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Physical evidence for the early church in Scotland  
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‘Early monastic complexes ... consisted of scatterings of crude huts around an equally unambitious oratory, and with a defensive rampart either encircling the site or cutting across the approach to it ... there are few signs of any striving after architectural effects in Scotland before the eleventh century even though the adjacent areas had already seen the emergence of a more monumental approach to design before then.’<sup>1</sup>

‘a people may be highly cultured in other respects without possessing a single structure that an architect would care to look at’.<sup>2</sup>

Separated by just over 100 years, these two quotes are both apologies for the nature of the physical evidence for the early church buildings in Scotland. In the twenty-five years since publication of the last of these, new evidence from archaeological excavations invites us to think far more ambitiously and creatively about the possibilities, as do different ways of looking at existing resources, particularly sculpture and place-names. This paper’s aim is to bring out some of the key characteristics of this material and in doing so to highlight some of its potential to recover an increasingly detailed and nuanced picture of the early church in northern Britain. As a preliminary to that, some brief scene setting is necessary: a few words about what this period means in Scottish terms; an introduction to the types of evidence we have for the physical form of the church; landmarks in past study; and what the recent key developments are.

#### A The sixth to tenth centuries in Scotland

In Scottish terms, the best chronological scope of this paper is the fifth to early tenth centuries AD. During this time there was no such political entity as Scotland: this part of northern Britain was a place of enormous diversity, home to five peoples (Britons, Picts, Gaels, incoming Angles and Norse) with six languages spoken (the church brought/reintroduced Latin).<sup>3</sup>

This half millennia of considerable change begins with some evidence for a sub-Roman church in south-west Scotland (the late fifth-century inhabitants of Dumbarton Rock were Christian), although it was not until the seventh century that missionary work was largely completed. The earliest physical evidence takes the form of cemeteries, sometimes with special burials or shrines, and some inscribed stones. The best-documented missionaries are Saints Ninian, Columba and Cuthbert, but there were many others. It ends around AD 900, the time when a consolidated nation of Picts and Gaels was forging a new identity for itself as Alba, with a redefined type of kingship. This is particularly evident in the events of AD 906 when Scone emerged as a new ceremonial centre for Alba with explicit associations with the church. Here the king Constantine, bishop Cellach ‘and the Scots likewise, upon the hill of Faith near the royal city of Scone, swore to preserve the laws and disciplines of the Faith and the rights in church and gospels’. There was a strong church and strong kingship with a mature and sophisticated mutual dependency.<sup>4</sup>

At end of Constantine’s reign in AD 943, the kingdom of Scots ran from the Mounth to the Forth; he was overlord of Northumbria; and the neighbouring kingdoms of Cumbria (including Strathclyde) and Moray may have acknowledged his overlordship. Govan, just 4km west of the ecclesiastical heart of later medieval Glasgow, was the principal royal centre of the king of the Strathclyde Britons. Here a place took shape with a strikingly similar monumentality and topography to Scone: an assembly place/court hill

at Doomster Hill adjacent to a major church used for high-status ecclesiastical or secular burials (recumbent slabs, free-standing cross-slabs, hogbacks and a special tomb-shrine), all within sight of the royal estate lying on the other (north) side of the river Clyde.<sup>5</sup> Elsewhere in Scotland, we find the earldom of Orkney with Caithness, and fledgling kingdom of the Isles and the Kingdom of Galloway.

#### A The nature of evidence for the physical form of the early church

In general terms, the surviving evidence takes the form of visible upstanding remains, excavated evidence, cropmarks, carved stones, textual sources and ecclesiastical artefacts. Between them these forms of evidence help us to build a picture of the form of ecclesiastical buildings and settlements, what they might have looked like, the activities that took place at them and where, as well as having implications for the wider environmental footprint of ecclesiastical settlements. Figure 1 shows the location of the main places mentioned in the text.

#### B Visible upstanding remains

If Scotland is like Ireland, and in the north and west this seems likely, most early drystone churches probably date to between AD 700 and 1100, and only a few were built in stone before around AD 900, while most mortared ones were built after 900.<sup>6</sup> In the absence of excavation it is not possible for sure to say how many of visible foundations in northern and western Scotland may pre-date AD 900 although attributes such as length/width ratios may help, and the form of churches/chapels and their enclosures sometimes parallels dated Irish examples.<sup>7</sup> The ‘classic’ examples are the corbelled cells surviving on remote islands, indeed surviving because these are so remote, on the Garvellachs (Argyll and Bute) and North Rona (Western Isles). The enclosure with its three corbelled buildings on North Rona, including the so-called oratory — a small stone building measuring 3.4m by 2.4m internally and 3.2m high — is the most complete complex of buildings, with carved stones suggesting a seventh to ninth century phase.<sup>8</sup> The structural complexities and monumental biographies of these places are certainly masked, but some sophistication is evident even on unexcavated sites.<sup>9</sup> Sgòr nam Bán-Naoimha (cliff of the holy women) on the island of Canna (Highland) is a likely eremitic site, about 3km from a presumed monastery. Here among a range of buildings, its builders channelled springs into a sophisticated water system that includes a probable horizontal water mill, and the latrine lies by the outflow.<sup>10</sup>

Visible building foundations of possible early medieval origin do not tend to survive in lowland Scotland.<sup>11</sup> Early churches buildings may lie within or close to present church sites, or abandoned in woodland and under cultivated fields. As at places like Tullich (Aberdeenshire) the presence of early sculpture, the sub-circular shape of the graveyard and dedication speak loudly of an early church foundation.<sup>12</sup> The possible exception is Portmahomack where Martin Carver suggests a Pictish date for the east wall of the crypt: the surviving sculpture supports the presence of a church magnificently elaborated with stone furniture, and surely of stone itself, but Yeoman argues that this wall is no earlier than the tenth century.<sup>13</sup>

#### B Excavated evidence

With notable exceptions (see below) work on known early sites – even very important ones such as Iona — has been keyhole in nature, with modern sensitivities and regulations meaning that little archaeologically observed work occurs at churches or graveyards still in use in some way. Only through excavation can archaeologists hope to recover stone, let alone the more normal timber and possibly also turf and earthen ecclesiastical buildings.

