Dysartgallen Church & Graveyard

Ballinakill, County Laois.

CONSERVATION MANAGEMENT PLAN

November 2020

An Roinn Tithíochta,
Rialtais Áitiúil agus Oidhreachta
Department of Housing,
Local Government and Heritage

CORA
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This conservation report was commissioned by the Spink Community Development Association in conjunction with Laois Heritage Society in October 2020 to assess the current condition and make recommendations for any necessary repairs to the ruin of the ancient church of Dysart Gallen, near Ballinakill, Co Laois. It was funded by Community Monuments Fund, an initiative of the National Monuments Service of the Department of Housing, Local Government and Heritage in partnership with Laois County Council. The report has been prepared by Howley Hayes Architects in association with Colm Flynn Archaeology; Dr Fiona MacGowan, consulting ecologist and botanist; and Lisa Edden of CORA, structural engineers. The surveys and enabling works on which this report is based were carried out in October and November 2020.

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1.0 INTRODUCTION

The ruined church at Dysartgallen was erected as a parish church during the fifteenth century and has long been abandoned, with a significant loss of original masonry to the chancel and the wall heads on the north and south sides of the nave. It stands in a deep river valley close to a small farmstead that remains in occupation, the owner of which has undertaken basic maintenance on the structure over the years. Currently concealed under a dense covering of mature ivy the structure is clearly at risk, particularly as the ivy growth was standing proud of the masonry acting as a sail that imposed additional wind loading on the structure. Of particular concern are the chancel arch, at the east end of the church and the west-facing gable that includes a tall west window.

West gable prior to trimming.

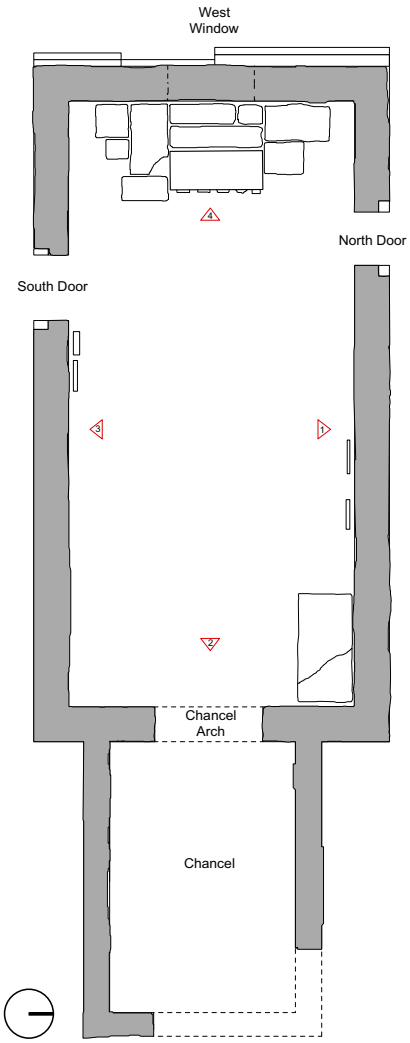
West gable after trimming.

View of chancel arch from the east after trimming.

Aerial view of site with graveyard in colour, church highlighted in red and Owenbeg River highlighted in blue.

This report includes - a cartographic record of the church; sketch survey plans and elevations; a photographic survey of the structure before and after the trimming back of the ivy; an archaeological appraisal; a structural report; and an ecological report. Also included is a statement of significance and a conservation strategy outlining a recommended course of action to implement much-needed repair and consolidation works. All repair recommendations are designed to be sensitive to the historic importance, cultural significance and status of the church as a scheduled national monument. The church ruin and its graveyard setting combine to create an historic place of both spiritual and ecological significance. The surveys on which this report is based were carried out during the months of October and November 2020. To facilitate these surveys ivy was trimmed back with safe access provided by a boom operated teleporter.

The ivy trimming works were approved by the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht. Time constraints and the dense network of stems and roots of the ivy that remained after the trimming, together with the complexity of the form of the surviving ruin, made it impossible to prepare stone accurate surveys at this stage. The report concludes with a budget cost estimate for the proposed conservation works and a summary of conclusions.



HHA sketch survey plan drawing of church.

General view of church and graveyard from south after trimming.

2.0 HISTORY OF DYSARTGALLEN CHURCH

General

The standing ruins of the ancient Church of Dysartgallen and its attractive graveyard setting are both included in the Record of Monuments and Places, references (RMP No LA030-011001 and RMP No LA030-011002) respectively. Both are afforded legal protection under the National Monuments Acts (1930-2004). Situated in the townland of Aughnacross, from the Gaelic; Áth na Croise, which translates as 'Ford of the Cross'), the church stands near the southern bank of the Owenbeg River, some 3kms northeast of the village of Ballinakill. The name Dysartgallen is an Anglicisation of the Irish name Díseart Gailine, which translates as the 'hermitage or wilderness of Galin', which is located in the civil parish of Dysartgallen, and the barony of Cullinagh. Sloping down towards the Owenbeg River, the land is fertile with a band of mature oak forest running along the northern bank of the Owenbeg. To the south the land rises considerably to form Coopers Hill, part of the Cullinagh mountain range, which marks the county boundary between Laois and Kilkenny.

Early Christian Period

The Church of Dysartgallen is dedicated to the early Christian ecclesiastic St. Manchán who it thought to have died around 652AD, and who reputedly founded a monastery at this location during the seventh century. Little is known about St. Manchán and his followers, although the surviving hagiography indicates that he was born in Min Droichit, translated as the 'bridge of the bog', and Anglicised as Mondrehid, which previous writers have identified as being in County Offaly. Colm Flynn has identified the townland of Mondrehid between Borris-in-Ossory and Coolrain, in County Laois, as a likely alternative place of origin for St. Manchán. Mondrehid, is an early Christian monastic site, of unknown dedication, while the early Christian monastery at Dysartgallen would have been on the routeway linking the monastic sites at Mondrehid, Aghaboe, Clonkeen, and Killeshin, all in County Laois. Although there is no above ground evidence of the early Christian monastery at Dysartgallen, the extant church and graveyard at Dysartgallen are situated within a pronounced raised platform, that rises to almost 1m in height. This raised area forms an enclosure (RMP No LA030-011004) that is of unknown origin, and could be the remnants of an earlier archaeological site.

A base stone from an early Christian cross (RMP LA030-047002) is situated approximately 0.5km to the northwest of Dysartgallen Church, in Graigue townland. This roadside religious site includes a holy tree (RMP LA030-047001), where religious devotion is still observed by the local community. It is possible that the base stone from the cross originated from the church at Dysartgallen. The early Christian church of St. Manchán would most likely have been a simple, single-cell stone structure, although some of the very early churches were built of timber. These early churches would have been constructed within an enclosure, formed by a bank and ditch, or a stone wall. Larger early Christian monastic sites had concentric enclosures surrounding the central church. The location at Dysartgallen would have suited the conditions favoured by the early monastics, as the site provided a sheltered area, with a water supply and a fording point over the Owenbeg River, and was also remote from existing settlements. There are no surviving records from the early medieval period that tell us how large the monastery at Dysartgallen may have been, and we do not know what survived when the Anglo-Normans arrived in this part of Laois.

Anglo-Normal Period

With the arrival of the Anglo-Normans in the twelfth century, the suppression of Gaelic society and the re-ordering of civic administration in Ireland required new Anglo-Norman settlements and places of worship. In some instances, existing Gaelic churches were altered and adapted to suit the needs and fashions of the Anglo-Normans. Some pre-existing single-cell churches were reconstructed as two-cell nave and chancel churches, while new churches were also constructed, in the two-cell arrangement. The Irish church was also reformed with the introduction of a church structure based on dioceses and bishoprics, within which parishes were subordinate to their relevant prelate. By the end of the thirteenth century most of the bishops in Ireland were of Anglo-Norman origin. The first surviving written reference to Dysartgallen dates to the late thirteenth century, when the area is referenced in documents contained in the Calendar of Judiciary Rolls of Ireland, which are proceedings of the Court of the Justiciar of Ireland. In this document the area is referred to as 'Galyn' which is listed in the ecclesiastical taxation of Ireland of 1302-6.

The Annals of the Four Masters records that in the late fourteenth century James Butler, 3rd Earl of Ormonde attacked and burnt Dysartgallen. At this time the 3rd Earl of Ormonde was resident in Kilkenny Castle, which he had recently purchased from the Despencer family. The Earl alternately held the position

Extract from 1560's Cotton map of Laois (after Sean Murray) Location of church marked with yellow arrow.

of Governor of Ireland, and Lord Justice of Ireland, as part of the administration of Richard II. These roles brought Ormond into direct confrontation with the O' Moore's of Laois; the O' Carrolls of Ely; and the O' Connors of Offaly. It was during one of these conflicts that caused the Earl to campaign through Laois that resulted in the attack on Dysartgallen. Although the church at Dysartgallen was attacked by the 3rd Earl of Ormonde, it was rebuilt following this event, and the surviving church at Dysartgallen most likely dates to this rebuilding during the fifteenth century.

Tudor Period

In the early sixteenth century the royal taxation of the diocese of Kildare and Leighlin, by the Commissioners of Henry VIII, included Gallen (or Dysartgallen), County Laois. This royal taxation was part of the English crowns break from the church in Rome, and was the precursor to the Dissolution of the Monasteries between 1536and 1541. In the royal taxation of the diocese of Kildare and Leighlin the church at Dysartgallen is taxed at a rate of £4, making it one of the most expensive taxes applied in Laois at this time. By comparison, the church at Borris (Ridge Church, Portlaoise) was taxed for £2. This indicates that in the early sixteenth century the church at Dysartgallen was substantial and in good repair, and was supported by a well-established parish. Surviving sixteenth-century documents record the reference to the name Dysartgallen (Dysartgallyn) in the Extents of Irish Monastic Possessions, 1540-1541, from manuscripts in the Public Record Office.

On the mid sixteenth-century map of Laois and Offaly (known as the Cotton Map) a single church building is depicted at Dysartgallen (Disertgalin) which has a pitched slate roof, a tall gable at one end, and a window. The medieval parishioners at Dysartgallen were responsible for the upkeep of the nave, whilst the clergy was responsible for the upkeep of the chancel. Exactly where the homesteads of the medieval parishioners at Dysartgallen were located, remains unknown, although the undated enclosures and moated sites, at Aughnacross, Boleybawn, Knockardagur, and Moat, together with the townlands of Graigue and Keelagh, would have provided possible settlements and ample arable lands to support an agrarian community at that time.

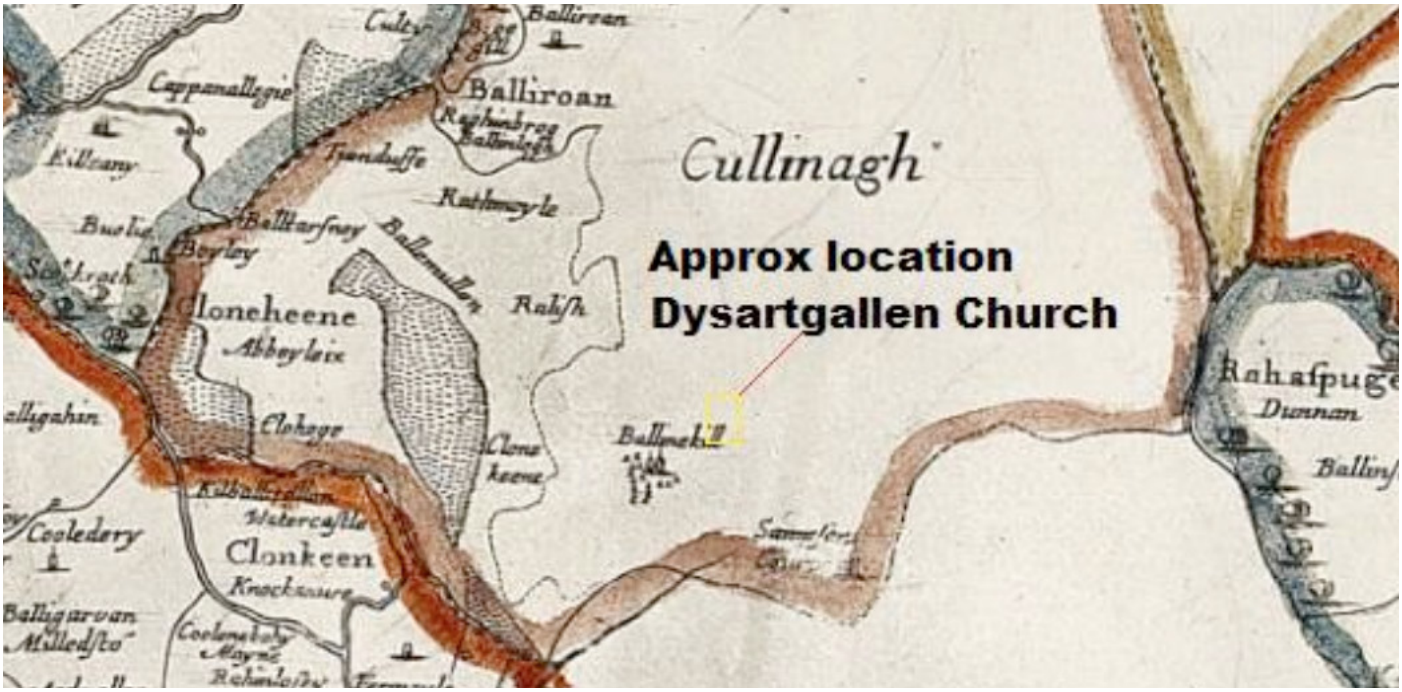
Although the church at Dysartgallen was referred to in several sixteenth-century documents, by the time of the Liber Regalis Visitationis in Tribus Provinciis Hibernie, in the early seventeenth century, the chancel or choir at Dysartgallen Church was described as being in ruins. There is no evidence that the chancel was repaired after this date, although the nave may have continued to be used for some time. Information is also lacking on what caused the damage to the church - accidental fire, violent attack, or general dilapidation and abandonment, are all possible explanations.

Seventeenth Century

The mid seventeenth-century Civil Survey records that the area of Dysartgallen Church was in the townland of 'Aghacrosse (Aghnacross), and was owned by the Sir Charles Coote, the Earl of Mountrath. A Down Survey map depicts a settlement and church at Ballinakill, but does not include a church at Dysartgallen, although the nearby property of Sampson's Court is depicted. This suggests that the Church of Dysartgallen was in ruins and was not considered to be an edifice of note. The late sixteenth-century map of Laois by Lamb is schematic, and only records settlements and significant buildings, such as Ballinakill and Sampson's Court, but does not however record Dysartgallen.

Nineteenth Century

During the nineteenth century, the first edition 6" to a mile Ordnance Survey map of the area depicts Dysartgallen Church as a rectangular building within an enclosed site also containing a graveyard. The enclosure continues further north beyond the boundary wall of the graveyard, and is curvilinear in shape, possibly indicating the line of an earlier archaeological site. On this map the church is described as bing 'in ruins' while a limekiln is depicted just to the north of the church, and within the enclosure. A corn mill is shown to the west of the church, on the west bank of the Owenbeg River, while a fording point is labelled 'Dysart Wooden Br'.

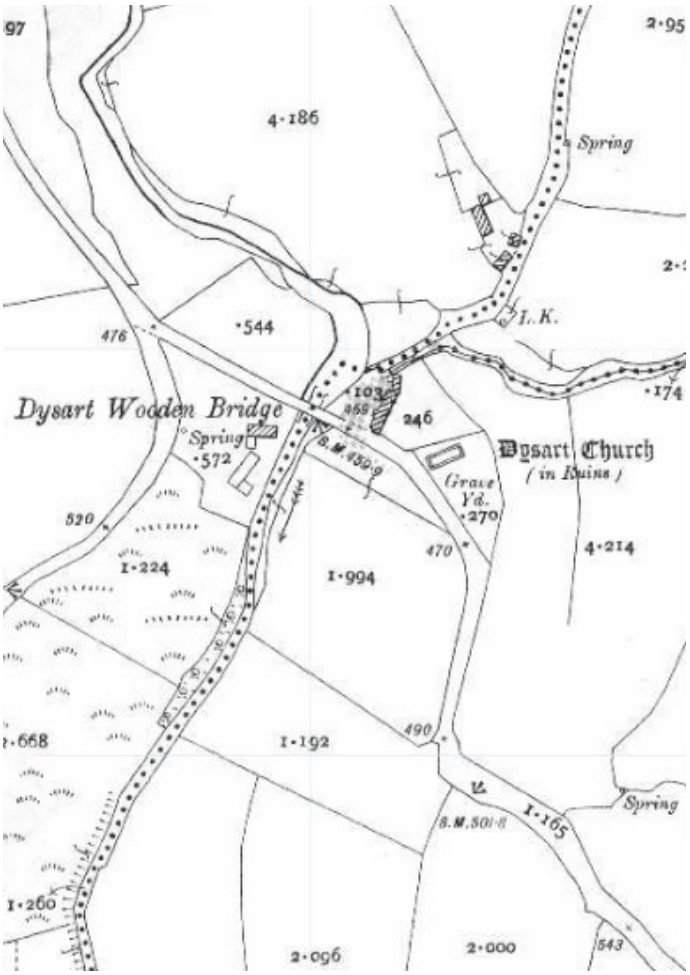


Extract from Down Survey map of Barony of Cullinagh

Extract from 1689 map of Queens County (Laois) by Lamb

These mid nineteenth-century Ordnance Survey maps were used for the compilation of the Primary Valuation of Ireland, known as Griffiths Valuation, which was an early form of property tax, organised by Sir Richard Griffith.. The Griffiths Valuation from the mid nineteenth century for Aughnacross identify Reverend John Brown as being the owner of Dysartgallen Church and graveyard, together with much of the surrounding land. Lands around the church and graveyard was leased by Rev Brown to Patrick Doran, and John Purcell.

Extract from 1st ED 6" to a mile OS map of the area



Extract from 1st ED 25" to a mile OS map of the area

Twentieth Century

The early twentieth-century Ordnance Survey map at a scale of 25" to a mile, depicts the church at Dysartgallen as being a rectangular building and is also described as being 'in ruins' This map indicates that none of the chancel walls were standing or were noteworthy at the time the structure was surveyed, although there are currently masonry remains in place which indicate the possible extent of the chancel. It is possible that these masonry elements were placed in the location of the chancel in the twentieth century, possibly during the conservation works during the second half of the twentieth century. A wall is depicted just north of the church building on the 25" to a mile Ordnance Survey map of the area, which was not recorded on the earlier first edition Ordnance Survey map. It is possible that this wall was constructed following the Irish Church Act of 1869, which disestablished the Church of Ireland as the official church in Ireland. This act also dealt with the issue of unenclosed graveyards and unofficial burials, that had been a cause of public concern since the time of the Great Famine. Also recorded on the larger, 25" to a mile Ordnance Survey map, are several buildings to the north west of the church, indicating that by the early twentieth century, the land had transferred into private ownership.

