

<Title> **Defining the Sanctissimus: The Early Medieval Church Enclosures of Pictland**

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<Abstract>

This article presents the results of a program of investigation into vallum enclosures around known or suspected early Christian church sites in eastern Scotland. Survey and keyhole excavation results are reported on for four sites: Abersnithock, Aberdeenshire; Migvie, Aberdeenshire; Glamis, Angus; and Dunkeld, Perth and Kinross. At each site a combination of aerial survey, geophysics and evaluative excavation revealed rectilinear or curvilinear ditched enclosures centering on the position of the church, with radiocarbon dating showing these enclosures are of early medieval date. The significance of the church vallums are discussed including their role as marking the sacred precincts of the early church and the significance of such large enclosures in the early medieval landscapes of Pictland. In addition to the early medieval results, the geophysical survey at Dunkeld revealed part of old Dunkeld town, which was burnt down and abandoned after the Battle of Dunkeld in 1689.

Keywords: Early Church; vallum; Pictland; early medieval; enclosure

<A> Introduction

In the past, there has been a paucity of evidence for the early church in Pictland, including a lack of identifiable early Christian church buildings and enclosures (e.g. Driscoll 2011, 270; Foster 2019). This has been compounded by a relative dearth of historical information on the nature and timing of conversion in Pictland and the character of the early church and its organisation (e.g. Clancy 2008; Fraser 2009, 68–115; Woolf 2013; Noble and Evans 2019; Noble and Evans *forthcoming*; Evans 2022). Nonetheless, in terms of archaeology at least,

important progress has been made in the last few decades, most notably through the investigation of the Pictish monastery at Portmahomack, Easter Ross (Carver *et al.* 2016), which has added critical detail to the character and dating of a major Pictish church settlement. In addition, survey and smaller-scale excavation at a small number of sites in eastern Scotland has added important detail (e.g. Noble *et al.* 2018; O’Grady 2013). The study of the sculptural assemblages of major church sites has also illuminated the richness of church interiors and settings (e.g. Geddes 2017), and the study of place-names and historical context has begun to set our knowledge of the early medieval church on firmer footings (e.g. Taylor 1996, 1997, 2005; Forsyth 2008). Nonetheless, our knowledge of the churches of Pictland remains significantly less than that of contemporary Irish or Anglo-Saxon examples (e.g. Thomas and Knox 2017; Ó Carragáin 2021).

Archaeological survey and evaluative excavation can help bring to light important new information on the character of early Christian establishments in Pictland and provide some chronological resolution on the development of important church landscapes in eastern Scotland. As part of the Leverhulme funded *Comparative Kingship* project at the University of Aberdeen, a number of evaluations of possible early church sites in eastern Scotland have been conducted (Illus 1). Surveys combining drone-based photogrammetry, aerial photography and large-scale geophysical gradiometry surveys have revealed important detail on the layout and dating of early church enclosure boundaries in eastern Scotland. The sites targeted to date have included Abersnithock and Migvie, both in Aberdeenshire, Glamis in Angus, and Dunkeld in Perth and Kinross (Illus 1). The results of the fieldwork will now be considered prior to a wider discussion,

<Illus. 1 here> Illus 1 The study area, sites targeted for excavation and other locations mentioned in the text.

<A> Sites Investigated

 Abersnithock, Aberdeenshire (NGR: NJ 68478 17254; CANMORE ID 18051)

The remains of a rectangular building enclosed by a sub-rectangular stone walled enclosure represents the remains of St Finan's Chapel near Monymusk, Aberdeenshire (Alexander 1952, 136; Barrow 1983, 12). The chapel is positioned on a terrace near the base of a southern facing hill overlooking the flat agricultural land surrounding the River Don. Alexander (1952, 136) argues that Abersnithock is a later modification of *Eglismonithoc*, which Barrow (1983, 12) notes contains the word 'egles' (church), as well as the name of St Nechtan. The former term can be attributed to AD 800 or earlier, while Nechtan is said to 'Nechtán of Nér' in AU 679.4 (AD 678), the latter a placename possibly connected with Fetternear which is located approximately 3km to the east of St. Finan's Chapel. St. Finan (or Finnan/Finnian) is probably the abbot Uineus of Nér AU 623.2 (probably AD 624 or 625) (Clancy 2008). Given the historical evidence, it is possible that St. Finan's Chapel in Abersnithock is the church of Nér, though nearby Monymusk is another possibility (Clancy 2008, 371).