The vestigial evidence for these structures may only survive as subtle changes in soils; waterlogged structural timbers surviving from Iona (Argyll and Bute) remind us of the techniques and skilled carpentry we are missing.<sup>14</sup>

Larger-scale interventions driven particularly by mitigation in advance of development, or rescue in advance of coastal erosion or threats such as agricultural ploughing, have led to the discovery of previously unknown church sites. In an urban context at Dunbar (East Lothian), Leslie Alcock suggested an L-shaped length of faced walling dating from the Anglo-Saxon occupation of southern Scotland compares to the Northumbrian church of Escomb (Co. Durham).<sup>15</sup> Nearby in a rural context at Auldham (East Lothian), some burials and structural evidence pre-date a stone, tenth-century chapel, set within a coastal promontory fort.<sup>16</sup> In Orkney, archaeologists found pre-Norse church remains at St Nicholas' chapel on the island of Papa Stronsay: a corbelled cell beneath the church produced a piece of imported green porphyry and a central rectangular stone setting containing the stump of an upright stone. This may be a ritual structure associated with a Pictish monastery.<sup>17</sup>

Significant invasive or non-invasive exploration around the periphery of large church settlement sites, likely to extend beyond the present-day churchyard boundaries, is also lamentably rare. Excavations at Portmahomack (also known as Tarbat, Highland), Whithorn and Hoddam (Dumfries and Galloway) vividly demonstrate the archaeological potential of these areas (see below).

### B Cropmarks

There is an inavoidable skew in our potential to recognise early church sites from cropmarks because the condition for creating these is generally restricted to lowland, mainly eastern Scotland. Such cropmarks can be particularly helpful in demonstrating how the modern churchyard is one small part of a large, presumed ecclesiastical settlement, such as at Portmahomack, Hoddam and Fortingall (Perth and Kinross). Cropmarks can provide a high level of resolution, a particularly notable example being Whitmuirhaugh near Sprouston (Scottish Borders) where a cemetery of at least 280 graves visible on aerial photographs appear to focus on a rectangular building in the south-west corner of the cemetery. Ian Smith interpreted this as a 7th-century Anglian church belonging to royal estate.<sup>18</sup>

### B Carved stones

Carved stones are the major accessible resource for trying to understand ecclesiastical monuments and buildings in early medieval Scotland to around AD 1000, after which church building became the more significant vehicle for social expression.<sup>19</sup> They provide evidence for different forms of monuments, including burial markers, church furniture, fittings and architecture, and hint at what may also have existed in timber.<sup>20</sup> Examples include a gable finial from the Phase III chapel at Ardwall Island (c AD 700), which the excavators suggested is of Irish type and implies a complete stone roof.<sup>21</sup> The range of Pictish sculptural monuments continues to expand, with what may be the decorated finial of a stone ecclesiastical chair from Portmahomack.<sup>22</sup>

### B Textual sources

This period is largely historically invisible. For our purposes, the most important surviving document is Adomnán's Life of Columba in which, in passing, he paints a picture of the church on Iona (see below). That said, it is unclear whether this is the church as Columba knew it, or as Adomnán knew it a century later at the end of seventh century.

## B Ecclesiastical artefacts

Surviving artefacts with a demonstrable ecclesiastical function are rare: there are some stone objects, such as portable altars or a cross-marked sandstone vessel from Whithorn, possibly a *mortarium* for preparing the host;<sup>23</sup> some fine metalwork (notably the eighth-century Monymusk reliquary); manuscripts (the Book of Kells was probably made on Iona); crosiers; bronze and iron bells. Much is simply lost/destroyed, or was made of organic materials and is unlikely to survive. The exceptionally rare leather book satchel recovered from a crannog at Loch Glashan (Argyll and Bute) is the earliest surviving Insular example and reminds us that possible ecclesiastical artefacts can be recovered from non-church sites.<sup>24</sup>

## A The form of the Christian sites

In the most general of terms, Christian sites range in form from ‘undeveloped cemeteries’ (usually unenclosed and without a church), which can be quite large, to ‘developed cemeteries’ (with a church, usually enclosed) which may be quite small sites, to larger establishments – let us call them ecclesiastical settlements – inhabited by religious communities. Some fulfil more regional than local functions, and some smaller sites are linked to more important ones, while some others are probably proprietorial (independently established by local lords and their families). Some sites are more remote (in geographical and/or topographical senses) than others and are assumed to be eremitic, including caves sites with internal structures or carvings on their walls. Findspots of Christian sculpture remind us how many possible sites we are possibly missing, although at most places with a church enclosure is in some way a defining feature.<sup>25</sup>

In general, the interpretation is that the aristocracy and kings played a key role in missionary activity and the foundation of churches: the local king gave Columba land on Iona; Nechtain king of Picts wrote to Abbot Ceolfrith of Wearmouth in the early eighth century seeking advice on building in the Roman style; eighth-century St Andrews (Fife) and mid-ninth-century Dunkeld (Perth and Kinross) are overtly royal foundations. The evidence speaks of a mutual dependency, a maturing and strengthening relationship over time, in which the line between secular and church politics arguably blurs. At the other extreme, the ultimate strength of the movement clearly lies in local community observance and practices.

In this period, while we know some places were bishoprics, or bishops were present (eg Iona), we have to allow for a more flexible organisation than ‘monastic’ and ‘episcopal’: ‘the early medieval church throughout Europe had a strong monastic impulse at every level, and this impulse waxed and waned, and took on different levels of standardisation’.<sup>26</sup>

## A Landmarks in the study of the physical evidence for the early medieval church in Scotland

Perhaps tellingly, there is no up-to-date modern review that brings together all the different sources for the early church across Scotland, or even a single *detailed* treatment of the full range of physical evidence. Ian Fisher and Ian Smith published short overviews of the current state of knowledge and issues in 1996, and general books in the Historic Scotland Batsford and Canongate series set the scene.<sup>27</sup> Charles Thomas is the first and last person so far to attempt anything magisterial, in 1971, with his inspirational *The Early Christian Archaeology of North Britain*.<sup>28</sup> Among other things, he introduced the influential concept of undeveloped and developed cemeteries. Ninety years previously in his Rhind lectures for 1879, *Scotland in Early Christian Times*, Joseph Anderson

struggled with the dating of simple architectural structures in much the same way as we do today.<sup>29</sup> Between 1971 and 1992 the Royal Commission on the Ancient and Historical Monuments of Scotland published seven inventories for Argyll, a highly significant regional recording exercise, notable to us here for its surveys of chapel sites and monasteries, including many upstanding but undatable remains, and its detailed drawings and excellent photographs of carved stone monuments. The techniques they developed in recording carved stones have extended to their work on *Early Medieval Sculpture in the West Highlands and Islands*,<sup>30</sup> and drawing of Pictish sculpture by John Borland, reinforced by the continuing work of Ian G Scott in his retirement.