Dysartgallen Church

The extant church at Dysartgallen is a rectangular building, orientated traditionally, east to west, measuring 12.7m long by 6.6m wide, and with wall thickness of between 800-900mm. It was constructed of un-coursed rubble stone, predominantly limestone but with some sandstone mixed in. Surviving evidence suggests that the church was a two-cell building when last in use, with the nave to the west and the chancel to the east, which is an arrangement that was common in small country churches of this period in Ireland. Due to the thick covering of ivy, it is not clear if the chancel was constructed at the same time as the nave, or was a later addition. Historical records indicate that the chancel was in ruins from the seventeenth century, and in the late nineteenth century Comerford reports that the foundations of the chancel measured 6.1m (20ft) long and 4.2m (14ft) wide. These measurements are very close to the current pattern of masonry that survives in the chancel, although it is not clear if the stones at the east end indicate rising walls, or if they have simply been placed there at a later date. Some local excavation would help to determine this.

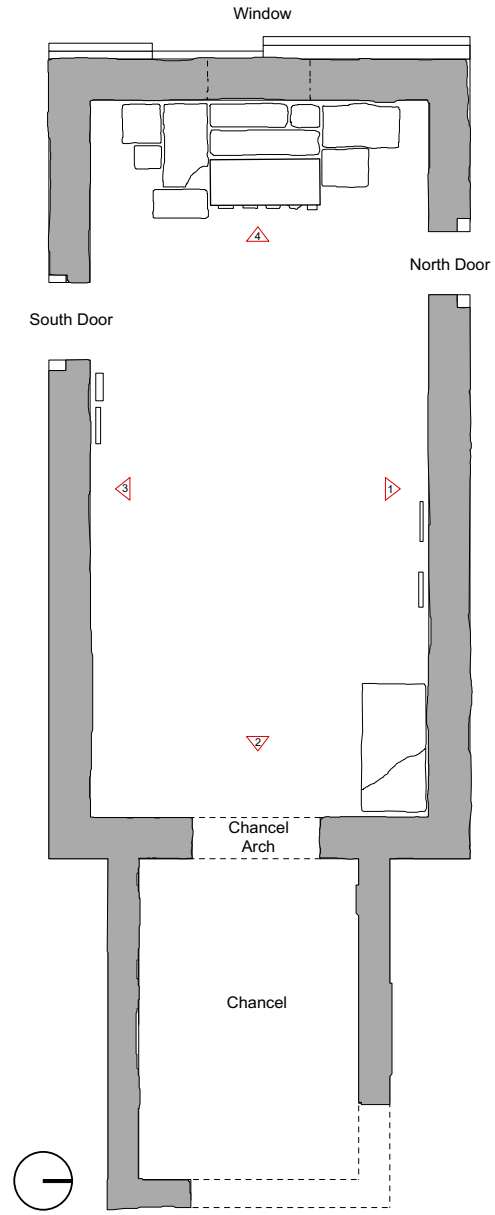
Detail of sandstone quoin at south east corner of nave.

Detail of south wall of nave, interior view, showing uncoursed rubble stone pattern.

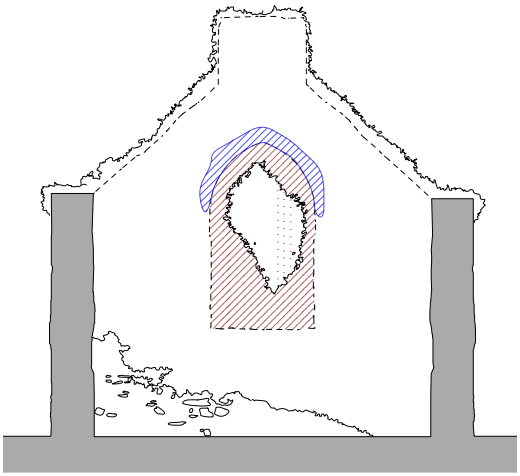
General view from the south prior to trimming.

Corner of nave where north wall meets east gable, section of lime plaster still intact.

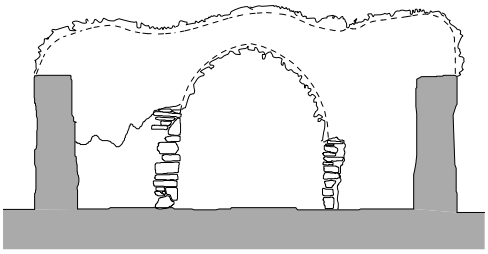
The surviving masonry includes the west gable, which remains largely intact, the north and south walls that are incomplete and mostly rise to below the wall plate level, the chancel arch and part of the east gable of the nave, and low walls and loose stones that suggest the footprint of the chancel. When the church was in use mass would have been celebrated in the sanctuary at the east end, with the congregation in the nave. Entry was usually gained into the church via a doorway in either the north or south wall of the nave, near the west end of the church. Dysartgallen Church has what appear to be door openings in both the north and south walls of the nave. Of these, the opening in the north wall is more likely to be the original entrance doorway. Window openings are also visible in both the north and south walls, near the chancel arch. The west gable contains a recessed central window, and evidence of a belfry. Recognisable constructional elements in the openings, which would help to date the church, have not yet been identified.



PLAN

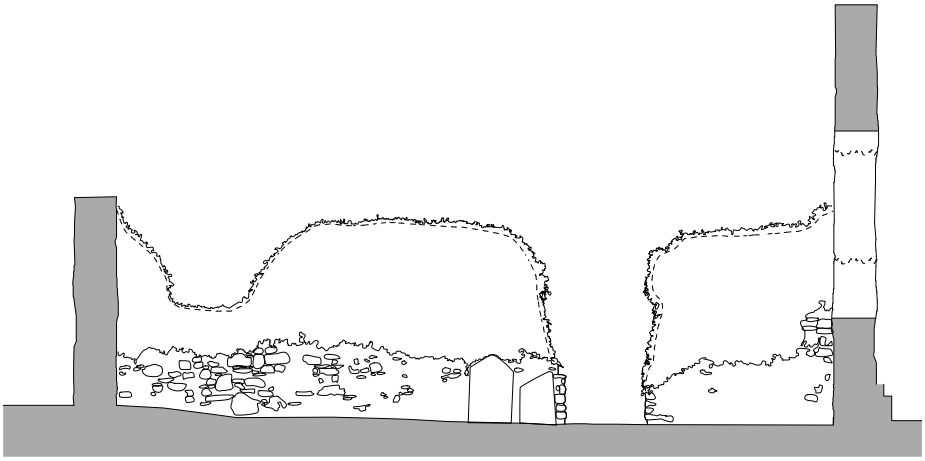


WEST GABLE



EAST GABLE

NORTH NAVE WALL

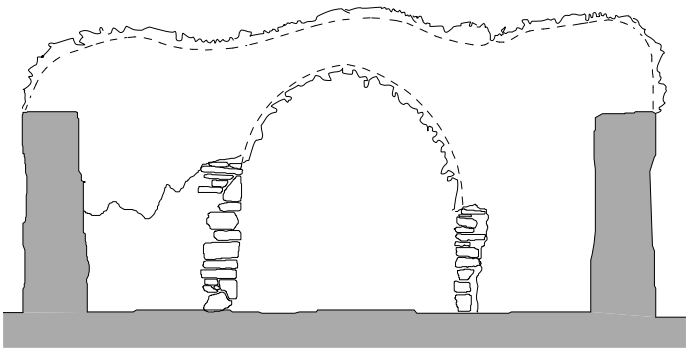


SOUTH NAVE WALL

Loose masonry restrained by Ivy.

Dense ivy filling window void.

The chancel arch is segmental and constructed in rough sandstone voussoirs. A pronounced slot is on the east side of the east wall of the nave where it abuts the south wall of the chancel. This suggests that the chancel was a later addition, to an earlier single-cell church. There are currently no recognisable features on view within the chancel, although these may come to light following full removal of the ivy, or through excavation of the fill that has raised the internal floor level to approximately 1.2m. A table tomb lies flat on the ground in the north east corner of the nave and probably dates to the eighteenth or nineteenth century. There is no evidence of any roofing material on the site, although if slate coverings had been used some evidence may be contained within the fill. Alternatively the slates may have been quarried for use in other structures in the area. Similarly, there is no evidence of a floor finish, although the steady build-up of soil has covered most of the original floor levels in both the nave and chancel.



HHA sketch survey drawing of east gable and chancel arch.

View of the east end prior to trimming.

Chancel arch from nave prior to trimming.

Detail of south jamb of chancel arch.

View of chancel arch from the south doorway.

There are, however, some stone flags evidence at the west end of the nave, which appear to have been placed in recent years. These flags have been arranged around a nineteenth-century limestone table tomb grave monument that has been turned into a make-shift altar supported on cut and rubble stone together with short length of sawn tree trunks. This was constructed by members of the local community, using salvaged material from the site, to facilitate occasional use for worship. Members of the local community were also responsible for moving four stone grave markers from the floor of the nave to rest against the walls, two on the south wall and two on the north wall.

Grave slab adapted for use as altar.

View through the south door before ivy was trimmed, grave markers laid up against the nave wall.

Detail of grave slab altar and surrounding flag stones.

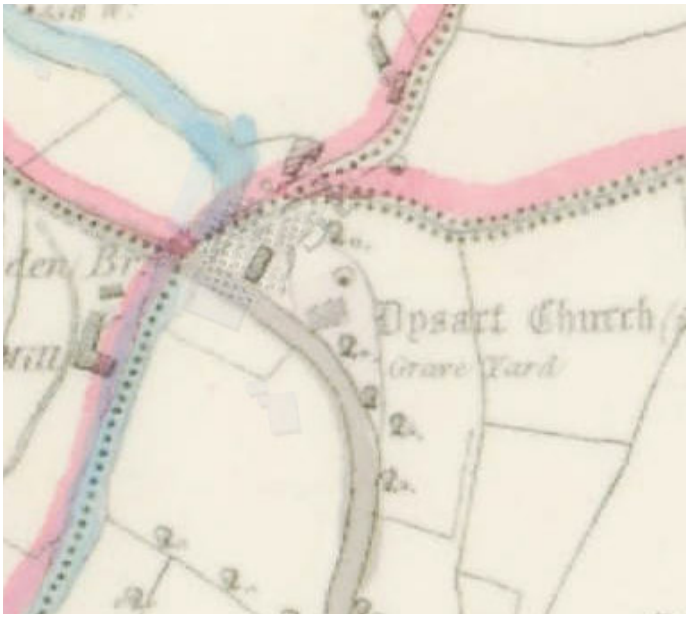
Detail of grave markers laid up against the south nave wall.

Detail of exposed masonry on the north wall of nave. Headstones laid against the nave wall.

Dysartgallen Graveyard

The church at Dysartgallen is situated in a lozenge-shaped graveyard (RMP LA030-011002) that measures 54m north to south and 30m east towest. Originally this may have extended further to the north, as is indicated by historic nineteenth-century Ordnance Survey maps of the area. The graveyard, which was still in use for new burials in the twentieth century, is delineated by a mortar bonded stone wall to the west and north, and a stone wall and earthen bank and hedgerow to the east and southeast. Anecdotal accounts from community members indicate that the west (roadside) wall was constructed (or reconstructed) during the second half of the twentieth century around the same time that the west gable was underpinned. The graveyard is mostly contained with a raised area approximately 1m higher than the surrounding ground level. This very distinctive raised area has been identified as an archaeological site (RMP LA030-011004), and is tentatively labelled as "an enclosure" in the Record of Monuments and Places

Perimeter ditch in graveyard, view from the south.



6 inch colour OSI map showing possible extension of graveyard to the north. Circa 1840.

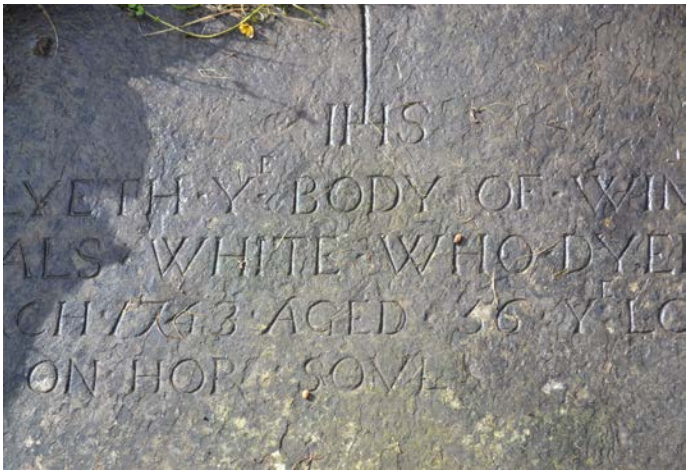
Aerial view of site with church & graveyard in colour.

View of the church and graveyard from the south before ivy trimming.

Within the graveyard is a large collection of upright headstones, Celtic cross headstones, table tombs, and uninscribed grave markers. Most of these gravestones date from the eighteenth century onwards, but some of the low uninscribed grave markers could be earlier. Some of the carved lettering on the headstones is high quality work, while others display a delightful archaic character in both the style of the lettering, the eccentric spacing and phonetic spelling. Currently the graveyard is well kept by the local community who cut the grass and keep weeds and invasive species at bay. Although the masonry of the church is fully concealed on the southern, graveyard side, the juxtaposition of the standing headstones to the ruin is very successful visually, and will only improve with the ivy is removed and the stone walls revealed to view.

Good quality letter cutting on headstone of 1837.

Detail of the rag tree adjacent to the cross base.



Archaic letter cutting on a grave slab of 1743.

Probably a base for a high cross, otherwise known locally as the wartstone.

Conclusion

Although there is no above ground evidence of an early Christian church or monastery at Dysartgallen, it is possible that targeted archaeological investigations such as geophysical surveys or test trenching to both the church and graveyard, might determine if earlier archaeological elements survive. Any such investigation should extend to the larger graveyard that formerly surrounded the church that appear on the earlier editions of the Ordnance Survey. This may provide further information about the early development of the site, and equally to changes that occurred after the church became inactive. In the short term, some less invasive excavation of the soil and possibly masonry debris, found within the nave, and to a significantly greater depth in the chancel, may also provide valuable insight into the construction of the church. As this material lies above the internal floor levels of the church, there is less likelihood of uncovering burials, than would be expected outside the church walls, while the potential of uncovering identifiable elements of worked masonry that might help to date phases of construction, is reasonably high.

4.0 CONDITION REPORT

General Description

The standing masonry of the church consists of un-coursed, random rubble masonry, predominantly limestone but with some sandstone mixed through. Most of the stone consists of small to medium sized units, with some larger stones integrated, in some cases at higher levels. There are few roughly-squared stones and where these occur they are generally used as quoins at outer corners, or to form the jambs at the lower level of the chancel arch. Walls are generally 800mm thick and there are currently no dressed stones on view at door or window reveals, although some may come to light when all of the ivy has been removed, or when the debris cleared out of the chancel area. The wall heads where visible (on the north wall of the nave) appear to be quite loose and will need consolidation. At the apex of the west gable is what appears to be the lower portion of a bellcote and this will almost certainly require consolidation after the ivy has been removed. There are two structural openings – to the chancel arch and a large window in the west gable, both heavily shrouded with ivy. While the chancel arch appears to be quite sound it will certainly need pinning and pointing when the ivy is removed and possible further structural intervention.

Detail of south west corner.

West gable from the nave before trimming.

West gable from the nave after trimming.

View of north wall masonry from nave.

Detail of chancel arch from nave after trimming.

Detail of stone pattern on underside of chancel arch before trimming.

Detail of underside of chancel arch after trimming.

View of the nave through the west window looking down to chancel arch after trimming.

Two areas of loose masonry were noted during our site inspection – one to the arch of the west window and the second at high level on the west jamb of the north doorway. In both cases the loose masonry is restrained by the ivy growth and care will need to be taken during the ivy removal phase to allow for these areas of damage to be consolidated. A stepped concrete plinth was added to the external side of the west gable during the 1960s, presumably to underpin and stabilise the structure at this point, as the ground falls away steeply from the gable. Notwithstanding these previous repairs there were no major cracks visible which suggests that the structure is at rest Remnants of original plaster coatings can be seen both internally and externally, being visible in several places where the ivy has not yet encroached. It is not yet clear if both of the existing doorways were original as there is no clear evidence of dressed door jambs or thresholds, there is however, what appears to be the remains of a window embrasure on the south side of the nave, where one would expect to find openings. Further evidence will no doubt emerge as ivy is removed.

Loose masonry above north door.

Concrete underpinning to west gable.

Loose masonry in arch of west window.

Surviving lime plaster in north west corner of nave.

View of possible south window.

Ivy Removal

The amount of ivy growing on the ruin is significant, with both sides of both gables and more than 50% of the nave walls covered with a thick covering. Thick mature stems can be seen at ground level, and from the thickness of the secondary stems it is almost certain that the ivy has developed adventitious roots that have penetrated into the masonry. While the early trimming of the ivy, carried out as part of this project has helped reduce the risk of damage by removing pressures caused due to wind load, it will have to be totally removed to avoid future damage. If left unchecked the plant will regenerate vigourously increasing the size of the embedded roots that will eventually split the masonry and cause collapse. To remove this risk all of the ivy should be killed back using an approved biocide, with no cutting of the lead stems, so that the biocide will enter the embedded roots that will in time die and rot. These can then be removed relatively easily and the masonry pinned and pointed in lime and sand mortar.

General view from north west prior to trimming.

Detail of bellcote prior to trimming.

Close up of ivy stems on west gable after trimming.

Typical ivy root on south wall.

Detail of ivy on arch of west window after trimming.

5.0 STRUCTURAL SURVEY

Outline of Brief & Proposed Works

CORA Consulting Engineers were asked by Howley Hayes Architects to prepare a structural appraisal and recommendation for the repair of the upstanding masonry ruins of Dysartgallen Church near Ballinakill, Co. Laois on behalf of the Spink Community Development Association in conjunction with Laois Heritage Society. This report is thus limited to the Structural Engineering appraisal of the upstanding ruinous walls and does not refer to any of the gravestones and other monuments within the churchyard nor deal with any Archaeological matters. Please refer to reports by others for this information.

Description of Structure

Dysartgallen Church is a small church of the late medieval period, roofless but still retaining much of its original masonry stature. The church is located in the centre of a graveyard along a quiet rural road and approximately 20m from Owenbeg River. The church ruins and churchyard are included in the Record of Monuments and Places (RMP) for Co. Laois (No LA030-011001 and RMP No LA030-011002 respectively) as established under S12 of the National Monuments, (Amendment) Act 1994; and in the Record of Protected Structures, established under the Planning and Development Act 2000 (11812009). For legislation regarding the care and repair of such refer to reports by others. Details of the structure are shown on CORA drawings 20760-Sk-01 to Sk-05.

Method of Appraisal

The building was visited 6th November 2020 by Lisa Edden of CORA Consulting Engineers. The inspection involved a close inspection from ground level of all the walls and an inspection from a MEWP of the high level wall tops to the West and East gables. Although the ivy had been recently clipped back, it still covered the majority of the walls and it should therefore be noted that a certain level of additional findings would be expected once the ivy has died back further and repair works commence. No invasive works were carried out, samples taken or tested.

