAS (Cat. No. 28). The terminal has strong parallels with a silver example from Caistor, Lincolnshire (Cat. No. 27) and is finely decorated in the Insular Military Style. Given the lack of information regarding the circumstances and location of the find, it can only be attributed to a general area.

6.3.4 Lincolnshire

Lincoln was a major *colonia*, one of the four provincial capitals of Britannia and appears to have been exceptionally prosperous towards the end of the fourth century. With the withdrawal of the Roman Empire from Britannia in the first decades of the fifth century, the central government structures ceased to function and there would have been devolution of power to the local aristocracies (*curiales*) of each civitas and its *territorium*. This in turn gave rise to the ascendency of local élites. Kevin Leahy (2007, 83-4) has argued for an active tradition of making and wearing Class I zoomorphic penannular brooches in and around Lincolnshire during the fifth and sixth century AD, and significantly, two Insular Military Style brooches have been found in this region in East Ravendale, and Caistor (Cat Nos 25 and 27). The silver proto hand-pin from Welton-le-Wold comes from the same general area (Cat. No 3; see below). Both brooches were found by metal detector users and can only be attributed to the general locality as no further details were available to the writer (Figure 6-7).

It is possible however to offer some commentary on the significance of their occurrence in this locality. These brooches suggest that there was an element of continuity among Romano-British élites in the so-called Anglo-Saxon heartland of south-east Britain, specifically in and around North Lincolnshire, in the Anglo-Saxon kingdom of Lindsey (T. Green, 2012). Indigenous British élites in these areas would therefore have had many reasons to prominently assert their ethnic identity and status perhaps by manufacturing and/or importing these overtly Romano-British type brooches and perhaps, associated clothing in an expression of what Thomas Green (*ibid.* 29) has termed ‘defiant Britishness’. While some of these brooches might represent small-scale trade between the British west and the Anglo-Saxon east, others appear to be locally made and suggest an active local tradition of making and wearing enamelled zoomorphic penannular brooches by British élites in north Lincolnshire, perhaps in order to reinforce and proclaim their identity and social
status in response and in opposition to the material culture of competing, and threatening Anglo-Saxon groups who settled on the edges of this British territory in the second half of the fifth century (Leahy 2007, 84; T. Green 2012, 27). In Britain, penannular brooches have a clear northern and western distribution with finds concentrated around the Severn Estuary and Hadrian's Wall. The cluster for finds from Lincolnshire in and around the kingdom of Lindsey are unusual and have not as yet been fully explained (Leahy 2007 83-4).

Although when first published, the Welton-le-Wold silver pin was said to have no associated material (Youngs 2005, 250), on the basis of aerial photographs and extensive crop and soil marks, an extensive Romano-British settlement site has been since been identified in the field where the pin was found (Bewley 1998; 29-65; Jones 1999, 72-5; T. Green 2011, 43-6, 148).\(^73\) Finds of Romano-British pottery, oyster shells and tiles from the central area suggest that it is most probably the site of a villa site occupied by high status and affluent Romano-Britons. A possible dependant village has also been identified. Metal detecting on the probable villa site has produced three hundred and three copper alloy and silver coins dating from the third to the late fourth century AD in an area spanning around 250 meters – a noteworthy quantity for this part of Lincolnshire.\(^74\) The silver proto hand-pin came from the same area and suggests that there were high status and affluent Romano-Britons living at Welton-le-Wold in the late fourth century.\(^75\)

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\(^73\) The site at Welton-le-Wold also has Iron Age antecedents and is located in the former territory of the Corieltavi (T. Green 2011, 43; see also).

\(^74\) See for example PAS NLM-17BCB0, NLM-B77AE2, NLM-B6FCD2.

\(^75\) The finder confirmed that the coins and the proto hand-pin all came from an area spanning 250 meters on the site of the villa. Other finds from the same site include a mid-late first-century dolphin brooch (PAS NLM-1758B3), a first or second century trumpet brooch (PAS NLM-178482), a mid-first century bow brooch (PAS NLM565) and a Romano-Celtic button and loop fastener (PAS NLM563).
Figure 6-7 The distribution of Insular Military Style art in Lincolnshire.
6.3.5 Denton, Newcastle-upon-Tyne

A silver hand-pin found in the course of excavations prior to the construction of the Newcastle Western Bypass at Denton, Newcastle-upon-Tyne represents the most northerly occurrence of Military Style art south of Hadrian's Wall (Batey 1996, 51). The pin was found in post-Roman plough soil south of Hadrian’s Wall and its presence close to the northern frontier may reflect the movement of people and goods along supply networks from the south (Figure 6-8). It is noteworthy however that the pin has been cut part way along the shank suggesting that at the time it was lost, it no longer functioned as a dress fastener but as a piece of scrap silver or bullion. The phenomenon of clipping silver siliquae in the Late Roman Britain (see e.g. Guest 2005, 110-115; Abdy 2013, 108-111) suggests that the recycling of scrap silver was a common occurrence in Late and sub-Roman Britain. The high purity of the Denton pin (Cat. No. 8) and the deliberate cut mark on its shank suggest that it was destined for the melting pot and that it functioned as a piece of scrap silver (Hacksilber) at the time of its loss/deposition.

The re-working of recycled silver is well attested at military sites along Hadrian’s Wall. At Vindolanda, a finger ingot of recycled silver was found in a fifth century context (Birley and Blake 2007, 51) while silver extraction or working may also be attested at Birdoswald (Banna) where residue analysis of a crucible fragment yielded results consistent with the cupellation of lead to remove silver (Wilmott et al 2009, 368; see also Collins 2012, 60-62). Heating trays for cupellation and crucibles for melting silver have also been found at military sites in southern Britain such as the Legionary fort at Caerleon, Wales (Zienkiewicz 1993, 124), and the campaigning base fort at Castlefort, West Yorkshire suggesting that the working of precious metals at military sites cannot have been an uncommon occurrence and indeed, such activities may account for the presence of the silver pin in Denton.
6.4 Distribution in Ireland

In Ireland, the material shows a clear eastern distribution with finds concentrated around the modern counties of Meath, Longford, Westmeath and Kildare with an outlier in Co. Limerick close to the Shannon estuary suggesting perhaps that movement along Ireland’s inland waterways played a role in the transmission of this style (Figure 6-1). Insular Military Style art is totally absent from Ulster and Connacht. The silver specimens represent the earliest known corpus of silver from Ireland which is in itself enough to make even this small number significant. Bronze specimens are more widely distributed but again they show a noticeable mid-eastern bias.

There is a considerable body of evidence for sustained and intimate contact between the internationalised East Midlands and the Roman world. The caput regionalis at Tara bolstered its special position as a point of trade and exchange as did the river routes along the Boyne which offered passage for trade into the central regions of the country. This may have led to the establishment of close and perhaps direct contact with the Roman Empire. Indeed, this region appears to have been of primary importance during the fourth and fifth centuries AD, because of its relative
wealth, political significance, ease of communication with Britain and its relative proximity to the Roman world (See Newman 1998; 2005: 378-382). Through these contacts and their dominant societal position, élites in the Irish east midlands may have instigated the dissemination of Military Style Art, and its associated objects, technologies and techniques in the Irish east midlands.

Plate 6-1 Castletown Kilpatrick and Teltown.

Two silver pins, a proto hand-pin and an early hand-pin were found together in 1848 at Castletown Kilpatrick, Co. Meath (Plate 6-1). They have been interpreted as a small hoard by Ó Floinn (2001, 5). The proto hand-pin came into the possession of W. F. Wakeman and it was later acquired from him by the Royal Irish Academy. The hand-pin found with it was presented to George Petrie by Wakeman and eventually, it also found its way into the collection of the National Museum of Ireland, reuniting the two pins. Unfortunately, no details of the find context were recorded (Mahr et al 1976, 24-7). While the pin provenanced to Newtownbond, Co. Longford is not associated with any known contemporary monuments, the two specimens from the townland of Castletown provide a potentially intriguing glimpse into the Irish socio-cultural context in which these objects may have performed. The townland is
overlooked from a distance of approximately 800 meters by what appears to be a minor assembly site known as Raffin Fort. The penultimate phase at Raffin dates from the early fourth and fifth centuries AD, making it contemporary with the Castletown Kilpatrick pins (for summary see Newman et al 2007, 349-351). The occurrence of the silver pins here may indicate the social circles/minor élite centres in which this material circulated and may support Newman’s contention that Raffin represents a new and internationally-orientated political order that arose out of a period of upheaval that favoured those who established new relations with Roman Britain via trade or military service (Newman 1998, 133).

The copper alloy, disc-headed pin attributed to Teltown is another uncontexted, antiquarian find (Plate 6-1). Its occurrence in Teltown (Tailtiu), one of the most significant ceremonial landscapes in the Meath region and the location of the famous Lughnasa assembly known as Oenach Tailten (Breathnach 2005, 369) is noteworthy however, in the absence of any firm evidence as to the context and circumstance under which the pin was found. Likewise, with regard to the silver proto hand-pin from Newtownbond (Cat. No. 5) which is believed to have been found on a Bond property at Newtownbond.

6.5 Distribution in Scotland
Three specimens were found in Scotland, beyond the northern frontier of Britannia defined by Hadrian’s Wall; the silver hand-pin and fragments of silver mounts from Norrie’s Law, Fife and a hand-pin from Gaulcross, Banffshire (Cat. Nos 9, 31, 7). All were contained in hoards deposited in prehistoric mounds and the implications for hoarding and this form of deposition are discussed below. The Norrie’s law hoard was found on the Largo estate, Fife, in 1819 (Graham-Campbell 1991, 1993) at the foot of a prehistoric mound. The hoard comprised a broad range of objects amounting to at least 12.5kg of silver including a selection of personal ornaments including arm bands, plain penannular brooches and significantly, three decorated hand-pins. Current scholarship suggests that the hoard represents an amalgamation of late Roman and Pictish silver with a deposition date in the second half of the seventh century (Graham-Campbell 1993, 116-7; see also Goldberg and Blackwell.
Likewise, the pin from Gaulcross formed part of a hoard of silver personal ornaments found in 1840 in the ring-cairn of a stone circle. 76

6.6 Ritual Deposition of Insular Military Style Metalwork

Objects enter the archaeological record by several means. They may be lost accidentally or casually discarded once they have reached the end of their usefulness. Objects may also be deliberately buried or concealed in a process usually referred to as 'hoarding' or they may be ritually deposited in the earth or in water as votive deposits. While ritual deposition and hoarding is not a specific focus of this study, it is perhaps significant that ten of the thirty-one specimens included in this corpus were deposited in dry land hoards or in watery contexts. Six were deposited as parts of dry land hoards; the Oldcroft pin (Cat. No. 1), the Gaulcross pin (Cat. No. 7), the hand-pin and mount fragments from Norrie's law (Cat. Nos 9, 31) and the pins from Castletown Kilpatrick (Cat. Nos 2, 11). Three were found in rivers, the Kilkea brooch, the Broxbourne pin and the anthropomorphic mount from Athlone (Cat. Nos 20, 26, 30); one was deposited in the sacred spring at Bath, Somerset (Cat. No. 22). 77

Hoard are defined as ‘a collection of two or more artefacts, the circumstances of discovery of which leads to the conclusion that all were deposited together at the same time’ and that they do not represent lost or casually discarded objects (Eogan 1983, 1). The true circumstances behind the deposition of a hoard can be complicated and difficult to interpret. Some hoards such as the Oldcroft hoard from Gloucestershire may have been assembled for safekeeping and may have been lost or forgotten rather than deposited with ritual intent. If this is so it implies that, the known corpus from hoards represents depositions that for some reason were never recovered, and that perhaps many more such hoards existed but that these were retrieved in antiquity. Other hoards were deposited in prehistoric mounds at Gaulcross, Banffshire and Norrie's Law, Fife. The non-functional, intentional and purposeful deposition of decorated metalwork in rivers or in the earth in so-called ‘hoards’ is often interpreted as ritual/religious activity suggesting that these hoards

76 Only three objects from the original hoard survive; a silver hand-pin (Cat. No. 7), a silver chain (NMS register no. L.1962.130 and a silver bracelet, NMS register no. L.1962.129.
77 Two un-localised zoomorphic penannular brooches, provenanced to Ireland (Cat. Nos 23, 25), feature a dark accretion typically associated with copper alloy artefacts that have been deposited in water for a period of time.
were integrated into Insular ritualised practices. (Hill 1996, 27; Bradley 1998, 249; Becker 2008, 12).

A number of socio-cultural motivations for the practice of ritual deposition have been proposed. For instance, such behaviour has been used by people in the past as a means of marking space and time (Bradley 1998; Hill 1995; Fulford 2001). Votive depositions may then reflect shared concepts of space and time, and may represent an action that functioned to define social groups. This practice may also reflect the symbolic relevance and significance of these items in their contemporary society. In an Irish context, silver was a locally rare, and exotic material while both bronze, and silver objects from this corpus were inscribed with potent symbols viz. triple annulets, saltires etc. As socially valuable and symbolically significant objects therefore, they may have been seen as powerful (even generations later), thus requiring deposition in particular, ritualised ways either in the earth or in water (Hunter 2013a, 22). Their final deposition in hoards may also represent a time when the object, and the knowledge system it represented were no longer socially or culturally valued, having been lost gradually over the decades and centuries or having become less relevant within contemporary belief systems. Such objects may not have continued to be passed on but instead, ‘ritually’ deposited in a hoard (Pope and Ralston 2013, 404). These forms of depositions have been interpreted as rituals that served to cement social associations and bonds such as marriage, death, inheritance, obligation, labour or fosterage; what Hill (2011, 252) has termed ‘messy, unstable associations that are not easily sustained by hierarchy’. As such, perhaps inter-connections like these are more easily managed and sustained by focusing on convention and shared understanding (Pitts 2007, 693). In other words, ranging from as far north as Gaulcross, Banffshire in Scotland, to Castletown Kilpatrick, Co. Meath in the Irish east Midlands and Broxbourne, Hertfordshire in south east England the practice of ritually depositing fine metalwork in the earth and/or water may represent the ‘glue’ that binds together what otherwise appears to be an unconnected Insular landscape.
Hydrolatry is a panhuman phenomenon and sacred rivers, wells and springs are known cross-culturally around the globe (Rattue 2001, 10-11; Ross 1974, 106-7) and across north western Europe, including Ireland and Britain (see e.g. Bradley 1990, 100-102). Wetlands, bogs, rivers, lakes, springs and wells are all valuable resources fundamental to human survival. Therefore the use of watery places as ritual and depositional foci is perhaps unsurprising (McLeod, 2006). As Eliade (1958, 188) describes ‘. . . water symbolises the whole of potentiality; it is fons et origo, the source of all possible existence’. Items of value were often deposited in water as votive offerings in prehistory in a form of ritual abandonment (Johns 1996c, 11). Rivers and lakes in Ireland have yielded fine metalwork, while pre-Christian votive offerings have been found deposited in St. Anne's holy well at Randalstown, County Meath. These may represent a continuation of earlier Iron Age votive practice (Ehrenberg 1989, fig. 2, Ó Floinn 2001, 2; Waddell 2011, 194-5). A similar practice of metalwork deposition in major rivers has been noted elsewhere in north Western Europe (Warner 1976, 282; see also Aitchison 1996, 71; Mytum 1992, 58; Rafferty 1994, 182-3, 213). In the context of this corpus, it is significant perhaps that the silver-gilt pin from Asselt, decorated in a rendition of late Roman Military Style art, was found in the River Meuse between Asselt and Neer (Böhme 1974, 284, cat. no.107, tafs. 86, 17), while the Broxbourne pin (Cat. No. 20) was found in dredger working in gravel pits on the River Lee. This together with the anthropomorphic mount from the River Shannon and the brooch from the River Greese does suggest some form of patterning in ritual behaviour.
In 1847, dredging activities along the river Shannon at Athlone, close to the modern railway bridge, produced two fragments of a curved, decorated bronze binding strip, one of which had a cast anthropomorphic terminal attached to one end (Kelly 2001, 267-8; Youngs 1989, 30, no. 13; Gavin 2013, 190-2). *Dindshenchas* also refers to *Sinann* (the River Shannon) as a sacred and special river (Gwynn 1991, 286-297). Therefore, ritual deposition may provide a plausible explanation for this find. However, it is possible that some finds from water, especially high-value single items, may have been lost accidentally by travellers rather than deliberate ritually deposited. There is evidence for a fording point near Hillquarter, slightly upstream from the find spot. This point marked the intersection of two important route ways, the River Shannon itself, and the road from Roscommon to Clonmacnoise, Clonard and Seir (Doran 2004, 72). Indeed the significant range and number of finds from the same general area suggests that this was a well-frequented crossing, that appears to have been in use for a considerable period in antiquity. The zoomorphic penannular brooch from the Kilkea castle collection was discovered ‘in the bed of the River Greese (Figure 6-9) while sinking for the foundations of ‘Kildare Bridge’ near Kilkea castle’, and the find spot suggests that this may have also been an ancient fording point on the River Greese. The association of the Shannon mount and the Kilkea brooch (Cat. Nos 30, 26) with possible fording points may be significant as it suggests that these prestigious objects may have been worn by individuals with
rights of mobility in a society where few had these rights outside of their own *túath* or territory (Kelly, 1988, 3–6).