#### A New knowledge, new ways of seeing

There are a several main reasons why our understanding of early church sites, and recognition of their existing and future potential, has leapt enormously in the last decade or so. A series of excavations at key sites have produced a mass of new evidence: Whithorn (1984–91, published 1997), Hoddam (1991, published 2006), Portmahomack (1994–2007; so far only published in interim or semi-popular form); Inchmarnock (Argyll and Bute) (1999–2004, published 2008), Isle of May (Fife) (1992–7, published 2008); and Govan (1994–6; not yet published in full).<sup>31</sup> While most of these are on a relatively large scale, they are still only partial excavations of very large sites; the location of the excavations in relation to what we understand to be the original church site varies and obviously influences what they can tell us.

This period has also seen detailed new studies of Pictish art and new approaches to extracting meaning from sculpture.<sup>32</sup> Beyond Columba, Ninian and Cuthbert, place-name and textual studies are playing a particularly important role in identifying the territories in which more local saints and their followers worked, and the possible relationship of these to secular territories.<sup>33</sup> A particularly exciting new development is the Leverhulme-funded project looking at the commemoration of saints in Scottish place-names, due to report in 2013.<sup>34</sup>

The remainder of this paper will briefly explore six key characteristics of the physical evidence for the early church in Scotland: the development of cemeteries as places of burial for local Christian communities; the physical manifestations of saints' cults; the desire to build in stone as an expression of alignment with the Roman church; the scale, complexity and diversity of 'church' forms and functions; the structured use of space at church settlements; and the associated crafts, industries and technologies.<sup>35</sup>

A The development of cemeteries as places of burial for local Christian communities  
Forthcoming work by Adrian Maldonado reviews the question of the relationship between burials and early Christianity.<sup>36</sup> By the end of our period, burial in churchyards is usually the norm. Very few burials are known in Iron Age Scotland and these did not tend to be in large groups. In south-east and east Scotland a tradition of larger cemeteries emerged, particularly from the fifth century: long cists and 'dug' graves in the south-east and square and round barrow further north. Barrow cemeteries, tended to be for relatively small communities, as at Redcastle (Angus). Both these burial forms can pre-date the arrival of Christianity which makes recognising whether east/west-aligned, unaccompanied graves, as at Lundin Links (Fife) are Christian problematic. Certainly no possible church building has yet been discovered associated with a barrow cemetery.<sup>37</sup> Both types of cemetery are expressions of community, and of the role that the act of burial of past community members played in creating and reinforcing local beliefs and values. Aerial photographs

in south-west Scotland now demonstrates the more widespread and diverse nature of the evidence for early Christian burial cemeteries.<sup>38</sup>

Long-cist cemeteries include the sixth–seventh-century cemetery associated with the inscribed Catstane, at Edinburgh airport. Excavations in 1996 at Thornybank (Midlothian) revealed over 100 burials in varied grave forms (including log coffins), aligned approximately east to west and carefully laid out with no intercutting. Behind such ordered burial rites lie organisation and complex social conventions. Radiocarbon dates suggest a floruit of burial in the sixth century. The burials include a four-posted dug grave (possible with a wooden mortuary structure over) and two square-ditched graves.<sup>39</sup> Hallow Hill, St Andrews is a large long-cist cemetery with a floruit in the seventh century (Fig. 2). This cemetery developed on either side of a road (to and from where? So far the only other known early medieval laid roads are *within* monasteries) and the site may be associated with an *eccles* (church) place-name. The organisation of the cemetery is again formal with the suggestion of some foundation graves containing Roman heirlooms. A six-post timber structure in a prominent hilltop location, aligned east to west and measuring 7 by 3m, is a possible mortuary chapel, if not a church.<sup>40</sup> This example illustrates the difficulty of identifying whether the earliest Christian communities in Scotland constructed buildings at their cemeteries designed for some aspect of regular Christian worship, although there certainly is a British, Irish and Scottish tradition of architecturally elaborating important tombs.<sup>41</sup> Their more routine worship could well have taken place in and around the home, and their initial priority for religious foci may have been places of baptism rather than burial.

The interpretation of the Phase I activity at Whithorn presents other possibilities but it open to question whether it represents proprietorial or church-led Christian activity.<sup>42</sup> Conceivably the earliest stone church here, presumed to lie under the cathedral on top of the hill, predated any burials. This is the area where the fifth-century Latinus Stone is likely to have come from. Excavations downslope from here found a sequence of burials and three circular/sub-circular shrines dating from the mid-sixth century to around 730 develops. The scale and presumed sophistication of the enterprise is considerable, for the whole sits within an enclosure that also includes domestic buildings in an outer zone. The associated finds indicate considerable prosperity, widespread evolving trade contacts, including with the continent, and innovative technological skills.

The classic examples of cemeteries developing with the addition of churches, often a timber church later replaced by stone, are St Ninian's Point, Bute (Argyll and Bute), excavated in the 1950s, and Charles Thomas' 1960s excavations at Ardwall Island (Dumfries and Galloway), both in south-west Scotland. Neither site has produced any scientific dates and both merit 'revisiting' in the light of current advances in understanding Irish sites, to which their excavators compared them. At St Ninian's Point north–south-aligned burials were overlain by east/west ones. A chapel built of undressed rubble set in clay overlay at least two graves, its altar interpreted as having a box-like cavity; Raleigh Radford argued for a pre-Viking date.<sup>43</sup> On Ardwall Island, Phase I extended inhumations related to the focus of a rock-cut slab shrine, a form interpreted as coming from Ireland. Phase II saw the construction of a small timber structure (oratory or chapel) and possibly another shrine of 'corner-post' type. According to the excavator, in around AD 700, in Phase III, a stone church with composite hollow altar was constructed: bone inside the altar is assumed to have been disturbed during construction of the chapel. There were two rows of inhumations to the west.<sup>44</sup> More recently excavated examples include St Ronan's, Iona. Here a unicameral stone building overlies the earliest Christian graves. Its clay-bonded walls bore lime mortar that dates sometime between the eighth

and twelfth centuries. This use of clay bonding and lime mortar finds its parallels at Ardwall, Whithorn and St Ninian's Point.<sup>45</sup>

Just how many such cemeteries, with or without early church buildings, lie under churches and graveyards where the visible remains date from the twelfth century at the earliest?