Observations

Details of the structure are shown on the drawings CORA drawings 20760-Sk-01 to Sk-05. 2.1 Overall stability and general condition of masonry From the extent of walls visible no excessive lean or other destabilising factors were noted. The walls can generally be viewed as being stable overall. However, the extent of degradation to the wall tops under the ivy is likely to be very severe and much of the upper 1m of the east chancel wall and possibly more of the side walls has already been lost to erosion following on from the loss of roof structure many centuries ago. The west gable appears to be more intact although it has lost its upper belfry portion and the window arch in the west gable is significantly compromised. Note it is impossible to see enough to qualify the actual extent of loss of the window arch. There has been significant robbing out of door surrounds; the two side window surrounds along with quoin stones to the corners of the church. The doors and windows to the long side walls have no heads. The chancel arch in the east gable wall appears to be relatively intact under its ivy coat albeit mortar loss is very significant. Water has been migrating down through the wall tops into the heart of the walls encouraging mortar loss further down and also plant growth in the top of the wall. These actions all lead to further stone loss that can be seen in the piles of loose stones on the wall tops and fallen stones stored on site.

Ivy & Other Vegetation

The east and west gables and the long south wall are compromised by severe ivy growth which has not only rooted in the foundations but also rooted in the mortar joints of the walls themselves and is potentially destabilising the masonry further. The ivy had been recently clipped back at the time of the survey but still covered the majority of the wall surface. The full extent of the resulting damage cannot be determined until the ivy has been injected/ plugged with biocide and died back. There are also two locations where woody stemmed tree saplings were observed to have rooted. These also need to be injected / plugged with a biocide. There is also a large dead tree stump at the doorway on the south wall. This is obscuring damage to the base of the south wall immediately adjoining the stump

Recommendations & Conclusions

<u>Repair Works Required</u>

The repairs works required in order of priority include the following:

- Careful control and removal of vegetation
- Repairs to top of gable walls and the arches within the two gables – most urgent
- Repairs to all wall tops in general – urgent
- Repairs to all vertical faces of walls
- Addition of soft top to south and north walls for additional protection

Outline of the proposed repairs are shown on CORA drawings 20760-Sk-01 – Sk-06. See Appendix

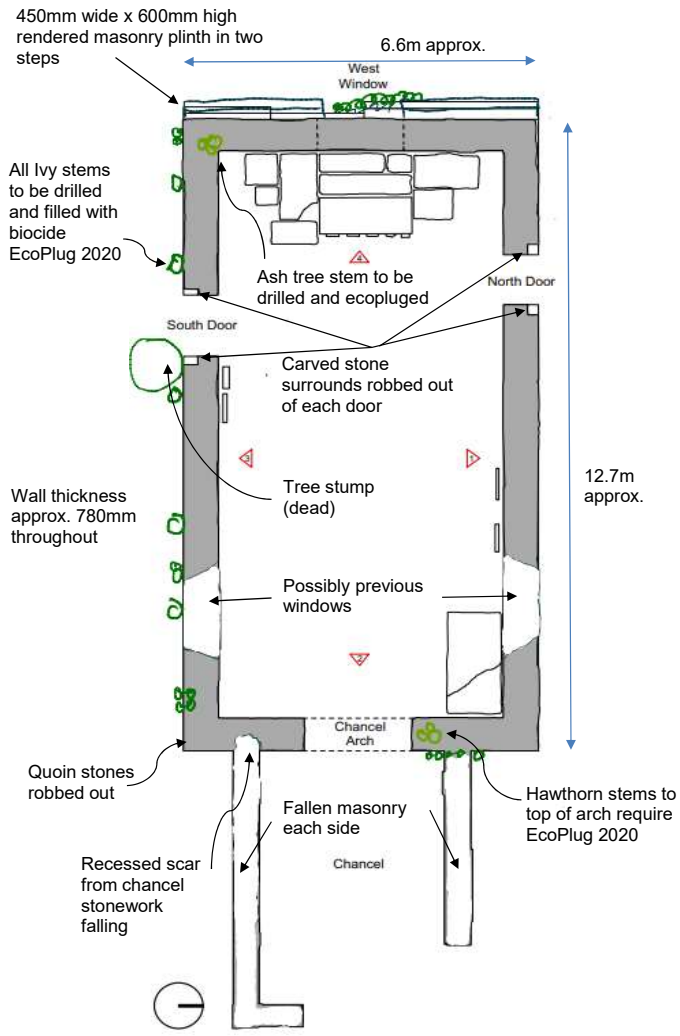
These are recommendations for the purpose of obtaining budget estimates for the repairs, applying for grants and the various approvals for the works. These recommendations will require detailed development as and when scaffold is erected, ivy removed and there is clearer visibility of the elevations.

Materials to be Used in the Repairs

It is assumed that the extent of any patching/re-building will only necessitate the use of the stone on site that has previously fallen from the wall. Indeed extent of repairs should be limited to the extent of this stone rather than importing new stone which may confuse the historic record. The only supplement should be new natural slate for pinning and also a selection of small wedge-shaped limestones pieces for pinnings.

The mortar to be used for repairs to the weathering faces such as wall tops should be formulated to be weatherproof. The mortar to be used for repairs to vertical faces should be less hard and more permeable than the masonry units it binds. Careful selection of these lime-based mortars will need to be made. The specification for such should be developed as part of the schedule of works with final selection being based on exemplars produced on site by the chosen contractor. A typical lime mortar specification is appended for initial reference.

Example of soft cappings detail to stone walls, clay layer installed prior to laying sod.



CORA sketch survey plan.

Example of a completed soft capping to wall head.

Conclusions

- The upstanding remains of Dysartgallen Church are stable overall but hidden beneath very vigorous ivy growth and the detail of the condition beneath is not known but assumed to be in poor condition and thus vulnerable to accelerating erosion from stone falls.
- The most vulnerable parts are the east and west arches, therefore removal of the ivy and repairs to stabilise these should be instigated as soon as possible.
- The rest of the wall tops are also degraded and letting water into the core of the walls. Further stone falls can be limited by instigating repairs and stabilisation in the longer term
- A bat survey should be commissioned before any works begin.

6.0 ECOLOGICAL REPORT

Dysart Gallen & Churchyard

The Dysartgallen Church and Graveyard stand on a small site, measuring approximately 0.1ha. It was visited for the purposes of this report on 17th October 2020, which is not an optimal time for any ecological survey, but was necessary to meet a grant deadline. The author, however, knows the place well having previously recorded the flora of the site during both spring and summer seasons, as part of her work with the BSBI. This knowledge is incorporated into this report.

The habitats present at the site are described in section 2 below and are categorised according to Fossitt (2000) with the Fossitt name and code given for each habitat recorded in the title of each habitat description. Plant species are named according to Stace (2019) and Parnell & Curtis (2012). Some small management suggestions are made with the purpose of enhancing and protecting the biodiversity of the local area at Dysartgallen whilst also respecting and protecting the social and religious importance of the site in Section 5. This section also includes a list of suggestions for further ecological studies and surveys that could be carried out in the future.

This report is hopefully just the start of a fascinating journey - Dysartgallen Church and its hinterland of the upper Owenbeg river valley have a wealth of both natural and social histories yet to be revealed.

Mouse-ear hawkweed

Prolific ivy growth on the church ruins that threatens the structural stability of the building. Image taken before trimming.

Hedgerow forming the eastern boundary of Dysartgallen graveyard, with Hazel the dominant species.

Natural History of Dysartgallen

Dysartgallen Church and graveyard are ancient structures that have become natural habitats in their own right, supporting a wide range of plant and animals species. These make a significant contribution to the richness of biodiversity within the greater Owenbeg river valley that runs through this hidden corner of south County Laois. While clearly the area has formerly played a vibrant and busy role in the life of the population of south Laois, in more recent centuries this has quietened down to the peaceful place it is today with just the occasional visitor. In this context, the local biodiversity has thrived as it has been left to its own devices in many ways. The primary example being the ivy (Hedera helix) which had grown so prolifically on the church ruins that it now threatens the structural stability of the building.

Habitat Survey

Church Building & Boundary Walls

The dominant plant growing on the walls of Dysartgallen Church is ivy, which is of huge biodiversity value in Ireland. A native species of Irish woodland habitats , ivy once covered most of the island prior to the arrival of humans. As most of these ancient woodlands disappeared, the ivy has colonised many man-made structures such as buildings, ruins and walls to mimic the trees that were originally the main source of support. Contrary to popular belief ivy is not a parasitic plant, it makes all its own food but it does use trees and walls for support to reach up to the light. The biodiversity importance of ivy rests in this habit of flowering and fruiting in late autumn and winter. Hardly any other plants in the native Irish flora do this and therefore ivy is of crucial importance as a pollen source for hungry bees who are about to enter hibernation in late autumn and the berries feed countless birds and mammals during the hungry months of winter. Another feature of the plant is that fact that it and Holly are the only native evergreen species with large leaves, therefore, ivy can host several species for hibernation in winter.

Apart from ivy, several other plant species grow on the walls at Dysartgallen Church. The botanical survey carried out on 17th October 2020 recorded a number of species commonly recorded growing on walls in Ireland, which occur on the church walls at Dysartgallen. None of these plants pose the risk to the structure that ivy imposes as their roots are small and fragile. The species recorded at Dysartgallen were - rosebay willowherb (Chamaenerion angustifolium); daisy (Bellis perennis); mouse-ear hawkweed (Hieracium pilosella) herb Robert (Geranium robertianum); the grass species yorkshire fog (Holcus lanatus) and two small fern species: maidenhair spleenwort (Asplenium trichomanes) and rustyback fern (Asplenium ceterach)

Rustyback fern

Picture taken in May 2019 showing the differences resulting from different lawn mowing regimes: a profusion of daisies flowering inside the church building in the foreground where little mowing happens compared to the lawn in the graveyard beyond where mowing is more frequent and thus there are few plants in flower.

Hedgerows, Dry Meadows & Grassy Verges

Two habitats occur in the graveyard - hedgerows (WL1) and dry meadows and grassy verges (GS2). The hedgerow runs in a line along the eastern side of the graveyard separating it from the agricultural land behind. This hedgerow is old and well established and is dominated by hazel (Corylus avellana). Hedgerows in Co. Laois are more often dominated by hawthorn (Crataegus monogyna) which was the main plant used in the late eighteenth and early nineteenth centuries when the fields of Ireland were enclosed by hedgerows (Feehan 1983). Hazel, however, is a dominant hedgerow plant in the upper Owenbeg river valley area. This may hint at the ancient native woodland history of the area where hazel would have been the natural dominant understorey tree in the oak-ash-hazel woods that would have covered the area.

Other species noted were elder (Sambucus nigra), hawthorn and ivy, all commonly found in local hedgerows. The base of the hedgerow features wildflowers to be expected such as the pretty cow parsley (Anthriscus sylvestris); hogweed (Heracleum sphondylium); herb Robert (Geranium robertianum) nettles (Urtica dioica); meadow buttercup (Ranunculus acris) and a profusion of daisies (Ellis perennis). The

graveyard itself is kept well mown which means that most species growing there do not get always get a chance to flower and set seed. With a slightly different management regime there is, however, the potential to create a diverse wildflower meadow to let the flowers bloom and set seed for long enough to highlight their aesthetic qualities and and increase the biodiversity of the site. The species recorded there include - yarrow (Achillea millefolium); daisy (Bellis perennis); dandelion (Taraxacum officinale); prickly sow thistle (Sonchus asper); meadow buttercup (Ranunculus acris); white clover (Trifolium repens) and common sorrel (Rumex acetosa). Yorkshire fog (Holcus lanatus) and perennial rye grass (Lolium perenne) are the prominent grasses.

With regard to other species of wildlife, the church and graveyard will provide foraging (places where food can be found) for several species of bird, mammal and invertebrate. When the ivy is removed from the church, as is the long-term plan for the preservation of the building, nesting and foraging sites for birds and insects will be lost. This can, however, be mitigated by allowing the hedgerow to thicken up a little and grow taller, as thick hedgerows of over 2m in height provide potential nesting sites for many bird species. Also if the hedge is managed on a three yearly cycle then it will allow flowering and fruiting to happen again adding to the aesthetic and biodiversity values of the site.

Surrounding Landscape

Any visit made to Dysartgallen church and graveyard will be richly rewarded with a wondrous atmosphere that bewitches the senses and the imagination leading to all kinds of wondering about what life was like for the people who lived and worshipped here over many centuries. This is helped in no small part by the bucolic landscape in which the church and graveyard are nestled. The church lies in the upper valley of the river Owenbeg, where the river is in its early stages being fed by numerous streams that flow down from the surrounding hills. Continuing southwards past the villages of Ballinakill and Attanagh villages the river eventually joins the river Nore.

It is also important to note that the biodiversity of the Owenbeg is of international significance and is protected under the EU Habitats Directive as a Special Area of Conservation (SAC). As part of the River Barrow and River Nore SAC (Site code 002162) it is designated for the protection of many habitats and species which occur in and around the river system. The lower stretches of the Owenbeg also forms part of the River Nore Special Protection Area (SPA code 004233). SPAs are also of international biodiversity value protected under the EU Birds Directive. The River Nore SPA is designated for the protection of the kingfisher.

View northwards across the upper Owenbeg valley at Dysartgallen. The church is hidden from view by the large ash tree in the mid-left of the picture.

At Dysartgallen the boundaries of the SAC stretch further than the river banks and out into the surrounding fields because they feature rare orchid-rich grassland habitats and the remnants of the ancient oak woodlands of south Laois. These ancient woodlands disappeared into the fires that supported the hugely important iron and tanning industries of nearby Ballinakill during the seventeenth and eighteenth centuries (Feehan 1983). Feehan (1983) makes reference to 'Coille, an old townland at Dysart Gallen where in 1794 the last of the native oakwoods in the Owenbeg Valley were felled'. The author and her fellow Laois botanical BSBI vice-county recorder Dr Mark McCorry recorded the intriguing toothwort (Lathraea squamaria) along the lane heading south-west across the Owenbeg bridge from the church.

The 'holloway' leading down to Dysartgallen from the Ballinakill Road, October 2020.

Toothwort pictured in Dysartgllen, May 2019

This parasitic plant steals all its nutrients from the roots of trees, usually hazel, and therefore has no need for green leaves filled with chlorophyll so the only part we see are the flowers which appear in April and May .With such an unusual life cycle, this is a plant that doesn't disperse too far, therefore its presence being indicative of long established woodland has long been suspected (Praeger 1934; Perrin & Daly 2010). It is likely that this plant is a ghostly remnant of the ancient oak woodland of Dysartgallen. The hints of the antiquity of this part of the Owenbeg valley continue on the narrow road that winds up to the Ballinakill-Spink road where the locally famed wart stone and rag-tree are located. This beautiful leafy lane makes a wonderful entrance to the river valley most especially for the walker or cyclist. The road runs in a south-east direction down towards the bridge over the Owenbeg and in springtime it is alive with birdsong and literally dripping with wildflowers and birdsong. This road is referred to by Feehan (1983) as a 'holloway' - a roadway so old and well used that hundreds of years of both animal and human feet and carts along a sloped path have worn down and hollowed out this route. Hazel are the dominant tree along this road with some ash and hawthorn together with a lush understorey featuring cow parsley, early purple orchid (Orchis mascula), wild strawberry (Fragaria vesca), hart's tongue fern (Asplenium scolopendrium), ivy, brambles, wood avens (Geum urbanum), herb Robert and bugle (Ajuga reptans).

Fauna of Dysartgallen

While no detailed faunal studies were carried out as part of this preliminary ecology report, several species of birds were noted in the area during site visits. During a short team visit in October 2020 to the site buzzards (Buteo buteo) and ravens (Corvus corax) were heard calling over the site and a sparrowhawk (Accipiter nisus) dramatically flew across the graveyard over our heads and over the hedgerow. Coal tits (Periparus ater) were busy feeding on insects in the ivy on the church building itself as the treatment of the offending Ivy was being discussed!

With regard to mammals on the site, it would be expected that foxes (Vulpes vulpes), badgers (Meles meles), woodmice (Apodemus sylvaticus) and perhaps hedgehogs (Erinaceus europaeus) would use the site occasionally for foraging.

Existing hedgerow to be allowed to thicken and flower, only cut back every three years.

Early purple orchid (Orchis mascula) recorded on the holloway in May 2019.

The Dysartgallen 'rag-tree' and wart stone. The tree is actually five different species (Ash, Hawthorn, Blackthorn (Prunus spinosa), Brambles and Ivy are all used here) that are used to hang rags over the all important wart stone.

Future Recommendations

The following four recommended actions are simple ways in which a light change of management can enhance the biodiversity of Dysartgallen church and graveyard without any negative impacts on the historical fabric of the site:

- Slightly change the mowing regime to once every six weeks starting in late April, to allow the small wildflowers a chance to flower and set seed but without the grass becoming too long for visitors. This will have a domino effect of encouraging more butterflies and other pollinating insects to use the area which will then lead to the occurrence of more bird species etc.

- Manage the hedge in the traditional way which involves cutting back once every three years. This could either be applied to the whole length of hedge or to three sections cut annually in rotation. In this way the native hedgerow is allowed to thicken up and grow a bit taller which not only makes it livestock proof but also more suited to nesting birds as they have more protection from predators but most importantly it allows the plants to flower and fruit more freely thus providing vital food for the local wildlife as well as the occasional foraging human.

- The southern corner of the graveyard used to have an elder bush, which might be re-introduced, while the planting of a locally sourced oak (Quercus robur) would create a suitable link to the ancient oak woodlands that once surrounded the area. This would also provide a lovely shady spot from which to view the site in the future.

- Install a bench for passing walkers to take their ease in this peaceful spot – maybe under the oak tree.

Recommended Reading

There are two great guidance documents freely available online specifically aimed at community groups who have graveyards under their care:

- All Ireland Pollinator Plan for Faith Communities – small changes to management of graveyard will maximise biodiversity (see: www.pollinators.ie/wordpress/wp-content/uploads/2018/08/Faith-Communities_actions-to-help-pollinators-2018-WEB.pdf)
- The Heritage Council has published a very helpful guide for the care of historic graveyards (see:www.heritagecouncil.ie/content/files/guidance_care_conservation_recording_historic_graveyards_2011_7mb.pdf)

Further Studies

This report is a baseline study giving an idea of the ecology of Dysartgallen church and graveyard and its surroundings. This study was carried out in a very short and limited time period in October 2020. Spring and summer are the optimal seasons in which to carry out in-depth ecological work and this site has many more stories to tell so the following further studies are recommended should funds become available in the future. All will add to the interpretation of Dysartgallen church and its surroundings and several can incorporate community events as suggested below:

- Bat survey and community bat walk
- Bird surveys and a community bird walk
- Full survey of the flora of the Owenbeg valley – results to include a community wildflower walk in May when the majority of the local woodland ground flora are in bloom
- Moth survey – including a community event This could be tied in with the bat walk.The Moth survey part of the nearby Abbeyleix Bog Bioblitz event proved the most popular with the locals.

Cultural Significance

The Guidelines to the Burra Charter state that - "Cultural Significance is a concept, which helps in estimating the value of places. The places that are likely to be of significance are those which help an understanding of the past; or enrich the present; or which will be of value to future generations." There are a variety of categories generally used to evaluate the level of cultural significance of an historic place. For Dysart Church and Graveyard this include – the historical; architectural; archaeological: ecological; and social interest categories.

