



AREA 4 in total 1.0m<sup>3</sup>



AREA 5 1.0m<sup>3</sup>



AREA 3 in total 6m<sup>3</sup>  
approx 3m<sup>2</sup> each side

AREA 5 1.0m<sup>3</sup>

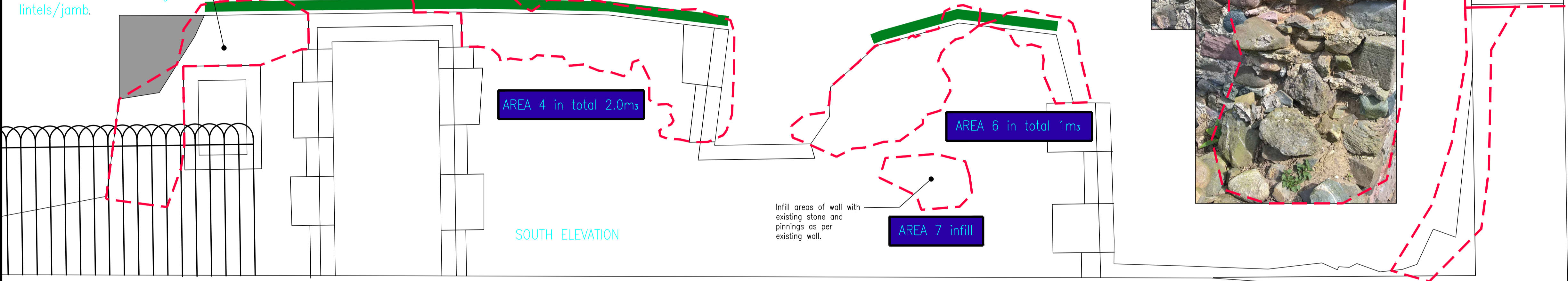


AREA 8 in total 1.5m<sup>3</sup>

See Str. Eng. Dwg  
600400-DG-01-P2  
for Lintel detail  
and spec.

AREA 14 in total 1.5m<sup>3</sup>

Add stone walling to provide  
more substantial bearing for  
lintels/jamb.



AREA 4 in total 2.0m<sup>3</sup>

AREA 6 in total 1m<sup>3</sup>

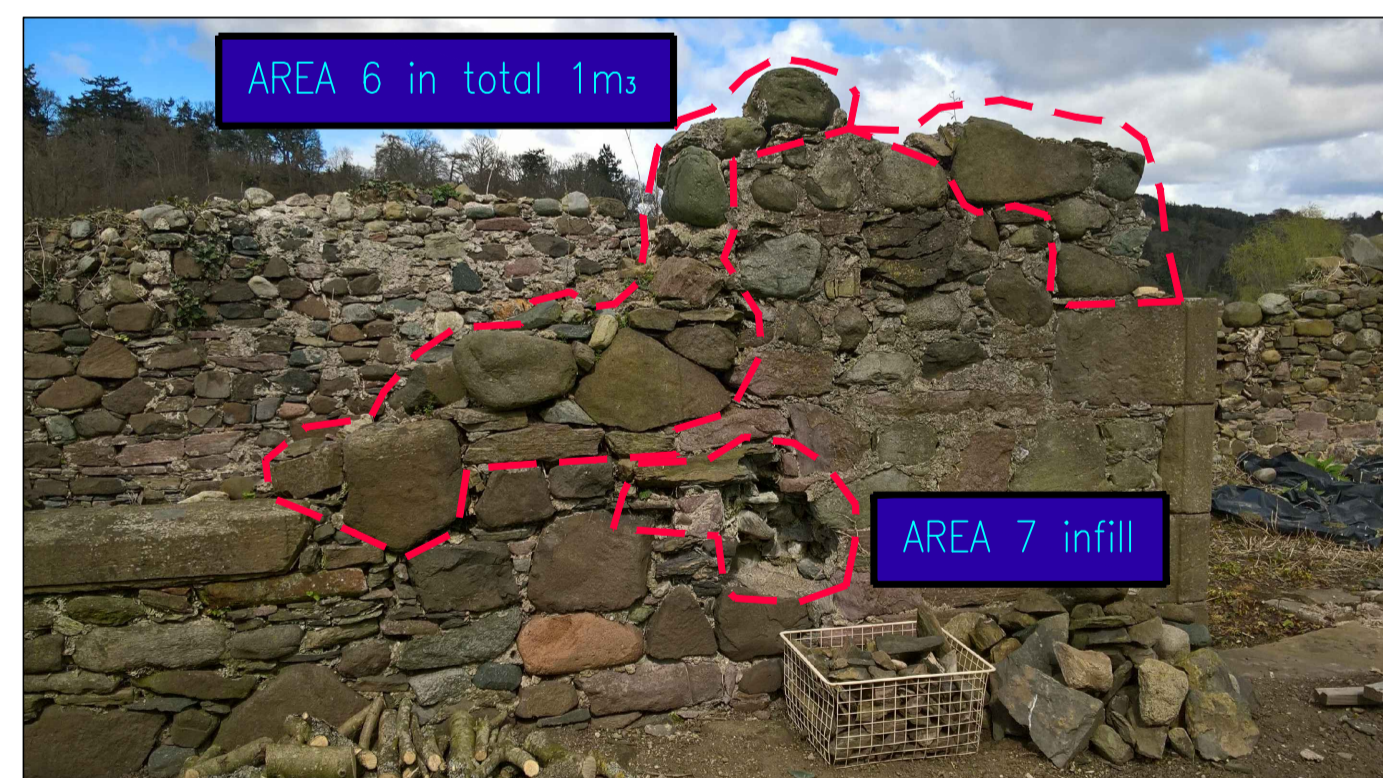
AREA 7 infill

SOUTH ELEVATION

Infill areas of wall with  
existing stone and  
pinnings as per  
existing wall.