<C> Survey

In a series of oblique aerial photographs, one of which is published by Shepherd and Greig (1996, 54), a faint annular crop can be seen surrounding St Finan's Chapel on the north and east of the ruins of the chapel. In March 2022, an area of 3.8ha was surveyed using a Sensys MXPDA five sensor magnetic gradiometry system at a 0.5m traverse and 0.125m sample interval, with the data being prepared in DLMGP and Magneto, before undergoing processing in Geoplot 4 (Illus 2). Unfortunately, the underlying geology (**G1**) largely masked possible

anomalies which may be archaeological in origin on the eastern side of the church. However, the survey did identify relict field systems (**G2** and **G3**), pipes and field drains (**G4**) and possible stretches of the crop mark enclosure identified in the aerial photographs (**G5**). The latter is defined as a band of negative readings, and as such, could represent a levelled bank associated with a ditch or simply a ditch with the gradiometer readings substantially affected by the geology. Regardless, this feature largely corresponds with the aerial photographs and highlights an enclosure which would have been sub-rectangular in shape and measured at least 140m N–S. There are suggestions, as evident on the aerial photographs, that there are two parallel ditch systems on the east which may be contemporary or successive boundaries encircling the church. In the immediate landscape, a series of circular features (**G6–G9**) were identified that may be part of funerary monuments or settlement features.

<Illus. 2 here> Illus 2 Results (above) and interpretation (below) of gradiometry survey and aerial reconnaissance at Abersnithock, Aberdeenshire. The possible church enclosure is (G5).

<C> *Keyhole Excavation*

Following the survey, a 7m by 1.5m wide trench was opened across the line of the possible enclosure (Illustration 3). This revealed the eastern edge of a ditch, with the western side remaining unexcavated as it lay underneath substantial overburden. The ditch [1013] measured at least 3.3m wide and up to 0.8m deep. Its eastern edge was cut into the underlying clay natural and was concave in shape with gradual sloping sides. The lowest fill of the ditch was a grey-white clayey silt (1005) likely derived from natural silting of a waterlogged ditch. At the base of the ditch cut, a narrow feature [1010] that ran parallel with the line of the ditch was filled with sterile mid-brown clayey silt (1011). This measured 0.35m wide and 0.17m deep and could be interpreted as a drainage slot at the base of the ditch, or perhaps the vestiges of an

earlier much more modest ditch that was replaced by a larger vallum cut. Sitting on-top of (1005), a yellow brown clayey silt with frequent charcoal (1004) measuring approximately 0.2m deep was recorded. The uppermost part of (1004) included a distinct if thin lens of charcoal. Birch charcoal from this lens returned a date of 690-890 cal AD (SUERC-106350: 1219 ± 29) (Table 1). Fill (1004) may have been within a recut of the ditch. The uppermost fill of the ditch (1003) consisted of a 0.4m deep loose mid-brown silt with occasional stones which likely represents a deliberate backfill. This fill was notably more silty and loose on the western side of the trench suggesting the possible presence of a former internal enclosure bank. The ditch lay below a deep gravel overburden (1002) and topsoil (1001). Beyond the ditch on the eastern side, a charcoal rich deposit (1006) was identified sitting on natural subsoil. This extended for approximately 3m to the eastern baulk and may represent an initial ground clearance episode related to the construction of the enclosing elements. This was overlain by a compact gravel (1012).

<Illus. 3 here> Illus 3 Section of enclosure ditch at Abersnithock, Aberdeenshire.

<Table 1 here> Radiocarbon dates from early medieval vallum enclosures in eastern Scotland. Calibrated using OxCal v4.4.4 Bronk Ramsey (2021); r:5; Atmospheric data from Reimer et al (2020).

 Migvie, Aberdeenshire (NGR: NJ 43668 06839, CANMORE ID 16994)

The present-day church at Migvie (**Canmore ID 16994**) sits at the southern base of Kirk Hill, around 9 miles northwest of Aboyne on the River Dee. In the 12th century the parish church of Migvie (*Miggevet*) was granted by Earl Morgrund (died ca.1178) to St Andrews Priory (Clancy 2008, 372–4). Migvie may have been one of the key centres of the earldom of Mar, perhaps the centre of Cromar (Oram 2003, 57–8). Migvie was dedicated to St Finnan, who may

be the same person as the Uineus of Ner associated with Abersnithock (Clancy 2008, 372). An older church ruin at Migvie may lie immediately south of the present building where there is a slight mound with grass-covered footings about 6m wide (CANMORE ID 16994). In the churchyard is a 8th-9th century cross-slab with an imposing interlaced decorated cross on the front (Allen and Anderson 1903 (part 3), 191–2). The cross may depict a metalwork cross, as indicated by four ‘fittings’ extending from the top and middle of the cross as if designed to attach the cross to a wall or other architectural setting. Arranged around the cross are a double-disc and Z-rod, a crescent and V-rod, a pair of shears and a mounted individual. A further figure on horseback is carved on the back of the stone. The stone was dug up in the kirkyard around 1861 (RCAHMS 2008, 32).