Historical Significance

The documentary and cartographical evidence that survives provide details of the long history of the site as a place of Christian worship. While the standing ruins appear to date from the fifteenth century, there is evidence on site that suggests an earlier foundation of a religious settlement dating back to the early Christian period. Small, two-celled medieval churches are not uncommon in the Irish country side, and any former place of worship of this age has considerable significance, all the more so if evidence of an earlier site is ever uncovered or identified.

Archaeological Significance

The above ground archaeological fabric is interesting is not exceptional. However, further architectural detail may come to light in the masonry, when the ivy is finally removed, or which might be discovered amongst the fill material of the nave and chancel, might provide valuable information about the date and possible phasing of construction. If non-invasive archaeological investigation or limited excavation reveals details of an early monastic enclosure the significance of the site to rise accordingly.

Architectural Significance

The architectural significance of Dysartgallen lies in the age of the structure rather than in the architectural composition or detail. Surviving evidence suggests a relatively modest rural church, of simple design and construction. Having stood for over 500 years, however, makes it a relatively early example of a building type in Ireland that has grown from small single-cell, structures to vast and complex church buildings conceived within a wide variety of styles and scales.

Ecological Significance

The ecological significance of the site is considerable, given the remoteness and small number of annual visitors to the graveyard, and its close proximity to the special areas of conservation designated within the Owenbeg valley and connecting river systems. Also significance is the large stand of natural oak woodland on the north side of the valley. With minor adjustments to the grass cutting regime and some judicious tree planting the site could be even more aesthetically pleasing with an even broader biodiversity. The significant loss of the ivy cover on the masonry can be mitigated by less frequent cutting of nearby hedges.

Social & Spiritual Significance

The social significance of Dysartgallen is also important, providing testament to the community that once lived within the surrounding countryside and worshiped in the church. Of particular relevance is the fine collection of surviving headstones and grave markers that adorn the graveyard, telling of lives lived within the local community. The letter cutting on many of the headstones is both beautiful and insightful into the lives of the former worshippers, capturing a sense of local distinctiveness in the stone and local names in those commemorated. As the authors of the archaeological and ecological sections of this report have already mentioned, the site has a very special atmosphere of stillness, relaxation and reflection. The strong sense of spirituality is apparent and enriched by the makeshift altar and use of the ruin for outdoor masses in summer by the local community.

Conclusion

While each individual category of significance might appear to be relatively modest when considered in isolation, the combination of history, archaeology, architecture, ecology and spirituality make Dysartgallen a place of considerable importance. Should evidence of the earlier monastic site every be revealed the site would arguably be a place of national cultural significance.

Conservation Guidelines

All proposed works at Dysartgallen Church and graveyard should be carried out in accordance with the National Monuments Acts (1930-2004); the document Frameworks and Principles for the Protection of the Archaeological Heritage (Government of Ireland 1999); the Advice Notes for Excavators; and the documents Care and Conservation of Graveyards (OPW 1995); and Guidance for the Care, Conservation and Recording of Historic Graveyards (Heritage Council of Ireland 2010).

The surviving masonry at Dysartgallen Church has been badly damaged by vegetation and weathering, and possibly quarrying. If the ivy is not removed, the north and south walls will continue to crumble and the chancel arch and west gable will start to collapse. Careful treatment of this vegetation followed by appropriate masonry conservation and consolidation will protect the extant masonry, and reverse the current deterioration. Any masonry conservation work will focus first on stabilising and securing both the west gable and its window, and the chancel arch, together with other areas of loose masonry. The nave walls that return at right angles to the east and west gable are also important structurally, as they help to stabilise the two gables both of which include large structural openings, making them vulnerable. These walls should be consolidated and the heads protected with either lime and sandy flaunching, or soft topping, while any raking walls should be protected with rough racking. All works should be carried out by skilled masons with conservation experience, under the guidance of experienced architectural, engineering and archaeological consultants who specialise in work of this nature. Consultation with the National Monuments Service within the Department of Culture, Heritage and the Gaeltacht, together with approvals from Laois County Council, will be necessary prior to commencing any repair works.

Internal Excavations

Currently there is a build up of material on the floor of the nave that appears to measure approximately 300-400mm deep at the east end, tapering to approximately 50-100mm deep at the west end. We recommend that as part of the repair works this build up be removed under archaeological supervision, and subject to ministerial consent, to identify what lies underneath (and to provide a sound base for scaffolds and temporary works.). This work is even more important for the chancel area, which has a greater depth of fill. It will be necessary to remove this material to expose the rising walls to be able to determine their condition and to repair any damage. During this work worked stone, or architectural detail may come to light that will help to date the church with more accuracy. Subject to ministerial approval it would be prudent to raise consolidate the top of these walls to preserve the original form of the chancel. As these works will be restricted to the interior of the church there is a lesser chance of encountering human burials.

Finishes

Consistent with Dr MacGowan's recommendations to enhance the biodiversity of the site, we recommend that on completion of the works that the nave and chancel floor be recovered with a bed of topsoil and seeded with grass and wild flowers, but with a more regular mowing regime than might be adopted in the graveyard. We would also recommend that rather than capping the walls with lime and sand flaunching that we adopt a soft topping detail for the repaired wall heads. This will encourage grasses, mosses, lichens and self-seeded flowers to grow, while any hard stem plants that appear should be uprooted. Although this and the turf floor finish will require greater on-going maintenance, the aesthetic benefits and increased biodiversity will be consistent with the remote, abandoned character of the site, while at the same time enhancing the atmosphere of the place.

Further Archaeological Investigation

Although there is no above ground evidence of an early Christian church or monastery at Dysartgallen, it is possible that non-invasive archaeological investigations combined with localised test trenching, might help to determin if any earlier archaeological elements survive as remnants of an early Christian foundation. Targeted archaeological investigations might also help us to understand why the reduction in size of the graveyard around Dysartgallen Church took place during the late nineteenth century. This might provide insights about the development of the site, particularly after the church became inactive

9.0 BUDGET COST ESTIMATES

1. Preliminaries

1.1 Allow for all insurances, access scaffolding, site set up facilities (including portaloo and welfare facilities, temporary works, plant and waste disposal)

1.2 Provide health and safety services for Project Supervisor for the Construction Stage.

Total …6,500….

2. Site Clearance & Temporary Works

2.1 Excavate back fill from nave and chancel floors under supervision of a licenced archaeologist to create sound, level working level for temporary access.
TOTAL FLOOR AREA (chancel and ¾ of church) : 93m2 …3,350….

2.2 Sort and store any building material found within the fill and retain for reuse. …1,950….

2.3 Allow for temporary props to the chances arch and west window. …1,580….

2.4 Construct scaffold to provide full working access to west gable, north and south nave walls, and to the chancel arch. …7,650….

2.5 Prop approximately 1sq/m of loose masonry at high level on west jamb of north wall. …1,020….

Total **…15,550….**

3. Ivy Clearance & Masonry Repairs

3.1 Remove all dead ivy from the masonry of the church (poisoning will be carried out well in advance by others.)
Approximate areas:

- West Gable Interior & Exterior : 77m2 approx.
- East Gable Interior & Exterior : 28m2 approx.
- North Wall Interior & Exterior : 52m2 approx.
- South Wall Interior & Exterior : 18m2 approx. …6,000…

(Note on Price: Based on an assumption no further root treatment will be required)

3.2 Consolidate loose masonry at north door, at head of west window and at chancel arch, and rebuild parts were necessary. …5,300…

3.3 Pin and point the entire structure with sand and lime.
Pinnings to be sourced from fallen stones on site.
Approximate areas:

- West Gable Interior & Exterior : 83m2 approx.
- East Gable Interior & Exterior : 34m2 approx.
- North Nave Wall Interior & Exterior : 80m2 approx.
- South Nave Wall Interior & Exterior : 60m2 approx. …27,300…

3.4 Consolidate wall heads to nave and install thin pinnings proud of rubble set in lime mortar to create run off, and base for soft capping.
Approximate quantity in linear meters:

- North Nave Wall Head : 13.5 linear meters approx.
- South Nave Wall Head : 14.5 linear meters approx.
- West Gable Wall Head : 8 linear meters approx.
- East Gable Wall Head : 8.5 linear meters approx. …9,100…

3.5 Consolidate wall heads to chancel and build up on exposed rising walls to 200mm above adjoining ground level and install thin stone pinnings proud of rubble set in lime mortar to create run off, and base for soft capping.
Approximate quantity in linear meters:
Chancel Wall Head : 18 linear meters approx. …6,900…

3.6 Construct a stable mortared base to the makeshift altar at the west end of the church and relay existing stone paving around it. …3,200…

3.7 Lay 100mm of top soil and sow grass seed, wild flower mix, within the church to cover original floor level.
Approximate area:
TOTAL FLOOR AREA (chancel and church) : 118m2 …2,000…

3.8 Allow for installing flush thresholds in salvaged stone at two doorways.
2x Thresholds approx: 3 linear metres in total. …2,100…

Total **…61,900….**

4. Provisional Sums

4.1 Allow a provisional sum of €2,500 for licenced archaeological supervision during the works.

4.2 Allow a provisional sum of €5,000 for unforeseen structural repairs.

4.3 Allow a provisional sum of €1,000 for tree planting on the site.

4.4 Allow a provisional sum of €3,000 for interpretive signage.

Total **…11,500….**

		€
1.	Total Preliminaries	…6,500…
2.	Site Clearance & Temporary Works	…15,550…
3.	Ivy Clearance & Masonry Repairs	…61,900…
4.	Total Provisional Sums	…11,500…

TOTAL ..... € 95,450.....
VAT ..... € 12,885.75.....
TOTAL INCLUDNG VAT .....€ 108,335.75.....

The ruined church at Dysartgallen was erected as a parish church during the fifteenth century. It has long been abandoned, with a significant loss of original masonry to the chancel and the wall heads on the north and south sides of the nave.

The structure is currently at risk due to the dense covering of mature ivy.

To facilitate closer inspection of the masonry, ivy trimming works were approved by the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht.

The standing ruins of the church and its attractive graveyard setting are both included in the Record of Monuments and Places and afforded legal protection under the National Monuments Acts (1930-2004.)

The Church of Dysartgallen is dedicated to the early Christian ecclesiastic St. Manchán who it thought to have died around 652AD, and who reputedly founded a monastery at this location during the seventh century.

The extant church and graveyard at Dysartgallen are situated within a pronounced raised platform, that rises to almost 1m in height, and could be the remnants of an earlier archaeological site.

The base stone from an early Christian cross is situated approximately 0.5km to the northwest of Dysartgallen Church, in Graigue townland.

The Annals of the Four Masters records that in the late fourteenth century James Butler, 3rd Earl of Ormonde attacked and burnt Dysartgallen.

In the early sixteenth century the royal taxation of the diocese of Kildare and Leighlin, by the Commissioners of Henry VIII, included Gallen (or Dysartgallen), County Laois.

This royal taxation was part of the English crowns break from the church in Rome, and was the precursor to the Dissolution of the Monasteries between 1536 and 1541.

On the mid sixteenth-century map of Laois and Offaly (known as the Cotton Map) a single church building is depicted at Dysartgallen (Disertgalin) which has a pitched slate roof, a tall gable at one end, and a window.

During the nineteenth century, the first edition 6" to a mile Ordnance Survey map of the area depicts Dysartgallen Church as a rectangular building within an enclosed site also containing a graveyard.

The early twentieth-century Ordnance Survey map at a scale of 25" to a mile, depicts the church at Dysartgallen as being a rectangular building and is also described as being 'in ruins.'

The extant church at Dysartgallen is a rectangular building, orientated traditionally, east to west, measuring 12.7m long by 6.6m wide, and with wall thickness of between 800-900mm. It was constructed of un-coursed rubble stone, predominantly limestone but with some sandstone mixed in.

The surviving masonry includes the west gable, which remains largely intact, the north and south walls that are incomplete and mostly rise to below the wall plate level, the chancel arch and part of the east gable of the nave, and low walls and loose stones that suggest the footprint of the chancel.

The church at Dysartgallen is situated in a lozenge-shaped graveyard that measures 54m north to south and 30m east to west. Within the graveyard is a large collection of upright headstones, Celtic cross headstones, table tombs, and uninscribed grave markers.

Most of these gravestones date from the eighteenth century onwards, but some of the low uninscribed grave markers could be earlier. Some of the carved lettering on the headstones is high quality work, while others display a delightful archaic character.

Dysartgallen Church and graveyard are ancient structures that have become natural habitats in their own right, supporting a wide range of plant and animals species. These make a significant contribution to the richness of biodiversity within the greater Owenbeg river valley that runs through this hidden corner of south County Laois.

Any visit made to Dysartgallen church and graveyard will be richly rewarded with a wondrous atmosphere that bewitches the senses and the imagination leading to all kinds of wondering about what life was like for the people who lived and worshipped here over many centuries.

This is helped in no small part by the bucolic landscape in which the church and graveyard are nestled.

The combination of history, archaeology, architecture, ecology and spirituality make Dysartgallen a place of considerable importance. Should evidence of the earlier monastic site every be revealed the site would arguably be a place of national cultural significance.

The surviving masonry at Dysartgallen Church has been badly damaged by vegetation and weathering, and possibly quarrying. If the ivy is not removed, the north and south walls will continue to crumble and the chancel arch and west gable will start to collapse.

Careful treatment of this vegetation followed by appropriate masonry conservation and consolidation will protect the extant masonry, and reverse the current deterioration.

All works should be carried out by skilled masons with conservation experience, under the guidance of an experienced architectural, engineering and archaeological consultants who specialise in work of this nature.

Consultation with the National Monuments Service within the Department of Culture, Heritage and the Gaeltacht, together with approvals from Laois County Council, will be necessary prior to commencing any repair works.

Consistent with Dr MacGowan's recommendations to enhance the biodiversity of the site, we recommend that on completion of the works that the nave and chancel floor be recovered with a bed of topsoil and seeded with grass and wild flowers, but with a more regular mowing regime than might be adopted in the graveyard.

We would also recommend that rather than capping the walls with lime and sand flaunching that we adopt a soft topping detail for the repaired wall heads. This will encourage grasses, mosses, lichens and self-seeded flowers to grow, while any hard stem plants that appear should be uprooted.

Although this and the turf floor finish will require greater on-going maintenance, the aesthetic benefits and increased biodiversity will be consistent with the remote, abandoned character of the site, while at the same time enhancing the atmosphere of the place.

Although there is no above ground evidence of an early Christian church or monastery at Dysartgallen, it is possible that non-invasive archaeological investigations combined with localised test trenching, might help to determine if any earlier archaeological elements survive as remnants of an early Christian foundation.

Targeted archaeological investigations might also help us to understand why the reduction in size of the graveyard around Dysartgallen Church took place during the late nineteenth century. This might provide insights about the development of the site, particularly after the church became inactive.

APPENDICES

- Ecological Report by Dr. Fiona McGowan
- Archeological Report by Colm Flynn Archaeology
- Structural Report & Drawings by CORA Consulting Engineers

Dr Fiona Mac Gowan BSc PhD
Consultant Ecologist & Botanist

* Nature Walks & Talks
* Botanical Surveys
* Screening for AA
* Conservation Management
* TidyTowns guidance
* Biodiversity Action Plans

Dysartgallen Church & Graveyard

A report to accompany the architectural survey of Dysartgallen Church, setting the church and its adjacent graveyard in their ecological context in the upper Owenbeg river valley, Aughnacross, Co. Laois

November 2020

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1 Introduction

1.1 Author's background & expertise

Dr Fiona Mac Gowan, a Consultant Ecologist based in Ballyroan, Co. Laois has been working both professionally and voluntarily in the area of scientific habitat and wildlife assessments and environmental impact surveys for over twenty years. Fiona (BSc Environmental Biology, PhD Plant Ecology) received an honours degree in Environmental Biology from the Botany and Zoology Departments of University College Dublin in 1993 and defended her PhD at the Botany Department of UCD in 2000. She has worked both in the public and private sector on projects such as: the evaluation of proposed SACs and NHAs for the NPWS; preparing management plans for SACs and NHAs; the restoration and management of peatland habitats; baseline ecological surveys and Screenings for Appropriate Assessment and Natura Impact Statements of various developments.

Fiona has written ecological management plans for sites featuring various habitat types such as native and mixed forests, raised bogs, lakes and fens for the NPWS as well as several Biodiversity Action Plans for different local community groups around Ireland. In recent years Fiona has worked with many local community groups as the TidyTowns movement has fully embraced the value of protecting and enhancing biodiversity on our local areas. This has led to Fiona working with communities all over the country on lots of positive projects such as pollinator-friendly planting schemes; wildflower management guidance and plenty of biodiversity awareness education work. She has also recently been able to combine her personal love of Irish local history with several projects where she has brought her ecological knowledge to form a natural history input to various local history projects such as the Conservation Plans for Lea Castle in Portarlington and the Timahoe Monastic site, both in Co. Laois. Fiona also worked on the local heritage study of the Cullenagh Mountain area of Co. Laois just 6km north of Dysartgallen (Cullenagh Community Group 2011).

In the voluntary sector Fiona is currently acting as a scientific advisor to the community-run Abbeyleix Bog Project and is a Vice-County Recorder of the Botanical Society of Britain and Ireland (BSBI) for Co. Laois.

1.2 Methodology

The Dysartgallen Church and Graveyard is a small site, approximately 0.1ha. It was visited for the purposes of this report on 17th October 2020. This is not the optimal time for any ecological survey, however, there were time constraints with this project. The author, however, is long familiar with the site having recorded the flora there before in the spring and summer seasons of previous

years as part of her work with the BSBI and she was able to incorporate this knowledge into this report.

The habitats present at the site are described in section 2 below. Habitats are categorised according to Fossitt (2000) with the Fossitt name and code given for each habitat recorded in the title of each habitat description. Plant species are named according to Stace (2019) and Parnell & Curtis (2012). Some small management suggestions are made with the purpose of enhancing and protecting the biodiversity of the local area at Dysartgallen whilst also respecting and protecting the social and religious importance of the site in Section 5. This section also includes a list of suggestions for further ecological studies and surveys that could be carried out in the future.

This report is hopefully just the start of a fascinating journey - Dysartgallen Church and its hinterland of the upper Owenbeg river valley have a wealth of both natural and social histories yet to be revealed!

1.3 Placing Dysartgallen Church and Graveyard in a natural history context

Dysartgallen Church and graveyard are such long established structures that they have become natural habitats in their own right and the location plays host to a number of plant and animals species that adds to the richness of biodiversity in the greater Owenbeg river valley in this hidden corner of south County Laois.

Fig. 1: Prolific ivy growth on Dysartgallen Church in early October 2020

While clearly the area has played a vibrant and busy role in the life of the population of south Laois, in more recent decades this has quietened down to the peaceful place it is today with just the occasional visitor. In this context, the

local biodiversity has thrived as it has been left to its own devices in many ways. The primary example being the Ivy (*Hedera helix*) which had grown so prolifically on the church ruins that it threatened the building's future (Fig. 1).

