

Record of Conservation Works at St. Columba's, Swords, Co. Dublin



CMF 2022

Introduction

Funding was allocated to St. Columba's, Swords, Co. Dublin for conservation works on the round tower (DU011-34005--) and the residential west tower of the medieval church (DU011-34004--). A methodology for stabilising key features (round tower roof and bell room level in the round tower, the window surround on the north elevation and the window mullion on the west elevation of the residential belfry tower) was agreed and a programme drawn up. This followed on from the production of a Conservation Management Plan in 2021.

Six mortar samples were extracted under the supervision of Finola O'Carroll of TAP Ltd. Four were taken from the round tower and two from the church tower; all were submitted for mortar analysis.

Report

The scaffolding was erected and in use by the third week in August and work on the roof of the round tower commenced immediately. This had been in very precarious condition and was in urgent need of repairs.



Round tower roof prior to conservation



Roof with completed works covered in sacking; the cross has been stabilised



Completed work on the roof

The columns framing the window openings at the top of the round tower were in very poor condition and mortar had weather out of the joints of the entire upper level of the wall in the interior. Work commenced in tandem with the re-pointing of the exterior to re-build and stabilise the columns.

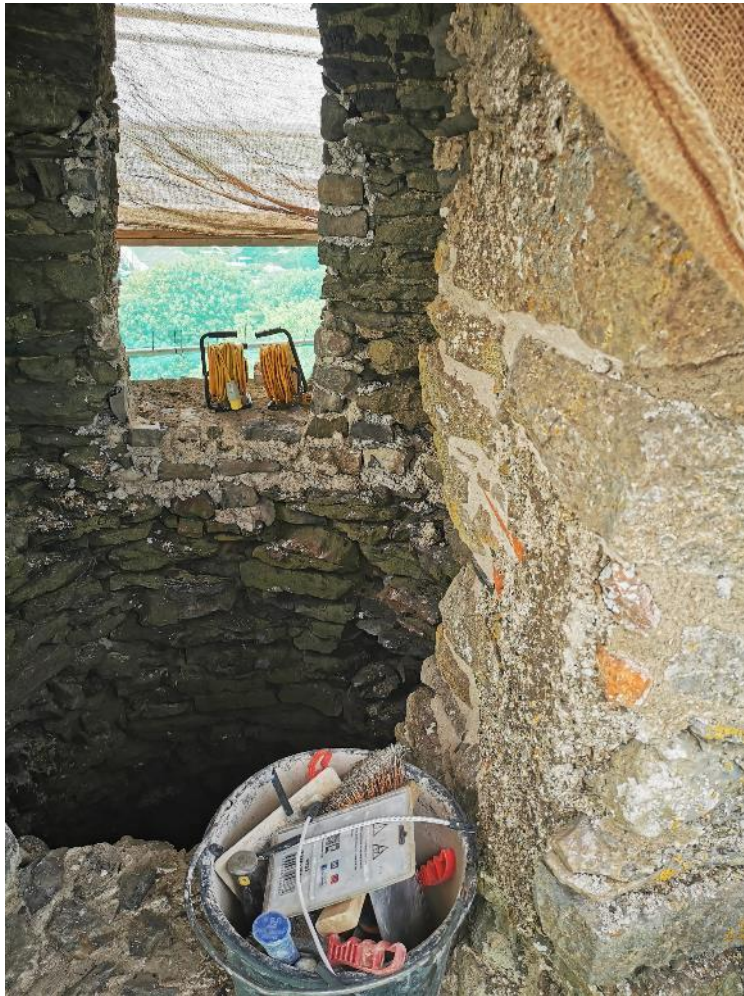


Repairs in progress on the east and west windows; looking through to the west window from east



The south window was missing several stones at the base of its west side. Consolidation works began on the parts that could be reached from the scaffolding, at a later stage the interior was planked, and the work completed.

Looking from SE at the west side of the window with re-pointing in progress on the exterior.



Looking north at the re-built and re-pointed sill and upper part of the wall beneath the north window

The north window also had been in poor condition, especially the area of the sill which was in a very precarious state. This required consolidation.

The sills of both windows were consolidated and re-pointed and the contrast is evident between this and the next photograph showing before and after images of the work carried out. The re-pointed right hand (east side) of the south window and the re-pointed north window can be compared with their 'before' condition.

View of the north window prior to conservation works





The interior of the belfry level was planked to give access for repairs in late September and the work mostly completed by the second week of October.

