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KILLEAN AND KILCHENZIE OLD CHURCHES

KINTYRE



REPORT

I. INTRODUCTION

Addison Conservation + Design was asked by Killean and Kilchenzie Churches Preservation Association to assess the condition of the ruins of Killean and Kilchenzie churches and to assess the need for the urgent stabilisation work. This follows an indication from HES about the possibility of a grant for such immediate work.

The scope of our appointment was to visit the ruins, define the urgent stabilisation works, prepare drawings and a schedule of work with an indication of probable costs for grant and scheduled monument consent application and submit an application to HES. Once the grant application is successful, and the work completed we will inspect the stabilisation work on site, approve the payment to the Contractor and submit a grant claim to HES.

Due to a very short timescale of the project we have not been able to carry out any detailed research into the history of the churches but, on the basis of their Scheduled Ancient Monument status, and overall background knowledge of the architectural history, we have accepted them to be of national importance.

This report consists of the following sections:-

- Brief description of each church
- Observations from our condition survey highlighting the issues to be addressed by emergency stabilisation work for each church
- Policies to be adopted in the proposals
- Description of the proposed stabilisation works
- Opinion on costs
- Appendix A contains a detailed specification and procedures of the proposed works
- Appendix B contains our drawings.

The costing for these works has been prepared on the basis of past experience of projects of similar nature and tested by consultation with specialist contractors familiar with this type of work. Contractors experienced in such works are few in number and those who have to specify, direct and control their work have to be very experienced, use expert knowledge and judgement, and must be able to instruct all the work involved with cost control also at their fingertips. This level of expertise is assumed in the costing provided by this Report.

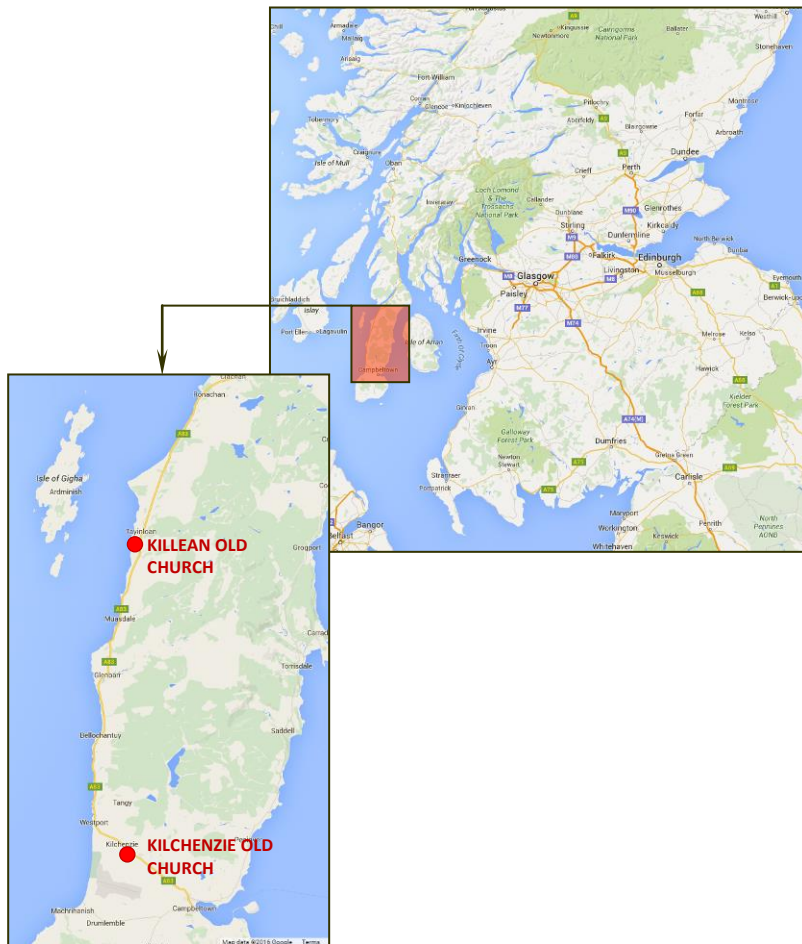
An outline of the necessary conservation policies have also been prepared. These have to adopted as fundamental criteria to be satisfied at every stage of the project.