<C> Survey

In the very dry summer of 2018, a field visit by one of the authors (JO’D) using a Phantom 4 drone identified two curving cropmarks (**A1** and **A2**), probably infilled ditches, surrounding the church on the northern and eastern sides (Illus 4 and 5). (**A1**) is the outer enclosure and is only partly visible on the western and northwestern side. It closely follows the line of the inner enclosure (**A2**) before projecting further to the west and turning at right angles back towards the south-east. The inner enclosure is more oval in shape. It is positioned approximately 3m from the outer enclosure (**A1**) at the north and is broadly centered around the upstanding church and graveyard.

<Illus. 4 here> Illus 4 Aerial photo of enclosure complex at Migvie, Aberdeenshire.

The following year, an area of 4.6ha was surveyed around the church using a Sensys MXPDA five sensor magnetic gradiometry system at a 0.5m traverse and 0.125m sample interval, with the data being prepared in DLMGP and Magneto, before undergoing processing in Geoplot 4

(Illus 5). Targeted earth resistance survey using a GeoScan RM85 with multiplexer was undertaken over the southern part of this enclosure at 1m sample and 0.5m traverse intervals, with data processed in Geoplot 4. Unfortunately, strong responses from the underlying geology masked any potential archaeological features in the areas to the north of the church, and as such, no responses that might correlate with the enclosing elements identified in the crop marks were identified.

<Illus. 5 here> Illus 5 Results and interpretation of gradiometry survey and aerial reconnaissance at Migvie, Aberdeenshire.

However, a number of possible archaeological features were revealed in other areas. (**G1**), for example, was found at the south-west, between the line of the inner (**A2**) and outer (**A1**) enclosures. This comprises a broadly circular setting of pit-like features, probably post-holes, with a central anomaly of higher magnetic readings (**G1**). The latter may represent a hearth at the center of a c.9m diameter roundhouse.

On the eastern side of the church, the partial remains of another possible structure (**G2**) were detected. This may comprise part of the southern side of a square or rectangular building some 6m wide which was built with timber posts. Immediately to the north of this, an extensive east–west alignment of pit-like features (**G3**) was identified. This may represent a prehistoric pit alignment consisting of at least 38 individual posts. However, without excavation it is impossible to ascribe an exact date, the alignment could also represent a more modern feature.

<C> Excavation

In the summer of 2019, a 5 by 1.5m wide trench was opened over the line of the inner enclosure on the western side of the church (Illus 6). The excavation revealed a 1.5m wide and a 0.4m

deep ditch that had been cut into the underlying natural subsoil. The ditch cut [1003] was U-shaped with moderately sloping sides and a concave base. It contained four fills (1004; 1005; 1006; 1007). The basal fill consisted of a 0.11m thick greyish brown clayey silt with moderate pebbles, charcoal and burnt bone (1007). A radiocarbon date obtained from willow charcoal from this layer returned a date of 650–780 cal AD (SUERC-89946: 1329 ± 23) (Table 1). On the inner (eastern) edge of the ditch cut [1003], a lens of material comprising a dark greyish-brown clayey silt with moderate charcoal and burnt bone (1006) was identified, this could conceivably be a relic ditch fill left behind after a recut with (1007) as the basal fill, but it is difficult to say for sure. Birch charcoal from this (1006) returned a date of 650–780 cal AD (SUERC-89947: 1326 ± 24) (Table 1). If (1007) was within a recut of the ditch there is therefore little difference between the dates from charred material from (1006) and (1007), though the charcoal from (1007) could have been from redeposited material within (1007).

Overlying these basal layers was a 0.19m thick deposit of mid brown clayey silt with moderate amounts of small stones and infrequent charcoal flexing (1005). This was sealed by a 0.1m deep layer of sterile mid greyish brown sandy silt (1004). The ditch cut [1003] was overlain by a 0.17m deep ploughsoil horizon (1002) which in turn was overlain by topsoil (1001).

<Illus. 6 here> Illus 6 Section of the enclosure ditch at Migvie, Aberdeenshire.

 Glamis, Angus (NGR: NO 38629 46865, CANMORE ID 32062)

Positioned centrally within Strathmore which links Perth and Kinross, Angus and Aberdeenshire, the present-day parish church at Glamis (Canmore ID 32062) was built towards the end of the 18th century, with architectural features incorporated into its fabric indicating it replaced an earlier medieval ecclesiastical building (Sheriff *et al.* 1984, 9). Glamis church is

just over 1km south of Glamis Castle, the seat of the Earls of Strathmore. The church at Glamis is dedicated to St Fergus, known in the the 9th-century Irish Martyrology of Tallaght as St Fergus Cruithneach, or St Fergus the Pict, probably the '*Fergustus the Pict, bishop of Scotia*' present at a Roman council in AD 721 (Clancy 2008, 378-81). Glamis church was granted to Arbroath Abbey in the 12th century.