#### A The manifestation of saints' cults

As Stephen Driscoll observes, with exception of St Andrew, the great Scottish saints are all firmly linked to particular regions of Scotland, and their distribution is a manifestation of ethnic differences apparent in languages and cultural practices: the distribution of cults may in fact represent 'eroded footprints' of ancient polities.<sup>46</sup> Driscoll argues that the vigorous growth of such cults in Scotland is 'perhaps the best documented of the innovative social and political developments that provided the framework for the Scottish kingdom', and their growth provides the clearest indication of the increasing power of leading churches.<sup>47</sup> Using place-names, the slight documentary evidence and the surviving sculpture we can infer how the aristocracy and royalty patronised such cults for political as well as devotional reasons. Examples include sixth-century Serf in the Forth Valley and Strathearn area and Ethernan (d 669) in the Fife area, native saints who had direct associations with local royalty and need have had no associations with the Gaelic church.

Aside from inscriptions on stone monuments that very occasionally refer to a named individual who could be a particular saint, it is nigh on impossible to identify from the *physical* evidence which saints prevailed where.<sup>48</sup> Yet sometimes incremental sources of evidence can hint at programmes of ecclesiastical activity. Place-names, cropmarks indicating a monastery similar in form to Iona, a newly discovered eighth-century cross-slab with Ionan parallels from Dull,<sup>49</sup> and a high concentration of handbells and cross-incised stones from Atholl appear to indicate the activities of Gaelic Columban churchmen in Pictish affairs in the early eighth century, where they were promoting Roman practices.<sup>50</sup>

In comparison to Ireland, few saints' reliquaries – metal shrines, crosiers, bells, etc – survive in Scotland, although sculptural detail and monument form regularly betray inspiration from sacred treasuries. Various forms of monuments are possibly shrines and/or had a reliquary function. Examples include the eighth-century so-called St Andrews Sarcophagus and related composite monuments (but see alternative possibilities below), and the ninth-century Govan tomb-shrine carved from a single block of stone. The Govan shrine probably stood on the south side of the east end of the church at Govan, while the St Andrews Sarcophagus, if a shrine, would have worked to best advantage on the north side.<sup>51</sup> A characteristic form of recumbent burial marker that develops in the eighth/ninth centuries sometimes had a secondary reliquary role by means of recesses designed to hold things. Concentrations of such monuments suggest aristocratic or royal patronage at key places like St Andrews, Meikle (Perth and Kinross) and St Vigean (Angus). Programmes of monument creation may relate in some way to the translation of saint's relics.

#### A The desire to build in stone as an expression of alignment with Roman church

After the Synod of Whitby in AD 664, an important way in Northumbria of signalling allegiance to the Roman church was to build in stone rather than timber. Since the Northumbrians occupied parts of southern Scotland we might expect to see this reflected in the churches that they built here, and from the eighth century in parts of Pictland because of their influence (see below). Beyond areas of Anglo-Saxon (ie continental architectural) influence, the sense is that we should not expect much by way of stone

buildings before the tenth century,<sup>52</sup> although the sophisticated prehistoric building tradition of north and west Scotland and wide availability of stone rather than timber would suggest that building in timber for the sake of showing allegiance to the ‘Celtic’ church would have involved considerable effort, if indeed this did routinely happen. The famous exception in Scotland is the church at Whithorn that Bede describes in AD 731 as St Ninian’s Candida Casa. While there is evidence from Whithorn for lime preparation in the Phase I deposits, pointing to the construction of a sophisticated, mortared and perhaps limewashed building in the vicinity of the excavated area, there is no proof that such a building is the one Bede describes, or indeed a church at all.

As mentioned previously, Adomnán describes the church on Iona in either its sixth- or seventh-century form. He gives no indication that the church is stone – it was probably timber — but he reveals that the floor space was large enough to accommodate the entire monastic community or those present at a given time. Singing took place in a choir, and there may have a window above the altar and possible extra windows along the south wall to help illuminate the altar further. Adomnán only mentions one main door, probably in the gable and possibly protected by a porch. Apart from the altar, there is no mention of any furniture. He describes an *exedra*, thought to be an annex adjoining the church wall on its north or south side and entered from the church, possibly serving as a sacristy or side chapel. On top of this we must consider the possibility of ornately carved and painted walls, wall tapestries, and gleaming and colourful metalwork adorning the altar.<sup>53</sup>

The Anglian, eighth-century minster church excavated at Whithorn (Fig. 3) is a complete revelation, illustrating how complex and sophisticated timber churches might be, and that for the Anglo-Saxons it *was* perfectly acceptable to build important, large churches in timber; we now know that European architecture elsewhere was commonly timber too.<sup>54</sup> Its internal divisions have much in common with Cogitosus’ description of the large seventh-century church at Kildare in Ireland, which Neuman de Vegvar argues exhibits ‘Romanitas’ in its form.<sup>55</sup> Adjacent to this timber church the Angles also constructed a clay-bonded building, apparently a mortuary chapel. Glass windows using at least two colours signal that this was a very important space.

There is a reasonable case for some Anglo-Saxon churches in Scotland being stone. Chris Lowe suggests we should take seriously the possibility that the eighth-century Anglo-Saxon church at Hoddam was on the scale of Escomb, and Leslie Alcock has suggested an equivalent stone church at Dunbar (see above).

In Pictland in around AD 716 King Nechtan sent messengers to Abbot Ceolfrith of Wearmouth (Northumbria, now Tyne and Wear) seeking advice on changing the Pictish Church from Columban to Roman observance, and for architects to build a church in the Roman style. By this we should understand a mortared stone church with arches. This presupposes an existing timber tradition – what Bede describes as ‘in the manner of the Scots’, ie Irish. One stated outcome was the construction of *Egglespethir*. Thought to be near Restenneth, the church site is not yet located.