2. Habitat survey

2.1 The Church building and boundary wall: Stonewalls and other stonework (BL1)

As mentioned above, Ivy is the dominant plant growing on the walls of Dysartgallen Church. Ivy is of huge biodiversity value in Ireland. It is a native species of Irish woodland habitats which once covered most of the island prior to the arrival of humans. Since these woodlands have slowly all but disappeared, the Ivy has made itself at home on many human-made structures such as buildings and walls using the structures to mimic the trees it would usually use for support. Ivy is not a parasitic plant, contrary to popular belief, it makes all its own food but it does use trees and walls for support to reach up to the light. The biodiversity importance of Ivy rests in this habit of flowering and fruiting in late autumn and winter. Hardly any other plants in the native Irish context do this and therefore the Ivy is of crucial importance as a pollen source for hungry bees who are about to enter hibernation in late autumn and the berries feed countless birds and mammals during the hungry months of winter. Another feature of the plant is that fact that it and Holly are the only native evergreen species with large leaves, therefore, Ivy can host several species for hibernation in winter.

Apart from Ivy, several other plant species grow on the walls at Dysartgallen Church. The botanical survey carried out on 17th October 2020 recorded a number of species commonly recorded growing on walls in Ireland growing on the church walls at Dysartgallen. None of these plants pose the risk to the structure that they Ivy poses as their roots are small and fragile. The species recorded were: Rosebay willowherb (*Chamaenerion angustifolium*); Daisy (*Bellis perennis*); Mouse-ear hawkweed (*Hieracium pilosella*) (Fig. 2); Herb Robert (*Geranium robertianum*); the grass species Yorkshire fog (*Holcus lanatus*) and two small fern species: Maidenhair spleenwort (*Asplenium trichomanes*) and Rustyback fern (*Asplenium ceterach*) (Fig. 3).

Fig. 2: Mouse-ear hawkweed

Fig. 3: Rustyback fern

2.2 The graveyard: Hedgerows (WL1) and Dry meadows and grassy verges (GS2)

The graveyard itself features two habitats: Hedgerows (WL1) and Dry meadows and grassy verges (GS2). The hedgerow runs in one line along the eastern side of the graveyard separating it from the agricultural land behind. The hedgerow is old and well established dominated by Hazel (*Corylus avellana*) (Fig. 4). Hedgerows in Co. Laois are more often dominated by hawthorn (*Crataegus monogyna*) which was the main plant used in the late 18th and early 19th centuries when the fields of Ireland were enclosed by hedgerows (Feehan 1983). Hazel, however, is a dominant hedgerow plant in the upper Owenbeg river valley area. This may hint at the ancient native woodland history of the area where Hazel would have been the natural dominant understorey tree in the Oak-Ash-Hazel woods that would have covered the area (see Section 3 below).

Fig. 4: Hedgerow forming the eastern boundary of Dysartgallen graveyard, with Hazel the dominant species.

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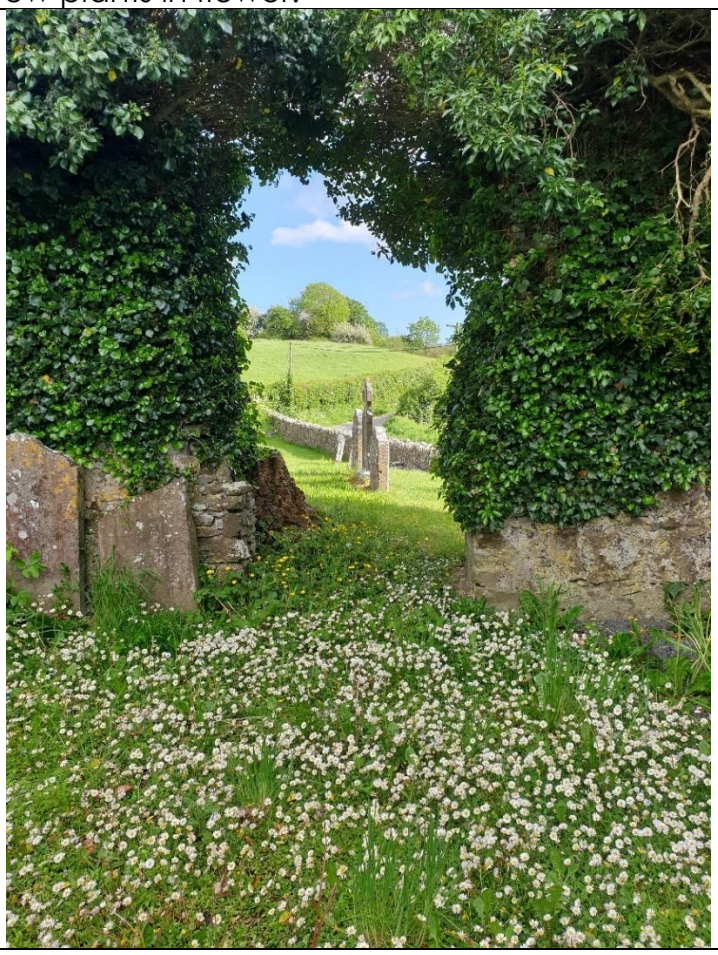
Other species noted were Elder (*Sambucus nigra*), Hawthorn and Ivy, all commonly found in local hedgerows. The base of the hedgerow features wildflowers to be expected such as the pretty cow parsley (*Anthriscus sylvestrius*); hogweed (*Heracleum sphondyllium*); herb Robert (*Geranium robertianum*) nettles (*Urtica dioica*); meadow buttercup (*Ranunculus acris*) and a profusion of daisies (*Bellis perennis*).

The graveyard itself is kept well mown which means that most species growing there do not get always get a chance to flower and set seed. It is, however, a potentially diverse wildflower meadow and the option exists to manage it slightly differently in the future in order to let the flowers bloom and set seed for long enough so that their diversity will add to the aesthetic and biodiversity values of the site. The species recorded there include: Yarrow (*Achillea millefolium*); Daisy (*Bellis perennis*); Dandelion (*Taraxacum officinale*); Prickly sow thistle (*Sonchus asper*); Meadow buttercup (*Ranunculus acris*); White clover (*Trifolium repens*) and Common sorrel (*Rumex acetosa*). The main grass is Yorkshire fog (*Holcus lanatus*) and Perennial rye grass (*Lolium perenne*).

Fig. 5: Picture taken in May 2019 showing the differences resulting from different lawn mowing regimes: a profusion of daisies flowering inside the church building in the foreground where little mowing happens compared to the lawn in the graveyard beyond where mowing is more frequent and thus there are few plants in flower.



With regard to other species of wildlife, the church and graveyard will provide foraging (places where food can be found) for several species of bird, mammal and invertebrate. With the Ivy removed from the church, as is the long-term plan for the preservation of the building, that will result in less nesting places for birds, this can, however, be mitigated against by allowing the hedgerow to thicken up a little and grow taller as thick hedgerows of over 2m in height provide the most nesting value for birds. Also if the hedge is managed on a three yearly cycle then it will allow flowering and fruiting to happen again adding to the aesthetic and biodiversity values of the site (see Section 5 below).

3 Dysartgallen in the context of its surrounding landscape

Any visit made to Dysartgallen church and graveyard will be richly rewarded with a wondrous atmosphere that bewitches the senses and the imagination leading to all kinds of wondering about what life was like for the people who lived and worshipped here over many centuries. This is helped in no small part by the bucolic landscape that the church and graveyard are nestled in. The church lies in the upper valley of the river Owenbeg. At Dysartgallen, the river is in its early stages being fed by numerous streams that flow down from the surrounding hills. The river flows on southwards past Ballinakill and Attanagh villages and then it joins the river Nore.

Fig. 6: View northwards across the upper Owenbeg valley at Dysartgallen. The church is hidden from view by the large ash tree in the mid-left of the picture.

It is also important to note that the Owenbeg is of international biodiversity value as it is protected under the EU Habitats Directive as a Special Area of Conservation (SAC). It is part of the River Barrow and River Nore SAC (Site code 002162) which is designated for the protection of many habitats and species which occur in and around the river system. The lower stretches of the Owenbeg also forms part of the River Nore Special Protection Area (SPA code 004233). SPAs are also of international biodiversity value protected under the EU Birds Directive. The River Nore SPA is designated for the protection of the Kingfisher.

At Dysartgallen the boundaries of the SAC stretch further than the river banks and out into the surrounding fields because they feature rare Orchid-rich grassland habitats and the remnants of the ancient Oak woodlands of south Laois which disappeared into the fires that supported the hugely important iron and tanning industries of nearby Ballinakill in the 17th and 18th centuries (Feehan 1983). Feehan (1983) makes reference to 'Coille, an old townland at Dysart Gallen where in 1794 the last of the native oakwoods in the Owenbeg Valley were felled'. The author and her fellow Laois botanical BSBI vice-county recorder Dr Mark McCorry recorded the intriguing Toothwort (*Lathraea squamaria*) along the lane heading south-west across the Owenbeg bridge from the church.

Fig.7: Toothwort pictured in Dysartgllen, May 2019

This parasitic plant steals all its nutrients from the roots of trees, usually Hazel, and therefore has no need for green leaves filled with chlorophyll so the only part we see are the flowers which appear in April and May (Fig. 7). With such an unusual life cycle, this is a plant that doesn't disperse too far, therefore its

presence being indicative of long established woodland has long been suspected (Praeger 1934; Perrin & Daly 2010). It is likely that this plant is a ghostly remnant of the ancient oak woodland of Dysartgallen. The hints of the antiquity of this part of the Owenbeg valley continue on the narrow road that winds up to the Ballinakill-Spink road where the locally famed wart stone and rag-tree are located. This beautiful leafy lane makes a wonderful entrance to the river valley most especially for the walker or cyclist. The road runs in a south-east direction down towards the bridge over the Owenbeg and in springtime it is alive with birdsong and literally dripping with wildflowers and birdsong. This road is referred to by Feehan (1983) as a 'holloway' - a roadway so old and well used that hundreds of years of both animal and human feet and carts along a sloped path have worn down and hollowed out this route. Hazel are the dominant tree along this road with some Ash and Hawthorn and the lush understorey features Cow parsley, Early purple orchid (*Orchis mascula*), Wild strawberry (*Fragaria vesca*), Hart's tongue fern (*Asplenium scolopendrium*), Ivy, Brambles, Wood avens (*Geum urbanum*), Herb Robert and Bugle (*Ajuga reptans*).

Fig. 8: The 'holloway' leading down to Dysartgallen from the Ballinakill Road, October 2020	**Fig. 9:** Early purple orchid (*Orchis mascula*) recorded on the holloway in May 2019
	

Fig. 10: The Dysartgallen 'rag-tree' and wart stone. The tree is actually five different species (Ash, Hawthorn, Blackthorn (*Prunus spinosa*), Brambles and Ivy are all used here) that are used to hang rags over the all important wart stone.

4 Fauna of Dysartgallen

While no detailed faunal studies were carried out as part of this preliminary ecology report, several species of birds were noted in the area during site visits. During a short team visit in October 2020 to the site Buzzards (*Buteo buteo*) and Ravens (*Corvus corax*) were heard calling over the site and a Sparrowhawk (*Accipiter nisus*) dramatically flew across the graveyard over our heads and over the hedgerow! Coaltits (*Periparus ater*) were busy feeding on insects in the ivy on the church building itself as the treatment of the offending Ivy was being discussed!

With regard to mammals on the site, it would be expected that Foxes (*Vulpes vulpes*), Badgers (*Meles meles*), Woodmice (*Apodemus sylvaticus*) and perhaps Hedgehogs (*Erinaceus europaeus*) would use the site occasionally for foraging.

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5 Recommendations for the future

5.1 Biodiversity enhancing actions

The following four recommended actions are simple ways in which a light change of management can enhance the biodiversity of Dysartgallen church and graveyard without any negative impacts on the historical fabric of the site:

- Slightly change the mowing regime to once every six weeks starting in late April. This will allow the small wildflowers a chance to flower and set seed but without the grass becoming too long for visitors. This will have a domino effect of encouraging more butterflies and other pollinating insects to use the area which will then lead to the occurrence of more bird species etc.
- Manage the hedge the old way which involves cutting back once every three years. This could either be applied to the whole length of hedge or to sections i.e. working on section A this year, section B next year, section C the third year and then back to section A the following year etc. In this way the native hedgerow is allowed to thicken up and grow a bit taller which not only makes it livestock proof but also more suited to nesting birds as they have more protection from predators but most importantly it allows the plants to flower and fruit more freely thus providing vital food for the local wildlife as well as the occasional foraging human!
- The southern corner of the graveyard used to have an Elder bush. The planting of a locally sourced Oak (*Quercus robur*) tree would create a suitable link to the ancient Oak woodlands that once surrounded the area as well as providing a lovely shady spot from which to view the site in the future.
- Install a bench for passing walkers to take their ease in this peaceful spot – maybe under the Oak tree!

5.2 Recommended Reading:

There are two great guidance documents freely available online specifically aimed at community groups who have graveyards under their care:

- All Ireland Pollinator Plan for Faith Communities – small changes to management of graveyard will maximise biodiversity (see: www.pollinators.ie/wordpress/wp-content/uploads/2018/08/Faith-Communities_actions-to-help-pollinators-2018-WEB.pdf)
- The Heritage Council has published a very helpful guide for the care of historic graveyards (see: www.heritagecouncil.ie/content/files/guidance_care_conservation_recording_historic_graveyards_2011_7mb.pdf)

5.3 Further studies

This report is a baseline study giving an idea of the ecology of Dysartgallen church and graveyard and its surroundings. This study was carried out in a very short and limited time period in October 2020. Spring and summer are the optimal seasons in which to carry out in-depth ecological work and this site has many more stories to tell so the following further studies are recommended should funds become available in the future. All will add to the interpretation of Dysartgallen church and its surroundings and several can incorporate community events as suggested below:

- Bat survey and community bat walk
- Bird surveys and a community bird walk
- Full survey of the flora of the Owenbeg valley – results to include a community wildflower walk in May when the majority of the local woodland ground flora are in bloom
- Moth survey – including a community event – could be tied in with the bat walk. The Moth survey part of the nearby Abbeyleix Bog Bioblitz event proved the most popular with the locals!

6 References

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Archaeological Report by Colm Flynn of Colm Flynn Archaeology

1.0 HISTORY OF DYSARTGALLEN CHURCH

General

The standing ruins of the ancient Church of Dysartgallen and its attractive graveyard setting are both included in the Record of Monuments and Places, reference (RMP No LA030-011001) and (RMP No LA030-011002) respectively, and are afforded legal protection under the National Monuments Acts (1930-2004). Situated in the townland of Aughnacross, from the Gaelic; *Áth na Croise*, which translates as 'Ford of the Cross'), the church stands near the southern bank of the Owenbeg River, some 3kms northeast of the village of Ballinakill. The name Dysartgallen is an Anglicisation of the Irish name *Díseart Gailine,* which translates as the *'hermitage or wilderness of Galin',* which is located in the civil parish of Dysartgallen, and the barony of Cullinagh. Sloping down towards the Owenbeg River, the land is fertile with a band of mature oak forest running along the north bank of the Owenbeg. To the south the land rises considerably to form Coopers Hill, part of the Cullinagh mountain range, which marks the county boundary between Laois and Kilkenny.

Early Christian Period

The Church of Dysartgallen is dedicated to the early Christian ecclesiastic St. Manchán who it thought to have died around 652AD, and who reputedly founded a monastery at this location in the seventh century. Little is known about St. Manchán and his followers, although the surviving hagiography indicates that he was born in Min Droichit, translated as the 'bridge of the bog', and Anglicised as Mondrehid, which previous writers have identified as being in County Offaly. Colm Flynn has identified the townland of Mondrehid between Borris-in-Ossory and Coolrain, in County Laois, as a likely alternative place of origin for St. Manchán. Mondrehid, is an early Christian monastic site, of unknown dedication, while the early Christian monastery at Dysartgallen would have been on the routeway linking the monastic sites at Mondrehid, Aghaboe, Clonkeen and Killeshin, all in County Laois.

Although there is no above ground evidence of the early Christian monastery at Dysartgallen, the extant church and graveyard at Dysartgallen are situated within a pronounced raised platform, almost 1m in height. This raised area forms an enclosure (RMP No LA030-011004), that is of unknown origin, and could be the

remnants of an earlier archaeological site. A base stone from an early Christian cross (RMP LA030-047002) is situated approximately 0.5km to the northwest of Dysartgallen Church, in Graigue townland. This roadside religious site includes a holy tree (RMP LA030-047001), where religious devotion is still observed by the local community. It is possible that the base stone from the cross originated from the church at Dysartgallen. The early Christian church of St. Manchán would most likely have been a simple, single-cell stone structure, although some of the very early churches were built of timber. These early churches would have been constructed within an enclosure, formed by a bank and ditch, or a stone wall. Larger early Christian monastic sites had concentric enclosures surrounding the central church. The location at Dysartgallen would have suited the site conditions favoured by the early monastics, as the site provided a sheltered area beside a fording point over the Owenbeg River, and was remote from existing settlements. There are no surviving records from the early medieval period that tell us how large the monastery at Dysartgallen may have been, and we do not know what survived when the Anglo-Normans arrived in this part of Laois.

Anglo-Normal Period

With the arrival of the Anglo-Normans in the twelfth century, the suppression of Gaelic society and the re-ordering of civic administration in Ireland required new Anglo-Norman settlements and places of worship. In some instances, existing Gaelic churches were altered and adapted to suit the needs and fashions of the Anglo-Normans. Some pre-existing single-cell churches were reconstructed as two-cell nave and chancel churches, while new churches were also constructed, in the two-cell arrangement. The Irish church was also reformed with the introduction of a church structure based on dioceses and bishoprics, within which parishes were subordinate to their relevant bishops. By the end of the thirteenth century most of the bishops in Ireland were Anglo-Norman. The first surviving written reference to Dysartgallen dates to the late thirteenth century, when the area is referenced in documents contained in the *Calendar of Justiciary Rolls of Ireland*, which are proceedings of the Court of the Justiciar of Ireland. In this document the area is referred to as *'Galyn'* which is listed in the ecclesiastical taxation of Ireland of 1302-6. The *Annals of the Four Masters* records that in the late fourteenth century James Butler, 3rd Earl of Ormonde attacked and burnt Dysartgallen. At this time the 3rd Earl of Ormonde was resident in Kilkenny Castle, which he had recently purchased from

the Despencer family. The Earl alternately held the position of Governor of Ireland, and Lord Justice of Ireland, as part of the administration of Richard II. These roles brought Ormond into direct confrontation with the O' Moore's of Laois; the O' Carrolls of Ely; and the O' Connors of Offaly. It was during one of these conflicts that caused the Earl to campaign through Laois that resulted in the attack on Dysartgallen. Although the church at Dysartgallen was attacked by the 3rd Earl of Ormonde, it was rebuilt following this event, and the surviving church at Dysartgallen most likely dates to this rebuilding during the fifteenth century.