In the grounds of Glamis Manse, just to the west of the church and thought to be *in situ*, is a monumental Pictish cross-slab with an interlaced cross (Glamis 2), either side of which are a range of motifs including two axe-wielding men fighting, a cauldron, a triple-disc and beast head, and a centaur and a four-legged creature (Allen and Anderson 1903 (part 3), 221–223; Walker and Ritchie 1987, 142; RCAHMS 2008, 54). On the back of the stone are an incised salmon, mirror and serpent. A stone with a triple-disc design (Glamis 5) was found in the rockery of the manse garden, while two cross-slab fragments were recovered from the churchyard (Coutts 1974; RCAHMS 2008, 54). The latter three stones are now held in the Meffan Institute in Forfar. Within Glamis on Back Dykes Road, two probable early medieval long cists were discovered during development-led work for a new car park (Greig 2006). These were unexcavated and left *in situ*. Around 1km to the southeast another impressive cross-slab of probable 8th century date stands on the northern slopes of Hunter's Hill, overlooking Glamis. The front face has a cross decorated with knotwork, interlace and key-pattern, flanked by an angel, a bird-headed man and a range of other creatures (Allen and Anderson 1903 (part 3), 221; RCHAMS 2008, 54). Hunter's Hill was on the old routeway between Glamis and Forfar (Roy 1755).

<C> Survey

In July 2019, targeted gradiometry survey was undertaken in a small open area, c.60m by 60m, located to the southwest of the church, opposite the church manse and behind the former Angus Folk Museum on Kirkwynd (CANMORE ID 122227) (Illus 7). Four 30m by 30m grids were laid out in which a Bartington 601 dual magnetic gradiometry system collected data at 0.5m traverse and 0.125m sample intervals and a GeoScan RM85 with multiplexer collected data at 1m sample and 0.5m traverse intervals. All of the data was processed in Geoplot 4. These surveys were undertaken with view to contextualizing the various early medieval carved stones from the Manse and churchyard at Glamis. The survey identified a slightly curving band of positive magnetic readings extending in a roughly north–west/south–east orientation (**G1**). Earth resistance survey, with a resolution of 0.5m traverse and 1m sample intervals, was used to further clarify the position and extent of the magnetic anomaly. This confirmed the gradiometry results, revealed a curving low-resistance anomaly (**R1**) indicative of a cut feature such as a ditch, in the same position as that of (**G1**). Interestingly, these features appear to head directly towards the probably *in situ* cross-slab in the Manse garden. These anomalies were tentatively interpreted as a vallum ditch with the cross-slab possibly standing at an entrance point on the enclosure ditch.

<Illus. 7 here> Illus 7 Results and interpretation of geophysical survey and aerial reconnaissance at Glamis, Angus.

<C> Excavation

A 5m by 1m trench was opened to characterize and date the possible ditch at Glamis (Illus 8). Beneath 0.25m of topsoil (1000-1001), a 3m wide ditch [1007] that measured up to 1.7m deep cut through natural (1002) was identified. The ditch cut [1007] was U-shaped with gradual sloping sides and a narrow base. It contained three fills (1004; 1005; 1006), all of which were

characterized by having large angular stones on the eastern side of the cut which likely represent the collapse of a stone revetment (1003) for an internal earthen bank. The basal fill comprised a 0.45m thick mid reddish brown sandy silt with moderate charcoal and small stone inclusions (1006). Birch roundwood charcoal from this context returned a date of 890–1030 cal AD (SUERC-93262: 1079 ± 25) (Table 1). Above this, a 0.55m thick deposit of mid greyish brown sandy silt with occasional charcoal and small stone inclusions (1005) was recorded, which must have been the base of a recut of the ditch judging by the section profile. Deposit (1005) was sealed by the upper ditch fill which consisted charcoal rich dark brown silt (1004). Willow charcoal from this context produced a date of 1030–1160 cal AD (SUERC- 93263: 944 ± 25) (Table 1), suggesting that the ditch had been largely infilled by the 11th or 12th century AD.

<Illus. 8 here> Illus 8 Section through enclosure ditch at Glamis, Angus.