AREA 4 in total 2.0m<sup>3</sup>



AREA 6 in total 1m<sup>3</sup>

AREA 7 infill

AREA 5 1.0m<sup>3</sup>

- Area 1** - See detail 1 - See Structural Engineer's Detail. Oak lintel 120x120mm to inner face.
- Area 2** Re-build areas of stone wall where stones are loose, but in position. Secure and consolidate. Re-build approx. 3m<sup>3</sup>.
- Area 3** Rough-rack rubble masonry gable wall head to match the wall core as closely as possible. The rough racking and pointing should be profiled in such way that rainwater will be shed off the wall head and ensuring that no pockets are formed where water could pond Area=6m<sup>2</sup>.
- Area 4** - Stonework in danger of collapse - Re-build wall area as indicated on photographs approx. 2m<sup>3</sup>. ANY TEMPORARY PROPPING SHOULD BE DESIGNED BY THE CONTRACTOR AND INSTALLED UNDER HIS DIRECTION.
- Area 5** - Rough rack and stabilize as per above - Re-build approx. 1.0m<sup>3</sup>.
- Area 6** - Re-build and consolidate wall head. Rough-rack wall head to match the wall core as closely as possible. The rough racking and pointing should be profiled in such way that rainwater will be shed off the wall head and ensuring that no pockets are formed where water could pond Re-build approx. 1.0m<sup>3</sup>.
- Area 7** - Infill area with existing stone and appropriate pinnings.
- Area 8 + 9 + 12 + 13** - Pinning stones to be driven into any large/washed out open joints towards the base of the wall as well as wall head and wall jambs to openings by mason with wooden mallet or timber shaft of a hammer. Any replaced or missing pinnings are to make physical contact prior to re-pointing to maintain the structural integrity of the wall and original appearance.
- Area 10** - wall face to be re-built with existing stone /pinnings/lime mortar to match existing. Re-build approx. 4m<sup>2</sup>.
- Area 11** - Prior to scraping the church interior ground level, salvage fallen stone for use in wall consolidation, clean off any cement mortar and re-use stones, bedding with lime mortar. No reduction to original floor level. Consolidate level with earth in situ under archaeological supervision. Any finds should be brought to the attention of the Archaeologist.
- Remove/cut back vegetation to below ground level and as far as is reasonably practical without interfering with wall structure or leaving a trip hazard. Plug any live roots. Area - approx. 60m<sup>2</sup>
- Lay Terram Weedguard/75mm washed river gravel to threshold level at doorway on South Elevation.
- Area 14** - Rough rack and stabilize - Re-build approx. 1.5m<sup>3</sup>. Minimal stonework to the west of the east jamb to be consolidated/re-built as necessary to allow the west jamb to be strengthened, providing a bearing for the existing stone outer lintel. The extent of the re-building works should be the minimum necessary to consolidate the wall and make it safe. Allow for 3no. 100mm wide x70mm deep concrete lintels and 1no. 120x120mm Oak lintel to inner face.
- Cutting back ivy growth** - Generally cut back at all growth points. However, do not remove woody root systems from within masonry of the monument, if this will require extensive rebuilding to anything other than the areas indicated on the photographs. Once ivy has been cut back to observe the individual stones, take record photographs, use water soluble painted grids and number the stones before any major dismantling works are undertaken as detailed below. Dismantle 1 metre at a time. Remove point on completion.
- For pricing purposes, assume wall head reconstruction as per red dashed areas on photographs.
- Rough-rack rubble masonry to match the wall core as closely as possible on rebuilt areas as well as below any soft capping. The rough racking and pointing should be profiled in such way that rainwater will be shed off the wall head and ensuring that no pockets are formed where water could pond.
- Re-Pointing/Pinning General Stonework** assume 85% INTERNAL AND EXTERNAL ELEVATIONS OF CHURCH. Consolidate wall heads and remaining walls with 1 part NHL5 to 2.5 parts SO.75xLoanleven Quarry Concrete sand from Almondbank, Perth, Scotland, Aggregate Grading Updated Nov.2012. For both pointing of existing walls and bedding of new stones.
- Preparation Work**
- Detailed photographs** - are to be taken of each area prior to re-pointing. Carefully rake out decayed mortar/cement mortar and small scale vegetative material with penetrating roots without damaging the edges of existing stones to reach sound mortar within the depth of the wall. No power tools to be used. Any pinnings or larger stones which become displaced are to be carefully laid aside in the manner by which they were taken from the wall so that they can be readily identified when re-building.
- Methodology Wall Consolidation**
- Raked out areas** - should be carefully flushed out with water taking care to also flush out loose debris down the entire wall face rather than letting it accumulate on the lower faces of stonework. The resulting depth of space into which new lime mortar needs to be placed, should be a minimum of 3 times the width of the joint. Anything less will not give the new lime mortar sufficient space to set and perform appropriately.
  - Pinning stones** to be driven into any large/washed out open joints towards the base of the wall as well as at wall head and wall jambs to openings by mason with wooden mallet or timber shaft of a hammer. Any replaced or missing pinnings are to make physical contact prior to re-pointing to maintain the structural integrity of the wall and original appearance.
  - Preparation of mortar** - The volumes of re-pointing mortar ingredients to be "batched" accurately so that successive mixes can follow the same proportions.
  - Pointing** - New mortar to be tamped back into the heart of the wall and be pressed well into the spaces to eliminate voids. The mortar mix used for tamping should be the same as that used for the final re-pointing. When the mortar has started to set, carefully dab the surface with a wet sponge to create a "less new" finish.
- Methodology - re-building areas of walling**
- The exact positions of all face stones and any notable archaeological/architectural features on the re-built section of the wall should be recorded on a planning frame. This is a wooden frame on which clear plastic sheeting is attached. The frame must be positioned on pins in the masonry to ensure it can be re-aligned precisely into the same position at any given time. Each individual stone and the skyline of the broken wall head is traced onto the planning frame to allow an accurate build. Each stone to be numbered so that it can be clearly identified at a later stage.
  - Dismantling the wall can now begin. As each face stone is removed it should be numbered using indelible marker or paint, in accordance with the planning frame. The number should be written on the top bed of the stone prior to its removal from the wall. (the top course should be marked on the bottom bed so that it's hidden once the wall is re-built.) The removed stones must be cleaned of any residual mortar and then stacked away from the wall ready for rebuilding later.
  - As the face work is dismantled the core can be removed. These stones should also be cleaned of residual mortar as far as practical (before stacking separately from facing stones). Any roots or soil within the walls should also be removed/cut back as far as possible within the area of re-building.
  - Once the dismantling is completed the exposed wall head should be prepared for resetting the face stones by brushing off loose material and washing with clean water. Re-building can then commence, starting with the facing work, which should be positioned in accordance with the planning frame. On completion of each facing course, the core work should be installed, thus building across the wall in levels. This process continues until the final course of face work. It will be accepted that the finished wall head may be rough raked as closely as possible, but different from the "as found" position to mitigate against ponding rainwater. It is important not to compromise any archaeological/architectural features that exist within the added masonry.
  - With the exception of very low walls (below approx. 1.5m) a scaffolding platform will be required. It is essential that an independent access mason's scaffold is used and that it is not fixed to the wall.
  - Wall to be dismantled in short sections as required.