### 6.7 Networks, Interconnections and the Mapping of Social Relationships

The distribution of Insular Military Style art appears to map a network of sustained social relationships in Ireland and Britain during the fourth and fifth centuries AD. Indeed, has been argued elsewhere in this thesis, groups and societies in Ireland and Britain during this period were not static, self-contained entities or a collection of separate groups. Rather, they were composed of multi-dimensional and dynamic networks with overlapping relationships that were constantly being redefined and renewed (Mann 1986, 414). Indeed, Waddell (1995, 9) has observed that, close-knit relationships were probably ‘a continuous feature in the region of the Irish sea with constant communication, interaction, exchange and possibly rather intense traffic throughout prehistory’. The manifestation of these regional identities in patterns on distribution maps may be interpreted as an expression of a deeper rooted and enduring network of relationships, the dots on the map being just the archaeologically visible elements of what must have been a much more intricate pattern of social interaction. While some may have been the result of recently forged alliances due to trade or diplomacy, others may represent a pre-existing web of communities based on kinship relationships established over many centuries (see chapter 8). While kinship links are difficult to identify archaeologically, the notion of kinship was an important component in the fabric of Insular society. Kinship may not have been limited to extended family or local community groupings, instead it is likely that many types of relationship entities overlapped and co-existed both regionally and supra-regionally with bonds of kinship centring on a variety of relationships such as family and fosterage, exchange and obligation. Consequently, kinship in Irish and British societies is perhaps best understood as a ‘malleable spread of relationships’ that were not always contained within neat political, cultural or ethnic communities (Hill 2011, 252-53).
6.8 Summary

There are a number of acknowledged difficulties associated with the interpretation of distribution maps. It can be difficult to identify the precise mechanisms that produced a particular distribution. Moreover, there are a number of factors outlined above, that can limit and distort interpretation of such maps, such as accidents of survival and discovery and differential survival in different areas due to variation in research and excavation from region to region. For instance, the popularity and legality of metal detecting in southern England and the work by the PAS in actively encouraging the reporting and recording of such finds may account for some of the variation apparent in the dots on the distribution map. This is especially true in the case of the small cluster noted in Lincolnshire where all three finds are the result of metal detecting. Distribution maps also conceal processes such as deliberate hoarding, ritual distribution and casual loss. In Ireland, Insular Military Style metalwork is largely confined to the Irish East Midlands, a region that had long-standing and well-established links with the Roman world. This distribution may reflect certain individuals and groups who perhaps used their access to Roman goods and trade to reinforce, maintain or improve their social position and power in Ireland (see e.g. Hunter 2013a, 17). In Britain, it is significant that this art style is found in areas where the ruling élite were highly Romanised e.g. Gloucestershire, Somerset and Lincolnshire. Indeed, most of south western Britain where this style is found lacks any real Germanic culture before the seventh century AD (Dark, 1995, 2000; Barker et al 1997; White 2007; Gerrard 2013). The distribution may map the locations of powerful Romano-British and Irish élites who found new ways to manifest their status, power and position in society through dress, display and the mobilisation of Insular Military Style art (White 2007, 169). It may also trace a pre-existing web of communities that were based on kinship relationships, established over many centuries. Indeed, the distribution of the Insular Military Style reflects the complexity of social and regional identities in the Insular world during this period, and illustrates how little is known about them in actuality. Perhaps as Waddell (1993, 38-39) has advocated, we should interpret such maps as just the visual expression at a particular time, for a particular reason of a deeper-rooted and longer lasting network of relationships.
Chapter 7 - The Social and Performative Context of Insular Military Style Art in Ireland

Contact between Ireland and the Roman world during the first five centuries AD provides a usefully broad framework within which to explore the social and performative context of Insular Military Style art in Ireland. That aspects of culture were transferred to Ireland from a Roman milieu is not in doubt; what are less clear are the precise mechanisms by which such transfers took place (Mytum 1992, 15) and in what way they played out. Roman material occurring in Ireland is generally explored in terms of Ireland itself, and explanations for the occurrence of such material here have tended to be particular to an Irish context and attributed accordingly to raiders, traders, invasions led by displaced Irish princes and so on. (Macalister 1928, Raftery 1989, 146; Warner 1995). However, the frontier zone between the Roman and Barbarian world was permeable in both directions, and Roman and non-Roman, Barbarian societies on either side were not overly segregated. An ‘arc of cultural exchange’ extended around the fringes of the north western Empire in the first four centuries AD, incorporating Wales, northern England, Scotland and Scandinavia as well as Ireland (Armit 2013, 288) and these regions interacted in every way imaginable with the Roman world, socially, politically, culturally and religiously through shared trading contacts, political allegiances, social relations and perhaps even intermarriage (see e.g. Isaac 1990; Lee 1993; Whittaker 1994; Mathisen and Shanzer 2011). In fact, the extraordinary success of the Roman Empire was due in no small measure to its capacity to integrate various groups, even beyond its frontiers, into its social and cultural texture. In some areas this had the effect of crystallising cultural identities sharply while in other contexts such contact occurred within the context of cultural exchange and adaptability (Pohl 1997, 34). Irish academics now openly acknowledge that not only was Ireland was under ‘Rome’s gaze’, it was in actuality a frontier zone, comparable to other frontier zones along the limes of the Empire. Like other frontier zones, Ireland was not directly part of the orbis Romana and in terms of intensity and political engagement its encounter with romanitas was probably different from regions that were under direct Roman control. Ireland did not for instance undergo the traumatic military, political, socio-cultural dislocation that accompanied the
transformation of the Late Roman Provincial West. That does not, however mean that it was unaffected by it.

Communities in the Irish east Midlands and along the eastern littoral appear to have been particularly amenable to new socio-cultural influences, both material and religious, and were well-acquainted with Roman customs, playing a pivotal role in what appears to have been regular and routine contact with the Roman world. It is through such interaction and exchange that Roman objects, ideas and innovations were received and transformed by indigenous communities here and served as an active agent for change. The archaeological evidence such as it is suggests that this was a period of profound transformation that witnessed exposure to new artistic and technical traditions, the appearance of novel personal ornament types, the adoption of the rite of extended inhumation, the advent of Christianity and the emergence of new forms of socio-political organisation all of which illustrate the ongoing and complex range of factors which undoubtedly underpinned the acknowledged transformation of Irish society in the course of the first five centuries AD (Lynn 1983; Mytum 1992; De Paor and De Paor 1958; McCormick 1995; Newman 1995; Warner 1995, 29; Ó Floinn 2001, Laing 2005, Gavin and Newman 2007; Gavin 2013a). Indeed Laing (1985, 268) has gone so far as to argue that ‘the influence of Roman civilisation pervaded the civilisation of early Christian Ireland, affecting most aspects of life represented in the archaeological record.’

Commenting on the Danish experience, Hedeager (1978), noted that the distribution of Romanised goods in frontier areas of the Empire was often constrained by internal social and political factors. Therefore, the localised concentration in the Irish north and east midlands may reflect indigenous factors such as the client status of native élites. It may also represent exchanges related to the establishment of kinship ties, diplomatic contacts, or economic alliances between prestigious and powerful native groups in Ireland and Britain during the fourth and fifth centuries AD, groups that were proactive in mobilising Late Roman Provincial culture. Indeed, the strategic use by indigenous élites of Roman connections and Romanised material culture has been the focus of several major studies (Blagg and Millett 1990; Millett 1990a; Roymans 1996a; Woolf 2000). These connections would have in turn, facilitated the creation of new wealth and served to enrich indigenous warrior élites, thus acting as a powerful catalyst for change in Late Iron
Age Irish society. For example, raids on and trading with Roman Britain arguably brought about an economic expansion in Ireland and one which probably underwrote the rise of new dynasties and kingdoms (Charles-Edwards 2000, 149-63). Indeed, the very fact that the Romans were able to make a treaty with the Scotti broken by the latter in AD 360 implies the existence of a powerful, political authority in Ireland that appears to have been engaged in negotiation with the highest level of Roman authority in Britain (see below). The Empire offered several ways to profit from interaction with it, whether by peaceful exchange, through pursuing military careers in the Roman army or by plundering the British province. The establishment of coastal emporia such as Drumanagh (feeding the desires of the élites to distinguish themselves with locally exotic goods), and the socio-cultural changes that facilitated the adoption of new mortuary practices and beginnings of Irish Christianity may well be connected with this catalyst (Knight 2007 164-5). Ireland’s contact with the Roman world was more than commercial, political and material; it was also intellectual and led to the beginning of literacy and commemoration on stone monuments. Its influence is also apparent in the way people presented themselves with the adoption of new dress fastener types and perhaps clothing and hairstyles (Newman 1995, Ó Floinn 2001; Gavin and Newman 2007; Gavin 2013a).

While the general view is that acculturation to Provincial Roman ways occurred only after the fourth century AD, new perspectives on Hiberno-Roman relations and new data suggests that these socio-cultural and material trends were apparent by at least the first century AD and that objects reaching in Ireland in the fourth and fifth centuries are likely to have performed in an already somewhat Romanised cultural milieu (e.g. Ó Floinn 2000, 24-9). Newman (1998, 2005, 378-82) has argued that the Meath and north Dublin area was a particularly internationalised region, heavily influenced by Roman Britain. It has the highest density of so-called exotic finds and intercourse with the Roman world has been commonly cited as the reason for this concentration (Soderberg 2013, 83). Home to the traditional and predominant caput at Tara, this region also witnessed the establishment of new seats of power, like Raffin Fort (for summary see Newman et al. 2007, 349-51), which is not only contemporary with the pair of silver pins from Castletown Kilpatrick (Cat. no’s 2, 11) but in fact overlooks from a distance of about 2km the area where they were reportedly found.
There is an emerging body of evidence which suggests that interconnections between groups in Ireland and the Roman World were far more complex and wide-ranging than can be explained by episodic and opportunistic raids on Roman Britain or general trade and exchange (Newman 1995; Ó Floinn 2001; Heald 2005; Soderberg 2013; Dowling 2012; Gavin 2012, 2013; Armit 2013). The interpretation of Roman material in Ireland is slowly expanding to include longstanding networks of communication between regions and the transmission of ideas and concepts rather than the simple movement of goods or people. As Heald (2001, 694) has argued, ‘Although analysis of trade or gift exchange may be rewarding perhaps the distributions hint at alternatives more diverse than trade yet subtler than warfare.’

7.1 Ireland and the Roman World; Trade and Entrepreneurial contact

From the first century AD there are a number of Classical references which leave little doubt that there was an established trading relationship between Ireland and the Roman world, and in particular, Roman Britain (Charles Edwards 2000, 156 and notes 50 and 51). There are several points of inter-visibility between both islands and there is a wealth of literary and historical evidence to suggest that two-way sailings were likely to have been frequent and commonplace. Writing in the first and second centuries AD, Pliny, Philemon, Tacitus and Juvenal all appear reasonably familiar with Ireland (Killeen 1976, Tierney 1976, Freeman 2001). Describing Ireland c. AD 97 Tacitus comments that:

Its extent is small when compared with Britain, but exceeds the islands of our seas. In soil and climate, in the disposition, temper, and habits of its population, it differs but little from Britain. We know most of its harbours and approaches, and that through the intercourse of commerce (Agricola 24 trans. Ogilvie et al 1914, 22)

Philemon, a writer of the first century AD gathered information from merchants and traders, and it was this information that largely informed Claudius Ptolemy’s mid-second-century AD Geographia (Freeman 1995, 66) which mapped the outline of the island of Ireland by way of a set of coordinates and recorded fifty-five separate tribal names, cities and geographical features such as headlands and rivers (Plate 7-1). The harbours of the east and south coasts are best represented while the west
coast is the least accurate, intimating that the majority of trade took place via the Irish Sea using the harbours along the southern and eastern littoral, at least in the first century AD.\textsuperscript{78} Ptolemy’s use of Irish place and tribal names suggests that these formed part of a wider repertoire of Roman directional and commercial lore and moreover, it reinforces the notion that there was frequent and intelligible contact between Irish and Roman traders during this period (Thomas 1998, 9).

In fact, Ireland appears to have been part of an extensive trade network that extended into the east Mediterranean with exports of slaves, leather and hunting dogs mentioned in the literary sources (Wooding 1996; Kelly 2010, 35-88). Wells (1999, 224) has observed that the ‘first trade ports and urban centres of northern Europe were created from the context of interaction with Rome’, and in an Irish context,\textsuperscript{78} Pliny described the shortest crossing to Ireland as being that from South Wales, a distance of thirty miles, an observation that implies that the Romans were familiar with other, longer crossing routes (Naturalis historia IV, 103)
several coastal sites along the eastern littoral have been identified as possible nodes for trade with the Roman world. A concentration of finds dating to between the second and fourth centuries AD at the coastal promontory fort at Drumanagh, Loughshinny (Figure 6-12) has been interpreted as evidence for an entrepôt or *emporia*, a place where merchants from Roman Britain and perhaps further afield could engage in commerce under the protection of the local polity. The site is defended by multi-vallate earthworks on its landward side and overlooks Lambay bay which may have served as an anchorage (Bateson 1973, 1976; Raftery 1996). Further south, the presence of late fifth century amphora fragments in Garranes, Co. Cork provide archaeological evidence for wine trade (and consumption) in Ireland (Ó Ríordáin 1945, 65, 69-70). Navigable rivers such as the Barrow and the Shannon would also have facilitated travel far inland via the lakes and rivers perhaps using vessels such as the carvel-built boat found in Lough Lene, Co. Westmeath which has been interpreted as either a Roman import or as being built by Roman settlers in Ireland familiar with Mediterranean ship-building methods (Brindley and Lanting 1990, 11 Raftery 1994, 208-9).

Bateson (1973) argued that Roman objects in Ireland have a bi-modal chronological distribution, with finds tending to belong to the first and second centuries AD or to the fourth and fifth centuries AD. Archaeological sources point to Roman Gaul as one of the possible sources for Roman objects of first and second century date from Ireland (Raftery 2005, 180) however the relationship with Roman Britain was closer and more continuous. The surprising lack of Roman material in Ireland dating to the third century may be a reflection of the political upheaval occurring in Gaul at that time and thus, the relative paucity of Roman material in Ireland from this period may provide indirect evidence for the importance of Gaulish trading contact with Ireland during this period. If true, it speaks to the manner in which Ireland could be affected, albeit indirectly, by circumstances further afield in the Roman world.
A number of archaic loan-words from Latin into Irish may have been introduced through entrepreneurial contact with the Roman world and/or familiarity with the Roman army (Warner 1995, 30). Carney’s (1971, 70) study of early Irish poems dealing with dynasties down to the fifth century has identified the use of *legión* (legio), *míl* (miles) *trebun* (tribunus), *arm* (arma) *long* ([navis] longa ‘soldier, ship’). Other loan-words borrowed during the fifth century include *claideb* (sword), *srián* (bridle) from the Latin *frenum* and *sroigell* (whip) from the Vulgar Latin *fragillum* (McManus 33-34, 54 cited in C. Swift 1997, 8). The most plausible context for such borrowings is believed to have occurred through contact with the largely Latin-speaking military world of the Provincial Roman West. Indeed, Richard Warner (1995) suggests that a brief Roman military expedition to Ireland by Roman forces actually occurred based on remarks by the second century poet Juvenal who mentions ‘we have taken our arms beyond the shores of Ireland and the recently-conquered Orkneys, and Britain of the short nights’ (Cited in Killeen 1976, 213). While it is possible that occasional, small, rapid incursions occurred, there is as yet no archaeological evidence to support Warner’s suggestion. Other loan-words such as *ór* (aurum ‘gold’), *fin*.(vinum ‘wine’) and *corcur* (purpureus ‘purple-cloth’) imply

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79 This has a suffix –eb that does not appear elsewhere in Irish and may be derived from a British loan-word.
that Irish élites indulged in high status imports (Laing 1985, 261; Bowersock et al 1999, 513). Both Mercúir (dies Mercurii, ‘Wednesday’), and Saturn (dies Saturni ‘Saturday) employ pagan gods for days of the week and infer a pre-Christian date for the borrowing (Carney 1971, 69-70; Ó Croinín 1981, 100: McManus 1983, 60). Significantly, one of the Old Irish names for a brooch, síbal, is borrowed from the Latin ‘fibula’ in an early stratum of loan-words introduced at the same moment in time as new dress fastener types via. zoomorphic penannular brooches appear in the Irish archaeological record (McManus 1983, 54-5).

Ogham, the earliest system of writing used in Ireland is suggested to have derived from secular or commercial contact with Roman Britain (Laing 1985, 261, Jackson 1950, 151; De Paor and De Paor 1958, 61; McManus 1991, 19-31). It is generally accepted that ogham is based on the Latin alphabet and it is organised in consonant and vowel clusters that bear some resemblance to the phonetic principles of late Roman grammar. It appears to have been designed for speedy execution on wood and stone (Stevenson 1989, 141). The date of ogham script is contentious and it has been the subject of much debate. Not a single inscription can be precisely dated and dates ranging from the second century AD (MacWhite 1960, 302) to the mid fifth century (Jackson 1950) have been proposed. However sometime in the fourth and fifth centuries AD is generally accepted as the ‘safest date’ for the first adoption of ogham (Sims-Williams 1993, 133-6). Conor Newman has suggested (2005, 380-2) that ogham may have been invented in Romanised areas of Meath, and he argued that the deployment of ogham stones on boundary locations in Meath may represent a form of cultural imitation of Roman protocols for commemorating the dead through inscriptions on stone (Thomas 1998, 10-11; see also Charles-Edwards 2000, 173, 175). Significantly perhaps, small concentrations of ogham stones occur in areas where Military Style art has been found (Plate 7-2). For example, the environs of Castletown Kilpatrick and the minor assembly site at Raffin Fort in Co. Meath boast a concentration of ogham stones, including one at Raffin itself. Newman contends that Raffin Fort represents a new and internationally orientated political order, which arose out of a period of upheaval that favoured those who established new relations and/or group affiliations with Roman Britain via for example trade or military service. The occurrence of ogham, silver and Military
Style art in this area, is perhaps further testimony to the internationalisation of this region during these centuries.

Plate 7-2 Castletown Kilpatrick and Raffin fort, Co. Meath. This area boasts a small concentration of ogham stones as well as a hoard of Insular Military Style silver.

### 7.2 Raiding and the Barbarica Conspiratio

Contemporary Roman literary sources describe how raiders from Ireland were making their presence known in *Britannia* from the third and into the fourth and early fifth centuries A.D (see *e.g.* Charles-Edwards 2000; Rance 2001, 2012, 228). Raids by the *Scotti* and *Picti* on Roman Britain are recorded from as early as AD 297 and Ammianus Marcellinus, a late Roman historian and former military officer recorded in his *History* that the Romans had attempted to resolve the issue by diplomatic means, negotiating a treaty with the *Scotti* in Ireland. This treaty was broken in AD 360 and Marcellinus notes that by this stage, *Scotti* and *Picti* raiding parties had ‘wrought destruction near the frontiers …’ and that the ‘provinces were worn out with fear’ (*History*, 20.1.1 trans. Yonge (1862, 360). This was followed by
an escalation in Scotti raids from the early 360’s culminating in the Barbarica conspiratio in 367-68/9 AD when the Picti, Scotti, Attacotti and Saxones combined together in an alliance to loot and plunder areas of Roman Britain (Moody et al 1982, 15). Little is known about the scale, frequency and location of these incursions though it is known that raiding continued into the early fifth century and penetrated as far as London in the south east of England (White 2007, 55). These raids and slaving expeditions preceded the beginning of Irish settlement in Britain in the late fifth century (Charles Edwards 2000, 113, 154, 156-7, 160; Rance 2001, 255; Pearson 2006, 345).