 Dunkeld, Perth and Kinross (NGR: NO 02393 42595, CANMORE ID 27156)

According to the shorter Pictish king-lists, which survive in a 13th century version, the church at Dunkeld was built during the reign of Constantín son of Uurguist (c.788–820) and the reference to a ‘Túathal son of Artgus, chief bishop (prím-epsco) of Fortriu and abbot of Dunkeld’ dying in 865 (AU 865.6) indicates that the leading cleric of Pictland also held the abbacy at that point (Anderson 2011, 169; Woolf 2007, 65). A portion of the relics of Columba were brought to the church from Iona in c. 849 AD and the church may have been rebuilt at this time (Woolf 2007, 98–99). Appropriately, the dedication of the church was to Columba.

Little is known of the form of the early phases of this ecclesiastical centre or its landscape. The current cathedral was not begun until around the 13th century (RCAHMS 1994, 124). In the

15th century the Bishop of Dunkeld's Palace stood to the southwest or west of the cathedral (CANMORE ID 27168). After the reformation the church became the parish church of Dunkeld (RCAHMS 1994, 124). Early medieval sculpture from Dunkeld includes a fragment of a cross-slab (Dunkeld 3), an unusual, very tall, undecorated cross-slab, and a spectacular cross-slab fragment which includes both religious figures and brutal images of combat and beheadings (Dunkeld 2) (Henderson and Henderson 2004, 244, n71). Another unusual piece of sculpture from the site comprises a large, roughly triangular block of stone, which has an incised depiction of a man on horseback carrying a spear and drinking from a horn (Dunkeld 1). On the top of the stone is a sunken equal-armed cross with expanded terminals. A bronze hand-bell from Little Dunkeld, just across the Tay, may have come from the early medieval church of Dunkeld (Bourke 1983, 467; Bourke 2020, 148).

<C> Survey

In February 2019, an area of 14.7ha was surveyed to the north of the Cathedral using a Sensys MXPDA five sensor magnetic gradiometry system at a 0.5m traverse and 0.125m sample interval, with the data being prepared in DLMGP and Magneto, before undergoing processing in Geoplot 4 (Illus 5). Targeted earth resistance survey using a GeoScan RM85 with multiplexer was also undertaken at 1m sample and 0.5m traverse intervals, with data processed in Geoplot 4. (Illus 9 and 10). The former revealed in detail the western extent of old Dunkeld town and a number of other outlying structures. Old Dunkeld town was burnt down and abandoned after the Battle of Dunkeld in 1689. The burning of the town has allowed the walls of individual structures to show up well in the results and hence the old town is vividly depicted in the results. The layout of the town is shown in yellow (**G1**) on the survey interpretation.

Over 50 rectangular structures, likely to be domestic houses, are roughly aligned on an east/west or north/south axis, with corresponding streets and a major thoroughfare approaching the northwestern corner of the modern burgh. More complex structures are visible within at the burgh at the southeastern edge of the survey, the area closest to the cathedral. This may include previously unrecognised structures such as the canon's houses or the medieval hospital of St. George and perhaps the remains of Dunkeld House (CANMORE ID 27183).

<Illus. 9 here> Illus 9 Results of geophysical survey and aerial reconnaissance at Dunkeld, Perth and Kinross.

<Illus. 10 here> Illus 10 Interpretation of geophysical survey and aerial reconnaissance at Dunkeld.

One of the major north/south roadways is directed towards the centre of the cathedral, though at a slightly obtuse angle. The town extends further along the present field boundary at the southwest, flanking a substantial road (**G2**) which leads to a large, complex structure (**G3**) with ancillary buildings to the southwest (**G4** and **G5**) which could represent either the uncompleted Duke of Atholl country house or the Bishop's Palace or combination of these remains. Approximately 100m to the west of these features, another road system (**G6**) is apparent.

Seemingly truncated by both the road (**G2**) and buildings associated with the burgh (**G1**), a curving band of positive magnetic readings, probably a cut feature such as a ditch (**G7**) was also revealed. The true extent of this is unknown, but it appears to have curved around the position of the current cathedral.

Immediately to the east of **G7**, up to 15 square anomalies (**G8**) are apparent, with a further example approximately 55m to the north of the main cluster. These comprise roughly square areas of negative magnetic gradient surrounded by c.1.5–2.2m wide bands of positive readings, suggesting some form of ditch or cut feature enclosing an area which may have incorporated some stony, or other non-magnetic material. They range from 5–9m². It is difficult to interpret

these features given the complexity of the settlement activity in the area and its potential wide temporal span. These could be features associated with the medieval burgh, though they are not regular in their layout or orientation. Alternatively, they could represent early medieval square barrows of the type found for example at Forteviot, Perthshire (Campbell *et al.* 2019; Campbell and Driscoll 2020). At the southern edge of features (G8), are a conjoined set of positive circular magnetic bands (G9), possibly a pair of circular barrows with central burials.