**Rait Old Parish Church**

**GENERAL**

- Salvaged stone to be set aside for re-use. Any carved stones should be classed as a "find" by the archaeologist.
- Any ground reduction will require archaeological control.
- A Photographic record should be undertaken as work progresses at key points during re-building.
- Re-built stone should match existing where possible, but be readable to the trained eye.
- All Architectural Drawings to be read in conjunction with Structural Engineer's Report and drawings.
- General rough rack wall all heads, as per Area 3 before soft capping.
- Internal AND external faces of wall to be re-pointed/consolidated.

**Soft Capping**

Soft capping required once concrete capping and consolidation/rough racking of wall head has been carried out. Commercially available turf with a minimum 150mm soil depth, seeded with a mix specified by Scotia Seeds Brechin, based on their analysis of the local seed mix.

Dimensions required are Approx. 17metres at 800mm wide.  
Store turfs on plastic sheets on scaffold/ground and minimise time lapse between cutting and placing on wall-head. Stored turfs to be watered and treated with hydroponic crystals to maintain growth prevent drying out.

**REVISIONS**

- Rev A. 20 06 2016 - Tender Issue to PKHT
- Rev B. 27 06 2016 - Mortar Specification
- Rev C. 20 07 2016 - Area 14 - built up jamb for bearing
- Rev D. 25 07 2016 - General Notes added
- Rev E. 04 08 2016 - Update re. turf spec. / Area 14

Perth and Kinross Heritage Trust  
The Lodge  
4 York Place  
Perth  
PH2 8EP

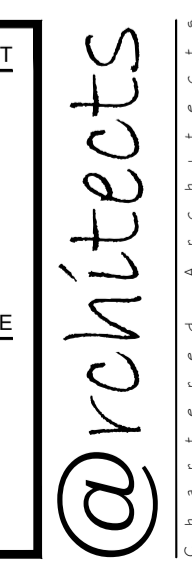
Rait Old Parish Church  
Rait  
Perthshire  
NGR: NO 1667 2227

Proposed Plan

SCALE	DATE
1:50 @ A1	April 2016
CAD FILE	DRAWN BY
1148	GM

PROJECT

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