Nechtán’s reforms appear to have been extensive. It seems that a strategy for implementing his agenda, and a measure of its success, was a programme of erecting symbol-bearing cross-slabs, found throughout much of Pictland. Their content seems in various ways to reflect the way in which the local aristocracy gave support to the king and the church. Their form and the adoption of interlace decorative elements is an imaginative and distinctive response by Pictish masons to the artistic and technical inspiration of their Northumbrian counterparts. Stone monuments such as these conceivably symbolised the persuasion of the church and identity of the local patrons, even if any church besides them was still of timber.<sup>56</sup>

Aside from the possible proxy of the symbol-bearing cross-slabs, there is no evidence of an extensive programme of stone *church* building in the early eighth century, but later and in the ninth century a growing corpus of carved stones throw a light on what we may be missing in terms of stone architecture. Carved panels may be cladding for the interior and exterior of buildings. At Rosemarkie on the Black Isle (Highland), panels appear to be part of the same architectural scheme as a decorated stone altar. Distinctive panels and corner-post shrines belonged to an interior setting; they provide the best evidence so far for Pictish church building.<sup>57</sup> Blackwell, Clarke and Goldberg suggest that fittings long interpreted as shrines (including the St Andrews Sarcophagus) were in fact precinct barriers within a church, in much the same way as the continental post-and-panel technique they are ultimately believed to derive from, via the Northumbrian masons.<sup>58</sup>

The so-called arch from Forteviot (Perth and Kinross) is certainly the only surviving vestige of a very grand, ninth-century church, part of the royal palace complex (Fig. 4).<sup>59</sup> Aitchison in a recent study argues that it stood above the chancel. He reinterprets its iconography as not biblical but showing a king, a prominent cross, the Agnus Dei and clerics, the rods in their hands depicting the iconography of ecclesiastical foundation (on the basis of Irish parallels). He makes the case that the king is Unuist (820–34), and that the Agnus Dei is evidence of promotion of the Roman liturgical rite. He suggests church was on the same scale as Escomb (which held an estimated held 84 adults), and that the arch's content may have formed part of a coherent iconographical programme that encompassed the whole church in a 'graphic and potent testament to royal patronage of the Pictish church'.<sup>60</sup> Mark Hall widens possibilities for the arch in suggesting that it might be a pillared canopy over an altar or formed part of the superstructure of a baptistery, as well as querying Aitchison's interpretation of the 'rods'.<sup>61</sup>

So, we know that the later Picts could build quite splendid stone buildings at major sites, but we do not know how common these were in general, and suspect not.

A The scale, complexity and diversity of 'church' forms and functions  
Aitchison's reconstruction of Forteviot suggests a large and splendid church on the scale of Escomb, full of other decorated items. While accepting this was a royal foundation on a royal estate, we may be being too timid about how large we think some of the other early medieval churches might be. Albeit the site of an Anglian bishopric, the scale of a secondary (timber) church excavated at Whithorn is telling of what was possible, as are the industrial buildings known as S1 ('the smith's hall') and S9 ('vellum-workers hall') at Portmahomack.<sup>62</sup>

We know from places such as St Andrews that major churches could have more than one church, and that the Anglian tradition, as at Whithorn and possibly Hoddum, could include aligned churches, part of a wider linear trend.<sup>63</sup>

The Whithorn minster phase shows the potential for the survival of fragile and slight evidence about the division of church interiors, where the altars and doorways were, where people walked and where water used in rituals might be disposed of. Such evidence may provide insights into liturgy.<sup>64</sup> Churches also had a need for places to safely store and display reliquaries, as well as the exotic ecclesiastical treasures that were clearly circulating (as analysis of Pictish art suggests).

The clay-bonded building to the east of the eighth-century minister church at Whithorn (see above) reminds us that individual church buildings may have had different functions: here it is suggested that a mortuary chapel doubled as a gateway to the inner precinct.

There are strong indications that quite a lot of the sculpture was designed for internal spaces, and we should therefore consider a range of possible functions for any buildings we do find. Might some of the major stone reliquaries have lain in dedicated chapels? Isabel and George Henderson speculate that the monumental cross-slab known as Meigle 2 could have acted as the focus of a funerary chapel containing graves over which were placed Meigle's cross-bearing recumbent monuments,<sup>65</sup> perhaps related to a wider British, Irish and Scottish tradition of building architecturally elaborate tombs, including the construction of separate burial enclosures and chapels within larger sites.<sup>66</sup> The shrine-chapel on Iona known as 'St Columba's Shrine' (Fig. 5) may indeed have been built to house a reliquary shrine, in which case, so O'Carragáin argues, it was built before AD 843 when the saint's relics were split between Dunkeld and Kells (Ireland), fitting in with his suggested model of the first shrine-chapels being built in Ireland in the eighth and ninth centuries.<sup>67</sup> Henderson and Henderson suggest that at least one of the series of major cross-slabs erected on Tarbat peninsula at end of eighth century was designed for use in an internal space.<sup>68</sup> The placing of sculpture within buildings raises interesting questions about how these internal spaces were illuminated, as well as how such spaces acted on the emotions and sense of visitors.

#### A The structured use of space

A very structured use of space is obvious at the larger church sites where significant excavations have taken place: evidence for inner and outer enclosures (Inchmarnock, Portmahomack by implication) and roads (Iona, Portmahomack). We have to bear in mind that these places were designed not just for the monks and clerics who used them but also for visiting pilgrims, the dead and their mourners. Enclosures are a distinguishing feature, seen from the mid-sixth century at Whithorn; the sixth-century vallum at Iona possibly reuses an Iron-Age one;<sup>69</sup> while the fifth/sixth-century date from the earliest burials at Govan could imply that its enclosure also dates from this period.

Within the enclosures, landscaping can be a feature. On the Isle of May in the Firth of Forth (Fife) there was four centuries of burial before the earliest dated building appears (probably in the late tenth century, a simple rectangle with a west door, overlying some earlier burials). At an early date the raised beach was transformed into something resembling a platform cairn measuring at least 60m from north to south by 22m transversely. Within this area, the Group 2/3 burials were aligned differently suggesting some segregation of burials in the eighth/ninth centuries. Another important example of landscaping is the constructions of revetments at Whithorn in the eighth century that transform the excavated part of this site.

Whithorn also provides detailed evidence of considerable experimentation with access for people entering the mortuary chapel and church, i.e. between outer and inner precincts of church.

Patterns are also visible in where other activities are taking place. Inchmarnock produced over 100 pieces of incised slate that imply a monastic school or equivalent to the north or west of the church. This mirrors the location of the Nendrum schoolhouse (Co. Down), and Inishmurray (Co. Sligo). The excavators believe this was a place where young children were fostered, possibly functioning as a primary or elemental school.<sup>70</sup>

There is good evidence for a wide range of activities taking place in association with church sites, often beyond the bounds of the historical or modern graveyard (agricultural activities at the perimeter; more specialised craft activities closer to the site core (Fig. 6): 'the evidence from Hoddam [and Portmahomack] should also lead us to reconsider the physical size of these early settlements and reassess the complexity of

their associated parts'.<sup>71</sup> Sometimes there is also evidence for domestic architecture, including possible guesthouses, as at Whithorn.