Tudor Period

In the early sixteenth century the royal taxation of the diocese of Kildare and Leighlin, by the Commissioners of Henry VIII, included *Gallen* (or Dysartgallen), County Laois. This royal taxation was part of the English crowns break from the church in Rome, and was the precursor to the Dissolution of the Monasteries between 1536and 1541. In the royal taxation of the diocese of Kildare and Leighlin the church at Dysartgallen is taxed at a rate of £4, making it one of the most expensive taxes applied in Laois at this time. By comparison, the church at Borris (Ridge Church, Portlaoise) was taxed for £2. This indicates that in the early sixteenth century the church at Dysartgallen was substantial and in good repair, and was supported by a well-established parish. Surviving sixteenth-century documents record the reference to the name Dysartgallen (*Dysartgallyn*) in the *Extents of Irish Monastic Possessions, 1540-1541*, from manuscripts in the Public Record Office.

On the mid sixteenth-century map of Laois and Offaly (known as the Cotton Map) a single church building is depicted at Dysartgallen (*Disertgalin*) which has a pitched slate roof, a tall gable at one end, and a window.

Extract from 1560's Cotton map of Laois (after Sean Murray)

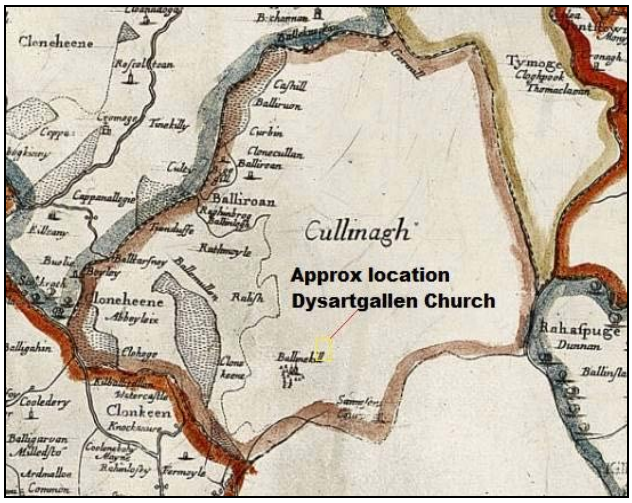
The medieval parishioners at Dysartgallen were responsible for the upkeep of the nave, whilst the clergy was responsible for the upkeep of the chancel. Exactly where

the homesteads of the medieval parishioners at Dysartgallen were located, remains unknown, although the undated enclosures and moated sites, at Aughnacross, Boleybawn, Knockardagur, and Moat, together with the townlands of Graigue and Keelagh, would have provided possible settlements and ample arable lands to support an agrarian community at that time.

Although the church at Dysartgallen was referred to in several sixteenth-century documents, by the time of the Liber Regalis Visitationis in *Tribus Provinciis Hibernie*, in the early seventeenth century, the chancel or choir at Dysartgallen Church was described as being in ruins. There is no evidence that the chancel was repaired after this date, although the nave may have continued to be used for some time. Information is also lacking on what caused the damage to the church - accidental fire, violent attack, or general dilapidation and abandonment, are all possible explanations.

Seventeenth Century

The mid seventeenth-century *Civil Survey* records that the area of Dysartgallen Church was in the townland of '*Aghacrosse* (Aghnacross), and was owned by the Sir Charles Coote, the Earl of Mountrath. A Down Survey map depicts a settlement and church at Ballinakill, but does not include a church at Dysartgallen, although the nearby property of Sampson's Court is depicted. This suggests that the Church of Dysartgallen was in ruins and was not considered to be an edifice of note.



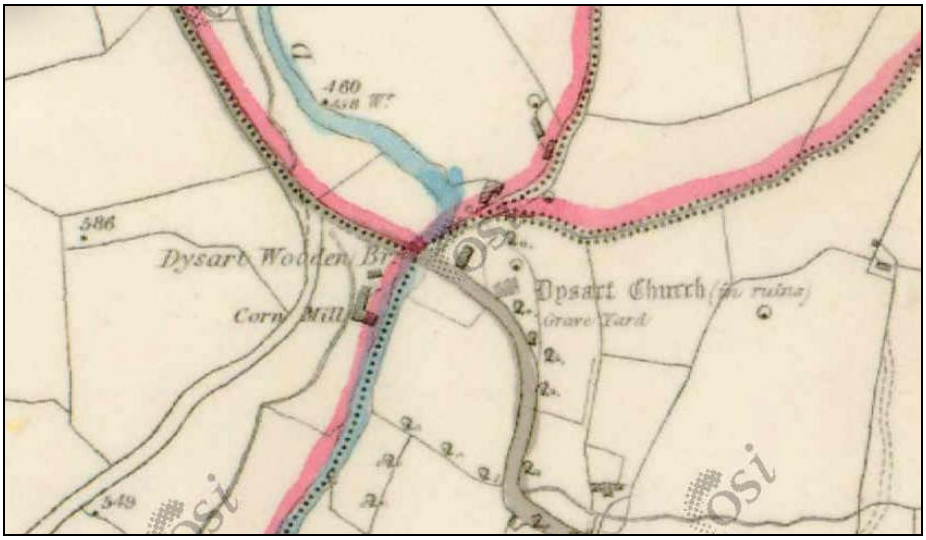
Extract from Down Survey map of Barony of Cullinagh

The late seventeenth-century map of Laois by Lamb is schematic, and only records settlements and significant buildings, such as Ballinakill and Sampson's Court, but does not however record Dysartgallen (see below).

Extract from 1689 map of Queens County (Laois) by Lamb

Nineteenth Century

During the nineteenth century, the first edition 6" to a mile Ordnance Survey map of the area depicts Dysartgallen Church as a rectangular building within an enclosed site also containing a graveyard. The enclosure continues further north beyond the boundary wall of the graveyard, and is curvilinear in shape, possibly indicating the line of an earlier archaeological site. On this map the church is described as being 'in ruins' while a limekiln is depicted just to the north of the church, and within the enclosure. A corn mill is shown to the west of the church, on the west bank of the Owenbeg River, while a fording point is labelled '*Dysart Wooden Br*'.



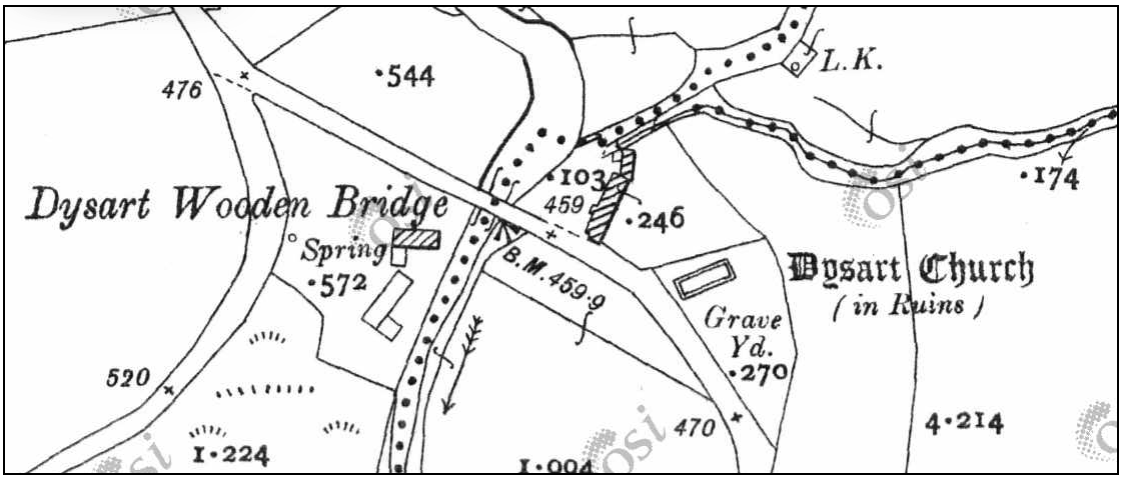
Extract from 1st ED 6" to a mile OS map of the area

These mid nineteenth-century Ordnance Survey maps were used for the compilation of the Primary Valuation of Ireland, known as Griffiths Valuation, which was an early form of property tax, organised by Sir Richard Griffith. The Griffiths Valuation from the mid nineteenth century for Aughnacross identify Reverend John Brown as being the owner of Dysartgallen Church and graveyard, together with much of the surrounding land. Lands around the church and graveyard was leased by Rev Brown to Patrick Doran, and John Purcell.

Twentieth Century

The early twentieth-century Ordnance Survey map at a scale of 25" to a mile, depicts the church at Dysartgallen as being a rectangular building and is also described as being 'in ruins' This map indicates that none of the chancel walls were standing or were noteworthy at the time the structure was surveyed, although there are currently masonry remains in place which indicate the possible extent of the chancel. It is possible that these masonry elements were placed in the location of the chancel in the twentieth century, possibly during the conservation works during the second half of the twentieth century. A wall is depicted just north of the church building on the 25" to a mile Ordnance Survey map of the area, which was not recorded on the earlier first edition Ordnance Survey map. It is possible that this wall was constructed following the Irish Church Act of 1869, which disestablished the Church of Ireland as the official church in Ireland. This act also dealt with the issue of unenclosed graveyards and unofficial burials, that had been a cause of public concern since the time of the Great Famine. Also recorded on the larger, 25" to a mile Ordnance Survey map, are several buildings to the north west of the church, indicating that by the early

twentieth century, the land had transferred into private ownership.



Extract from 1st ED 25" to a mile OS map of the area

2.0 GENERAL DESCRIPTION

Dysartgallen Church

The extant church at Dysartgallen is a rectangular building, orientated traditionally, east to west, measuring 12.7m long by 6.6m wide, and with wall thickness of between 800-900mm. It was constructed of un-coursed rubble stone, predominantly limestone but with some sandstone mixed in. Surviving evidence suggests that the church was a two-cell building when last in use, with the nave to the west and the chancel to the east, which is an arrangement that was common in small country churches of this period in Ireland. Due to the thick covering of ivy, it is not clear if the chancel was constructed at the same time as the nave, or was a later addition. Historical records indicate that the chancel was in ruins from the seventeenth century, and in the late nineteenth century Comerford reports that the foundations of the chancel measured 6.1m (20ft) long and 4.2m (14ft) wide. These measurements are very close to the current pattern of masonry that survives in the chancel, although it is not clear if the stones at the east end indicate rising walls, or if they have simply been placed there at a later date. Some local excavation would help to determine this.

The surviving masonry includes the west gable, which remains largely intact, the north and south walls that are incomplete and mostly rise to below the wall plate level, the chancel arch and part of the east gable of the nave, and low walls and loose stones that suggest the footprint of the chancel. When the church was in use

mass would have been celebrated in the sanctuary at the east end, with the congregation in the nave. Entry was usually gained into the church via a doorway in either the north or south wall of the nave, near the west end of the church. Dysartgallen Church has what appear to be door openings in both the north and south walls of the nave. Of these, the opening in the north wall is more likely to be the original entrance doorway. Window openings are also visible in both the north and south walls, near the chancel arch. The west gable contains a recessed central window, and evidence of a belfry. Recognisable constructional elements in the openings, which would help to date the church, have not yet been identified.

A stepped concrete plinth was added to the external side of the west gable during the 1960s, presumably to underpin and stabilise the structure. Remnants of original plaster coatings can be seen both internally and externally. are visible at the northeast corner of the nave. The chancel arch is segmental and constructed in rough sandstone voussoirs. A pronounced slot is on the east side of the east wall of the nave where it abuts the south wall of the chance. This suggests that the chancel was a later addition, to an earlier single-cell church. There are currently no recognisable features on view within the chancel, although these may come to light following full removal of the ivy, or through excavation of the fill that has raised the internal floor level to approximately 1.2m. A table tomb lies flat on the ground in the north east corner of the nave and probably dates to the eighteenth or nineteenth century. There is no evidence of any roofing material on the site, although if slate coverings had been used some evidence may be contained within the fill. Alternatively, the slates may have been quarried for use in other structures in the area. Similarly, there is no evidence of a floor finish, although the steady build-up of soil has covered most of the original floor levels in both the nave and chancel. There are, however, some stone flags evidence at the west end of the nave, which appear to have been placed in recent years. These flags have been arranged around a nineteenth-century limestone table tomb grave monument that has been turned into a make-shift altar supported on cut and rubble stone together with short length of sawn tree trunks. This was constructed by members of the local community, using salvaged material from the site, to facility occasional use for worship. Members of the local community were also responsible for moving four stone grave markers from the floor of the nave to rest against the walls, two on the south wall and two on the north wall.

Image showing interpreted nave and chancel medieval parish church (© JG O'Donoghue)

Dysartgallen Graveyard

The church at Dysartgallen is situated in a lozenge-shaped graveyard (RMP LA030-011002) that measures 54m north to south and 30m east to west. Originally this may have extended further to the north, as is indicated by historic nineteenth-century Ordnance Survey maps of the area. The graveyard, which was still in use for new burials in the twentieth century, is delineated by a mortar bonded stone wall to the west and north, and a stone wall and earthen bank and hedgerow to the east and southeast. Anecdotal accounts from community members indicate that the west (roadside) wall was constructed (or reconstructed) during the second half of the twentieth century around the same time that the west gable was underpinned. The graveyard is mostly contained with a raised area approximately 1m higher than the surrounding ground level. This very distinct raised area has been identified as an archaeological site (RMP LA030-011004) and is tentatively labelled as "an enclosure" in the Record of Monuments and Places (see image below). Within the graveyard is a large collection of upright headstones, Celtic cross headstones, table tombs, and uninscribed grave markers. Most of these gravestones date from the eighteenth century onwards, but some of the low uninscribed grave markers could be earlier. Some of the carved lettering on the headstones is high quality work, while others display a delightful archaic character in both the style of the lettering, the eccentric spacing and phonetic spelling. Currently the graveyard is well kept by the local

community who cut the grass and keep weeds and invasive species at bay. Although the masonry of the church is fully concealed on the southern, graveyard side, the juxtaposition of the standing headstones to the ruin is very successful visually, and will only improve with the ivy is removed and the stone walls revealed to view.

Dysartgallen church and graveyard, showing raised bank of possible enclosure, facing north

Conclusion

Although there is no above ground evidence of an early Christian church or monastery at Dysartgallen, it is possible that targeted archaeological investigations such as geophysical surveys or test trenching to both the church and graveyard, might determine if earlier archaeological elements survive. Any such investigation should extend to the larger graveyard that formerly surrounded the church that appear on the earlier editions of the Ordnance Survey. This may provide further information about the early development of the site, and equally to changes that occurred after the church became inactive. In the short term, some less invasive excavation of the soil and possibly masonry debris, found within the nave, and to a significantly greater depth in the chancel, may also provide valuable insight into the construction of the church. As this material lies above the internal floor levels of the church, there is less likelihood of uncovering burials, than would be expected outside the church walls, while the potential of uncovering identifiable elements of worked masonry that might help to date phases of construction, is reasonably high.

(INCLUDE IN CHAPTER 6.0 CONSERVATION STRATEGY)

Recommendations for further work

All proposed works at Dysartgallen Church and graveyard should be carried out in accordance with the National Monuments Acts (1930-2004); the document *Frameworks and Principles for the Protection of the Archaeological Heritage (Government of Ireland 1999);* the *Advice Notes for Excavators*; and the documents *Care and Conservation of Graveyards (OPW 1995)*; and *Guidance for the Care, Conservation and Recording of Historic Graveyards (Heritage Council of Ireland 2010).*

The surviving masonry at Dysartgallen Church has been badly damaged by vegetation and weathering, and possibly quarrying. If the ivy is not removed, the north and south walls will continue to crumble, and the chancel arch and west gable will start to collapse. Careful treatment of this vegetation followed by appropriate masonry conservation and consolidation will protect the extant masonry and reverse the current deterioration. Any masonry conservation work will focus first on stabilising and securing both the west gable and its window, and the chancel arch, together with other areas of loose masonry. The nave walls that return at right angles to the east and west gable are also important structurally, as they help to stabilise the two gables both of which include large structural openings, making them vulnerable. These walls should be consolidated, and the heads protected with either lime and sandy flaunching, or soft topping, while any raking walls should be protected with rough racking. All works should be carried out by skilled masons with conservation experience, under the guidance of experienced architectural, engineering and archaeological consultants who specialise in work of this nature. Consultation with the National Monuments Service within the Department of Housing, Local Government and Heritage, together with approvals from Laois County Council, will be necessary prior to commencing any repair works.

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Report on Structural Condition
and recommendations for stabilisation

Dysartgallen Church,

Ballinakill, Co. Laois

10th November 2020 **Project 20760** **Issue 1**

Table of Contents

1 Introduction

1.1 Outline of brief and proposed works

CORA Consulting Engineers were asked by Howley Hayes Architects to prepare a structural appraisal and recommendation for the repair of the upstanding masonry ruins of Dysartgallen Church near Ballinakill, Co. Laois on behalf of the Spink Community Development Association in conjunction with Laois Heritage Society.

This report is thus limited to the Structural Engineering appraisal of the upstanding ruinous walls and does not refer to any of the gravestones and other monuments within the churchyard nor deal with any Archaeological matters. Please refer to reports by others for this information.

1.2 Description of Structure

Dysartgallen Church is a small church of the late medieval period, roofless but still retaining much of its original masonry stature.

The church is located in the centre of a graveyard along a quiet rural road and approximately 20m from Owenbeg River.

The church ruins and churchyard are included in the Record of Monuments and Places (RMP) for Co. Laois (No LA030-011001 and RMP No LA030-011002 respectively) as established under S12 of the National Monuments, (Amendment) Act 1994; and in the Record of Protected Structures, established under the Planning and Development Act 2000 (11812009). For legislation regarding the care and repair of such refer to reports by others.

Details of the structure are shown on CORA drawings 20760-Sk-01 to Sk-05.

1.3 Method of Appraisal

The building was visited 6th November 2020 by Lisa Edden of CORA Consulting Engineers.

The inspection involved a close inspection from ground level of all the walls and an inspection from a MEWP of the high level wall tops to the West and East gables.

Although the ivy had been recently clipped back, it still covered the majority of the walls and it should therefore be noted that a certain level of additional findings would be expected once the ivy has died back further and repair works commence.

No invasive works were carried out, samples taken or tested.

2 Observations

Details of the structure are shown on the drawings CORA drawings 20760-Sk-01 to Sk-05.

2.1 Overall stability and general condition of masonry

From the extent of walls visible no excessive lean or other destabilising factors were noted. The walls can generally be viewed as being stable overall.

However the extent of degradation to the wall tops under the ivy is likely to be very severe and much of the upper 1m of the east chancel wall and possibly more of the side walls has already been lost to erosion following on from the loss of roof structure many centuries ago.

The west gable appears to be more intact although it has lost its upper belfry portion and the window arch in the west gable is significantly compromised. Note it is impossible to see enough to qualify the actual extent of loss of the window arch.

There has been significant robbing out of door surrounds; the two side window surrounds along with quoin stones to the corners of the church. The doors and windows to the long side walls have no heads.

The chancel arch in the east gable wall appears to be relatively intact under its ivy coat albeit mortar loss is very significant.

Water has been migrating down through the wall tops into the heart of the walls encouraging mortar loss further down and also plant growth in the top of the wall. These actions all lead to further stone loss that can be seen in the piles of loose stones on the wall tops and fallen stones stored on site.

2.2 Ivy and other vegetation

The east and west gables and the long south wall are compromised by severe ivy growth which has not only rooted in the foundations but also rooted in the mortar joints of the walls themselves and is potentially destabilising the masonry further.