Less than 40m to the north of the main cluster of square anomalies (G8) is a circular band of positive magnetic readings approximately 19m in diameter (G10). While this could be a small settlement enclosure, it might also represent a large ring-ditch. Further to the north, a larger circular area of mixed positive/negative magnetic readings is defined by a faint, diffuse band of negative readings (G11). This measures approximately 38m in diameter and is truncated by a field-boundary, confirming its antiquity. It may represent a settlement enclosure.

<C> Excavation

A 4m by 1.6m wide trench was opened over the curving positive band of magnetic readings (G7) (Illus 11). Excavations revealed a 1.97m wide, 0.69m deep ditch [1005] cut into the natural pale-greyish yellow clay (1004). The ditch was linear in plan and orientated east–west, with a U-shaped profile. The ditch had two fills (1002 and 1003). The basal fill (1003) comprised a 0.17m thick light greyish-yellow firm clayey-silt with occasional charcoal flecks and pockets of burnt soil. This probably represents the gradual silting-up of the ditch after its construction. Charcoal from (1003) returned a date of 700–890 cal AD (SUERC-98923: 1220±24) (Table 1). Overlying this was a 0.52m thick deposit of light yellowish-orange compact clayey silt with occasional charcoal inclusions (1002). Some angular stones ranging up to 0.35m in size were found at the base of this fill. It is likely that (1002) represents deliberate

backfill of the ditch and the presence of angular stones may indicate the former presence of an associated bank. The ditch was overlain by a 0.31m thick topsoil.

<Illus. 11 here> Illus 11 Section of enclosure ditch at Dunkeld, Perth and Kinross.

<A> Discussion

The most obvious result of this programme of survey and small-scale excavation is the identification of enclosures of early medieval date around a number of church sites in eastern Scotland. Vallum enclosures around probable early church sites in Pictland are now known at Portmahomack, Easter Ross; Kinneddar, Moray; Abernethy, Perthshire; Forteviot, Perthshire and now as outlined in this article at Dunkeld, Glamis, Migvie and Abersnithock. The late Oliver O'Grady also excavated a double vallum enclosure at Fortingall, Perthshire in 2011 (O'Grady 2013).

The identified enclosures range in size from around 1-2ha (Migvie and Abersnithock) to c.4ha (Fortingall) to over 8ha (Kinneddar). The Portmahomack example must have been at least c.4ha, but could have been much larger if the vallum ditches extended further towards the coastline than aerial photographs currently suggest. Smaller possible early medieval church enclosures in northeast Scotland are also known at Tullich, Aberdeenshire (through excavation) (Geddes *et al.* 2015) and Parc-an-caipel, Congash, Highland (aerial survey) (CANMORE ID 15675). In these latter cases the enclosures appear to have been less than one hectare in extent. Probable short stretches of vallum boundary features have also been found at Abernethy (Fyles 2008) and Dunning (Cook 2008), both in Perthshire.

What were these vallums enclosing? The lack of excavation hampers understanding, but at the most intensively investigated early Christian establishment in Pictland at Portmahomack, the

early church was enclosed by a rectilinear enclosure (Carver *et al.* 2016). Within the vallum, on either side of a road heading towards the church, evidence for craftworking was found with the production of precious metalwork, glass and vellum being undertaken to the south of the church. Large timber buildings were also identified, as well as timber and turf-built ‘bag-shaped’ buildings that were associated with metalworking and the storage and processing of cereals. The enclosure complex had at least four monumental cross-slabs standing within, along with a range of other monuments including simple cross-marked stones, grave-markers, a sarcophagus lid, and elements of a possible composite shrine. There are also architectural fragments of likely 8th century date that are strongly suggestive of a stone church having stood at the centre of the enclosure complex.

Elsewhere, the vallum enclosure at Kinneddar, near Lossiemouth, is the most complex yet identified in northeastern Scotland and closely mirrors the form of Iona (Noble *et al.* 2018). During the later medieval period, Kinneddar was one of the seats of the bishops of Moray (Dransart 2016, 59). Early medieval remains include an extensive collection of early medieval sculpture such as a Pictish symbol stone, composite shrine slabs, cross-slabs and freestanding cross fragments. The church is dedicated to Gartnait, a royal name in the Pictish king-lists (Clancy 2008, 378). The site may have been the main ecclesiastical centre for a territory that included the nearby fort at Burghead (Noble *et al.* 2018, 140). The vallum enclosed around 8.6ha. Recent excavations within the vallum have identified possible structures, evidence for metalworking and extensive subdivision of the vallum interior.