Philip Rance (2001, 250) suggests that the Insular tribal groupings can be identified as the Scotti of Northern Ireland and the Picti of Lowland eastern Scotland while the Attacotti may be a term to refer to the other tribes of Ireland outside of the territory of the Scotti, the name perhaps being a latinisation of the Irish aitheachthútha, a general term used for ‘rent-paying’ groups (Rance 2001, 251). This evidence for a major invasion, organised in concert with peoples from outside of Ireland viz. the Saxones, suggests that the Irish groups who engaged in these raids had a high degree of political authority and or/military co-ordination. It also reveals the naval capabilities among those groups suggesting that they had possession and control of a number of ships. Indeed Thomas Charles-Edwards (2003, 25) suggests that these same ships may have been used to facilitate the trade allowed under the terms of the treaty broken in AD 360.

7.3 Diplomatic Targeting: the Ballinrees Hoard in Context

Roman imperialism did not operate only through military force and power politics vis-à-vis the Barbarians. Reciprocal exchange was also central to the creation of order and the maintenance of control along the limes of the Roman Empire. Official Roman policy involved the negotiation of agreements or alliances with local rulers in troublesome areas and the creation of client ‘buffer zones’ thus creating pro-Roman factions within the Barbarian world (Painter 1988, 1-04).
For example, Tacitus noted that:

As for the Germans, they do not know what the orders of obedience mean. They invariably act as the fancy takes them. Money and gifts are the only means of seducing them and these are available in greater quantity on the Roman side (History 4, 76).

The application of what can best be described as a form of ‘economic imperialism’ was intended to protect the Empire from attack by hostile elements, to provide trading partners for the supply of cattle, raw materials and slaves, and increasingly, from the fourth century, to fill the ranks of the Roman army with mercenary soldiers. In return, so-called foederate kings were supported with targeted diplomatic ‘gifts’ or subsidies that took a variety of forms including silver, coins, goods and favours (Braund 1989, 20; Grahame 1998, 7-8).

In common with other frontier areas along the limes, two late fourth/early fifth century hoards of Roman Hacksilber are known from Ireland, from Balline, Co. Limerick and Ballinrees, Co. Derry (Mattingly et al 1937; O Ríordáin 1947, 48-53, 77-8; Bateson 1973, 42, 63-4, 73-4; 1976, 171-3; Raftery 1994, 215-7). Caches of this type are consistent with Roman donativum practices (Grünhagen 1954, 56-7; Cameron 1992, 180-2; Guest 2005, 24-5) and their occurrence in Ireland may point to the ‘diplomatic targeting’ of local Irish chieftains or donative rewards to mercenary soldiers. Both hoards take the form of an absolute weight of bullion of the kind typically used to pay less compliant recipients of Imperial state expenditure such as foederate leaders or hostile Barbarians engaged in raiding what was an already unstable province. Hacksilber is also mentioned in written sources as a ransom for those fallen into captivity (Delmarie 1988, 116 and note 66), and Marzinzik (2013 182) suggests that the significant Hacksilber hoard from Ballinrees, Co. Derry, which lay within the territory of the Scotti, may relate to their attested raiding and slaving exploits in Roman Britain (see above). In this instance the silver appears to have been retained as a means of status display and deposited as a hoard (see e.g. Hunter 2010, 98-100).

The presence of officially stamped Roman silver ingots in both hoards may also represent official donatives and payments associated with military service; hoards containing cow-hide and finger ingots are thought to have been bullion paid to
soldiers and not a craftsman's stock of raw material (see e.g. Painter 1965, Johns and Potter 1985; Jackson 2009). Indeed it has been suggested that mercenaries or 'fianna' from Ireland may have served as auxiliaries in the Roman army in Britain, perhaps directly on the Continent and/or via settlement and recruitment in Roman Britain (Raftery 1994a, 216; C. Swift 1996, 5-6; Rance 2001, 260-1). If this were so then these warriors would also gained invaluable military and political experience. The Ballinrees hoard (Plate 7-3) consisted of at least 1,701 silver coins, a silver bowl, and 6 kg of silver ingots; the total weight of the hoard was a substantial 9.5kg. While some of the evidence points to a British origin for the hoard, the preponderance of evidence suggests that that the silver was drawn from a mixture of northern Gallic and British sources.80 Two of the ingots have stamped inscriptions; CVR MISSI which perhaps stands for CURRATOR MISSIONUM (quartermaster) and EX OFF(ICINA) PATRICI (from the workshop of Patricius). The Balline Hoard contains four silver ingots and Hacksilver but no coins. Three of the silver ingots are inscribed EX O(FFICINA) NON; EX OFFI(CINA) ISATIS; this latter is paralleled on a similar ingot from Richborough fort, Kent (Cunliffe 1968). The last bears a Chi Rho symbol EX XP OF FI(CINA) VILIS (Freeman 2001, 10; Plate 7-5).

The ingots contained in the Ballinrees hoard (Plate 7-4) provide the best dating and contextual evidence. They consist of three types; regular double-axe head or cow-hide, donative-type ingots, crude imitations of official double axe-shaped ingots and long, narrow so-called finger ingots of native type. Official silver ingots were used to provide the occasional bonus payments traditional in the late Roman army and it is thought that as the official supply of official coinage and donative ingots had dried up in the early fifth century, these imitation double-axe head ingots represent an initial attempt to continue the production of bonus payments in as close a form to the original model as possible. The later ‘finger’ ingots confirm that the hoard was most probably assembled in the early decades of the fifth century from mixed sources.

80 Based on comparisons with two similar bowls from fourth century graves at Leuna, Germany, the silver bowl may be the product of a Gallic workshop (Schulz 1953, 62 taf. 5, 1 and 25, 1; see also Ager for discussion) while the belt equipment is also most probably of northern Gallic origin and manufacture (Schorsch 1986; Marzinzech 2013).
Access to and intercourse with Roman world vis-à-vis trade, raiding, military service etc. had a profound effect on Irish society in socio-cultural, political and economic terms and acted as a powerful catalyst to bring about change in Irish society (C. Swift 1996, 3-7). The accumulation of this type of wealth destabilised the balance of power by enriching pro-Roman factions and increasing their status and economic position far beyond what would ordinarily have been possible.

Plate 7-3 Hacksilber, ingots and coins from the Ballinrees Hoard. © Trustees of the British Museum.
These militarised élites may have sought to legitimise their emerging authority by associating themselves with the trappings of Roman authority. Ultimately, it led to the breakdown of the established order, shifting centres of power and the emergence of a warrior élite whose new form of kingship may have been inspired by direct exposure to Roman political and military organisation (Newman 1998, 127-41). The Ballinrees hoard demonstrates that Irish élites also had ownership of Military Style metalwork of the highest calibre. As has been recognised elsewhere (Forsyth 1950, 306; Van Es 1967), it is through such exposure that Military Style art began to
permeate the decoration of indigenous personal ornaments, and it is this that informed Newman’s (1995, 24) suggestion that the decoration of the Insular disc-headed pin is an analogue of the small corpus of heavily ornamented, prestige late Roman pins of Böhmé’s Type Muids (See Chapter One).

7.4 Familial and Kinship Ties

More peaceful contacts are also recorded from at least the early fifth century AD. Groupings in the Irish East Midlands obviously had an ethnic sentiment which clearly identified with Romano-British populations and it has been suggested that relationships between dynasties on the two islands contributed to the adoption of aspects of British material culture and social practices in Ireland from the first century AD (Charles-Edwards 2000, 155-76). Familial and kinship ties between élites on both islands are mentioned in the written sources describing the earlier fifth century AD. The Additamenta to the Book of Armagh for example, records that an Irish king in Brega during the fifth century had strong familial connections with Britain going back at least three generations.

Lommán, a British companion of Patrick came to Ath Truimn … and she rejoiced when she saw Lommán because he was British . . . Her husband Fedelmid . . . also rejoiced . . . because his mother was from the Britons, a daughter of a King of the Britons . . . Fedelmid greeted Lommán in British. (Bieler 1979, 167-9).

The founder of the Uí Néill dynasty, Niall Noigiallach, was said to have had a British mother, Cairenn. Since Niall’s floruit was before the middle of the fifth century (Carney 1955, 364-71), her background would have been in sub-Roman Britain.81

7.5 Romanised Ritual Practice; the Evidence from Freestone Hill, the Rath of the Synods, Newgrange and Knowth

Interaction with the Roman world may also have prompted the emergence of new forms of ritual focus in the socio-cultural fabric of late Iron Age Ireland. Evidence for what has been described as ‘Romanised cultic practice’ is suggested by activity associated with stone enclosures on the summit of Freestone Hill, Co. Kilkenny

81 The derivation of Cairenn from the Latin Carina is discussed by O’Rahilly (1946, 216-17).
(Figure 7-2). Originally built in the later Bronze Age to enclose an earlier burial cairn, the central enclosure on Freestone Hill was remodelled and transformed in the fourth or fifth century AD. A small assemblage of coins (including a copper issue of Constantine the Great minted at Trier, dated c. AD 337-40), pottery sherds, a gaming piece and personal ornaments (toilet implements, penannular bracelets or copper alloy and blue glass, rings, decorated bronze strip, etc.) of a late Romano-British type commonly found in south-west Britain were ritually deposited there. Based on parallels with votive deposits at Romano-British temple sites such as Lydney, offerings are considered indicative of cults devoted to fecundity and healing.\(^82\) Given the absence of evidence for Iron Age occupation, Ó Floinn (2000, 25-29) suggests that the enclosure on Freestone Hill served as the temenos (i.e. sacred boundary) for a small rural shrine that echoes temene found in Roman Britain. Moreover, he suggests that those who used the site were intimately familiar with comparable monuments, artefacts and depositional practices in Roman Britain suggesting that they had strong connections outside Ireland, specifically with southern Britain where examples of temene reusing prehistoric burial monuments such as barrows are well known. Haddenham, Cambridgeshire (Evans 1985) and Stanwick, Northamptonshire (Neal 1989, 156-7) for example feature temenos enclosures that appear to have deliberately encompassed Bronze Age barrows. There may also be a Neolithic long barrow beneath the Romano-British temple complex at Uley, Gloucestershire (Woodward and Leach 1993). 

Settlers from Roman Britain have been linked with finds of Provincial Roman material from the Rath of the Synods (Raftery 1994, 212). The site produced an impressive collection of occupation material that Grogan (2008, 89-91) argues, has a largely Romano-British origin. Finds included imported pottery from Britain and Gaul, glass drinking vessels dating to the first and second centuries AD, a barrel padlock, a lead seal, a mirror fragment, personal ornaments viz. copper alloy pins, rings, an earring, a fragment of a penannular brooch, part of a bracelet and Roman fibula as well as dagger chapes, discs and iron objects including rods, nails and rings Other interesting finds from the site include a hoard of sixty-five water-rolled pebbles, balls of Roman ironstone and sandstone, antler tines and a decorated silver

\(^82\) Pins and bracelets at Lydney have been associated with the healing cult there (see Wheeler & Wheeler 1932, 41-2).
fragment (ibid. 96-7). Much of the material is common-place and domestic and Lindsay Allason-Jones (2008, 107) has interpreted these as representing the material culture of a settled, domestic group rather than a high status group with important political, military, religious or mercantile connections. This is contra Grogan (2008, 97) who describes the Rath of the Synods as a high status habitation. Gerard Dowling (2011, 222, 229) however has argued convincingly that as with Freestone hill, Co. Kilkenny, the material from the Rath of the Synods constitutes votive deposits and that two small, post-built rectangular structures on the site are not domestic houses (contra Grogan 2008, 57-9, 85) but rather, they are shrines associated with cult-centres such as the Romano-British sites at Heathrow and Uley (Woodward 1992), the Late Roman sanctuaries at Gournay-sue-Aronde (Derks 1998, 175-80) and St. Maur (Brunaux and Lambot 1991, 198), albeit on a smaller scale (see also Breathnach 2011, 127-8).

Several explanations have been advanced for the ‘ritual’ deposition of Roman objects at major prehistoric sites including the passage tombs at Newgrange and Knowth Co. Meath during the early centuries AD (Carson and O’Kelly 1977; Thomas 1982; Raftery 1989, 145-6; 1994, 210; Stout 2002). It has been argued that travellers or traders ingratiating themselves with local deities, military expeditions to Ireland, expatriate settlement or Irish soldiers returning home after service in the Roman army were responsible (Soderberg 2013, 74). Similar activity has been noted in Roman Britain where there are also examples of the deposition of Roman material at ancient monuments. Williams (1997, 72-3) suggests that this practice represents the reuse of ancient monuments to host open-air ritual performances and for votive deposition and notes that cult activities and ritual practices commonly took place in the open air during the Roman period (see also Salway 1981). At Newgrange, personal ornaments including two Roman disc brooches, two finger rings of fourth to fifth-century type and the possible remains of penannular brooches were found deposited near three standing stones in the vicinity of the entrance to the passage tomb (Conyngham 1844; Wilde 1847, 740; Carson & O’Kelly 1977, 35-40). Twenty-five Roman coins including gold coins of fourth-century date (some turned into pendants) were also found around the entrance area (Carson & O’Kelly 1977

83 Cooking jars and coins were found at the Giant’s Grave long barrow in Wiltshire (see Annable 1970).
Votive offerings of circular and ring-shaped objects are a particular feature of fourth century depositions at Uley, Gloucestershire where remarkable concentrations of such objects were noted (Woodward 1992, 69, 72).

The archaeological evidence for votive deposition at Newgrange, Freestone Hill and the Rath of the Synods in the fourth century AD provides us with clear evidence that cultic practices, of a type also found in contemporary Britain, took place at these sites. Those participating in the rituals, whether the local inhabitants, Irish or Romano British mercenaries or exiles were clearly aware of the cultic practices in Britannia and moreover, had access to select personal ornaments and other objects of late Roman type. Given that the lower Severn/Bristol Channel region has already been identified as a key node for the development and transmission of the Insular Military Style to Ireland, evidence for the transmission of cultic practices from the same general region is noteworthy if unsurprising. Furthermore, these shared cultic practices suggest that interconnections between groups in Ireland and the Roman World were far more complex and wide-ranging than can be explained by episodic and opportunistic raids on Roman Britain or general trade and exchange (Newman 1995; Ó Floinn 2001; Heald 2001; Soderberg 2013; Dowling 2012; Gavin 2012, 2013a; Armit 2013).

84 For further details on coins found at Newgrange see Ó Riordáin and Daniel 1964, 32 and Molyneux 1726, 206.
7.6 Mortuary Evidence

A series of burial practices more typically associated with the Roman world have been found in Ireland, indicating perhaps, the presence of small groups or individuals familiar with non-indigenous funerary practices. These changes mark a significant break in funerary tradition. A first century AD Roman-type cremation burial from near Stoneyford, Co. Kilkenny is said to have been found ‘in a rath and protected with stones in a field …’ (Bourke 1989, 56-7). Accompanying the burial was a glass cinerary urn, sealed by a bronze disc-mirror and a glass lachrymatory. In the Roman world, personal items such as hairpins, necklaces and mirrors were often ‘given’ to the dead as grave goods; the presence of a mirror in this instance suggests that this may be a female burial (Figure 7-3). This burial has also been interpreted as indicating the presence of traders navigating along the River Nore (possibly the

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85 Halsall (1992, 1995) proposes the following criteria for the evaluation of whether a mortuary ritual might be due to the arrival of non-indigenous group rather than the result of its general adaption within a region: 1) the significant difference of the ritual from established, native rituals; 2) the identification of the precise geographical origin of the ritual, which is outside of the region; 3) the appearance of the ritual in the region before its disappearance in the place of origin and the similarity of these two occurrences.
‘River Birgos’ in Ptolemy’s gazetteer) or the presence of a Roman community in the area (Bourke 1989, 56-7; Warner 1976, 274). Another (possibly) female burial from Loughhey near Donaghdee, Co. Down may similarly be linked to Roman settlers. The cremated burial was accompanied by one hundred and fifty glass beads, two glass armlets, as well as a fibula, rod, tweezers and finger ring in copper alloy. These metal objects find their best parallels in the Somerset region of Southern England (Jope and Wilson 1957; Raftery, 1981; Edwards 1999, 3).

Familiarity with Roman burial rites is also attested by several extended inhumations at Bray Head, Co. Wicklow that were interred with Roman coins placed in their mouths (O’Brien, 1990; Davies 1989; Raftery 1994a, 209). Such coins, called Charon’s obols, were intended to be used as payment to Charon in the underworld for the journey to the after world (Naumann-Steckner 1997). A small cemetery of at least two apparently crouched inhumations was uncovered in 1927 during harbour construction on the West of Lambay Island, Co. Dublin and produced grave goods suggestive of late British ‘warrior burials’, from the first or second century AD (Rynne 1976, 235-6; Raftery 1994, 203). The associated assemblage of militaria and personal ornaments is particularly unique in an Irish context and includes brooches of first century type, a beaded torc and a jet bangle, all of which indicate connections to northern Britain, specifically the territory of the Brigantes (Raftery 1994, 201-3; Mattingly 2006, 441-2). Whether these finds are more likely to represent a community fleeing a Roman advance (Raftery 1994, 200-210) or a group associated with activities at the speculative entrepôt at nearby Drumanagh, which has reportedly produced a significant quantity of Roman material some of which dates to the first and second centuries AD (ibid.) is difficult to tell until archaeological artefacts and features from the latter site are published (see also McGarry 2007, 9). Nonetheless, it is noteworthy that these locally exotic burials were also found in the vicinity of the east Midlands.