The ivy had been recently clipped back at the time of the survey but still covered the majority of the wall surface. The full extent of the resulting damage cannot be determined until the ivy has been injected/ plugged with biocide and died back.

There are also two locations where woody stemmed tree saplings were observed to have rooted. These also need to be injected / plugged with a biocide.

There is also a large dead tree stump at the doorway on the south wall. This is obscuring damage to the base of the south wall immediately adjoining the stump

3 Recommendations & Conclusions

3.1 Repair works required

The repairs works required in order of priority include the following:

- Careful control and removal of vegetation
- Repairs to top of gable walls and the arches within the two gables – most urgent
- Repairs to all wall tops in general – urgent
- Repairs to all vertical faces of walls
- Addition of soft top to south and north walls for additional protection

Outline of the proposed repairs are shown on CORA drawings 20760-Sk-01 – Sk-06.

These are recommendations for the purpose of obtaining budget estimates for the repairs, applying for grants and the various approvals for the works. These recommendations will require detailed development as and when scaffold is erected, ivy removed and there is clearer visibility of the elevations.

3.2 Materials to be used in the repairs

All works to be preceded by exemplars.

It is assumed that the extent of any patching/re-building will only necessitate the use of the stone on site that has previously fallen from the wall. Indeed extent of repairs should be limited to the extent of this stone rather than importing new stone which may confuse the historic record. The only supplement should be new natural slate for pinning and also a selection of small wedge-shaped limestones pieces for pinnings.

The mortar to be used for repairs to the weathering faces such as wall tops should be formulated to be weatherproof.

The mortar to be used for repairs to vertical faces should be less hard and more permeable than the masonry units it binds.

Careful selection of these lime-based mortars will need to be made.

The specification for such should be developed as part of the schedule of works with final selection being based on exemplars produced on site by the chosen contractor.

A typical lime mortar specification is appended for initial reference.

3.3 Conclusions

- The upstanding remains of Dysartgallen Church are stable overall but hidden beneath very vigorous ivy growth and the detail of the condition beneath is not known but assumed to be in poor condition and thus vulnerable to accelerating erosion from stone falls.

- The most vulnerable parts are the east and west arches, therefore removal of the ivy and repairs to stabilise these should be instigated as soon as possible.

- The rest of the wall tops are also degraded and letting water into the core of the walls. Further stone falls can be limited by instigating repairs and stabilisation in the longer term

- A bat survey should be commissioned before any works begin.

Prepared by;

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Reviewed by;

Lisa Edden BEng CEng MIStructE MIEI

for CORA Consulting Engineers.

4 Appendix

4.1 Specification for Vegetation Removal

CONSTRUCTION PHASE Specification for containment of plant growth where Masonry works are being carried out

General – before starting

Vegetation treatment / cutting / removal should ideally occur within the period 1st September to 28th February (dates inclusive) to comply with the Wildlife Act 1976 (Amendment) 2000. www.npws.ie/legislation

Although the removal of structure endangering plant growth outside of this period is not illegal, consultation with the National Parks and Wildlife Service is advised where substantial removal of vegetation is envisaged.

It is possible that bats are roosting in dense plant growth and cutting of the plant foliage should only occur after inspection by a qualified bat ecologist, who will recommend appropriate mitigation measures. All bat species are protected under the Wildlife Act and it is prohibited to interfere with their roosts.

Only very specific use of herbicides or biocides as mentioned below is to be deployed at any stage as the general policy is to reduce the plant growth immediately at the wall but not to the surrounding areas.

Access for works

Extreme care must be taken when removing plant growth from walls and at high levels to reduce the risk of injury from falls and from falling masonry.

The operatives removing the plant growth should work in pairs.

All work above 1.8 metres must be carried out from a safe access platform such as a mobile tower, scaffold or MEWP such as a small articulating boom lift hoist.

Machinery must be operated by personnel qualified to do such.

NB: IF IN DOUBT STOP WORK

Disposal of waste

All vegetation waste should be chipped on site and a place for disposal preferably in the nearby vicinity agreed with the client. Note waste must be disposed of correctly and in accordance with the Waste Management Acts 1996 to 2011.under which parties disposing of the waste must be licensed.

http://www.citizensinformation.ie/en/environment/waste_management_and_recycling/waste_management.html

Prior and during repair works to masonry

Leave all growth in place and carefully weed wipe or very topically spray only those plants growing from foundations or walls with Glyphosate such as Round-up Pro Bioactive or similar approved. Apply according to manufacturer's instructions. https://www.monsanto-ag.co.uk/documents/. Extreme care must be taken to avoid any spraying in such close proximity to a water course

The herbicide should be applied as long as possible, at least 2 weeks, before any removal of growth.

This will serve to kill embedded root systems deep in the fabric of the masonry.

Removal of vegetation

After a minimum of two weeks all the plant growth growing from the foundations; sides and tops of walls should be clipped back hard. The vegetation may be mechanically trimmed initially but then carefully cut close to the building by hand.

Hedge trimmers and croppers are likely to be the appropriate tools for this job.

It is extremely important not to pull any plants away from the masonry walls as this will dislodge stones and mortar.

Any large or deep-seated roots are to be left in place during trimming operation so that they can be further treated – see below.

Under no circumstances should ivy that is growing up the walls be cut at the base as this only encourages development of any aerial roots and potential for much greater damage to the building in future years. Once the aerial roots have been removed during masonry works the stem will then be removed by the masons as they re-point down the wall.

Apply according to manufacturer's instructions Roundup Pro Bioactive or similar approved, to the cut faces of large stumps within 48 hours of felling. A soluble die will help in identifying which stumps have been treated.

Proceed with masonry repairs

Dig out as much of root as is practicable as masonry works proceed, without dismantling large sections of currently stable masonry. If in doubt consult Engineer.

Where roots remain drill all roots over 30mm diameter root with 13mm diameter drill and insert EcoPlug by Monsanto. Treatment to be carried out in accordance with manufacturers instructions.

Typically:- Treat within 2 days of cutting for optimum performance.

Using the prescribed drill bit make the appropriate number of holes in the living part of the stump just inside the bark.

Each hole should be 25-30mm deep, 13mm wide.

Place an EcoPlug Max in each hole with the narrow end first. The top of the plug will protrude by about 10mm.

Tap each EcoPlug Max until the head is flush with the stump. This will force out the sides of the plug and release the glyphosate.

Useful References:-

"Ruins – The conservation and repair of masonry ruins" ISBN 978 1 4064 2445 4

Department of Culture Heritage and the Gaeltacht Architectural Advice series /

" Bats, Birds, Buildings and You! The heritage Council

"Bats in Buildings" Guidance notes for planners, engineers, architects and developers

https://www.batconservationireland.org/

http://invasivespeciesireland.com/

"The Herbicide Handbook: Guidance on the use of herbicides on nature conservation sites"

Published by English Nature 2003 in association with FACT. ISBN 1 85716 746 5

4.2 Specification for Masonry Repairs using Lime Mortar

Note final mix designs to be a result of consultation with Lime suppliers; Cora Engineers; Architect and appointed Contractor and will be based on exemplars and a more thorough understanding of the previous construction obtained during masonry works preparation.

Lime mortar works can be affected by excessive wind, rain, sun or low temperatures.

If these conditions prevail the working areas must be kept moist by spraying and protection using polythene or hessian sheets sprayed with water at regular intervals. Spray hoses can be used for large areas or for damping down hessian sheets but should be used with caution to avoid jet action of water washing out mortar or over saturating a wall. Thus a bottle spray, sprayer back pack or similar is an essential part of the equipment.

No works to be carried out if below 5 degree Celsius temperatures forecast within 48 hours unless temperature control methods such as tented enclosures deployed.

Full discussions regarding mortar mixes and methodologies to be undertaken with Engineer prior to commencing works. Exemplars will be required for each pointing / rebuilding type and are to be agreed with the design team before undertaking any work.

<u>Stone Identification process - numbering and recording</u>

Any part of a wall that is to be dismantled or stones that need to be removed must follow strict protocol.

All stones to be numbered using removable chalk / paint; photographed and layout mapped using clear mona flex or similar before dismantling.

After dismantling apply same number in indelible ink / paint to hidden face and store stones in reverse order on scaffold or pallets etc ready for reassembly.

Mortar Binder

The use of Portland Cement shall not be permitted for this work. All mortars for repairs to the historic masonry including rebuilding of new sections of traditionally constructed walls will be lime and sand mixes as specified in this section.

Lime for structural repairs should be Naturally Hydraulic Lime NHL or indigenous quicklime.

There may be instances such as work in areas where a quick set is desirable because of the inherent wet conditions and the need to work in times outside of the ideal temperatures for lime because of the programme. Prompt Natural Cement may be sourced for these situations with the approval of the Engineer.

Metastar 501 pozzolan will be permitted for situations such as exposed wall tops.

Hot Mixed Lime mortars using indigenous quicklime as manufactured by Clogrennane, Co. Carlow should be considered for rebuilding. For masonry wall re-building it is proving a much quicker, more robust way of rebuilding rubble stone masonry and the expansion during slaking will be inherently useful in tightening up the arch voussoirs. The document “Hot Lime Mortars - HLM Project - TECHNOLOGY TRANSFER & APPLIED RESEARCH” should be consulted (see references).

Naturally Hydraulic Lime; Metastar; Prompt and quick lime for hot mixing are all supplied by the following (not exclusive list)

Stoneware Studios, Youghal www.stonewarestudios.com

Traditional Lime Co., Carlow www.traditionallime.com

All lime mortars should be prepared and mixed as recommended in manufacturer's printed guidelines. Bags of lime hydrate, natural cement, etc. must be stored off the ground in a clean, dry place and not used outside of the dates recommended on the bags. Quicklime should be stored in weatherproof air tight bags/containers.

Sand

Shall be clean, coarse, well-graded sharp sand.

Particle sizes should range from 3mm to fine dust for any ashlar repointing and 5mm to fine dust for repointing larger joints in stonework.

The sand colour is important in achieving a good visual match to the existing mortar.

Mixing

Lime and sand should be carefully measured by volume, using batching boxes (shovels are not sufficiently accurate to be used). A conventional cement mixer may be used.

Add lime and sand dry and mix thoroughly. Lime hydrate and sand must be mixed dry in a mixer for a minimum of 20 minutes prior to the addition of water, to encourage air entrainment and improved workability.

Add water carefully until mixture starts to run. It should be a little dryer than a cement-sand mix. After water is added allow a full twenty minutes further mixing. The long mixing period helps improve workability.

The mortar should be damp but not too wet. Mortar for re-pointing needs to be dryer than that used for original bedding because it is being placed in small quantities in a vertical situation.

Use mixed mortar within a few hours and do not moisten to extend the working life. Mortar when mixed must be used within the time scale recommended by the manufacturer.

Exemplars of all proposed works will be required at start of contract.

This should include the following at minimum:

i) Pointing of original facing stonework

ii) Insertion of new facing stonework where structural repairs required

iii) Sample wall top detail both regularised + rough racked to low east walls

Mix proportions

Mix proportions may need to vary depending on the lime + sand but are to be in the range:

Hydraulic mortar: For structural repairs, and wall tops

Structural repairs: 1 part NHL 3.5 lime to 2.5 – 3.0 parts graded sharp sand.

Sand should be minimum 5mm down with additional larger aggregate 3-6mm and 6-10mm supplied to site for gauging

Wall tops and slopes As above but gauge the NHL3.5 with Metastar according to manufacturers' instructions.

A typical Hot-mixed mortar: for repointing to vertical faces of wall

1 part quicklime (Clogrennane kibbled or powder):

3 parts coarse sharp sand 5mm down (If a silica sand as opposed to a calcareous sand is to be used then substitute 0.5 part for limestone dust).

Gauging by (level) bucket. Additional 3-6mm and 6-8mm aggregate may be required to create a good match where the joints are wide

Gauged Hot Mix Mortar - wall face work such as rebuilding sections of facing stones

1 part Hydraulic lime (NHL5 St Astier or NHL3.5 Roundtower grey):

1 part quicklime (Clogrennane kibbled or powder):

5 parts coarse sand (If a silica sand as opposed to a calcareous sand is to be used then substitute 0.5 part for limestone dust).

Gauging by (level) bucket. Courser aggregate may be required as above.

Moisture resistant Mortar - works below ground level to wall bases

1 part Naturally Hydraulic Lime NHL3.5 (upper band width NHL3.5 spec)

1 part Prompt Natural Cement

2 parts 5mm down washed sharp sand + addition of up to 10% 10mm aggregate

Note. The Prompt Natural Cement in these ratios will give an initial set in approximately one hour of placing

without dramatically increasing brittleness or reducing longevity.

For details of Prompt refer to supply and also
www.vicat.fr/en/Activities/Cement/Prompt-natural-cement

Re-laying Masonry

All loose stones / bricks are to be laid on a full bed of mortar, spread on a carefully cleaned and wetted upper surface of the underlying masonry. Slate or small stone

pinnings may be used to level the stone and all horizontal and vertical joints are to be completely filled with mortar well packed in so that the loadings of the structure are distributed evenly.

Think of mortars as soft beds to provide cushions between stones. Lime does not glue things together or create a hard, impervious skin like cement-based mortars and coatings.

Where new stones or bricks are to be inserted, allow for “dry packing” joint over with barely wet mortar.

The new mortar joints of the rebuilt stone and brickwork are to match exactly the existing joint depth and are to be struck flush, brushed off diagonally across joint in both directions and sponged off carefully to match exactly the re-pointing works to the remainder of the masonry. Care must be taken to ensure that mortar or grout splashes do not stain the existing masonry faces. See also note below re: beating back of mortar once stiff.

Preparation for Re-pointing and initial build-out

Prepare areas for re-pointing using small hand-held tools and by removing all the very friable mortar saving any small stones (“gallets” or “pinnings”) that come loose for re-use.

Good preparation is essential for all lime works and a brush is an essential piece of equipment for cleaning out joints, wall surfaces and for brushing pointed joints.

Do not use large blobs of mortar to fill in voids or loose areas; build up with pieces of stone. If the voids are large, bed in the small filler stones in the normal way. If smaller then fill void with mortar and then drive in a stone wedging it in tightly to tighten up loose masonry.

Re-Pointing

Carefully rake out joints to depth of twice the joint width. Face of raked out mortar to be cut back square and not sloped or V-shaped. Brush out joints to clear of all debris.

Wet down joints and adjoining masonry to be pointed thoroughly, on dry or windy days spraying may be needed several times and also occasionally during the pointing process and after the work is completed. The wetting is to stop the bed joints from drawing water out of the pointing mortar that would make it dehydrate and fail to set. Lay the pointing mortar on a hawk to a depth equal to the depth of the joint and square off the front edge. Using a pointing iron of similar depth to the joint, cut off thin strips of mortar and offering the hawk up to the joint press well in with the pointing iron.

Make sure the joint is well filled and the front face brushed off lightly once the mortar has become stiffer. Beating back the mortar with a churn brush (as supplied by lime

supply companies above) once stiff also assists with compaction of the mortar into the joint and reduction in shrinkage cracks.

Protection & Follow up Work

All finished work must be protected by plastic sheeting or damp hessian sheeting to prevent the joints or coatings from drying out too quickly or conversely becoming saturated

Some slight cracking may occur to the joints and this should be pressed back by hand/churn brush. Brushing up of finished pointing is essential to roughen the finish and clean up drips and splashes from adjoining areas.

All masonry works should be carefully planned such that proper protection can be included or scheduled for the warmer months of the year.

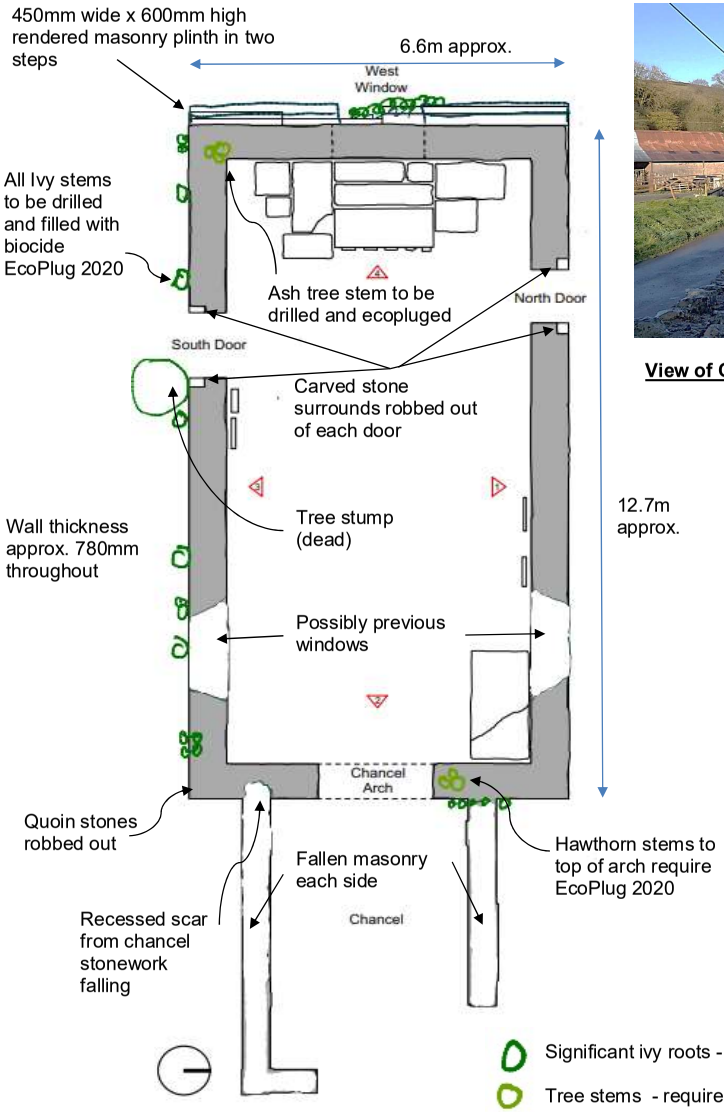
Precautions of suspending operations until the temperature reaches 6^0 C on a rising thermometer or 8^0C on a falling thermometer shall be strictly observed. Also frost protection and protection from saturation by rain is essential.

The horizontal surfaces of masonry are particularly vulnerable to saturation and thus frost damage in the weeks immediately following rebuilding/ pointing and should therefore be protected from excesses of water. The vertical elevations can be protected by draping with hessian

Consideration should be given to insulating and /or applying heat to wall faces if cold weather is forecast in the two months during or after masonry works are completed.

Care must also be taken to protect applied work from rapid drying conditions i.e. exposure to direct sunlight or drying winds. In these conditions it should be kept evenly damp for up to 30 days, depending on ambient conditions and the rate of set, by lightly spraying periodically with clean water. In areas exposed to direct sunlight, the possibility of a "greenhouse" effect must be avoided, either by shading the polythene or by substituting woven cloth materials.

Polythene, hessian or other approved sheeting that is used during curing should be arranged to hang clear of the face of the wall in such a way that it does not form a tunnel through which the wind could increase the evaporation of water. The polythene or hessian sheeting must not have intermittent contact with the pointing / render as this may cause a patchy appearance.