- **SUMMARY OF CONCLUSIONS**

1. Both churches were extremely well built and, although currently some parts of the ruins are in poor condition and require urgent stabilisation works, overall the original masonry is robust. This is despite being heavily overgrown with vegetation.
2. The estimated costs of the emergency stabilisation works described in this report is approx. ██████ excluding VAT but including professional fee and contingencies. It is assumed that, due to the nature of the work, no archaeological recording is required prior to work on site

II. LOCATION

Both ruined churches are located next to A83 Campbeltown to Tarbert road in Kintyre



III. OLD PARISH CHURCH, KILLEAN

1. BRIEF DESCRIPTION

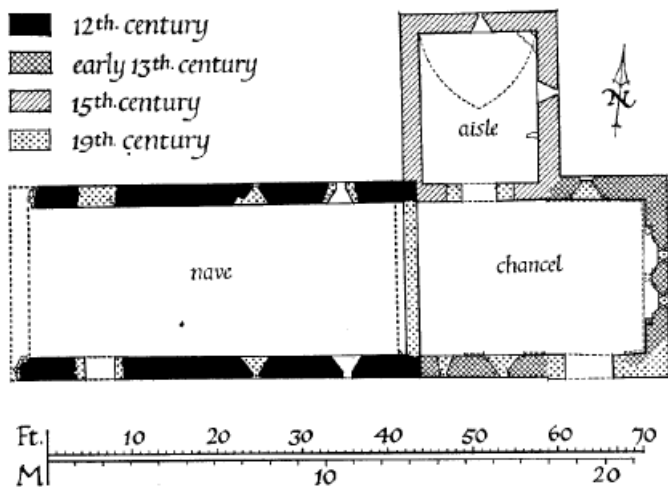
The original church is 12th century. Parts of its south and north walls were incorporated in later alterations and extension in the 13th century and later in the 15th century when an aisle was built to the north.

The 13th century work included the creation of a magnificent east window and large windows in the south wall.

These large openings were built up with masonry infills some time ago.

The church itself has been a roofless ruin for some 200 years but the aisle is still in its original form.

The aisle contains a collection of elaborate 14th and 15th century graveslabs.



EAST WALL WITH ELABORATE WINDOW OBSCURED BY IVY



VIEW OF SOUTH WALL COVERED BY IVY



NORTH AISLE COVERED WITH VEGETATION, VISIBLE ORIGINAL ROOFING SLABS

2. OBSERVATIONS ON CONDITION AND IDENTIFICATION OF AREAS OF IMMEDIATE CONCERNS

The church was extremely well built with solid masonry walls of some 850mm thick, good quality stone and lime based mortars. In numerous areas traces of an original render are visible internally and externally.

Most of the openings of the church are now infilled with masonry.

The south wall is leaning outwards relatively consistently from approximately 100mm to the west of the crosswall to some 250mm in the east part. This tilt is historic and due to the burials adjacent to the foundations. Although this distortion might appear to be extensive it is not threatening the stability of the wall itself.

The church has been heavily overgrown with ivy for over 60 years. We can say this on the basis of old photographs. The ivy has been trimmed recently, however, large roots have penetrated the walls and infills splitting them and pushing large lumps of masonry outwards. Our photographs and a sketch are showing this.

Although it is reasonable to assume that due to the extensive growth the wallhead stones and infills are loose and might be unstable, much of the wall in the lower parts is still in good condition.

There are also large tree stumps protruding from the wallheads and foundations. These now appear to be dead.

The aisle is still in its original form with large roofing stone slabs covering the vault.

The walls are covered with ivy but are still in good condition up to some 400mm downwards from the wallhead level. The ivy has penetrated the wallhead however and is now holding the stones and roofing slabs in place. A concern however is the amount of water retained by the ivy in the upper parts of the walls. This must have a detrimental impact on the internal environment of the aisle and its humidity level. We noted some minor salt efflorescence on one of the graveslabs.

From the above we identified two areas of concern:-

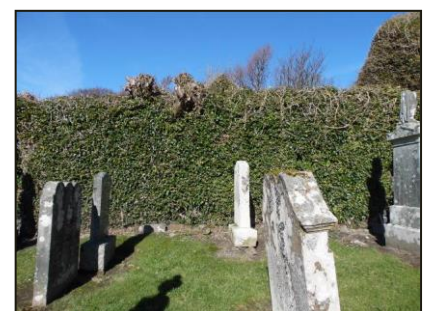
- Large splits in the east part of south wall
- Heavy ivy growth over the walls of the church and aisle