A diversity of mortuary practices is known from the Iron Age period in Ireland such as crouched inhumation, extended inhumation and cremation (O’Brien 2003). Inhumation replaced cremation as the dominant formal funerary rite in Ireland during the early centuries AD. Elizabeth O’Brien (1992, 131) has pointed out that such inhumations represent a radically different and intrusive style in the Irish Iron
Age and has suggested that they show Romano-British influence. Articulated crouched inhumation emerged during the first or second century BC at a handful of sites in Leinster, specifically the Meath-Dublin region on the east coast. Crouched inhumations had not been practiced in Ireland since the Bronze Age however this was a common mortuary rite in neighbouring contemporary Britain until the early centuries AD. The spatial positioning in Leinster and the presence of artefacts more common in contemporary Britain than Ireland suggests that this small but important group of burials either originated in Britain or the individuals concerned had strong kinship links with people from there (Raftery 1981; O’Brien 1990; McGarry 2010, 181). Moreover, their prominent and potentially high-status nature may suggest that these were no ordinary migrants and that they may represent important inter-regional socio-political relationships (McGarry 2010, 178–9). If we consider that east midlands has been identified as a core region for the dissemination of both Insular Military Style art, locally exotic metals and new dress fastener types to Ireland during the fourth and fifth centuries AD, this evidence for early, high-status inter-regional contact and exchange is doubly significant.

From the second century AD the rite of extended inhumation supplanted both the burial custom of cremation and the relatively recently adopted rite of crouched/flexed inhumation in the Leinster region and again, it is suggested that these changes only occurred after extended inhumation had become the dominant
burial rite in Roman Britain and that the impetus for such burials came from there (O’Brien 1990, 2003, 63-72; 2011). Cremation was the dominant form of burial in Ireland up to first century BC and, given the amount of preparation required and difficulty involved in effecting a cremation, McGarry (2010, 181) suggests that the practice must have been deeply imbedded in Irish religious and cosmological beliefs. Extended inhumation was adopted by the Romans in the second century AD and soon spread to the province of Britannia and later to Ireland. The apparent widespread and swift adoption of a radically different burial practice from the late fourth century onwards viz. extended inhumation may therefore signal fundamental changes in religious and cosmological beliefs. Initially, the orientation of the head varied but during the fourth century east–west orientation with the head to the west became the norm. Burials featuring this orientation are often assumed to be Christian in character and while McGarry (2010, 182) suggests that individuals buried in this manner had Christian beliefs or were greatly influenced by them, O’Brien has argued that the associated beliefs are less certain. She suggests that this new rite in Ireland reflects an adoption of what was considered the ‘norm’ in late and post-Roman Britain and as it was considered the ‘norm’ it was practiced by all regardless of whether they held Christians or non–Christian beliefs (O’Brien 2003, McGarry 2007; O Brien 2010, ix).

7.7 A Continuum of Contact?
The presence of Roman material culture in Ireland, and the adoption of Roman ways of doing things have generally been employed to determine degrees of romanisation. The archaeological evidence suggests that quite quickly following the conquest of Britain this process had begun in Ireland. At Rath, Co. Meath, for example, a disc-headed brooch and a late La Tène fibula were found in a building that has been interpreted by the excavator as a sweat lodge. These types are otherwise unknown in Ireland but are paralleled by finds in Britain. It is suggested that the introduction of the fibula to Ireland during this period may be associated with changes in clothing, and perhaps with the introduction of linen (Soderberg 2013, 78; Fitzgerald 2006, 38-40). A double inhumation burial from Knowth, Co. Meath (Figure 7-4), of two male relatives, probably twins aged around 30 years, who were decapitated prior to burial and buried together head-to-toe, has recently been re-dated to between BC 40 to AD.
130 and isotopic analysis indicates that they probably originated in north-east Britain (Cahill-Wilson and Sikora, forthcoming). Both individuals were placed on their backs, slightly crouched and as such they constitute an example of the crouched burial rite derived from contemporary mortuary practice in Britain described above. Aspects of material culture in the graves *viz.* Roman style pegged gaming pieces, dice and other gaming equipment, also point to a link with Britain, suggesting perhaps that these are the burials of immigrant Britons or indigenous Irish seeking to emulate British practices (Hall and Forsyth 2011, 1330). By the end of the first century BC, board games were adopted by British élites in the south east as part of a Roman cultural package. Following the conquest, the playing of Roman and Roman style board games spread throughout Britain, into the Germanic world and beyond the Imperial frontier into Scandinavia as part of a wider Roman cultural package (Hall 2007). For example there are numerous finds of gaming pieces throughout Scotland including a set of Romano-British glass gaming pieces from a second-to-third-century grave at Tarland, Aberdeenshire, which contained a clear mixture of indigenous and Roman artefacts (including a silver penannular brooch) in a high status, non-Roman burial context (See Hall 2007; Hall and Forsyth 2011, 1331). Significantly, this mortuary evidence from Knowth suggests that, in common with other frontier zones, Roman-style board games were introduced into Ireland during the first or second century AD through cross-frontier material culture interaction.

At Rath, Co. Meath, a crouched inhumation believed to be female, was accompanied by three copper alloy toe rings positioned at the toes of each foot. One spiral ring was found in situ, encircling two toes (the big toe and the one next to it) of the right foot, another decorated with a herringbone motif was found on the same foot encircling the toe next to the little toe. They have been interpreted as being part of some form of footwear, possibly sandals, and are without parallel in Ireland (Schweitzer 2005, 96-7). Similar types are known however from Britain, mainly from contexts dating to the late first century BC to the first half of the first century AD, suggesting that this burial at Rath may mark cultural connections between the individual, her social group and contemporary British communities (McGarry 2010). Likewise, the central burial in the largest of a cluster of ring ditches in Ballydavis, Co. Laois, produced a sheet bronze canister that is a close match to an object in Yorkshire chariot burials (McGarry 2005, 8).
Toe-rings and board games are not premium goods such as the previously discussed votive depositions at Newgrange or the large hoards of late Roman Hacksilber from Ballinrees, Co. Derry, or Balline, Co. Limerick, which do seem to be focused on solidifying social control and élite identity. Nonetheless, they are locally exotic and they suggest that broader, deeper connections, more complex than raiding and trading, and involving wider swathes of the population in both Ireland and Britain also existed (Soderberg 2012, 78-9). There is an increasing body of evidence to suggest that groups and individuals were formulating their identity in terms of long-distance connections with communities in south western and eastern Britain. Indeed, the evidence from Rath, Knowth, Ballydavis and Stonyford outlined above suggests that in central eastern Ireland and along the eastern littoral in particular, there existed a continuum of connection and contact with Britain. This may go some way towards explaining why this style and the artefacts associated with it gained such a widespread and rapid acceptance in Ireland.
During the first half of the fourth century, southern England was very much part of the Roman world and shared a unified currency, a common language, a centralised bureaucracy and system of taxation, a regular army and a network of roads and trade routes with that world. This changed during the second half of the fourth century when, following the collapse of Imperial rule, the socio-political landscape underwent a profound transformation. In the latter decades, the borders of Britannia were placed under increasing pressure from raids and migrations by Germanic-speaking peoples from Northern Europe and raids by the Scotti and Picti from
Ireland and northern Britain. By AD 450, most of the key elements of Roman economic organisation ceased to be renewed such as coinage, fine glassware and pottery, and the material hallmarks of Roman civilisation slowly began to fade (Jones 1996, 1-3; Dark 2000, 12-15; Jones 2011, 331-2). The state-centred political organisation of Roman rule was replaced with ‘a multitude of unstable and competing polities… in which authority was directed through chains of personalised relations of domination and obligation’ (Garwood 1990, 90).

Élite status is frequently reinforced in iconography and symbology, and élites in fourth and fifth century Britain employed dress ornaments, to promote a new ideological outlook, based on symbols of Imperial martial power (Gerrard 2013, 156) and to create new social identities during this period of flux and change (Curta 2005, 133). The Insular Military Style occurs in the Irish east midlands, the Severn valley and its environs and Lincolnshire with individual finds scattered along major route ways such as the Fosse Way. This art style could not have symbolised a uniform identity, but it may have given the wearer a social locus associated with a powerful military and civilian élite in Roman Britain. This not only reinforces the importance of the east Midlands as an important zone of contact and exchange, it also provides further evidence of a desire for high status Late Antique goods among native élites.

It is generally assumed that the Roman army withdrew from Britain in the early fifth century (Millet 1990, 215). However, Cameron (1985, 213-4) suggests that it was unlikely that Imperial rule ended so abruptly. The situation in fourth century Britain may well have been like that of seventh century Italy, where the structures of state remained but the silver and gold coinage required as cash payments for the army became increasingly difficult to procure. In Italy, soldiers began to acquire land and live off its produce, a process which gave troops an incentive towards vigorous defence of their own properties and communities. In Britannia, the money economy collapsed and silver and gold coinage became increasingly rare from AD 378. In this context it is possible that soldiers here immersed themselves in local power structures. Romanised élites retreated to their country estates, which essentially formed the nuclei of self-contained and self-supporting communities that were operating defensively, much as some areas under
local governors in provincial Gaul and began to develop their private powers as land owners (Salway 1982, 454-7). The claim to legitimacy was made by evoking Roman military strength and prowess thereby claiming continuity from the period of Roman rule.

The withdrawal of troops from Britain during the later fourth century coupled with the activities of Irish raiding parties created an atmosphere of fear and insecurity throughout the general region of south west Britain. This may have provided the impetus for those with sufficient power, and wealth to create their own private armies for the protection of their villas, estates, and other resources such as mines. Private armies such as these are recorded elsewhere in the Empire where they enabled the development of military patronage by local élites (McMullen 1963, 139). Indeed, it has been suggested that Irish foederati in the form of élite Irish fianna were employed within southwest Britain by local potentates to protect their interests and territories from Barbarian raids (Drinkwater and Elton 1992; 214–15; Mathisen, 1993; 56-57, 99-100).

South western Britain was a region which witnessed long-term cross-cultural exchange with eastern Ireland as evidenced by similarities in settlement, ritual and burial practices between both regions. It is also argued that groups in these regions share strong kinship ties (Charles-Edwards 2000, 149, 162-3; Edwards 1999, 129; O’Brien 1999, 132; Rance 2001, 250). In this context then, it is interesting to note the connection between this corpus of Insular ornamental metalwork which was mobilised by élite groupings in the south east around Lincolnshire, in the south west around the environs of the Bristol Channel and in the Irish East Midlands with identifiable items of male dress and military association viz. crossbow brooches and belt sets decorated in Böhme’s late Roman Military Style. Just as Continental Élites appropriated Roman military symbols to legitimate military power and authority, Irish élite foederati could similarly have drawn upon Roman military symbols to legitimate their military power and authority while at the same time drawing on a Roman military identity to provide group cohesion (Gardener 2007; Jarrett 2010, 195-199).

Following the breakdown of Roman socio–political structure in the late fourth century, new socio–political groups emerged in both Ireland and Britain and these groups required some form of visible, material demarcation. In continental
Europe, members of the military displayed their power and status by wearing insignia such as elaborate belt sets and the crossbow brooch. Though clearly not of Imperial issue or part of a formal military uniform per se, Insular Military Style art operated mimetically within an aristocracy, most likely a warrior aristocracy for whom status was measured by military prowess and ostentation (Fitzpatrick 1989, 28). As such they are a reflection of what Thomas (1995, 1) has termed ‘power-dressing, arising from a need to impress’ and they may have signified membership of military networks associated with local élites; subtle variations in style could have signified local groups or kin affiliations. This art should not be viewed within an all-encompassing, homogenous, Romano–British context. It performed in a narrower milieu, as a localised expression of identity and affiliation and as such, local and regional strategies of social mobility, competition and power struggles provide the most effective prism through which to interrogate the social context in which this art style ‘performed’ (see e.g. Hall 2004, 20). The evidence suggests that the Insular Military Style was created to suit a specific, local audience who were active participants in this ‘arc of cultural exchange’ that characterised the Late Roman Provincial West and the Late Antique world. As such they were well-acquainted with many different cultural strings of communication, indigenous, Roman and Germanic. Groups and individuals in southern Britain and in the Irish east midlands understood and used this multivalent ‘symbolic language’ across the boundaries of our modern perceptions of ethnic and geographical polarisation. It is within this culturally complex post-Roman world where identities were under constant change and were adapting to new and different socio-cultural impulses that Insular Military Style art performed.
Chapter 8 - Interpreting Insular Military Style Art

Decoration serves a number of purposes not least of which is to provide visual interest and pleasure for the viewer. The creation of symmetry and repetition on decorated surfaces is intended to enhance the aesthetic experience by making objects visually attractive and desirable (Brett 2005, 6; see also Kant and Bernard 1931, 75). Applying decoration also creates a point of focus and offers a means to engage with an object, inviting observers to cogitate on the various patterns and designs both in terms of how they were created and what they might mean (Gell 1998, 74, 81).

Indeed, Shanks (1996) argues that there can be no purely decorative surfaces devoid of meaning since at the very least, any design will imply the conditions of its production (see Chapter Four). A functional relationship also exists between such art and the wider social, cultural and intellectual world (Marcus 1996, 2). The affective properties of art construct and maintain social hierarchies and mark and affirm religious beliefs as well as social and political positions and wider kin or ethnic societal affiliations (Gell 1998, 6; Hedeager 1992, 28). Therefore, material culture is part of an apparatus which people use to construct meaningful worlds (Thomas 1999, 93-4). It is a medium that human beings use actively to explore and shape their social, natural and supernatural surroundings and one which is also used consciously (or unconsciously) to construct and affirm social identities and to shape relationships (See e.g. Hodder 1986; 1991, 73-5; Gell 1998; Morphy 1999; Garrow et al 2008).

Objects of personal adornment comprise a special group. They have an inseparable connection with both the corporeal and the social body and whether they are worn about the person or adorn objects intrinsically associated with individual display such as saddlery, belt-fittings etc., they serve as important vehicles of the overall personhood of the wearer, proclaiming attributes such as individual and group identity, status and gender. As bearers of these important messages, personal ornaments (and the art that decorated them) can be presumed to have been selected with a great deal of care (Gell 1998). Consequently, the shapes, motifs, designs and colours of the Insular Military Style can be viewed as meaningful, fulfilling a definite (though poorly understood) purpose within indigenous Insular belief systems.
In their most accessible form symbols present a simplified, visual representation of the signified. They can also be abstract and complex, reflecting a particular interior quality or essence rather than simply the external appearance of what is being indicated. Symbols and motifs are also capable of simultaneously expressing more than one concept or idea and are capable of being interpreted on a number of different levels. Whether simple or complex, symbols and motifs act as visual cues and as instruments of communication, conveying information and meaning to their viewers. The responses they trigger are anticipated and shaped by cultural conditioning and how they are interpreted is largely dependent on the context in which they are viewed (Wobst 1977; De Marrais et al 1996, 16; Scott 2000, 16). A personal epistemology is brought to bear in each and every encounter with art. It is the prism through which perceptions are refracted and understood.

While modern viewers may easily identify the symbols, motifs and designs of Insular Military Style art, the meaning, purposes, thought processes and intended impact of these aniconic representations can prove elusive to modern scholars particularly so when attempting to penetrate and understand the symbology of pre-literate societies such as late Iron Age Ireland (Dickinson 2005, 111; M.J. Green 1984, 303; Janes 1998, 116). These inherent difficulties have led writers such as Kitzinger (1970, 643; 1993, 3) to caution against opening a ‘floodgate of symbolic interpretations of innocent ornaments’ and embarking on ‘flights of interpretative fancy’ when attempting retrospective symbolic analysis. Such advice not withstanding, if no attempt is made to elucidate the symbology then all that is accomplished might amount to little more than a descriptive account of this art and thus a limited and narrow understanding of its role in the social, cultural and religious infrastructures of the Insular world (Megaw and Megaw 1989, 19).

While to modern eyes Insular Military Style imagery may appear abstract, ambiguous and difficult to decipher, the recurrent themes and specific and consistent positioning of certain motifs on these objects suggests a conventional or preordained order obtained in the disposition of the fields of ornamentation. References to such conventions are usually indicative of meaningful order and thus encoded symbolism. There is a formula at work here and this art was probably read as a symbolic language complete with its own vocabulary and syntax within the society that created and consumed it. Members of non-literate, Insular society would have been
especially reliant upon the visual both to convey messages and to make sense of themselves and the world around them, suggesting that the motifs and symbols of their art must surely have been intended to elicit a deeper response than mere visual gratification. They may have carried explicit religious and cosmological associations, and fulfilled a definite purpose within belief systems in late Iron Age Ireland (Elsner 1998, 44; Megaw and Megaw 1989, 293-5; see also Panofsky and Panofsky 1962).

Symbols, motifs and patterns on decorated metalwork provide a means to understand and penetrate the social, cultural and religious infrastructure of non-literate or non-recorded peoples (Jope 1995, 376-410). Indeed, exciting new insights have been gained by those who have taken up the challenge of translating the symbology of the past. Both Anna Gannon (2003) and David Leigh, (1980, 288-432; 1984a) for example have successfully endorsed and applied such an approach. In her exploration of the iconographical content of Anglo-Saxon coinage, Gannon emphasises the iconographical content of the coinage as a bearer of meaning and explores how the iconography fitted into the visual culture of the time while Leigh addresses the relationship between the form of Salins Style I art and its iconographic and social meaning. It is in this same spirit that Chapter Eight will explore the symbology of the so-called Insular Military Style, using the objects and the art that decorated them as metaphors, as texts to be read (see e.g. Patrik 1985; Hodder 1986; 1988; Tilley 1993; Buchli 1995). It is intended that the following examination of a selection of the more prominent motifs will provide a strong indication of the rewards that await a more dedicated study of this art, and its enormous scope for enhancing our understanding of what is, in effect, a relatively obscure period of Irish history.