Key Plan

View of Church grounds from south

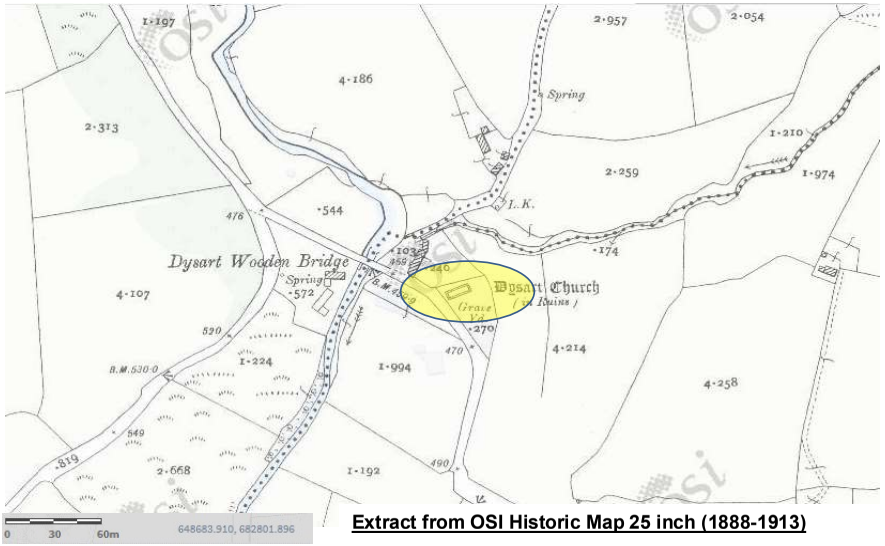
View of west gable wall internally

Fallen stone stored on site available for repairs

Significant ivy roots - require Ecoplugs 2020

Tree stems - require Ecoplugs 2020

All vegetation will require further treatment as per vegetation control specification prior to Masonry repairs



Extract from OSI Historic Map 25 inch (1888-1913)

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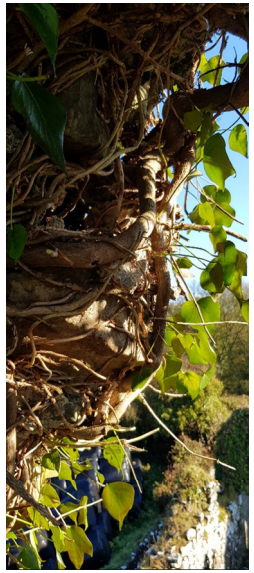
PRELIMINARY						TB	LE	LE	09/11/2020						
Project Details:						Project Name: **Dysartgallen Church**		Scale:	Project Number:						
Site Address:	Ballinakill, Co Laois					**Structural Condition Survey**		NTS	20760						
Client:	Spink CDA & Laois HS	P1	For information for inclusion in Report and initial cost estimates	10/11/2020	TB	Drawing Title:		Project:	Originator:	Zone:	Level:	Type:	Discipline:	Drawing No.:	Stage:	Revision:
Architect:	Howley Hayes Architects	REV. No.	REVISION DESCRIPTION	DATE	ISSUED BY	**Location and Plan**								Sk-01		P1

West gable wall - external

West gable wall - internal Significant ivy growth around arch window with roots embedded in masonry

Condition of mortar and stonework behind ivy as seen top LHS of outer face of west elevation generally in good condition



Pictures of ivy to inside edges of west window- Stones are being held in place by ivy therefore ivy removal needs to be carried out by stone mason and stones identified and referenced as dismantled

Assumed Sequence of Works

i) Erect working platform
ii) Spray vegetation to wall top and face each side
iii) After 2-3 weeks start to take off ivy very carefully from wall tops and in all of arch area.
iv) Install temporary timber propping and bracing to inside of arch area.
v) Fully record all stones in top 300-500mm of wall
vi) Carefully rake out some sample sections of top of walls of loose mortar and soil and fill.
vii) Arrange for inspection by Contract Administrator (CA) to agree full scope of works.
viii) Rebuild 200-300mm of wall top exactly as is now but with adjustments to give a top surface that is self draining.
ix) Repoint and stabilise around window area as best as is practicable - not full and final solution to this may not be decided in this first set of masonry works
x) Repoint rest wall inside and out as necessary using soft NHL2 or gauged hot-mix mortar. Note re-pointing should not be wholescale, only where needed.

All Masonry works to be carried out with materials to match existing. ie local stone as retrieved from site, slithers of natural slate used for packing structural joints. All mortars to be lime based as specification.

External plinth to outer face of west gable helps stabilise wall against overturning from retaining effect of built up ground internally. The condition of this masonry and its over render appear reasonable but should be further checked when all ivy removed

Rendered Masonry stepped plinth at external base of West gable

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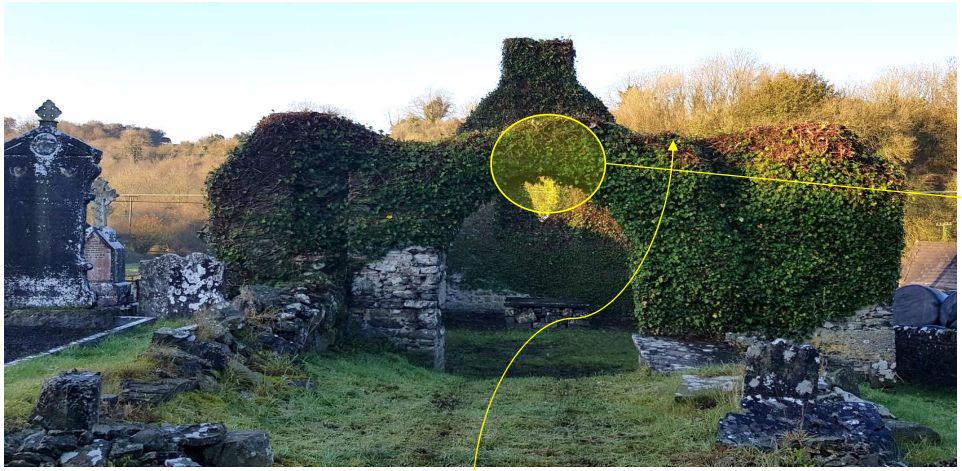
PRELIMINARY						TB	LE	LE	09/11/2020								
Project Details:						Project Name: **Dysartgallen Church**			Scale:	Project Number:							
Site Address:	Ballinakill, Co Laois					**Structural Condition Survey**			NTS	20760							
Client:	Spink CDA & Laois HS	P1	For information for inclusion in Report and initial cost estimates	10/11/2020	TB	Drawing Title: **West Gable**			Project:	Originator:	Zone:	Level:	Type:	Discipline:	Drawing No.:	Stage:	Revision:
Architect:	Howley Hayes Architects	REV. No.	REVISION DESCRIPTION	DATE	ISSUED BY	**Outline proposed repairs**									Sk-02		P1



East gable wall - external

Hawthorn stems at top of arch require EcoPlug 2020.
To be checked again as part of masonry works.
Note it may not be possible to fully remove tree root. Any remaining root to be drilled and plugged again

Arch voussoirs up to 400mm long generally of thin flat stone.
Unusual key stone formation that doesn't reach to underside of arch.

Mortar washed out to underside of arch with significant ivy growth around arch

East gable wall - internal

Assumed Sequence of Works

i) Erect working platform
ii) Spray vegetation to wall top and face each side
iii) After 2-3 weeks carefully clip back ivy to underside of arch and install temporary props to arch.
iv) When props installed carefully remove rest of ivy
v) Fully record all stones in top 300-500mm of wall
vi) Carefully rake out some sample sections of top of walls of loose mortar and soil and fill.
vii) Arrange for inspection by Contract Administrator (CA) to agree full scope of works.
viii) Pack and repoint masonry arch work with lime mortar and slithers of slate / sharp thin stone pinnings. Note props may need to be removed sequentially to allow full access to all arch mortar joints
ix) Rebuild 200-300mm of wall top exactly as is now but with adjustments to give a top surface that is self draining.
x) Repoint rest wall inside and out as necessary using soft NHL2 or gauged hot-mix mortar. Note re-pointing should not be wholescale, only where needed.

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Client:	Spink CDA & Laois HS	P1	For information for inclusion in Report and initial cost estimates	10/11/2020	TB	Drawing Title: East Gable		Project:	Originator:	Zone:	Level:	Type:	Discipline:	Drawing No.:	Stage:	Revision:		
Architect:	Howley Hayes Architects	REV. No.	REVISION DESCRIPTION	DATE	ISSUED BY	Outline proposed repairs								Sk-03		P1		

Vegetation growth with shallow roots on wall face, not harmful to wall

North wall as seen from above

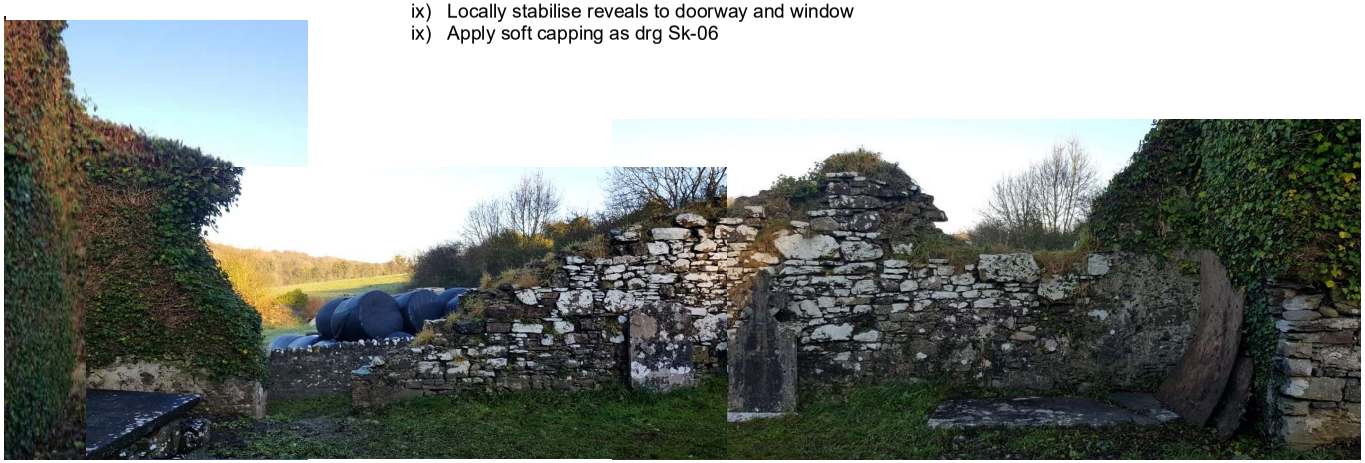
North wall - external

Note boundary walls should also be treated with respect and any ivy growth curtailed. Repair of boundary walls not part of immediate proposed works

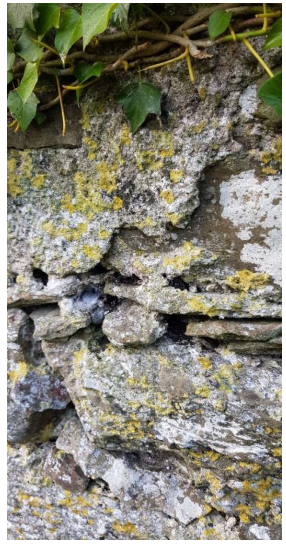
Assumed Sequence of Works

i) Spray vegetation to wall top and face each side
ii) Erect working platform
iii) After 2--3 weeks carefully remove ivy from wall tops and sides
iv) Fully record all stones in top 300-500mm of wall
v) Carefully rake out sample sections of top of walls of loose mortar; soil and fill.
vi) Arrange for inspection by Contract Administrator (CA) to agree full scope of works.
vii) Rebuild 200-300mm of wall top exactly as is now but with adjustments to give a top surface that is self draining
viii) Repoint rest wall inside and out as necessary using soft NHL2 or gauged hot-mix mortar. Note re-pointing should not be wholescale, only where needed.
ix) Locally stabilise reveals to doorway and window
ix) Apply soft capping as drg Sk-06

North wall - internal



Traces of historic lime plaster evident internally on wall



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PRELIMINARY						TB	LE	LE	09/11/2020										
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Client:	Spink CDA & Laois HS	P1	For information for inclusion in Report and initial cost estimates	10/11/2020	TB	Drawing Title: **North Wall**		Project:	Originator:	Zone:	Level:	Type:	Discipline:	Drawing No.:	Stage:	Revision:			
Architect:	Howley Hayes Architects	REV. No.	REVISION DESCRIPTION	DATE	ISSUED BY	**Outline proposed repairs**								Sk-04		P1			

South wall - external

Ash stems at top of south west corner require EcoPlug 2020. To be checked again as part of masonry works. Note it may not be possible to fully remove tree root. Any remaining root to be drilled and plugged again

Allow for local stabilisation at doorway and sides of previous windows where carved stone has been robbed out. Note stabilisation to take the form of minimal intervention with just such sufficient stone and pinnings in lime mortar

Tree stump (dead) to be cut down further so base of south wall can be attended to in masonry repairs

Corners where Quoins robbed out to be rebuilt to match other corners as closely as possible with squared off rubble work

South wall - internal

Assumed Sequence of Works

i) Spray vegetation to wall top and face each side
ii) Erect working platform
iii) After 2--3 weeks carefully remove ivy from wall tops and sides
iv) Fully record all stones in top 300-500mm of wall
v) Carefully rake out sample sections of top of walls of loose mortar; soil and fill.
vi) Arrange for inspection by Contract Administrator (CA) to agree full scope of works.
vii) Rebuild 200-300mm of wall top exactly as is now but with adjustments to give a top surface that is self draining
viii) Repoint rest wall inside and out as necessary using soft NHL2 or gauged hot-mix mortar. Note re-pointing should not be wholescale, only where needed.
ix) Locally stabilise reveals to doorway and window
ix) Apply soft capping as drg Sk-06

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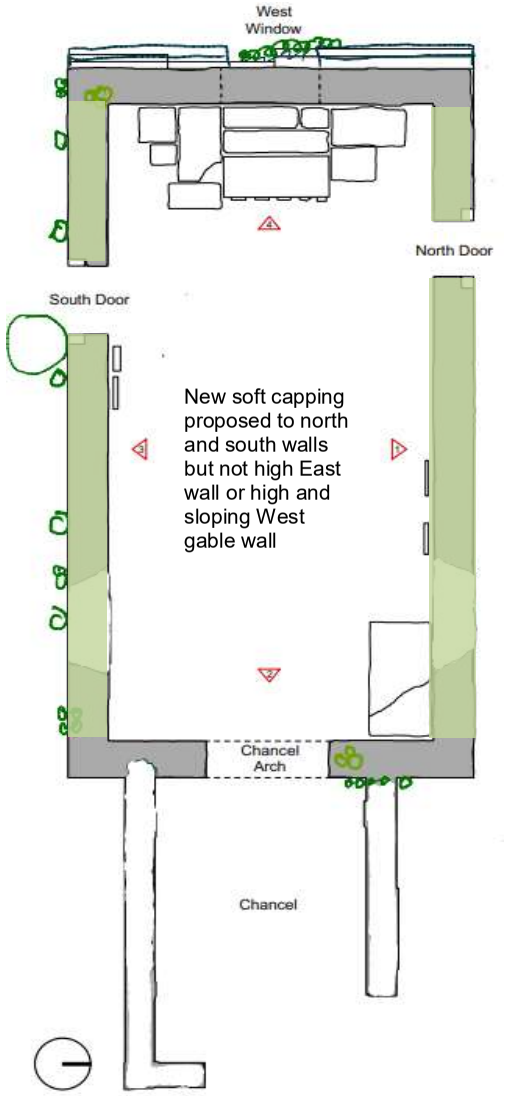
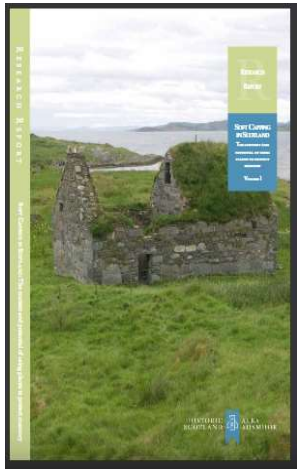
Project Details:						Project Name: Dysartgallen Church Structural Condition Survey			Scale: NTS	Project Number: 20760							
Site Address:	Ballinakill, Co Laois																
Client:	Spink CDA & Laois HS	P1	For information for inclusion in Report and initial cost estimates	10/11/2020	TB	Drawing Title: South Wall Outline proposed repairs			Project:	Originator:	Zone:	Level:	Type:	Discipline:	Drawing No.: Sk-05	Stage:	Revision: P1
Architect:	Howley Hayes Architects	REV. No.	REVISION DESCRIPTION	DATE	ISSUED BY												



Plan view on wall tops



Turf selection from field and application on wall should follow general guidelines set out by Historic Scotland in Soft Capping in Scotland Vol.1 Research Report concerning plant species variety and soil type.

Images from Building Limes Forum Ireland/ SPAB workshop on soft capping at Russborough 2018.

Above image, a cross section of the soil and turf layers can be seen atop the wall.

Right image, clay layer installed prior to laying sod.

Below image, completed soft capping to wall head is shown.

Assumed Sequence of Works

i) Complete all masonry works as drgs Sk-02 - Sk-05
ii) Erect working platform
iii) Source local clay and mix vigorously with sand to form malleable sticky mix. This is a water impeding layer to slow water penetration into top of wall and also provide a solid but soft base to sod
iv) Cut sod in as large apices as manageable and lay on top of wall and clay just tucking ends under and pinning with short lengths of bamboo or cut sticks that will not self root
v) Water sod though dry spells for rest of summer season
vi) Once yearly check sod for self seeded woody stemmed plants and either pull or apply topical weed killer to the weed only.

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Architect:	Howley Hayes Architects	REV. No.	REVISION DESCRIPTION	DATE	ISSUED BY	**Soft Capping Specification**								Sk-06		P1		

Howley Hayes Architects are recognised for their work in both contemporary design and for the sensitive conservation of historic buildings, structures and places. The practice has been responsible for the conservation and reuse of numerous buildings of national and international cultural significance, many of which have received RIAI, RIBA, IGS, Opus or Europa Nostra Awards. Under the Conservation Accreditation System, implemented by the Royal Institute of Architects of Ireland, Howley Hayes Architects is a Grade 1 Conservation Practice, and James Howley is a Grade 1 Conservation Architect. Over the years the practice has completed many projects for the restoration, conservation and adaptation of historic buildings and places including – Russborough, Lambay, the Law Society Headquarters at Blackhall Place; Hotel Ard na Sidhe; the Crawford Observatory & the Pavilion in the People's Park, Dun Laoghaire; together with numerous churches dating from the twelfth to the twentieth century. Howley Hayes Architects have to date been responsible for over 250 conservation plans, reports and strategic master plans for clients such as the Heritage Council, the World Monument Fund, the Department of Arts, Heritage, Regional, Rural & Gaeltacht Affairs, the Office of Public Works, together with many local authorities and private clients, including the Alfred Beit Foundation, Liebherr International, Diageo, several Irish Universities, numerous churches and the Governors & Guardians of Marsh's Library.