#### A Associated industries and technologies

This final example introduces the expanded evidence for a wider range of crafts, industries and technologies present in association with the churches: fine metalworking and glassworking (eg Portmahomack, where the 'pieces' are in place for manufacture of reliquaries); unique evidence for a vellum-manufacturing workshop at Portmahomack, which supports the evidence for not only the presence but also the manufacture of decorated manuscripts here;<sup>72</sup> a workshop specialising in oil-shale artefact production to the north of the church at Inchmarnock, and a metalworking area (both dating to the last quarter of the 1<sup>st</sup> millennium AD); metalworking from Govan;<sup>73</sup> smithying at Portmahomack; leather tanning at Hoddam; possible milling (water management was certainly a feature at Portmahomack); and good evidence for agricultural activities in the form of an arc of corn-drying kilns around the inner perimeter of the vallum at Hoddam, which has implication for access to resources (cereal and fuel).

#### A Concluding remarks

In focussing on the physical evidence this short paper has skipped over the expected complexities and diversity of early Christian religious establishments across what is now Scotland, including key questions such as who was founding and supporting the churches (communities, lay persons, lords, kings), and how this changed across time and space. Our period saw the transformation of how and where critical rites of passage took place (individual baptism and burial; inauguration of kings, etc), so that by the tenth century the church had acquired control of these (note: how exclusively is unproven). For places that lie at the heart of understanding the development of early medieval settlement as a whole, we know lamentably little about church sites in general, particularly about the church buildings themselves. (This makes Historic Scotland's decision in 2005 not to fully excavate Auldham down to its earliest levels all the more depressing). The archaeological revelations have primarily come from excavations taking place *around* surviving churchyards, in the outer perimeters of what were mostly some of the largest religious establishments of this period. With opportunities for significant exploration of the heart of early church sites very slight, the greatest future potential for understanding the physical nature of the church in Scotland largely lies in understanding what happened around the perimeter or larger sites, and in understanding how these sites fitted into the wider social and economic landscape.

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<sup>1</sup> R. Fawcett, *Scottish Medieval Churches* (Edinburgh, 1985), p. 28.

<sup>2</sup> J. Anderson, *Scotland in Early Christian Times. The Rhind Lectures in Archaeology—1879* (Edinburgh, 1881), p. 128.

<sup>3</sup> For accessible introductions to the political development of Scotland at this time see the Historic Scotland Batsford and Canongate series.

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- <sup>4</sup> S. Driscoll, *Alba. The Gaelic Kingdom of Scotland AD 800–1124* (Edinburgh, 2002), p. 8: Constantine, who retired to a monastery in 943 was ‘in many respects the real architect of medieval Scotland’.
- <sup>5</sup> Driscoll *Alba*, 37; C. Dalgligh and S. T. Driscoll, *Historic Govan. Archaeology and Development* (York, 2009), pp. 28–50.
- <sup>6</sup> T O’Carragáin, *Churches in Early Medieval Ireland* (New Haven and London, 2010), pp. 15, 52, 57.
- <sup>7</sup> Carver, *Portmahomack*, p. 90.
- <sup>8</sup> N. Fojut, D. Pringle and B. Walker, *The Ancient Monuments of the Western Isles* (Edinburgh, 1994), 22–5; I. Fisher, *Early Medieval Sculpture in the West Highlands and Islands* (Edinburgh, 2001), pp. 114–16.
- <sup>9</sup> High Island (Co. Galway) is a good example of how an apparently simple church building reveals great complexity: J.W. Marshall and G. D. Rourke, *High Island. An Irish Monastery in the Atlantic* (Dublin, 2000).
- <sup>10</sup> Fisher, *Early Medieval Sculpture*, p. 101.
- <sup>11</sup> Traditionally little surviving fabric of medieval date has been recognised either, but systematic survey of the dioceses of Dunblane and Dunkeld has shown that a considerable amount does survive: R. Fawcett, R. Oram and J. Luxford, ‘Scottish medieval parish churches: the evidence from the dioceses of Dunblane and Dunkeld’, *Antiq. J.*, 90 (2010), pp. 261–98.
- <sup>12</sup> I. A. G. Shepherd and M. K. Greig, *Grampian’s Past. Its Archaeology from the Air* (Aberdeen, 1996), p. 34.
- <sup>13</sup> M. O. H. Carver, *Portmahomack. Monastery of the Picts* (Edinburgh, 2008), pp. 82–92; P. Yeoman, ‘Investigations on the May Island, and other early medieval churches and monasteries in Scotland’, in *The Archaeology of the Early Medieval Celtic Churches*, ed. N. Edwards (Leeds, 2009), pp. 227–44 at p. 233.
- <sup>14</sup> J. Barber, ‘Excavations on Iona, 1979’, *Proc. Soc. Antiq. Scot.*, 111 (1982), 282–380.
- <sup>15</sup> L. Alcock, *Kings and Warriors, Craftsmen and Priests in Northern Britain AD 550–850* (Edinburgh, 2003), p. 216.
- <sup>16</sup> E. Hindmarch and M. Melikian, ‘Baldred’s Auldham. An early medieval chapel and cemetery’, *Church Archaeol.*, 10 (2006), 97–100. Since the chapel was not fully excavated we do not know whether an earlier church lay beneath it, but this seems likely.
- <sup>17</sup> RCAHMS record HY 62 NE 14.
- <sup>18</sup> I. M. Smith, ‘Sprouston, Roxburghshire: an early Anglian centre of the eastern Tweed Basin’, *Proc. Soc. Antiq. Scot.*, 121 (1991), pp. 261–94.
- <sup>19</sup> S. T. Driscoll, ‘Christian monumental sculpture and ethnic expression in early Scotland’, in *Social Identity in Early Medieval Britain and Ireland* (Leicester, 2000), eds. W. Frazer and A. Tyrell, pp. 251–52.
- <sup>20</sup> At the time of writing, prompted by excellent night-time photography of the ninth-century Sueno’s Stone by Alan Braby, Katherine Forsyth (pers comm.) is exploring the possibility that the feature depicted above a series of decapitated bodies might represent a building of the period, conceivably a church. The ailsed basilican-style church incised on a slate at Inchmarnock is thought to be tenth or eleventh-century in date and unlikely to represent a building on Inchmarnock: C. Lowe, *Inchmarnock. An Early Historic Island Monastery and its Archaeological Landscape* (Edinburgh, 2008), pp. 160–1.
- <sup>21</sup> C. Thomas, ‘An Early Christian cemetery and chapel on Ardwall Isle, Kirkcudbright’, *Medieval Archaeol.*, 11 (1967), pp. 127–88 at p. 175.
- <sup>22</sup> G. Henderson and I. Henderson, *Art of the Picts* (London, 2004), p. 211.
- <sup>23</sup> P. Hill, *Whithorn and St Ninian. The Excavation of a Monastic Town 1984–91* (Stroud, 1997), pp. 46, 437.