8.1 Apotropaic and Amuletic Properties

Amuletic objects and apotropaic practices play an important role in the lived experience of humans and the way in which they negotiate the world. Johns (1996a, 5-12) lists protection from evil as one of three reasons for the wearing of jewellery in Roman Britain and, in an uncertain world populated by threats both real and imagined, talismans and amulets would doubtless have been in great demand and employed to protect the wearer. These were perceived as having and exerting agency
on the physical world and on the human body by acting in invisible yet, tangible ways with the power to prevent external harmful forces such as illness or spirits from infiltrating the human body (Pauli 1975, 1985). Close proximity to the body is an essential characteristic of amulets whereby the act of being worn and/or carried about the person offered the wearer continuous protection. It also signalled to others that the wearer was under the protection of the particular entity symbolised (Gladigow 1992, 14). In their original context, images and symbols were not understood as mere copies but as an actual part of the sacred entity or power source that they represented and as such, were seen capable of acting upon another entity in the same manner as the original and understood as actual evocations or manifestations of the power of the prototype they represented. Both were conflated and considered inseparable in the mind of the viewer (Gell 1998, 6). Embellishing objects with ‘powerful’ designs and devices, invested functional items of dress such as brooches and pins with talismanic properties and apotropaic abilities, capable of bringing good luck and/or defending the wearer from malevolent intent (Freedberg 1989, 60; Webster 1986, 133).

8.2 Private Decoration

Across the corpus, artistic focus was concentrated on the most prominent and visible aspects of the objects, whereas comparatively plain, chased ornament was employed on the verso and other areas that would ordinarily have been hidden from view. This is a shared characteristic with earlier continental La Tène art (Reinhard 2004 92-9; Müller and Lüscher 2009, 311). The elaborate, beaded saltire (Plate 8-1) for example is always deliberately obscured from view, perhaps suggesting that the motif was of personal significance to the wearer and was not for public consumption. In general, the importance of visibility varies with the type of information that is being transmitted stylistically. ‘Private’ or hidden motifs and designs are more likely to convey messages about ritual or belief systems whereas highly visible material often proclaims group or ethnic identity (Hegmon 1992, 521). Objects of personal adornment are perhaps unsurprisingly the most common vehicles for protective and talismanic symbolism (M.J. Green 1984, 41, 54) and the specific placement of certain motifs as ‘private decoration’ on the verso and other areas hidden from the public gaze suggests that these may have held an apotropaic or spiritual significance in the Insular world.
Commentators have tended to distinguish the ‘seen’ from the ‘unseen’ in terms of ‘public’ and ‘private’ aspects of such objects but in so doing may have overemphasised the ‘personal’ at the expense of the hidden. The potency of some motifs may have depended on their not being seen rather than their being ‘private’ in any exclusive sense. The elaborate and complex nature of these hidden or private designs and their general uniformity across the corpus, suggests that these are unlikely to represent random geometric patterning or markings of ownership and authority and may instead have had an apotropaic or talismanic function. Their occurrence on the verso and other less prominent areas, worn close against the body and hidden from view suggests that the symbolism was directed at the wearer, and that the pins were invested with protective, talismanic or apotropaic powers, readable, as is so often the case, through either a pagan or a Christian prism.

Comparable iconographical schema, known to be related to Greco-Roman perceptions of the cosmos have been found incised on third and fourth century sandal soles across the north-western Provinces. These may have held a similar talismanic or protective function (van Driel-Murray 2002, 96-7, 99). The decoration on both pinheads and brooch terminals is almost always orientated towards the wearer even though the motifs were quite tiny in many cases and would have been difficult to see. The important feature appears to have been the awareness of the wearer and their relationship with the decorated objects. The tightly-wound spirals of the Insular Military Style may also have an element of apotropacism; the complicated patterns and ambiguity of the motifs may represent deliberate attempts
to confuse and confound. Across diverse cultures, cognate complicated designs and patterning have been employed as protective devices on apotropaic objects, to confound and ensnare malevolent forces and keep them at bay by trapping them within the design as if in a web; the greater the virtuosity and complexity of the design, the more powerful the level of entrapment (Ingold 2000, 57). The theory is that they would have been hopelessly beguiled and enthralled by the intricacy of the design which presented them with a maddening puzzle to unravel and decipher, thus deflecting their attention and defending the wearer from any malevolent intent (Gell 1998, 83).

8.2.1 Psychological Effects of Art
Whilst it is commonplace in art-historical analyses to describe the skill of virtuosic artists as magical, Gell suggests that this metaphoric language may also be applied to decoration, designs and motifs. It is accepted that certain stimulus arrays can disrupt our normal cognitive functioning. Complex, intricate patterns for example can evoke mild psychological confusion that can render the viewer unable to logically organise their visual field (ibid. 18-9). Cognate psychological phenomena have been observed on this corpus. Complex fine-line spiral motifs have hypnotic qualities, tempting the viewer to enter a seemingly indecipherable mental maze while motifs such as palmette variants with opposed volutes cause peculiar optical sensations; the intrinsic instability of the design leads the eye off in different directions. Compressed into a miniature field makes the design all the more intriguing.

There are ethnographical examples which suggest that the visual effects induced by such designs can be interpreted as a potency or magical power emanating from the object itself. Richly-carved and painted Tobriand canoe prow-boards described by Gell also feature intrinsically ‘unstable’ and intricate designs (Plate 8-2). These elaborate carvings are the first things that their trading partners see when the Trobriand flotilla makes shore and they are intended to dazzle and demoralise potential trading partners. Having demonstrated the magical potency they possess in the artistic domain, the implication is that the Torbrianders are equally superior in terms of trade and commerce. In other words, these designs were intended to ‘project power’ (Gell 1992, 44; 1998, 69–71; see also Giles 2008, 78-9).
The complex curvilinear designs that are a particular feature of Insular Military Style art may have been intended to elicit similar responses (Plate 8-3). Positioned frontally on the most prominent areas of the object the decoration immediately attracts the gaze of observers and was perhaps intended to be the first point of reference. The complexity, dexterity and miniature scale of the designs was both captivating and disconcerting and as with the Trobriand prow-boards, it was an integral part of the object’s powerful effect, proclaiming its ‘magical potency’ and the wearer’s prestige.
8.2.2 Miniaturation

In addition to the designs themselves, the tiny scale of the field of ornamentation in Insular Military Style art can also affect our ‘first impressions’. The act of miniaturation is an impressive visual strategy, which can imbue objects with psychological tensions and elicit sensory and emotional responses from the observer (Nakamura 2005, 32; Waddington 2007). Bailey (2005, 34) has argued for example that by manipulating scale, our perceptions are affected creating a ‘sense of being drawn into another world’. Miniaturation also forces both the wearer and the observer into a close, perhaps tactile encounter in order to experience the image or object fully, thus encouraging them to fully engage with it. In the Romano-Celtic world, miniaturation often acted as both an expression of and an essential part of ritual (M. J. Green 1981, 266; 1984, 73–4). The diminutive size of both objects and the motifs and designs that decorated them may have enhanced their cultic significance (Allen 1993, 257). With miniaturation, only certain traits of the full size are present, thus rendering the smaller version a compressed and notionally more powerful version of the original (Bailey 2005, 29).

Miniaturation has also long been a valued visual and artistic quality in fine metalwork and objects decorated thus have been interpreted as the sole preserve of an élite minority (Waddell 2010, Avery 1997). While technical and artistic virtuosity is acknowledged as intrinsic to the efficacy of prestige objects in their social context, the considerable time and skill invested in creating diminutive and intricate ornament may also have served to enhance the cultic significance of the motifs and designs (Gell 1994, 56). As the products of exceptional artistic prowess and representing
‘dexterity in objectified form’, the combination of miniature ornamental fields and diminutive objects of for example the Denton pin (Cat. No 8; Plate 8-4) would surely have both captivated the viewer and caused them to wonder how it was accomplished, thus uniting Gell’s (1992) ‘technologies of enchantment’ and ‘enchantment of technologies’.

The Denton pin (Cat. No. 8) is the smallest known example of a hand-pin, the projecting head measuring just 7.1 x 6.9mm. Nonetheless, the decoration is exceptionally elaborate. Each motif has been rendered in superb detail and has not been compromised in any way by the miniature decorative field. In actuality, the design can only truly be appreciated when viewed under magnification. The technical means by which designs such as these were achieved was probably beyond the comprehension of the viewer, and perhaps was explicable only in magical terms – the technical processes and artistry involved transcended understanding, forcing the uninitiated viewer to construe both object and decoration as magical (Gell 1992, 43–9). Likewise, the diminutiveness of both object and ornament suggests that each were only ever intended to be viewed by the wearer and were not for general consumption (Waddell 2011, 2).

8.3 Motifs and Meanings
Decoding the symbolism on this corpus necessitates looking beyond it, for sometimes the meaning of a symbol can be worked out from the range of different
contexts in which it is found, such as by identifying a common denominator. For instance, a number of the more prominent motifs on this corpus e.g. triple annulets, triskeles, S-scrolls and quatrefoils also occur as a distinctive facial tattoo on coins of the Aulerci Eburones, the Treviri and Aulerci Cenomani from Gaul and Jersey dating to the later third and second centuries BC (Figure 8-1).

In these contexts, facial tattoos have been interpreted as a sign of divinity and it is argued that ‘collectively there are enough examples to leave little doubt that a cheek mark of some kind on a Celt was nothing very odd, at least in north-west Gaul’ (Thomas 1963, 92, fig. 15 and appendix II;). It is thought that similar tattoos were also in use in southern Britain during this period though images of facial tattoos on British coins have not been found (Carr 2005). Nonetheless, what the coin evidence does suggest is that the head was considered an appropriate position for such symbolism, at least in the wider Celtic world. In fact the preponderance of decoration in the region of the pinhead may reflect the sacredness of the head in Celtic religion where it was seen as a ‘totem of power’ and was venerated as such

![Facial tattoos from Gallic coinage](after Thomas 1963, 92, fig. 15)

86 Although Claudian’s description of Britannia is stereotypically outlandish and barbaric, it is significant perhaps that he describes her as ‘Britannia, dressed in the skin of some Caledonian beast, her cheeks tattooed, and her sea-blue mantle sweeping over her footsteps like the surge of ocean. De consulatu Stilichonis, 2, 250-5
This symbolism would have appeared all the more potent if these pins functioned as hairpins and were worn on the head.

Plate 8-5 Anthropomorphic Mount from the River Shannon, head decorated with a band of narrow elliptical quatrefoils; cheeks decorated with tricorns. Cat. No. 30a, b.

A unique anthropomorphic mount recovered from the River Shannon near Athlone (Plate 8-5: Cat. No. 30a,b), suggests that at least some of these ideologies and cult features from Continental Iron Age Europe may have penetrated Irish society (Kelly 2001, fig. 24.6). The face is depicted in typical Celtic fashion with stranded hair, wide, lentoid-shaped eyes with a faraway gaze, and a gaunt, impassive countenance (M.J. Green 1976, 140). In contrast to other renditions of the human head known from Ireland, the cheeks and forehead are heavily decorated. Significantly, each cheek is ornamented with a tri-foliate motif or tricorne; this is the
only depiction of a cheek tattoo in Ireland and Britain known to the writer (Gavin 2013b, 191-193). The forehead is adorned with a band of three quatrefoils formed of narrow, elliptical leaves. These find parallels on the so-called ‘blattkrone’ or ‘leaf crown’, a form of early La Tène headdress depicted on many pieces of Celtic art from continental Europe in both stone and metalwork, particularly statuary. Notionally said to resemble mistletoe leaves, a peculiarly Celtic motif, this distinctive regalia is thought to be associated with either divinity or religious or secular authority (Jacobstal, 1944: 4, 15; Fox, 1958: 69). Venclová has argued however that given the attested reluctance among Celtic peoples to portray their deities, realistic heads such as these are most likely to represent heroised persons such as celebrated warriors and chieftains (Venclová, 2002: 460–61).

The blattkrone is also found on British metalwork, for example on first century BC bucket-handle escutcheons from Alkham, Aylesford and Baldock (Stead and Rigby, 1986: 51–61; Stead, 1996: 67, fig. 75). The foliate symbolism on the Shannon mount, and indeed the tri-lobed plant motif on the ‘gorgon’ head at Bath, may mark conscious reference to this earlier symbolic repertoire (M.J. Aldhouse-Green, 2004, 222-23, fig. 8.2). Though differences in style may be observed, the various foliate motifs are sufficiently idiosyncratic to suggest some kind of shared association or common world-view. Indeed such references may have played an important role in the symbolic fabric of late Iron Age Ireland. Similar practices can be observed for example among aboriginal Australian groups, who also use ancestral memory as points of reference to cosmological perception and ritual practice (Flood, 1997: David et al, 1998: 290–304).

8.4 Solar Symbolism
Solar symbolism is well attested in Bronze Age and early Iron Age continental Europe as well as in Britain and Ireland suggesting that solar and lunar phenomena played an important role in European cosmology. This is unsurprising as the sun’s warmth is of vital necessity for the germination and growth of plants and crops which are primary concerns in the day to day survival of humankind. For this reason, heliotropaic symbols are commonly employed as emblems regeneration, renewal and fertility. The sun and healing were closely linked in the Celtic world and solar and rayed motifs recorded at a number of curative shrines in the late Roman provincial
West (M.J. Green 1991, 119-21). The curious ‘pinwheel’ device featured on the anthropoid mount from the River Shannon may represent another instance of the continuance of archaic concepts and beliefs into the fourth and fifth centuries AD (Error! Reference source not found.). Positioned in an area approximating to the chest, it may equate to an apotropaic pectoral pendant. Though there are no known comparanda from Ireland for such regalia, wheel-shaped, solar pendants attached to chains are known from Backworth, Tyne and Wear (Allen 1901, 32), Newstead, Borders (Curle 1911, 333-34, pl. 87, no. 34), and Dolaucothi, Carmarthenshire, (Nash-Williams 1950-1952, 78-84, fig. 1). Further examples of solar pendants may be found in Gaul with examples occurring in both Thérouanne and Arras while the use of a wheel pendant is clearly indicated on a stele from Metz in eastern Gaul (De Villefosse, 1881: 1–13; Courcelle-Seneuil, 1910: 73; see also M.J. Green 1981, 254–55). The suggestion by Venclová that such representation may portray a warrior is interesting given that sculptures depicting warriors bearing talismanic solar amulets on their body-armour are known from Continental Europe such as the soldier at Fox-Amphoux (Var) and Celtic cuirasses and helmets represented on the arch at Orange (Espérandieu no. 4566; CIL XIII, no. 4542; Espérandieu, German volume, no. 428 cited in M. J. Green 2003, 116).

So-called ‘celestial’ emblems, including rayed stars, spoked wheels and sunburst motifs, also occur on select proto hand-pins and hand-pins and are always positioned prominently on the central ‘finger’. 87 Each of these motifs is circular and features linear, triangular or wedge-shaped projections that are suggestive of movement, revolution, and rotation, calling to mind the radiating life-giving rays of the sun and the nimbus around them or the wheels of the sun chariot as it journeyed across the sky (M. J. Green 1992, 117, 164; see also Lynn 1992, 47). There does not appear to be any consistency in the number of radiates deployed which suggests that the rayed motif itself was of primary importance and not the number of radiates.

87 Warner (1987, 21) has also commented on the popularity of ‘sunburst motifs’ on hand-pins from Scotland and on escutcheons from Craig Phadrig.
Plate 8-6 Rayed star, spoked wheel, sunburst and rosette variants on proto hand-pins and hand-pins
(a) Gaulcross, Banffshire Cat. No. 7; (b) Tripontium, Warwickshire, Cat. No. 10; (c) Long Sutton,
Somerset Cat. No. 12.
8.5 Triskeles

The configuration of the triskele motif, with its tightly wound spirals radiating from a common centre also implies rotational movement and, as a result, triskeles have been considered as representative of the perpetual regeneration of life, the passage of time and the ‘movement of the seasons’ (Whittick 1960). Specifically, they have been interpreted as symbolising the vernal regeneration of plants and crops, an enduring and primary human concern (Cooper 1978, 181; Gimbutas 1989, 296; See also Kilbride-Jones 1989, 13). They are also associated with good fortune, healing and protection (Bruce-Mitford 1996, 105; M.J. Green 1992, 39). Indeed, de Villeforce (1881, 10) contends that all objects embellished with solar motifs may have been considered to hold protective, amuletic or talismanic powers on account of their inherent light versus darkness symbolism. Such powers would have been amplified by the additional magical qualities of a triple motif such as the triskele (Ross 1972, 293; see also below).

Moreover, their presence across such a wide area and time span must surely reflect a widespread and enduring belief in the potency of such symbolism (Green 1992, 39). Solar motifs have been identified by John Waddell on Iron Age metalwork from Ireland, for example the Bann disc and the Petrie crown (Figure 8-2). The Petrie crown features a stylised depiction of the sun boat being drawn across the heavens by birds with a wheel-like roundel representing the sun and birds heads’ representing the prow and stern of the solar boat (Waddell 2009; 2011, 195; 2012, 344, fig. 5.1).
Likewise, rotational solar devices also occur on the celebrated Battersea shield (*ibid.* 2009).

There is unequivocal evidence for divine representation accompanied by a wheel in Ireland, Britain and the wider Romano-Celtic world, perhaps because the central sphere, rays and nimbus of the sun bear a striking resemblance to the nave, spokes and felloe of a wheel (Plate 8-7). Depictions of the sun as a spoked wheel have an acknowledged connection with a Romano-Celtic sky and sun god, Tarranis, who shares many attributes with the classical Jupiter, and whose protective and talismanic properties are well attested (Green 1984, 41-43). Ross (1975, 476) argues that his cult may have been widespread in the British isles, particularly in Northern Britain. Heads associated with wheels occur on antefixa such as the one from Caerleon, dating to c. 70-110AD which features a radiate central male head with a six-spoked wheel below (Ross 1974, 134-5). Wheel motifs and celestial symbolism are also found in association with a mother-goddess cult (Green 1978, 18; 1981, 256).