It is difficult to say what the newly identified enclosures outlined in this article contained due to the constraints of the fieldwork, but there is possible evidence for structures and funerary monuments in the survey results at Migvie and Dunkeld, and there is early medieval sculpture from Glamis, Migvie and Dunkeld. At Fortingall, excavations led by Oliver O’Grady uncovered parts of two rectilinear enclosing ditches first identified during aerial

reconnaissance in the 1980s (O’Grady 2013). The excavations at Fortingall showed that the outer ditch was around 3m wide and was flanked on the interior by a stone revetted bank, with a 3m wide roadway identified leading into the interior. Fortingall has a number of early medieval carved stone monuments and a hand bell was formerly associated with the church before its theft in 2017.

With regard to the layout of these church enclosures, the early 8th century Gaelic collection of canon law *Collectio Canonum Hibernensis* compiled by Ruben of Dairinis and Cú Chuimne of Iona devotes a chapter to the rules and regulations on the physical layout of holy places (Picard 2008, 70). In the *Collectio* it is stated that a holy place must be surrounded by two or three enclosures designed to separate the site from the secular world (Blair 1992, 231; Petts 2002, 26; Picard 2008, 70; O’Sullivan *et al.* 2014, 145; Harney 2017, 104; Ó Carragáin 2021, 13). The innermost around the church was the most holy where only the clergy could enter. The tripartite division appears to have been based on biblical models, perhaps the vision of the Levitical city given in the Old Testament (Picard 2008, 69), or depictions of the Tabernacle or the Temple of Jerusalem, the earthly dwelling places of God (Jenkins 2010, 102; Johnson 2013, 32; See also Campbell and Maldonado 2020, 57). In Ireland the holiest, innermost zone, the *locus sanctissimus*, would have included an oratory, a saint or founder’s tomb, a cemetery and a representation of the cross – a cross-slab or free-standing cross being the most common monuments (MacDonald 2001, 29; Jenkins 2010, 101; Ó Carragáin 2021, 135). The idea of the vallum system originally developed in the eremitic and cenobitic settlements of Egypt in the 3rd and 4th centuries AD (Hughes 1948, 139; Walters 1974, 9; Romel *et al.* 2020, 2), before spreading to areas such as Gaul from where the main influences on the Insular church are likely to have drawn (Hughes 1948, 143; Johnson 2013, 14, 22). The groundplans of North African monastic sites were rectangular, but in Ireland this form tended to become circular. Campbell (2019, 26) has suggested that

the rectilinear form as found at Iona may have been the norm in early medieval Scotland (and in contrast to Ireland), but the research here shows that both rectilinear and curvilinear examples were found in Pictland. As Campbell notes (2019, 26) there could be a size factor here for the smaller examples such as Migvie and Abersnithock were curvilinear, whereas the larger tend to be more rectilinear (Fortingall, Kinneddar). Time will tell if these patterns hold and what significance shape may have had for status, form, and the origins of these enclosure systems.

As well as a physical marker excluding or at least controlling interactions with the secular world, the boundaries may have meant to keep hearts and minds free of earthly distractions. In Bede's account of Cuthbert's time on Farne he states this of the monastic boundary:

the wall itself is higher than a man standing upright, but inside he made it much higher by cutting away the living rock so that the pious inhabitant could see nothing except the sky from his dwelling, thus restraining both the lust of the eyes and the thoughts and lifting the whole bent of his mind to higher things (Colgrave 1939 in Herity 1995, 21).

As well as marking the sacred area, the enclosures of ecclesiastical centres are likely to have had diverse roles. For one, these boundaries had a legal role in marking zones of sanctuary, providing a safe haven to foreigners and those accused of crimes (Picard 2008, 70). They may have also had a defensive role dissuading raiding or theft of church property. Other practical roles may have included defining areas of working, enclosing areas for animals, and defining zones of industry, and other activity areas within the inner bounds of the ecclesiastical enclosures (Jenkins 2010, 101; Johnson 2013, 14; Cramp 2017, 30). Indeed, the *Collectio Canonum Hibernensis* actually states that the 'precincts' of a *civitas* (an

ecclesiastical centre) were for sustaining the cattle of the clergy (Ó Carragáin 2021, 67), suggesting that the agricultural role of the enclosures was important.