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<sup>24</sup> A. Crone and E. Campbell, *A Crannog of the 1<sup>st</sup> Millennium AD. Excavations by Jack Scott at Loch Glashan, Argyll, 1960* (Edinburgh, 2005), pp. 81–92.

<sup>25</sup> There is an obvious risk of circularity here because it is so difficult to recognise unenclosed sites!

<sup>26</sup> T. Clancy, ‘Deer and the early church in North-Eastern Scotland’ in *Studies on the Book of Deer* (Dublin, 2008), ed. K. Forsyth, pp. 363–97 at p. 390.

<sup>27</sup> I. Smith, ‘The origins and development of Christianity in north Britain and southern Pictland’, in *Church Archaeology. Research Directions for the Future* (York, 1996), eds. J. Blair and C. Pyrah, pp. 19–37; I. Fisher, ‘The west of Scotland’, in *ibid*, pp. 37–42. Carver, *Portmahomack*, pp. 87–92 is useful on the form of early church buildings in Scotland. Professor Thomas Clancy is writing *The Making of Scottish Christianity: A History to 1215*.

<sup>28</sup> C. Thomas, *The Early Christian Archaeology of North Britain* (Oxford, 1971).

<sup>29</sup> Anderson, *Scotland in Early Christian Times*, p. 123.

<sup>30</sup> Fisher, *Early Medieval Sculpture*.

<sup>31</sup> Hill, *Whithorn*; C. Lowe, *Excavations at Hoddam, Dumfriesshire. An Early Ecclesiastical Site in South-west Scotland* (Edinburgh, 2006); M. O. H. Carver, ‘An Iona of the east: the early medieval monastery at Portmahomack, Easter Ross’, *Medieval Archaeol.*, 48 (2004), pp. 1–30; Carver, *Portmahomack*; Lowe, *Inchmarnock*; H. James and P. Yeoman, *Excavations at St Ethernan’s Monastery, Isle of May, Fife 1992–7* (Perth, 2008); S. T. Driscoll, ‘Govan: an early medieval royal centre on the Clyde’, in *The Stone of Destiny: Artefact and Icon* (Edinburgh, 2003), eds. R. Welander, D. Breeze and T. O. Clancy, pp. 77–83.

<sup>32</sup> eg S. M. Foster (ed.), *The St Andrews Sarcophagus. A Pictish Masterpiece and its International Connections* (Dublin, 2006); S. M. Foster and M. Cross (eds), *Able Minds and Practised Hands. Scotland’s Early Medieval Sculpture in the 21<sup>st</sup> Century* (Leeds, 2005); and Henderson and Henderson *Art of the Picts*.

<sup>33</sup> T. Clancy, ‘Deer’, pp. 386, 392 demonstrates that there is negative evidence for the development of the church in north-east Scotland having non-‘Columban’ roots and having been open to other influences, including internal ones and ones from elsewhere in Ireland. The sculpture supports an early establishment of local churches in this area. He suggests that the key period for formation of these churches is 670–720 during floruits of Nechtan, Drostan and Fergus; this is the same period as new centres emerged in Fife, Fotherif, Atholl and Easter Ross.

<sup>34</sup> Rachel Butter, Thomas Clancy and Gilbert Márkus are undertaking this project for Celtic, School of Humanities, University of Glasgow.

<sup>35</sup> Independently, this list has resonances with the themes Nancy Edwards explores in ‘The archaeology of the early medieval Celtic churches: an introduction’, in *Early Medieval Celtic Churches*, ed. N. Edwards, pp. 1–20 at pp 7–14: hierarchy of sites; planning and layout; churches; burials and cemeteries; saints and the cult of relics; estates, craftworking and ‘monastic towns’; and the wider landscape.

<sup>36</sup> At the time of writing his University of Glasgow PhD is nearing completion. See *The Pictish Arts Society Newsletter*, 57 (2010), 1–2 for a summary of some of his unpublished findings. See also S. Winlow, ‘A review of Pictish burial practices in Tayside and Fife’, in *Pictish Progress. New Studies on Northern Britain in the Early Middle Ages* (Leiden, 2010), eds. S. T. Driscoll, J. Geddes and M. A. Hall, pp. 335–69.

<sup>37</sup> C. Greig, M. Greig and P. Ashmore, ‘Excavation of a cairn cemetery at Lundin Links, Fife in 1965–6’, *Proc. Soc. Antiq. Scot.*, 130 (2000), pp. 585–636; D. Alexander, ‘Redcastle, Lunan Bay, Angus: the excavation of an Iron Age timber-lined souterrain and a Pictish barrow cemetery’, *Proc. Soc. Antiq. Scot.*, 135 (2005), pp. 41–118.