Figure 8-2 Solar Imagery on the Petrie crown. After Waddell 2012, fig. 5.1.
A silver Atrebatic coin attributed to near Petersfield, Hampshire and dated c. AD 10-20 depicts a face with an antlered headdress with a spoked wheel device positioned centrally between the antlers (Boon 1982; Van Arsdell 1989, 128; Plate 8-8). Interestingly, this head apparatus bears a strong resemblance to the so-called priestly headgear surmounted by solar wheels from the Roman temple at Wanborough in south-east England (O’Connell and Bird, 1994: fig. 23; Plate 8-10). On the basis of this wheel symbol, the presiding deity at the Wanborough temple has been identified as the Celtic Jupiter with specifically solar attributes in this instance.

In Ireland, the radial divisions on the cairn at Site B, Navan Fort, Co. Armagh, visible only from the air, has been interpreted by Lynn as evidence for the veneration in Ireland of this same sky or solar deity (Plate 8-9) who suggests that the Navan ceremonial structure may have been dedicated as a sacrifice to this deity (Lynn 1992, 48). There is also some supporting evidence for such a ‘wheel cult’ preserved in early Irish literature. In the description of the hosts in the Táin, one of the heroes is described as wearing a wheel-shaped brooch; ‘he had brown, very curly hair; a black flowing mantle around him; a wheel-shaped brooch of tin in the mantle over his breast’ (Bratt dub luascach imme. Roth creda sin brutt ás a brunni) (Windisch 1905, 777; Dunn 1914, 329). When Elatha comes from across the sea to mate with the goddess Éiru he is described as having five wheels of gold on his back (cúig roith óir) (Stokes and Windisch 1891, 60).
Plate 8-9 Radial pattern on the cairn at Navan Fort (Lynn 1992, 48, plate 3).

Plate 8-10 Priestly headgear from the Romano-Celtic temple, Wanborough, Surrey; detail, solar wheel. Image courtesy of Brian Wood.
It is interesting to note that a heliotropaic device occurs in exactly the same position on the unusual ring-shaped mount from Ardsallagh, Co. Meath (Clarke 2008, 20, 271; Plate 8-12). The mount is believed to have topped an oaken staff, and may potentially be quite significant in terms of our interpretation and understanding of the symbolic significance of projecting-headed pins, specifically hand-pins. Not only does the combination of staff and finial with its three elongated beaded projections bear a striking resemblance to a hand-pin, significantly, the central projection bears an engraved starburst motif. The overall morphology of the object and the positioning of the solar symbol suggest that this configuration may have been recognised and understood as a form of secular or sacral regalia in the Insular world. Cognate examples occur across the Indo-European World where six and eight-pointed rosettes/stars framed within a circle were employed as solar symbols, apotropaic devices and as symbols of divinity (Camparetti 2007, 205-8). While the rotational devices on select projecting-headed pins may perhaps be added to this small corpus of evidence for the veneration of a celestial deity in Iron Age Ireland, the specific positioning of solar motifs on projecting-headed pins, centrally and above the main body of the pinhead, is most curious, especially given the evidence for similar placement on sacred head regalia from Roman Britain. Not only does this suggest shared belief systems and practices during the Late Iron Age, importantly it may also have implications for our understanding of the religious and cultural contexts in which these objects performed.

Plate 8-11 Copper alloy mount, Ardsallagh, Co. Meath (Clarke 2008, pl. 59-60)
8.6 Saltires

The ‘X’ motif, or saltire, is the most commonly occurring motif on this corpus, either simply incised or in a more elaborate, beaded form, each with their own particular symbolic significance. Saltire motifs can be hidden, occurring on the verso of pin heads. Three zoomorphic penannular brooches (Plate 8-13) feature chased saltires and annulets on the verso of the terminals (Cat. No’s 23, 25, 26), or they may be visible, occurring for example between the panels on the shanks of disc-headed pins, where they are typically elaborated with additional circles in each of the four triangles. Also referred to as the St. Andrews Cross and the crux decussata, the saltire is simple to execute and has a long history of use, both factors that tend to obscure its pedigree. Anne Roes (1937, 248-51), for example, identified it on sacred banners depicted on coinage of the second and third centuries BC from Persepolis, where it represents an ancient solar symbol. She goes on to suggest that it was later revived by Constantine and adapted by the early Christian church (see below).

Miranda Green (1981, 255), on the other hand suggests that the saltire started as a celestial symbol analogous to the spoked wheel associated with a Romano-Celtic sky deity that by the Late Roman period had become somewhat secularised, and was deployed as a good-luck talisman across the provincial Roman west (Schiller 1972, 102; M. J. Green 1984, 163-5; see also Röttlander 1971).

The more elaborate, beaded saltire, with three dots or annulets in each of the four quadrants, is frequently placed on areas of the pin that would ordinarily have been hidden from view (Figure 8-3). This is a common and popular motif in Roman art associated with harvesting and Dionysian themes, where it depicts highly stylised, fruiting vines, symbolising nature’s fecundity and abundance. Its use as a sacred symbol in the Insular world is attested by the presence of saltires on ritual model axes and wheels found in Roman Britain (see M. J. Green 1981, 257). Incised diagonal crosses also occur with some frequency on personalia including small Romano-British penannular brooches dated to the first century AD (see Brailsford 1962 no’s E11, E16 and E17). In both of these instances the motif cannot be

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88 Haseloff & Roth (2005, 42-3) have noted the occurrence of saltires on select zoomorphic penannular brooches, hand-pins and late Roman silver but they do not elaborate.

89 The saltire was also employed as a punctuation mark in Greek inscriptions, a factor that has caused dispute as to when it was first used as a Christian symbol (Watts 1991, 199).
considered purely decorative as often it can hardly be seen or is completely hidden from view on the verso of the object (M. J. Green 1984, 297).

![Figure 8-3 Beaded saltires.](image)

Variants on the saltire motif featuring circles in the interstices and/or flanking parallel lines also occur in late Roman Britain on votive objects such as the Chelmsford bar (Wickenden 1986, 350) and on personal ornaments including a small zoomorphic penannular brooch from Henley Wood, Somerset of Fowlers Type E (Watts & Leech 1996, 83, fig. 89 no 27). Saltires also occur on select zoomorphic pins from Ireland (Kilbride-Jones 1980, 7, fig 2 no’s 1, 4) and on Ellen Swift’s type 12, snakehead bracelets suggesting that the saltire or X motif had an established and widely understood apotropaic meaning (E. Swift 2000b, 169, fig. 216).
A further possible interpretation of the symbology of the saltire as it occurs on this corpus is that the punched and incised lines might have been intended to denote bindings or chains. In antiquity, the constraining of images and motifs in this manner, particularly those considered as sacred, representational of the divine or imbued with supernatural power is a well-attested cross-cultural phenomenon. Images were bound in order to prevent them from being lost, stolen or escaping and transferring their protection or good fortune to rivals. Images were also bound because they were considered dangerous and capable of causing harm (Freedberg 1989 74-76). As the beaded saltire with its linked annulets bears a more than superficial resemblance to a chain, it may have symbolically functioned as such to bind the triple annulet motif, already suggested as a talismanic symbol of divinity, securely against the body of the wearer (see above).

8.6.1 *The Crux Decussata and Iota-chi*

Paganism is the matrix out of which early Christian art, symbols and motifs emerged, and so it is unsurprising to find Bacchic-like themes appearing in early Christian imagery where fruiting vines and/or ivy allude to everlasting life, salvation and also the iconography of the tree of life (Brilliant 1979, 128; Jensen 2000, 59). The cults of Christianity and Dionysus both emphasised transcendence and a blissful life after death, and Early Christian art often employs references to Dionysus.

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90 Christianity however gave the connection of wine and transcendence a new meaning via the wine. John 15.1 gives the vine a clear and exclusive Christian symbolic reference ‘I am the true vine ..’, and reiterated in John 15.5 ‘I am the vine, ye are the branches’.
suggesting that belief in his soterial powers were transferred to Christ by early Christian communities.

Indeed, in the northern provinces of the Roman Empire, pagan and Christian themes and symbols were often closely interwoven and Dionysiac imagery in particular came to constitute a potent iconographical element of the early Christian church (Johns and Potter 1983, 40). By the beginning of the third century AD, Christianity had gained a foothold in Britain (Toynbee 1968) where it remained a minority religion, essentially a religion of the élite, throughout the fourth and fifth centuries AD (Frend 1982, 19). Christianity was introduced into Ireland during the fourth century AD though it was largely episcopal in nature and was quite limited in terms of its distribution and influence. It appears to have co-existed alongside native beliefs and practices (Ó Crónín 1995). Given that this art occurs on high status objects from Britain and Ireland during this period, the possibility that the saltire, and its variants thereof, may have been intended as a Christian device merits discussion.

While the use of the saltire may be traced back to pagan origins, there is evidence for its use as a Christian symbol from the middle of the second century AD in the catacomb of Lucina in Rome. Examples are found on a pewter plate from Stamford, Lincolnshire (Plate 8-14), and a small, Christianised stone altar from Chedworth villa, Gloucestershire (Watts 1991, 199). In such instances, where the saltire is further elaborated with circles in each of the triangles, or where it is turned into a hexagram by adding a medial line (with each triangle containing one or more circles), more complex iconographical schema can be postulated (Figure 8-3). Bisected with a medial line the saltire becomes an iota-chi motif, the earliest Christian monogram comprising the letters I and X standing for ΙΗΣΟΥΣ ΧΡΙΣΤΟΣ (Jesus Christ) (Sulzberger 1925, 366-393). The circles themselves may represent the
laurel crown or wreath of triumph associated with the Risen Lord (see Watts 1991: 162-5). Though comparatively rare, the currency of this early Christogram in the Insular world is demonstrated by its occurrence on circular lead tanks (Plate 8-13) which are considered to have had some form of Christian significance, being used either in baptismal rites (see Thomas 1981 221-225) or alternatively in the rite of _pedilavium_ or ritual washing of the feet (see Watts 1991, 171).  

![Plate 8-13 Decoration on lead tanks from Roman Britain (not to scale). After Watts 1991, 160, fig.23.](image)

In the wider provincial Roman west, the _crux decussata_ with full circles in the interstices occurs on fourth century _terra sigillata_ from Argonne and fifth century funereal ware from the Late Roman cemetery at Ugium where it is associated with other Christian symbols such as the _cantharus_, the cross and the dove (Watts 1988: 213-5; 1991: 162-5). A later incarnation of the X or saltire with groups of three pellets between the arms has also been noted on Anglo-Saxon silver coinage where the design is understood as representative of a Greek or _Chi_ -cross (Gannon 2003).

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91 A plate from feature 6 of Lankhills cemetery, with stylised fish on the reverse (Clarke 1979, 429-30); a shaped stone, possibly from a nymphaeum, at Chedworth (Goodburn 1979, pl. 11D) a candlestick from Kelvedon (Eddy and Turner 1982, cover fig.) and a similar find from Colchester (Crummy 1983, fig. 207, cat. No. 4709); a locally-made pot from Rockbourne villa (Hewitt 1971: pl. XXII A).

92 See Cabrol and Leclerq (1920-53) s.v. Rouen, XV (1), col. 128; s.v. Ugium, XV (2), cols. 2854-8 and fig. 11201.17.
The same motif occurs on a cross–carved slab from Lemanagh, Co. Offaly which features triple dot motifs in three of the quadrants of the cross, the fourth quadrant having four dots (Kelly 1988, 93, Fig.31b). The beaded saltire manifests itself in the vocabulary of Imperial power, most strikingly on the so-called ‘Missorium of Theodosius’ which depicts an enthroned Theodosius I, flanked on either side by Valentinian II and Arcadius, each of whom holds a symbolic orb, or globus, featuring a beaded saltire with a triangle of punched annulets in each of the four quadrants (see e.g. Grünhagen 1954: taf. 9, 10, 11).

However, while a Christian identity may be postulated for the saltire devices featured on this assemblage, the identification of symbols as definitively Christian is problematic and is dependent on other evidence. In many instances, the religious significance of the symbol was in the ‘eye of the beholder’ and what they personally understood the symbol to mean. Definitive identification will always depend on other evidence, a combination of motifs and symbols and the context in which the object they decorate was found. And in the context of Insular Military Style art it is important to note that none has been found in association with undoubted Christian parallels such as the Chi-Rho or the alpha and omega symbols (Watts 1991, 205).

BM register no. P&E 1927 1-6 1.
Indeed Thomas (1981) argues that simple linear motifs such as these cannot be regarded as Christian in an Insular context prior to the sixth century AD.

8.7 Triple Annulet Motif

Triplets of annulets arranged in pyramidal form feature prominently on this corpus occurring, for example as a stand-alone motif on the angle of the shank of the Londesborough pin, marking the point where it projects forward to carry the head. The positioning together with the panelled, lobed scroll above bears a striking resemblance to the appearance of the hair, the beaded crown and facial tattoo on the figure depicted on a coin of the Aulerci Eburuvesces (Plate 8-16 a,b); La Tour, 1892, no. 6909). Perhaps significantly the same motif occurs on a recognisable animal head e.g. a heavily-silvered zoomorphic penannular brooch terminal from Caistor, Lincolnshire (Cat. No. 28). When taken together with the specific positioning of solar symbols discussed above, the evidence suggests that these projecting pinheads may have been considered analogous to the human head. Why this was conceived is puzzling as there is nothing overtly anthropomorphic in the morphology of these pins. The attested zoomorphism of earlier ring headed pin types may provide some illumination as some of the formal aspects of these pin types were inherited by these later projecting-headed pins. Insular ring–headed pins reflect a well-rehearsed propensity towards zoomorphism and a tendency among native artists to convert recurved elements or motifs into an animal head and in the course of their evolution they developed into an animal looking down its own neck (Newman 1995, 17-8). An unusual and important pin from the River Thames at Hammersmith (Raftery 1984, fig. 90.5) features not only the recurved shank of a ring-headed pin but also some elements which became hallmarks of later projecting-headed pins and has been interpreted as a hybrid between the two pin types.

Across this corpus, punched annulets are employed as surface decoration and occur either singly, in triads or multiples of three; sometimes the surface is virtually peppered with these triads. Though the triple annulet motif often occurs in association with beaded saltires on hidden parts of the objects it is also found as a stand-alone motif positioned prominently in full view of both the wearer and observer. Triplets of annulets arranged in pyramidal form occur for example on the angle of the shank of the Londesborough pin (Cat. No. 14; Plate 8-15a), on the
central ‘finger’ of the Newtownbond pin (Cat. No. 5), and also on a silver brooch terminal from Caistor, Lincolnshire (Cat. No. 27).

Plate 8-15(a) The Londesborough pin, Cat. No. 15. The angle of the shank is decorated with a triple annulet motif and running S-scrolls, framed within a beaded border, dimensions 6.9 x 15.8mm © Trustees of the British Museum, (b) Coin of the Aulerci Eburovices, La Tour 6909. After Lily, 2008, 17, fig. 17m.

However, despite the frequent occurrence of the triple annulet motif on silver projecting-headed pins, its meaning has rarely been discussed. The motif has been described as having ‘magical properties’, but there has been little attempt to explain why this is so. In fact the only such attempt known to the writer is provided by Ball and Stokes (1893, 291) who proffer an unconvincing Christian interpretation of the symbology as ‘a primitive representation of the Three Holy Children [...] , their heads like three round balls coming out of a circular basin representing the furnace’. The representation of three tiny dots in a pyramidal arrangement does occur on earlier, high-status Insular metalwork, including for example the terminals of the ‘great torc’ from Snettisham, Norfolk, 94 and an unlocalised ring-headed pin from Ireland (Raftery 1983, 2, no. 412, fig. 135) suggesting that the motif may in fact have held some long-standing cultural, possibly religious significance in the Insular world. 95 Triple dots also occur on Middle La Tène (c. 300 BC) Insular and continental

94 British Museum register no. BM Register no. P&EE 1951 4–2 2.
95 The same configuration has survived into modern times as so-called ‘hobo-dots’, usually tattooed between the forefinger and thumb. They are considered a protective device.
decorated sword scabbards. For example, a recurring, microscopic triple-dot motif is repeated along the entire length of a La Tène scabbard from the River Bann in the blank areas between the curving, tendril-like elements of the design. The occurrence of this same motif on scabbards from Ireland, England, Bulgaria and Hungary provides intriguing evidence of a possible pan-European symbolic and stylistic link between these regions (Raftery 1984, 101-4; 1994, 490, fig. 7; 2006, 124, fig. 24).

The enhancement and intensification of a symbol’s potency by multiplication is a surprisingly durable means of guarding against evil that has long played an important role in religious symbolism; the interminableness of large numbers are thought to breed confusion and ward off evil in the same way as complicated patterns (Eliade 1990, 59-61; Gell 1998, 84; M.J. Green 1984, 53; 1992, 204). While the multiplication of a symbol, particularly one invested with apotropaic powers would have worked to increase its potency and the significance of what it was understood to represent, tripling it gave the symbol an additional magical dimension that could only have served to ‘enhance the potency of the symbol’ and reinforce the significance of the motif and what it was understood to represent (ibid. 1992, 222-3). While the multiplication of a symbol, particularly one invested with apotropaic powers would have worked to increase its potency, multiplying it by three gave the symbol an additional magical dimension given the significance of the number three itself. On this corpus, the triplication and multiplication of motifs is most evident in relation to annulets. On specimens such as the pins from Newtownbond and Norrie’s Law (Cat. Nos 5, 9), the verso of the pinhead is covered with triplets of annulets, pyramidally-disposed (Plate 8-16), the multiplication of the symbol probably serving to intensify and enhance the potency of the symbol by super-inflating the power of threeness (Eliade 1990, 59-61).

Indeed, triplism appears to have been a deeply rooted concept in the Insular world. It was frequently employed as a motif on cultic sculptures and other sacral objects in Ireland, Britain and Gaul. Tricephalon are known from Roman Britain with examples occurring in Bradenstoke, Wiltshire and the Northern roman fort at Rislington (Green 1992, 175). In Ireland, objects such as the triple–horned ‘Cork

96 The scabbard known as Bann 1, found near the River Bann at Toome, Ireland.
horns’ (O’Kelly 1961, 1–12; Raftery, 183) and polycephalic sculptures such as the Corleek head all attest to the importance of the concept in late prehistoric Insular religion (Rynne 1972, 79-93; M.J. Green 1986, 204). Tripilism is also a feature of vernacular literature where divine forces and deities are often presented as triads.