SOUTH WALL INTERNALLY – ABOVE AND BELOW - VISIBLE TILT AND DISTORTIONS AT INFILLS



SOUTH WALL AT DOOR – NOTE EXTERNAL SECTION OF WALL LIFTED AND PUSHED OUT BY IVY



SOUTH WALL – MASSIVE TREE ROOTS IN INFILLED WINDOW AREA



NORTH AISLE - ORIGINAL ROOFING SLABS LIFTED BY ROOTS, LOOSE WALLHEAD STONES HELD BY IVY



NORTH AISLE WEST WALLHEAD

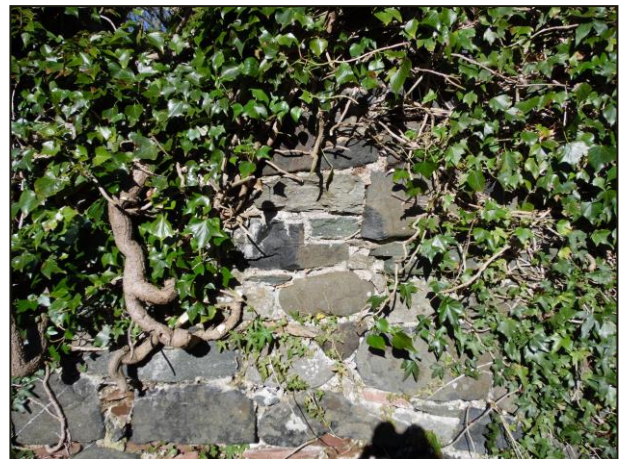
IVY RETAINING WATER AND PREVENTING WALL FROM DRYING
NOTE GOOD CONDITION OF WALL FACE SOME 600MM BELOW
WALLHEAD LEVEL