The vallums enclosing ecclesiastical centres are likely to have been only one part of the landholdings associated with a church. For example, the concept of a tripartite topography is referenced in Adomnan's *Life of Columba* and appears in this case to have included the coastline of the island itself as the outermost boundary (MacDonald 2001), indicating that the physical boundary of the vallum enclosure at Iona was only one element of a wider church estate. Indeed, the land defined by the vallum enclosures may have just been a small part of an ecclesiastical estate that is likely to have had extensive and diverse portions of land in outlying estates (Ó Carragáin 2021, 135). Comparative work in Ireland, where territorial reconstruction is more viable than in Scotland, suggests that church estates could be many square kilometres in extent, with church land in major polities making up to 15-33% of the total landholdings within the boundary of a kingdom (Ó Carragáin 2021, 129–131). The Irish evidence shows just how extensive church lands could be and how the church engineered increasing influence on the control of land and modes of governance within a polity as the first millennium AD progressed.

<Illus. 12 here> Illus 12 Comparison of select church enclosures from sites in Scotland and examples from Ireland. Sources: Swan 1985; McCullough and Crawford 2007; Claffey 2009; Stevens 2010; Noble *et al.* 2018).

In Ireland there tends to be direct correlations with the size of vallum enclosures and the importance of particular church sites (O'Sullivan *et al.* 2014, 147). In Pictland large enclosures have been confirmed at sites including Portmahomack, Kinneddar, and Fortingall, though the full ground plan of any ecclesiastical enclosure(s) is not known at any Pictish site as of yet (Illustration 12). As in Ireland, the larger vallum enclosures may indicate relative importance, with the larger examples in Pictland such as Kinneddar, Fortingall and

Portmahomack tending to be associated with the largest sculptural assemblages and in the case of Kinneddar, the larger size of this site is also accompanied by the complexity of internal divisions and enclosing elements. These larger ecclesiastical sites must have been densely populated centres and appear to have been associated with extensive production, trade and conspicuous consumption where the evidence is available (e.g. Portmahomack: Carver *et al.* 2016; cf. Doherty 1985; Ó Carragáin 2021, 147). In Ireland through time these ecclesiastical estates became highly integrated components of their respective polities, economically, spiritually and politically (Picard 2008, 69; Ó Carragáin 2021, 145), with many receiving extensive patronage from many levels of society including the initial donation of land to establish these important ecclesiastical centres.

<Illus. 13 here> Illus 13 Oxcal v4.4 plot of modelled dates from church enclosures from the University of Aberdeen excavations, along with the two dates from Fortingall.

With regards dating, compiling all of the dates from the University of Aberdeen excavations, along with the two dates from Fortingall (O’Grady 2013) in a Bayesian model (calibrated using Oxcal v4.4: (Bronk Ramsey 2009)) suggests that the phenomenon of vallum enclosure in northeast Scotland became common in the 7th and 8th centuries AD and charred material was still finding its way into ditches at sites such as Kinneddar and Glamis in the 11th and 12th centuries AD (Illus 13). The dates from many sites may well not date the earliest activity – at Abersnithock the date would suggest activity after the early to later 7th century references to Nér, but the date came from a mid-fill of the ditch suggesting the earliest phase of enclosure may well have been earlier than the date obtained. Moreover, there may not be a precise chronological relationship between the cutting and filling of ditches and the date of the charred material within given the opportunity for processes such as redeposition.

Nonetheless, the dating from the vallums is likely to provide a broad indication of the activity associated with or near to these vallum boundaries during the lifespan of their use. Overall, modelling estimates that the dated activity in association with the vallum ditches at Kinneddar, Fortingall, Migvie, Dunkeld, Glamis and Abersnithock began in *cal AD 540–660* (95% probability; Figure X; *Boundary start*), or in *cal AD 590–650* (68% probability) and that dated activity ended in *cal AD 1050–1220* (95% probability; Figure X *Boundary end*), or in *cal AD 1070–1170* (68% probability). The dating suggests that the 7th century was the era in which enclosure began to take hold across Pictland. The spread of dates also shows that the phenomenon of enclosing and maintaining major enclosures at church sites in Pictland (and Alba) was clearly long lived. Such long periods of maintenance would have required significant resources through the life of each ecclesiastical centre.

Conclusions

Significant elements of the early Christian landscapes around church sites at Abersnithock, Aberdeenshire; Migvie, Aberdeenshire; Glamis, Angus; and Dunkeld, Perth and Kinross, have been identified through survey and keyhole excavation. While there is undoubtedly a greater need to understand the nature of activities within and around these enclosures in much more detail (Foster 2019, 49), the targeted fieldwork presented here has proven to be an effective means at providing a basic identification and characterization of these early Christian ecclesiastical establishments and samples from the excavations have provided a basic chronology for the *floruit* of a series of vallum enclosures in eastern Scotland. The size of these enclosures may through time suggest the relative importance of respective church sites in Pictland and comparative work can reveal more on the significance and function of such enclosures. Undoubtedly further work on the early church in eastern Scotland can continue to flesh out our understanding of the early church within an area of archaeology that has traditionally been relatively impoverished.

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