Plate 8-16 Verso and recto of the proto hand-pin from Newtownbond, Co. Longford Cat. No. 5 featuring multiple triple annulet motifs.

We find references for example to three eponymous goddesses of Ireland, Éiru, Banbha and Fódla and the war-mothers, the Morigna and the Machas (MacCana 1983, 86 ; Ellis 1988, 172). Representations of deities in triadic form are also known from Britain, the cult of the Three Mothers (Tres Matres) was transmitted from Gaul during the Roman period. The Mothers are typically depicted as three sitting or standing female figures with baskets of fruit, loaves of bread and/or fish and accompanied by children. The Mothers may individually represent life, death and rebirth while the fruits and fish have been interpreted as symbols of fertility and prosperity, aspects that collectively link them to the ‘seasonal cycle of the earth’s fertility’ (M.J. Green 1986, 72-9, 81-3; Webster 1986). Other cult images from Roman Britain include representations of three hooded figures (Genii Cucullati) who are also thought to have an association with fertility (Webster 1986, 66-70).

The symbolism of the number three is ancient and redolent with meaning. From the earliest times it has been universally used to express god-like or divine attributes, perhaps due to its numerous simple analogies in the natural and social world. Any attempt to contemplate the world around us, or the meaning of human existence,
brings to mind the number three. Time is divided into past, present and future, the world we inhabit is composed of earth, sky and sea, the day is divided into morning, noon and night. Some of these natural division, earth, sky and sea for example were used to divide gods into three classes while the familiar triplicity of the rising, midday and setting sun is manifest in solar-based religious beliefs and symbolism such as the solar boat or chariot (Gelling and Davidson 1967, 14-5; Waddell 2009, 2011). Concepts such as the beginning, middle and end are mirrored in the human life cycle and the triple division of birth, life and death while the triad of the family, mother, father and child is mirrored in the cross-cultural triadic grouping of divine families including the Christian Trinity of father, son and Holy Ghost (Hopper 2000, 6-7). Consequently, the number three may have symbolised totality (Rees and Rees 1961, 193). In Christian doctrine, three is the number of Resurrection as it was on the third day that Jesus rose again (Bullinger 2007, 111-2). The number three is also represented in the iconography of power by symbols such as the trident and triple thunderbolt (Hopper 2000, 4). Numbers are among the oldest and most important symbols in antiquity and in Ireland, the symbolic use of numbers can be traced through much of the early vernacular literature in Ireland and Wales (MacCana 1970, 48-9; Hopper 2000). From these accounts it is apparent that odd numbers, e.g. three, five, seven and nine, were especially important (Rees and Rees 1961, 192-6). Of these, tripilism held the highest symbolic significance.

8.8 The Natural World

During the fourth and fifth centuries AD, Irish society was for the main part rural. Dependency on nature was not the abstract concept it is for most people today, it was real, urgent and reciprocal. Human beings were at the mercy of the weather, the fecundity of nature and the whimsy of the gods and goddesses who were said to control both the elements and the earth’s fertility. People were heavily dependent on the fertility of both the land and domestic animals for survival and these concerns were in turn intrinsically linked with the cycle of the seasons, the weather and the cosmo-celestial activities of the sun (M. J. Green 1992, 2–3, 19-22). 97 It has been observed that animistic world-views such as this often attribute ‘life or divinity to

97 Archaeological evidence for extensive arable farming in the Irish east midlands is provided by a number of cereal drying kilns dating to the third century AD (see e.g. O’Connell 2009; Danagher 2009; Clarke 2009; Rathbone 2009).
natural phenomena such as trees, thunder or celestial bodies’ (Hunter and Whitten 1976, 12). Natural places such as groves, woodlands, forests and at springs, bogs and lakes were venerated and played an important role in the belief systems of the Celts (Birley 1964, 136; Ross 1967, 1986; Henig 1984; Webster 1995, 448; Cunliffe 1997, 197–99). In the Celtic world, the natural and supernatural worlds were in constant juxtaposition, so much so that Miranda Green (1996, 21) contends that:

The basic perception underpinning the religion of the pagan Celts was that the gods were everywhere: the landscape was full of spirits. Thus, every tree, spring, lake, river and mountain was numinous. All over Celtic Europe, there is evidence of the very close association between the Celts and their natural world which was, to them, full of supernatural energy, energy which could do humankind good or evil, and therefore needed to be controlled or neutralised.

These close ties with the natural world are also reflected in the symbolic repertoire of the Insular Military Style that is dominated by renditions of plants, foliage, birds and animals in fantastic, and more rarely, natural conceptions.

8.8.1 Berried Ivy and Fruiting Vines
Symbolically, fruiting plants appear with the greatest frequency on this corpus, and acted perhaps as referents to themes such as vigour, fecundity, regeneration and the cyclicity of life. Two of the most recurring motifs are the berried leaf and a saltire with annulets in the four quadrants, both of which find interesting counterparts in the contemporary repertoire of late Roman art where they are closely allied with the consumption of wine, viticulture and harvesting. Fruiting vines are commonly depicted in an abbreviated form as saltire or X-motifs with three dots or annulets in each of the four quadrants occurring for example on small altars or pedestals in a Dionysiac procession on the Achilles Platter (see Plate 8-18; Mango and Bennett 1994, figs 3-29-32). The same ‘X’ device occurs in association with viticulture on the Dominus Julius mosaic (Arce 1997, fig. 9). Likewise, heart-shaped leaves with three superimposed dots are used to portray ivy when limitations of space must be taken into consideration, such as on a silver-gilt disc from Nordrhein-Westfalen, Köln (Böhme 1980, fig. 215b), and the decorated handle of the Prickwillow patera (Toynbee 1964, pl. xxlv.b). Such imagery generally evokes the cult of the god Dionysus or Bacchus (Hutchinson 1986, 124). Bacchus was considered the most
powerful and widely venerated saviour god of late Antiquity and was also part of the divine pantheon of late Roman Britain where his cult was especially popular during the fourth century (Johns and Potter 1983, 52; Hutchinson 1986, 108-9). Bacchus is often depicted wearing a wreath of ivy leaves, and in the course of Bacchic rituals his initiates were said to become exhilarated, and intoxicated by consuming ivy leaves. Other Classical sources maintain that the plant could be used to prevent intoxication (Hatfield 2004, 213). Indeed, ivy, grape vines and Bacchic scenes occur together with such frequency in late Antique art that they can be said to constitute an example of iconographically related imagery. Though best known as a personification of the vine, Bacchus was also associated with regeneration, and transcendence; his initiates were promised a happy sojourn in the afterlife. He was also known as a deity of agriculture and the corn and was deeply associated with the harvest festival (Frazer 1996, 387).

Plate 8-17 Berried-leaf motifs (a) The Londesborough pin, panel 5, length 12.3mm  (b) panel 8, length 12.9mm  (c) Head of silver proto hand-pin. Castletown Kilpatrick, Co Meath. Head diameter 11mm; NMI 7.w.24; © National Museum of Ireland. (d) Detail inverted, drawing by author.

98 In the Insular world, the plant played an important role in folk medicine; the juice of ivy leaves was used for example to treat wounds, sore eyes while ivy berries were employed as a remedy for general aches and pains (Barbour 1897, 386-90; Jobson 1967, 59; Logan 1972, 69).
Romano-British evidence for the worship of Bacchus is most commonly found on objects worn on the person *e.g.* hair pins, intaglio devices and signet rings rather than on stone inscriptions and sculpture. This suggests that personal ornaments were the preferred media for Bacchic symbolism in Britannia. Interestingly, symbols such as fruiting ivy and grape vines are not typically employed to evoke Bacchus on these dress ornaments, motifs such as *canthari*, seashells, parrots, the thyrsus and felines are favoured instead. The placement of symbols associated with abundance and fertility on pins - objects that are usually considered feminine personal ornaments - may also relate to a more general association between pins, fertility and childbirth that may be evident, for example, in the more than 320 bone pins thought to have been ritually deposited by women to ensure successful childbearing at the southern British temple at Lydney Park (see Puttock 2002; Wheeler and Wheeler 1932, 41-2). That such cultic practices were known in Ireland is evidenced by similar depositions, albeit on a smaller scale, at Freestone Hill, Co. Kilkenny, which has been recently re-interpreted by Ó Floinn (2000, 25-29) as a small *temenos* or shrine in the Romano-British tradition (see also Chapter Seven).

The berried ivy design on the Londesborough pin represents an almost botanical rendering of twining ivy and clusters of fruit. Likewise, the red-berried leaf and flanking scrolls on the pin from Castletown Kilpatrick (when viewed from the perspective of the wearer) is instantly recognisable as a fruiting plant (Plate 8-17). Plants clearly fitted into the Irish, pagan worldview and it is interesting to note that in the decoration of projecting-headed pins, only elements from the Classical repertoire that suited native, visual grammatical syntax were used. Bacchus was also
known as a god of trees in general and was credited with their growth and fruitfulness, attributes which would have resonated with native Celtic tree-lore and these fruiting vines and berried ivy motifs may have been conflated with the reassuringly familiar symbology of sacred trees (Frazer 1996, 465-66). The tripiration of berries, an unequivocal Celtic trait also features prominently in early Irish literature. *Echtrae Chormaic i Tir Tairngiri* (Cormac’s Adventures in the Land of Promise) feature a magical silver branch with three golden apples hanging from it (Stokes and Windisch 1891, 186). A Middle Irish tract in the Yellow Book of Leccan titled the ‘Settling of the Manor of Tara’ describes a great warrior, *Trefuilingid Tre-echochair* as having ‘Stone tablets in his left hand, a branch with three fruits in his right hand, and these are the three fruits which were on it, nuts and apples and acorns in May-time: and unripe was each fruit’ (Best 1910, 140-1). Celtic vernacular tales describe the *craebh ciúl* (musical branch), a staff with three metal balls or bells carried by the *filid* and used to start meetings, bring peace to assemblies and play the music of the *súantraigh* (Hull 1901 434-5, 444). As plant motifs, the shorthand, classical renditions of berried ivy and fruiting vines would have instantly resonated with these native abstractions and this may account for their adoption into the Insular repertoire.

Evidence for a type of a syncretic fusion of Celtic and Bacchic religious concepts is provided by the silver spoons from the Thetford Treasure where at least twelve invoke the god Faunus using Celtic epitaphs (Johns and Potter, 1983) while Hutchinson (1986, 113–6) attributes the popularity of the cult of Bacchus in Britain to the existence of ‘kindred religious concepts’. Given the significance of agriculture and fertility and trees in Celtic religion, and Celtic familiarity with the human head as a religious motif, the cult of Bacchus and Bacchic masks may have appeared reassuringly familiar.

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99 Amongst the Celts the human head was venerated above all else, and was considered the seat of the soul and the very essence of being (Ross 1975, 94; Kaenel 1990, 104; Henig 1984, 2).
8.9 Plant and Tree Kinship: Totemic Personal and Tribal Names in Ireland, Britain and Gaul

The idea of a close relationship between humans and plants is preserved in a number of early Irish personal names derived from the names of different tree species including mac Cuill, ‘son of hazel’, Mac Cairthin ‘son of rowan’, mac Ibair, ‘son of yew’ and mac Cuilinn, son of holly’. Totemic tribal names related to the plant kingdom also occur including an Ulster population group known as Fir na Craobh, the ‘men of the tree’ (McNeill 1909, 366) and the Uí Fìidgeinti, people of the woods. The Uí Fìidgeinti are also indirectly associated with the magical well at Segais which is traditionally identified as the source of the River Boyne. Segais reputedly gained its supernatural powers from hazelnuts that dropped into it from a nearby hazel bush. According to the legend, the ‘Salmon of Knowledge ‘ (Eo Fis) acquired its special wisdom by swallowing one of these hazelnuts and later transferred it to the legendary Fionn Mac Cumhaill (whose name means ‘Seer Son of hazel’) when he ate its flesh (Newman et al 2007, 361). Indeed, connections between particular plants and people can be observed across Europe (Hall 2011, 124). In Britain, comparable plant kinship can also be read in names such as in the old Welsh Guidgen, ‘Son of Wood’, Guerngen, ‘Son of Alder’ and Dergen, ‘Son of Oak’. Tribal groups in Gaul also identify with particular species of tree including the Lemovices (elm-people) from the area around Limoges, the Eburones of the Rhineland while the Eburovices of Belgic Gaul were associated with yew trees (Rivet and Smith 1979, 385-7).

8.9.1 Sacred Trees in the Insular World

The sacred tree or the tree-of-life is a widespread, enduring and archaic concept that features in almost every major world religion for example the Bo tree, under which Buddah meditated, the Lote tree of Islam which guards the boundaries of spiritual knowledge and the Scandinavian world tree Yggdrasill. In Ireland, the significance of wood and sacred trees or ‘bíle’ is well attested in the early law tracts, onomastic lore and epic tales. In fact, a relatively consistent set of rituals and beliefs relating to sacred tree and vegetation fertility cults can be identified in civilisations across culture, time, and geography (Smith et al 1989; Frazer 1996). With roots that draw nourishment from deep underground, trees provided a natural symbol of the earth’s abundance while the behaviour of deciduous trees in summer and winter speaks to regeneration, renewal and rebirth. Trees also provide a symbolic link between the
earth, the sky and the underworld as their trunks and branches are held in the air with their roots in the ground (M. J. Green 1992, 154-5). Their life cycle also superficially mirrors the path of human life, progressing from fresh young saplings to wizened, craggy maturity. It is not surprising then to find the tree conceived of as the ultimate source of ever renewing life at the centre of the cosmos in several belief systems (James 1966). Sacred groves, trees and images of wood played prominent, complex and interrelated symbolic roles in the cosmologies and vanished mythologies of late pre-Christian Gallo-British societies (M. J. Aldhouse-Green 2000, 23). A wealth of evidence preserved in the Classical sources, Insular vernacular literature, oral histories, place names and in the archaeological record all attest that the veneration of trees played a major role in native pre-Christian beliefs and religion in both Ireland and Britain and in Continental Europe (Ross 1975, 62-3). Depictions of sacred trees often feature in Celtic art, particularly on coins, wine jugs and metalwork (James 1966, 1; Kruta and Forman 1985, 103).

The veneration of trees is also attested by the small 3rd century BC cult tree from the Celtic oppidum of Manching, in Bavaria. It features a wooden stem and branch which has been decorated with ten heart-shaped ivy leaves with embossed gold foil and acorns and buds of gilded bronze (Plate 8-19; Ross 1995; Raftery 1997). There are also frequent references in Classical sources to sacred groves and woods where
priests or druids worshiped and carried out ceremonial rites and sacrifices. Lucan, writing in the first century AD describes an ancient, sacred grove in the town of Massilia, which was discovered by Caesar’s legions as they invaded Gaul (The civil war III, 399-425 translated by Duff 1927, 142-7). Tacitus speaks of the reception awaiting his army when they confronted British Druids at their sacred grove on the island of Anglesey, Wales in 60-1 AD (The Annals XIV, 30, 1: translated by Jackson 1937, cited in M. J. Aldhouse Green 2000, 4-7).

While the concept of the sacred tree did not play a significant role in the iconography of the Roman pagan world, it would have been readily understood by Christians in Roman Britain (Watts, 1991, 206-7). References to trees both figurative and literal also abound in the bible. In the Old Testament; Genesis 2.9 has the tree of life in the midst of the Garden of Eden while in Revelation 2.9, it is in the paradise of God. Interestingly, the Dindsenchas describes the Bile Tortan as ‘the son of the tree in the Garden of Eden’. Christian references to trees are found in literary allusion from the first century AD: Paul (1 Timothy 3.6) refers to the newly baptised as ‘neophytes’ or the ‘newly planted’ while Clement of Alexandria (Stromata 3.7, 103,4 and 5.11, 72,2) refers to Christ as the ‘tree of life’ (cited in Watts 1991, 200).

In Ireland, the significance of ‘sacred trees’ or ‘bile’ is well attested both in secular and religious legends, and in the historical annals. These sources also preserve the various kinds of symbolism and powers attributed to different tree species. The Old Irish tree-list from the law text Breatha Comoithchesa arranges trees in four classes of seven, with each class corresponding to a division in society. Oak, hazel, holly, yew, ash, pine and apple are counted as airig fedo, (nobles of the wood) ; oak for its acorns and nobility, hazel for nuts, apple for fruit and bark, yew for buildings, holly for chariot-axles and ash for weapons (Kelly 1997, 380). Alder, willow, hawthorn, rowan, birch, elm and cherry were counted as aithig fedo, (commoners of the wood). Blackthorn, elder, spindle-tree, aspen, juniper, whitebeam and arbutus were less valuable again and labelled fodla fedo, (lesser divisions of the wood). The fourth, lowest, class, losa fedo or (bushes of the wood) included bracken, bog-myrtle, gorse, bramble, ivy, briar and broom (Kelly 1976).

100 Trees are depicted on a silver patera handle from Capheaton in association with the spring and sanctuary of Minerva, possibly Bath (Oddy 1988, Plate III, 6). Henig (1984) suggests that these are ‘sacred trees’ and indicative of Romano-Celtic symbolism.
Five sacred bíle are mentioned in *Dindsenchas*; Bíle Tortan (the ancient Tree of Tortu), Eó Ruis (the Yew of Ross), Eó Mugna101 (the Tree of Mugna), Craeb Daithi (Dathi’s Branch) and Bile Uisneg (the Ancient Tree of Uisnech). One of these, the Eó Mugna was an enormous evergreen oak that was said to grow on the plain of Mugna beside the River Barrow on the plain of Leinster. In addition to acorns, this wondrous tree was said to bear three different crops each year of ‘apples, goodly and marvellous, nuts, blood-red and round and acorns brown and ridgey’ (Stokes 1895, 278–79).102 There is also a reference in *Dindsenchas* to ‘blood-red nuts of the wood’ (*cnod cro-deaga*) (Gwynn 1991, 35). The literary evidence suggests that a strong connection existed between the sacred trees of native lore and red berries; either they bear red berries in the natural world, for example yew, or they are associated with a blood-red, supernatural fruit. It is possible then that red orbs superimposed on foliate motifs may reflect the conflation of red berries and sacred trees in Insular beliefs and mythology. These sacred trees of native lore would have inevitably been visualised and it is possible that these visualisations may have been made real and material on personal ornaments (Freedberg 1989, 56).