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- <sup>38</sup> D. E. Cowley, 'Early Christian cemeteries in south-west Scotland', in *St Ninian and the Earliest Christianity in Scotland* (Oxford, 2009), ed. J. Murray, pp. 43–56.
- <sup>39</sup> A. R. Rees, 'A first millennium AD cemetery, rectangular Bronze Age structure and late prehistoric settlement at Thornybank, Midlothian', *Proc. Soc. Antiq. Scot.*, 132 (2002), pp. 313–55 at pp. 349–50.
- <sup>40</sup> E. Proudfoot, 'Excavations at the long cist cemetery on the Hallow Hill, St Andrews, Fife', *Proc. Soc. Antiq. Scot.*, 126 (1996), pp. 387–454.
- <sup>41</sup> D. Petts and S. Turner, 'Early medieval church groups in Wales and western England', in *Early Medieval Celtic Churches*, ed. N. Edwards, pp. 281–99 at p. 294.
- <sup>42</sup> K. Forsyth, 'Hic memoria perpetua: the early inscribed stones of southern Scotland in context', in Foster and Cross, *Able Minds*, pp. 113–34 at pp. 130–1.
- <sup>43</sup> C. Thomas, *Early Christian Archaeology*, pp. 54–6, 71, 179–80. W. G. Aitken, 'Excavation of a chapel at St. Ninian's Point, Isle of Bute', *Trans Buteshire Natur Hist Soc*, 14 (1955), pp. 62–76.
- <sup>44</sup> C. Thomas, 'An early Christian cemetery'.
- <sup>45</sup> J. O'Sullivan, 'Excavation of an early church and a women's cemetery at St Ronan's medieval parish church, Iona', *Proc. Soc. Antiq. Scot.*, 124 (1994), pp. 327–65. Rachel Barrowman's re-examination of the St Ninian's Isle, Shetland evidence is eagerly awaited. In general, there is little hard evidence for pre-Norse churches in the northern isles, although the timber predecessor of stone church at Brough of Deerness may be pre-Norse: C. D. Morris, 'The chapel and enclosure on the Brough of Deerness, Orkney: survey and excavations, 1975–77', *Proc. Soc. Antiq. Scot.*, 116 (1986), pp. 301–74 at p. 357.
- <sup>46</sup> Driscoll, 'Christian monumental sculpture', pp. 233–52.
- <sup>47</sup> Driscoll, *Alba*, pp. 9–11.
- <sup>48</sup> It is questionable the extent to which, for example, schools of sculpture can be used in this way. They are, anyway, difficult to establish for the Picts: Henderson and Henderson, *Art of the Picts*, p. 212.
- <sup>49</sup> Sculpture found close to N–S clay-bonded wall that is likely to be earlier undated church.
- <sup>50</sup> See for example S. Taylor, 'Seventh-century Iona abbots in Scottish place-names', *Innes Review*, 48:1 (1997), 45–72 and N. M. Robertson, 'The early medieval carved stones of Fortingall', in *The Worm, the Germ and the Thorn. Pictish and Related Studies presented to Isabel Henderson* (Balgavies, 1997), ed. D. Henry, pp. 133–48.
- <sup>51</sup> J. R. Davies, *The Cult of St Constantine* (Glasgow, 2010), p. 4; I. Henderson, 'Primus inter pares: the St Andrews Sarcophagus and Pictish sculpture', in *The St Andrews Sarcophagus*, ed. S. M. Foster, 97–167 at p. 155.
- <sup>52</sup> A. Pritchard, 'The origins of ecclesiastical stone architecture in Wales', in Edwards *Early Medieval Celtic Churches*, pp. 245–64; C. Manning, 'A suggested typology for pre-Romanesque stone churches in Ireland', in *ibid.*, pp. 265–80.
- <sup>53</sup> A. MacDonald, 'Adomnán's monastery of Iona', in *Studies in the Cult of St Columba* (Dublin, 1997), ed. C. Bourke, pp. 24–44 at pp. 29–31.
- <sup>54</sup> O'Carragáin, *Churches*, pp. 15–17.
- <sup>55</sup> C. Neuman de Vegvar, 'Romanitas and the Realpolitik in Cogitosus' description of the Church of St Brigit, Kildare', in *The Cross Goes North. Processes of Conversion in Northern Europe AD 300–1300* (York, 2003), 153–70.
- <sup>56</sup> In a recent study, James Fraser suggests that many Picts in the early eighth century 'had convinced themselves that a mutual lack of interest in "the Romans" however, they defined them, was central to their ethnic identity', and that non-engagement with the continent was part of that Pictishness (J. Fraser, 'From ancient Scythia to *The Problem of the Picts*: thoughts

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on the quest for Pictish origins’, in Driscoll, Geddes and Hall, *Pictish Progress*, pp. 14–43 at p. 38). The implication of this for Nechtan’s Roman church ‘drive’ needs further work.

<sup>57</sup> Henderson and Henderson, *Art of the Picts*, p. 208; C. Thomas, ‘Form and function’, in *The St Andrews Sarcophagus.*, ed. S. M. Foster, 84–96.

<sup>58</sup> de Vegvar, ‘Romanitas’, p. 161; D. V. Clarke, A. Blackwell and M. Goldberg, ‘New thoughts on early historic Scottish shrines’, forthcoming.

<sup>59</sup> N. Aitchison, *Forteviot. A Pictish and Scottish Royal Centre* (Stroud, 2006), p. 146 describes it more accurately as a ‘round-arched monolithic lintel’.

<sup>60</sup> Aitchison, *Forteviot*, p. 208. The chancel arch at Escomb is different in scale (5’3” wide in comparison to about 4’ inner diameter at Forteviot) and form (at Escomb the arch is created from wellcut voussoirs and is probably re-used Roman masonry): H. M. And J. Taylor, *Anglo-Saxon Architecture* (Cambridge, 1965), pp. 234–8.

<sup>61</sup> M. Hall, ‘Tales from beyond the Pict: sculpture and its uses in and around Forteviot, Perthshire from the ninth century onwards’, in Driscoll, Geddes and Hall, *Pictish Progress*, pp. 135–68 at pp. 141–3.

<sup>62</sup> M. Carver, ‘Early Scottish monasteries and prehistory: a preliminary dialogue’, *Scott. Hist. Rev.* 88:2, no 226 (2009), pp. 332–51 at pp. 342–3.

<sup>63</sup> See useful summary in D. Petts and S. Turner, ‘Early medieval church groups in Wales and western England’, in Edwards, *Early Medieval Celtic Churches*, pp. 281–300 at pp. 292–3.

<sup>64</sup> See for instance, T. O’ Carragáin, ‘The architectural setting of the mass in early-medieval Ireland’, *Medieval Archaeol.*, 53 (2009), pp. 119–54.

<sup>65</sup> Henderson and Henderson, *Art of the Picts*, p. 201.

<sup>66</sup> D. Petts and S. Turner, ‘Early medieval church groups’, p. 294.

<sup>67</sup> O’Carragáin, *Churches*, p. 69–70.

<sup>68</sup> Henderson and Henderson, *Art of the Picts*, p. 180–1.

<sup>69</sup> Recent geophysical survey confirms the outline of a complex of ditches that surround the early monastic site and later abbey, and appear to suggest an inner and outer precinct, at the very least: D. Alexander, ‘Geophysics defines monastic enclosure at Iona’, *Archaeol. Scot.* 9 (Winter 2010), p. 8.

<sup>70</sup> Lowe, *Inchmarnock*, pp. 257–63.

<sup>71</sup> Lowe, *Hoddam*, p. 198.

<sup>72</sup> M. Carver and C. Spall, ‘Excavating a *parchmenerie*: archaeological correlates of making parchment at the Pictish monastery at Portmahomack, Easter Ross’, *Proc. Soc. Antiq. Scot.*, 134 (2004), pp. 183–200.

<sup>73</sup> Dalglish and Driscoll, *Historic Govan*, p. 39.