WATER RUNNING ON THE WALL FACE UNDER IVY



NORTH WALL INTERNALLY - HEAVY
IVY GROWTH



NORTH WALL INTERNALLY - INTACT
UNDER IVY

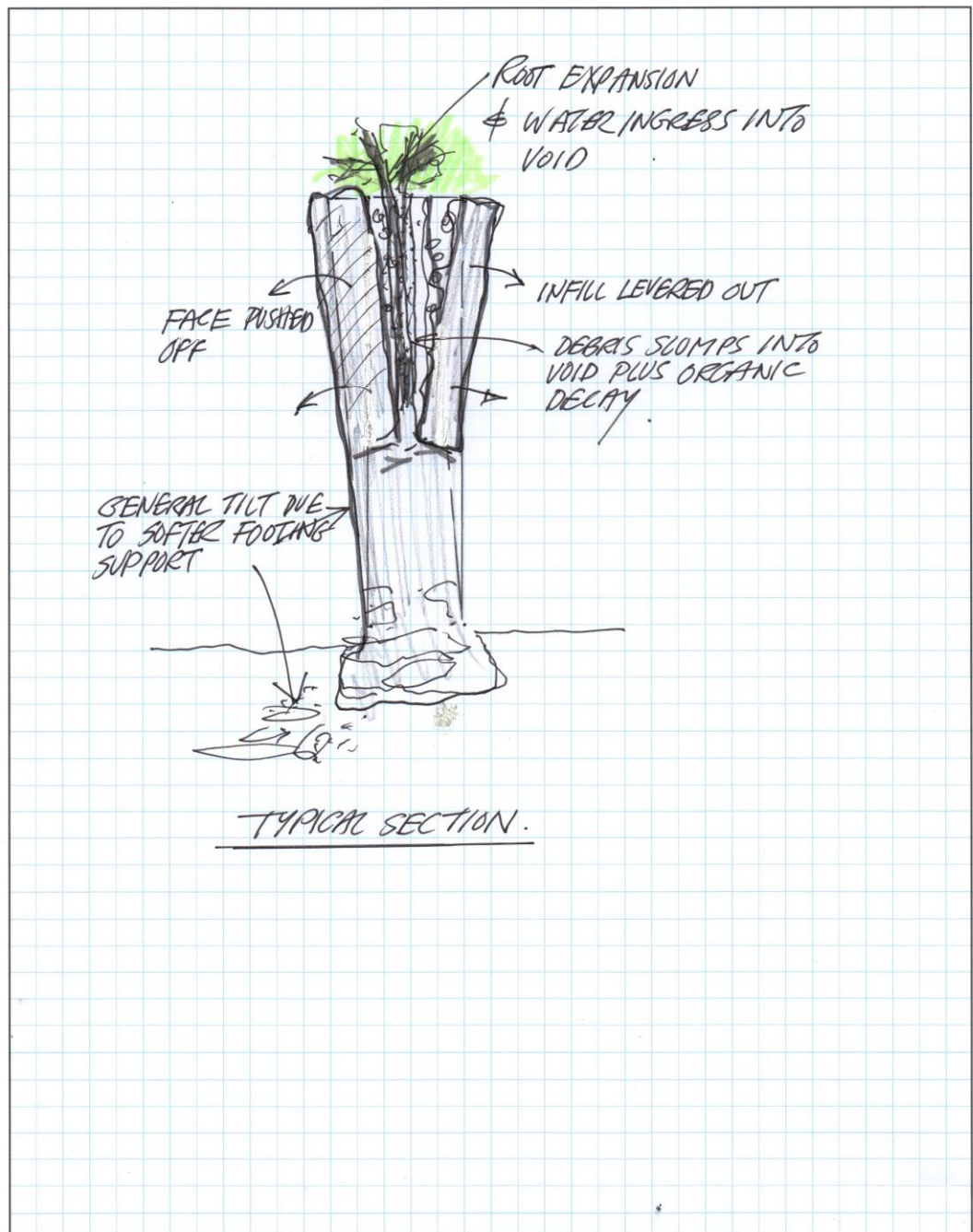
addison conservation + design

consulting engineers

CHURCHES

Drg No SK/O Job No 16/821
Rev _____ Scale _____
Drawn by JPA Date MAR16.
Checked by _____ Date _____

EFFECT ON ROOTS & VEGETATION
GROWTH



IV. KILCHENZIE CHURCH

1. BRIEF DESCRIPTION

The original church was a simple rectangular shape, altered or extended at some point

It served as a burial place for many years. At that time the west end of it was separated with railings and a large door opening was built up to create a niche. Currently, the niche area is covered by a metal canopy protecting important graveslabs.

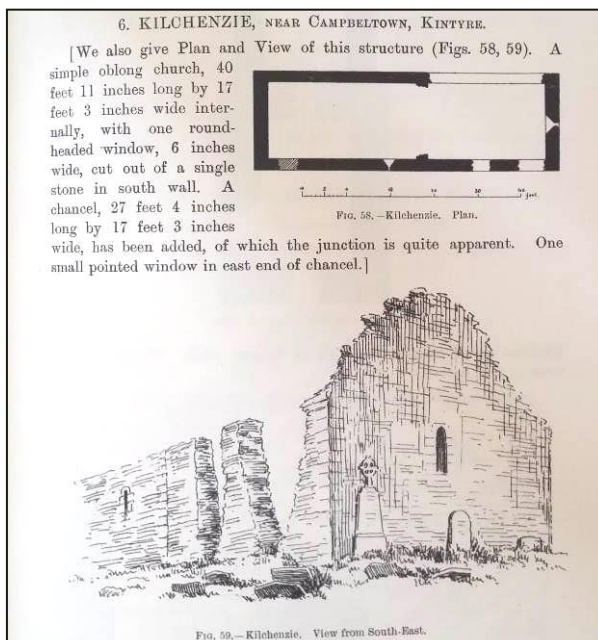
In the east part of the church, part of the south wall has ended up as a free-standing “stub”, probably due to localised collapses in the original windows areas.



OVERGROWN EAST GABLE



SOUTH WALL STUB – NOTE LARGE TREE ROOT AT THE BASE



EXTRACT FROM MACGIBBON AND
ROSS'S THE ECCLESIASTICAL
ARCHITECTURE OF SCOTLAND 1897

2. OBSERVATIONS ON CONDITION AND OF AREAS OF IMMEDIATE CONCERNS

The church was very well built with solid masonry walls of some 800mm thick, good quality stone and lime based mortars.

Some of the existing openings (door, window) of the church are now infilled with masonry. These infills are poor quality and largely eroded or displayed.

The south wall is leaning outwards relatively consistently due to burials adjacent to the foundations. This is a historic distortion and not threatening the stability of the wall in itself.

The church is heavily overgrown with ivy.

Although it is reasonable to assume that due to the extensive growth the wallhead stones and infills are loose and might be unstable, most of the wall in the lower parts are still in good condition.

There are also large tree stumps protruding from the wallheads and foundations. These now appear to be dead.

From the above we have identified two areas of concern:-

- The stability of the “stub” which lost some of its foundation stones due to the proximity of the graves and erosion
- Loss of support of the original door lintel in west end of the south wall due to erosion of the poor quality masonry infill



SOUTH WALL OVERGROWN WITH IVY



“STUB” – PUSHED BY TREE ROOT FROM INSIDE AND WITH VOID AT FOUNDATION LEVEL



UNSUPPORTED ORIGINAL LINTEL

V. PROPOSED IMMEDIATE CONSERVATION WORKS

1. APPROACH TO DESIGN AND EXECUTION OF CONSERVATION WORKS AND POLICIES

The following principles have been adopted in the specifications for the conservation works:-

- The work should focus on preventing any further loss of historic fabric as the most vulnerable elements are those which have archaeological and architectural importance and are critical to the understanding of the churches.
- The purpose of the specified works is to arrest any instability on A temporary basis pending fundraising and design of the main conservation works.
- A minimal disturbance of the existing masonry is critical for conservation and safety reasons.