8.9.2 *The Bath Brooch*

These same fabulous blood-red nuts may also have been visualised in the iconography of the zoomorphic penannular brooch found in the sacred spring at Bath (Cat. No. 21) during excavations of the temple and baths (Cunliffe and Davenport 1985; Gavin, F. (forthcoming)). Although Celtic art incorporated many Classical and Oriental motifs, narrative or figurative art was not among those and generally there is no attempt at pictorial realism. Natural representations of living creatures are exceptionally rare and vegetal and geometric forms tend to dominate artistic expression. The mimetic and naturalistic renditions of fish and birds on the terminals of the Bath brooch (Cat. No. 21; Plate 8–20) are thoroughly Roman and therefore noteworthy.

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101 Though the word eó connotes the yew in Old Irish, it can also mean tree in general and the Eó Mugna was an oak (see Lucas 1963, 17-18)
102 Ubla amra ingantacha, cnoe corra crodergga, derccain donna drumnecha
The first terminal features a predatory bird rendered in profile facing the viewer, the head is turned aside to the left, its wings are folded and the legs are apart. A bifurcated feature, possibly a branch, lies close to, but does not touch the bird’s beak. The bird’s body is distinguished from the wing by a series of curved lines suggesting perhaps, ruffled breast feathers while the tail is indicated by two feathers. On the second terminal, a similar bird is depicted, hunched forward with wings splayed, a curving beak and talon grasping the fish below it. Lloyd Laing (1975, 105; 1997, 26) suggests that one terminal features a raven grasping a fish (probably a salmon) and that the other bird depicted was intended to represent a peacock, the extended tail feathers being formed by the additional enamelled cell (see also Cunliffe 1988, 83). Close observation of the design by the writer suggests that these enamelled cells are unlikely to represent elongated tail feathers as they do not meet the main body of the bird, and on such an exquisitely wrought object, such a clumsy oversight by the artist seems unlikely. Henig (1995, 172) has identified the birds as an eagle and an osprey catching a salmon and indeed the curving beak, large, staring eyes, ‘booted’ legs and talons suggests that these are raptors, probably eagles. A more definite identification of the species of fish may be attempted as the presence of an adiposal fin on the back near the tail identifies it as a member of the salmonidae family (Burton and Burton 2002, 2755). Both the salmon and trout were revered in Celtic religion and are frequently associated with wells, springs, otherworld knowledge and wisdom (Ross 1974, 436–77). In the natural world, members of the salmonidae
family are distinguished by spots on the upper half of the body and these have been accurately depicted on the fish from Sutton Hoo.  

Further insights into the iconography of Bath brooch may be provided by the contents of the fish’s belly, specifically the two red orbs (Plate 8-21; Gavin 2013b, 199-120; F. Gavin forthcoming). These perhaps allude to the Eó Fis or 'Salmon of Wisdom,' which inhabited certain wells, springs or rivers (See M. J. Green 1992, 191-2; O'Rahilly 1984, 319). Dindsenchas describes Tipra Chonnlaí ‘the Well of Cornila’ which was said to be located beneath the ocean. Seven streams sprang from the well and nine hazel trees surrounded the well. These were associated with Crimall the sage (fír glic). The trees bore nuts, leaves and flowers all at the same time. They dropped the hazel nuts of wisdom (bolcc imba fuilngne) into the well under the command of some obscure druidical force or knowledge (le doilbi smachta fo cheó doirchi dráidechtá). The red nuts were scattered on the bottom of the well and eaten by the salmon that lived there (Gwynn, 1991, 292-3).

The link between wells and springs and sacred fish víz. salmon and trout is an enduring association that continues into the eleventh century AD and beyond in

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103 The rotating fish mounted on a pedestal in the interior of the hanging bowl from Sutton Hoo is also shown with fins and scales and the body is spotted by small sunken pits filled with enamel (Bruce-Mitford and Evans, 1983, 242).
104 Bolg can mean bubble but it can also mean a berry or bud (Royal Irish Academy 1990, 78).
Ireland. The Annals of Clonmacnoise record that in ‘AD 1061, Hugh O’Connor broke down the royal palace of King Brian of Kincora; burned Killaloe, and did also eat the two salmon that were kept in the king’s fountain or fishpond there’ (Murphy 1896, 96). The following entry taken from *Chronicum Scotorum*, at the year AD 1059 also refers to sacred fish;

A hosting by *Aedh Ua Conchobhair*, King of Connacht, into Munster, and he burned Killaloe and demolished the fortress of Kincora, and ate the two salmon that were in the well of Kincora, and the well was afterwards closed up by him" (Hennessy 1866, 287).

There is also mention of a sacred trout that inhabited the well of *Cumenet*, *Cumannait*, or *Commanait*, in the parish of Kilcomentady (Church of Cumenet), near Newport, County Tipperary (Berry 1904).

Birds and fish are stock motifs that were iconographically current in the late Roman period and both were also interpreted in terms of Christian thought. Laing and Laing (1975, 105) suggest that these are Christian symbols and that the pairing of eagle and salmon ‘represent Christ, seizing the spirit’ and the peacock resurrection. In Christian iconography pairing of an eagle seizing a fish has indeed been interpreted in terms of Christian thought. The Medieval bestiary describes that;

The eagle is the king of birds. It alone can look at the sun when it is brightest without blinking and from aloft can gaze into the depths of the ocean and see the fish below which it seizes and drags ashore to eat… The eagle signifies Christ, who is far seeing and dwells on high. The sea is the world and the fish are the people in it. God came into this world to obtain possession of our souls and he draws us towards him by right as the eagle catches the fish. (Romilly Allen 1887, 244-5).

The same pairing of a bird and fish also occurs on late Roman intaglios from the third and fourth centuries AD where examples both with and without overt Christian significance are known. The fish was a widely used motif in late Antiquity,
both in secular and religious, pagan and Christian contexts. In pagan contexts it was employed as both a talisman, as the astrological sign Pisces (Cabrol and Leclerq 1920-53: vol. 7.1, cols. 1991-3) and also as a symbol of the journey to the blessed isles after death (Henig 1977, 352). Fish symbolism also pervades Christianity. Indeed, Clement of Alexandria (Paedagogus 3.11.59.1) encouraged the use of allegorical seals among Christians stating that ‘the emblems of our rings should be a dove, or a fish or a ship sailing before the wind, or a lyre or an anchor.’ From as early as the second century AD a fish was used to denote Christ in the famous acrostic consisting of the initial letters of five Greek words forming the word for fish ichthys (ἰχθύς), Iesous Christos Theou Yios Soter, (Jesus Christ, Son of God, Saviour). It is also representative of the idea of spiritual re-birth in baptism - Tertullian wrote (in ‘De Baptismo’) ‘but we, being little fishes, as Jesus Christ is our great Fish, begin our life in the water, and only while we abide in the water are we safe and sound.’ Moreover, converts to Christianity were referred to as pisciuli ‘little fishes’ and the baptismal font was referred to as piscina or ‘fish pond’ (Werness 2003, 177-8).

8.10 Summary

When attempting to decode the symbology of the past, entering into the ‘labyrinth’ of images can be as fascinating as it is dangerous. It can also be exceptionally rewarding. Chapter Eight has examined, interpreted and situated the thematic content of this art within the visual culture of Ireland and Britain during the fourth and fifth centuries AD and within the limitations of the present study, has shed some light on belief systems, ideologies and cosmologies that may have sustained the use of such symbolism in Insular élite society and in particular in Irish society during this period. Indeed, this chapter illustrates the rewards that await a more dedicated study. Drawing from a deep and pan-national pool of convergent and divergent traditions these motifs permit us a glimpse into the sophistication of the religious symbolism current in Late Iron Age Ireland, and testify to the willingness of Irish society to embrace what the outside world had to offer. These multivalent designs and motifs held a multitude of meanings that could be interpreted and read on a number of different levels. They were familiar forms in Roman and Insular culture

105 see Daniélou (1964, 42-57) who discusses the Jewish origins of the symbol and its association with living water. Thomas lists examples from Roman Britain (Thomas 1981, 89, 92).
that could also be interpreted in terms of the canon of Christian iconography. In each instance, the message conveyed depended on how the viewer ‘read’ the symbolism. One core tenet pervades however, and that is the primacy and importance of the natural world in the pantheon of indigenous beliefs (Gavin 2013b, 199).
Chapter 9 - Summation

This thesis has explored the concept, origins and development of Insular Military Style inspired art in Ireland and Britain in terms of the art and what it may symbolise, the technologies and techniques involved in its production and decoration, the objects it appears on and their distribution, and also the socio-cultural context in which it was mobilised and performed. One of the initial aims of this study was to test the hypothesis first advanced by Conor Newman (1995, 24) that the Insular Military Style, distinguished by highly-accomplished, and exquisitely-crafted fine-line ornamentation, was inspired by Later Roman Provincial art, specifically Böhme’s Military Style of the fourth and fifth centuries AD. The analysis has confirmed Newman’s suggestion but in testing this hypothesis a corpus of remarkable objects was uncovered, leading the research on a journey from microscopic examination of sublime workmanship to the fascinating and culturally complex world of late- and post-Roman Britain and Ireland.

One of the key findings of this thesis is the identification of this corpus and the Insular Military Style. This study has repatriated these objects into their correct chronological horizon, the fourth and fifth centuries AD, and has established that in developmental terms, this oeuvre predicated the appearance of the so-called ‘Ultimate La Tène’ style of the seventh century. Another key finding is the significant role that Insular Military Style objects played in signifying individual and group identity in a culturally complex post-Roman world where identities were under constant change and were adapting to new and different socio-cultural impulses. The Insular Military Style crossed ethnicity (though in the case of Lincolnshire it was about ethnicity (see below)) and did not always signify the same thing in the different socio-cultural contexts in which this art and these objects ‘performed’. Differences in the significance, and meaning ascribed to the silver specimens from Ireland has also been noted. These exhibit signs of prolonged circulation, heavy wear and repair unlike their counterparts in Britain, none of which have been repaired. The patterning revealed by the distribution map, such as it is, may reflect pre-existing and well-established interconnections such as political alliances, familial or kinship ties or trading networks between élite groups and individuals on both islands. In addition to the Roman road network, sea and river
travel may also have acted as modes of transmission. Technically, this thesis has established that specific, lead-rich alloys were employed to facilitate the crisp, hand-cut decoration. The earliest known instance of the use of niello in Ireland was identified and this thesis was the first to identify and comment on an artificial black overlay is thus far unparalleled on contemporary metalwork. Moreover, it has been established that ‘Xanten-type’ enamels were also employed on the Irish corpus. Finally, this research has shed some light on Insular belief systems, ideologies and cosmologies during the fourth and fifth centuries AD suggesting that these projecting pinheads may have been considered analogous to the human head and highlighting the importance of the natural world in the pantheon of indigenous beliefs.

Changing social contexts and relations compelled élite groups and individuals to project their social identity and construct and maintain power relations through social mimesis witnessed in conspicuous display of close imitations of Late Roman Military Style art. Indeed, a Late Antique style that verges on being formulaic can be identified in ‘emblematic’ contemporary regional styles such as the Scandinavian Nydam and Sösdala styles, the Saxon Relief Style and the Quoit brooch style that was mobilised by élites to convey information about position, prestige and access to and control of resources (Wiessner 1985, 162; Binford 1989:54-55; Curta 2005, 102). This not only reveals the long-standing influence of Late Roman motifs on the grammar of display and power in the north-western Barbaricum, it also reflects a conscious attempt to adapt, and modify those motifs (Halsall 2007, 382). Ireland was neither isolated nor insulated from this and the ornamental metalwork is so much more than an ill-documented horizon of early Irish art: it is the cultural identifier of an élite and previously invisible stratum of Insular society and as such presents a prime means to provide new insights into topics such as social status, cultural identity and social, political and economic relations between Ireland, Britain and the wider Late Roman Provincial West during a formative though relatively obscure period of Insular history.

From an initial corpus of nineteen objects, this study has now identified thirty-one specimens decorated in the Insular Military Style, utilising variety of sources and methodologies outlined in the introduction. One of the most useful was the PAS database which contributed five new specimens - a considerable number in such as small corpus. The majority of these new finds occur in the Lincolnshire
region and its environs and while trade and intercourse between groups in eastern Ireland and the environs of the Bristol Channel are well attested, the interconnections suggested by the occurrence of a concentration Military Style art in the east of England are somewhat puzzling. The settlement of Anglo-Saxon groups on the edges of this British territory in the second half of the fifth century may have motivated indigenous élites in Lincolnshire to assert prominently their ethnic identity and status by utilising elaborate and overtly Romano-British type personal ornaments in an expression of what Thomas Green (ibid. 29) has termed ‘defiant Britishness’. While it is possible that some of these brooches and pins might represent small-scale trade between the largely British west and the Anglo-Saxon east, Kevin Leahy (2007, 83-4) argues that some were locally made, suggesting an active local tradition of making and wearing enamelled zoomorphic penannular brooches by British élites in north Lincolnshire, some of which were decorated in the Insular Military Style (see also T. Green 2012, 27). In Britain, Class I penannular brooches have a clear northern and western distribution with finds concentrated around the Severn Estuary and Hadrian's Wall. The cluster of finds in Lincolnshire (the kingdom of Lindsey) is unusual and unexpected and has not yet been fully explained. It will be truly fascinating to witness how this evolves in the future as new finds are made and further Irish and British scholarly attention is focused on this phenomenon.

A purely art-historical approach to the poorly-contexted corpus of Insular Military Style metalwork cannot develop our understanding beyond typologies and classifications already in existence, particularly given the dearth of contextual and dating evidence. In any case, the appearance of Insular Military Style art appears to have been dictated as much by its techniques of manufacture as by its motifs and designs. Each object decorated in the Military Style is entirely unique, and this same lack of correlation is also found in contemporary bodies of metalwork such as the Sösdala Style and Quoit Brooch Style. It is clear that skilled hand-engraving was of paramount importance not just in producing these motifs but in driving the fashion. Chased punched ornament was employed as a decorative device to frame panels of fine-line relief ornament, to highlight and augment formal aspects such polished beads on the hand-pin series, and also to create motifs such as saltires and triple annulets. Further to this was the practice of applying enamel or niello with the most
ambitious inlays occurring on silver specimens. This constellation of imagery, technology and technique defines the Insular Military Style.

Objects in the Insular Military Style were clearly produced by artisans with similarly exceptional skills and a mutual sense of art. Microscopic study of the worked surfaces by the writer has revealed nuanced differentiation and variation in technique and ability which suggests that Insular Military Style objects are unlikely to represent the output of one workshop, person or region. The wide variety of tools and motifs and the precision, delicacy, minutia and complexity of the ornament suggests that each piece of Insular Military Style art was manufactured individually, whether in small specialist workshops or by mobile artisans commissioned by élite patrons. As discussed in Chapter Six however, this suggestion must be tempered with the consideration that the known corpus of Insular Military Style art may be unrepresentative of what was originally produced. This is supported by a frustrating but important feature of the Insular Military Style corpus, namely the lack of context information and poor recording, including the modern finds many of which have been uncovered as a result of metal-detecting.

The hypothesis that the roots of the Insular Military Style lie within Provincial Late Roman metalwork of the fourth century AD is confirmed by the technologies and techniques employed in the production and decoration of this corpus. The Insular Military Style drove the development and evolution of existing Late Roman prestige forms such as crossbow brooches, and military belt sets according to indigenous tastes and sensibilities in much the same ways as the contemporary but independent Quoit Brooch Style, the Sösdala and Nydam Styles and the Saxon Relief Style did in Britain, Scandinavia and northern Germany respectively. This reflects a desire among Insular élites for Late Antique styles of metalwork (see e.g. Inker 2000) because the use of precious metals and technically sophisticated or labour intensive techniques played a significant role in the construction and affirmation of élite status and identity. The social and political potency of the wearer could also be amplified or represented through artistic virtuosity and the use of intricate and elaborate decoration. In fact, only élites would have had the means necessary to elevate an otherwise quite prosaic object like a dress fastener into such a precious work of art. The objects testify to the cultural intelligence of the élites who commissioned them and the skilled artists who

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composed and executed the designs. The use of silver, and the elegance and accomplished nature of the Insular Military Style, leads to the crucial observation that in terms of style, technology, and technique, this *oeuvre* formed part of the school of highly accomplished Late Antique art and can be placed alongside other regional Late Antique expressions of élite status in precious metal.

This thesis has identified a number of key issues for development in future work. The material occurs in Ireland, southern England and Scotland and there is an urgent need for the material to be drawn together and studied as a whole technically, scientifically and in terms of the socio-cultural and political contexts in which it circulated and performed. It is intended to publish this corpus as a step towards collaboration and to make it available for others to work on. The Bath Brooch and the Shannon Mounts (Cat. Nos 22, 30) are significant objects which will also be published. The artificial patination discussed in Chapter 5:4 undoubtedly requires further research. In addition, lead isotope analysis of the corpus might assist in determining the source of the ores used in the manufacture of these objects, and help to connect objects with particular mines as at present there is insufficient reference material available to permit a full evaluation of the Insular Military Style silver circulating in Ireland and Britain. At the very least such analysis would provide definitive evidence for the early exploitation of silver-bearing galena deposits in Ireland. Interpretative aspects such as the ‘life histories’ of these objects and the role they played in proclaiming group and individual identities also warrant further attention.

One of the most pleasurable aspects of this study has been the opportunity to become intimately familiar with these exquisite objects. Miniature friezes of ornament characterise the Insular Military Style and the opportunity to appreciate and view this art under high magnification and examine the individual tool marks on the worked surfaces has given the writer a more developed understanding of the artistic virtuosity and technical competence of the artisans who created it, and indeed re-joined them to the objects made by their own hands. The thesis has incorporated micro-photography wherever possible and it is intended that the dossier of images included in the text and catalogue will serve as a valuable resource for future research and that it will facilitate the ongoing study of these objects outside of the
laboratory. It is also intended that the methodology employed here will provide a template for other artefact-based studies to follow.