2. DESCRIPTION OF WORKS

The proposal on our drawings (Appendix B) and procedures (Appendix A) and scope of immediate work represents everything what has to be done to prevent loss of stability of the ruins in their current shape.

Our concern at this point is to ensure that the localised instability should not accelerate out of control with the risk of further loss of historic fabric.

These works should to be done immediately.

The following works are in the urgent category;-

- (a) Installation of shoring system clamping the south wall of Killean Church
- (b) Localised packing of voids in the foundations and infill of Kilchenzie Church
- (c) Selective removal of vegetation in accordance with the procedure

3. COST ESTIMATES

Based on our surveys and assessment and on the basis of our experience in leading similar type of works we are of the opinion that the Immediate Works can be achieved within a budget of ██████ excluding VAT, some of the work can be carried out by the members of the Association on “in kind” basis. In addition to this some ██████ + VAT towards professional fees should be made to cover the cost of the survey, report, design work, grant application and “signing off” the completed work. No allowance for archaeological monitoring has been made as, due to the “non invasive” nature of the work, we believe that it is not essential at this stage.

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APPENDIX A

**PROCEDURES AND SEQUENCE
OF
PROPOSED EMERGENCY WORKS**

1. KILLEAN OLD CHURCH PROPPING OF DISTORTIONS - SEQUENCE OF WORK

(ref to SK 01, 02, 03)

The purpose of the propping is to hold in those masonry segments which have been wedged out of the wall by roots and other effects. The longstanding historical leaning of the wall has to be accepted for now. It is due to burials and early ground disturbance etc.

- 1) Select prop-pair positions based on our overall plan, erect scaffolding to get access to both sides of each prop, and cut back sufficient vegetation (about 18" wide) to give direct access to the faces of the wall. Do not pull roots out of the wall; cut them off or bend them out of the way if the battens.
- 2) Set up vertical timber battens propped off the ground on small packers; hold them temporarily in position and measure up for the top timber . (The timber must be C16 grade minimum although good quality second hand timber is acceptable).
- 3) Cut small steel][sections to length and predrill holes 14mm diameter in them at the positions shown. This is to suit 12mm bolts.
- 4) Install top timber and hold in position with temporary wooden stays off the battens.
- 5) Suspend the pairs of steel sections and bolt to top timber after plumbing them up. Remember to use single side toothed connectors to make a strong joint. These must be hammered into the timbers and not pulled in with the bolts.
- 6) Fix bottom timbers to steel and wedge tight against battens. Stitch nail them in position. Wedge any gaps left between battens and wall as agreed on site.
- 7) Make sure top timbers are packed and secured to support the steels

2. SELECTIVE REMOVAL OF IVY – SEQUENCE OF WORK

The purpose of the selective removal of ivy is firstly to allow installation of the bracing and, secondly, to remove selective to prevent future root damage and to minimize retention of water.

No work shall be carried out to the wallheads or within 600mm (2 feet) from the wallheads, or in the areas of masonry infills.

- 1) Vegetation removal should be carried out by 3sq feet sections of wall, after checking that the masonry is solid in the area of work
- 2) Cut the roots on the perimeter of the area and remove the ivy.
- 3) Treat the large roots with biocide
- 4) Do not remove roots from the masonry joints .
- 5) Do not support ladders on the wallheads or within 600mm from it.

3. KILCHENZIE OLD CHURCH – PACKING OF VOIDS

Ref to SK 10 and SK 11

The purpose of the work is to prevent loose foundation and infill stones from falling and destabilising the masonry around it.

- 1) Remove loose earth from the void without excavating
- 2) Line the void with Tyvek or similar separating membrane. This is to ensure that there is no bond between the masonry and lime concrete infill.
- 3) Mix lime concrete in proportion 1 part of hydraulic lime NHL5 to 2 parts of well graded aggregate from 20mm downwards. Mix should be semi-dry. Fill small hessian bags with lime concrete up to one third of bag capacity. This work can be done off site and prepared in bags transported to the churchyard
- 4) Place bags into the void lined with membrane and compact them thoroughly.

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APPENDIX B

DRAWINGS