View of the east window looking through to the west window showing work in progress

All four window columns were re-built where

needed, stabilised and re-pointed.



The re-pointed and repaired base of the SW corner



between the south and west window, looking south

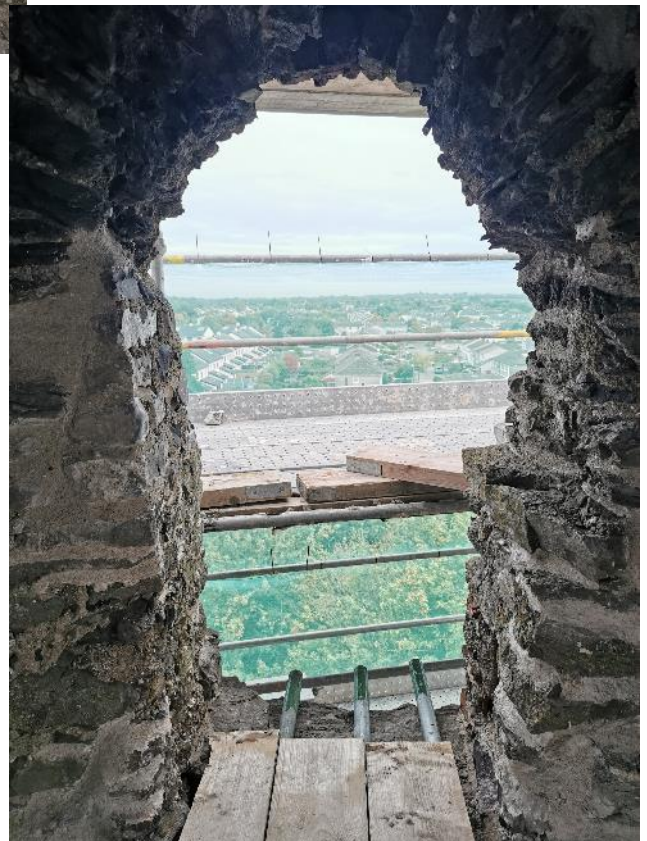
View looking SE at the interior of the wall between the East (left) and South (right) windows

Extensive repair and re-pointing was needed throughout this area.



In some instances the upper arches were still reasonably intact, as in the south window which from that point of view was the best preserved. By contrast, the west window, below, showed a distortion of its original shape which could be rectified only by a certain amount.

Looking S through South window

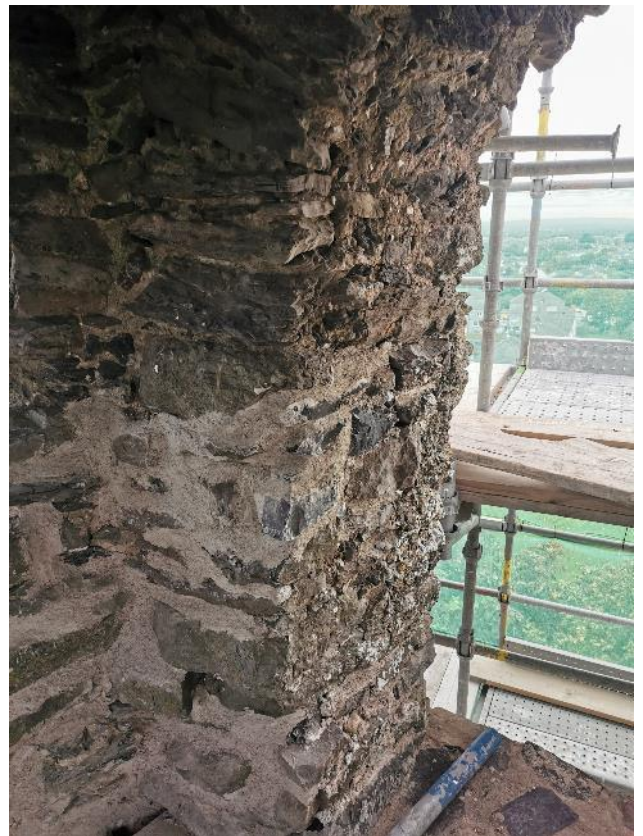


The west window by contrast with the south is much more distorted in shape



Looking at the North window from the interior of the tower

The NW corner showing the re-pointing of the lower half. The sill has also been conserved



The NE corner after conservation

Conservation of the Exterior

The specifications stated: 'Repoint eroded masonry joints internally and externally where identified on drawings'.

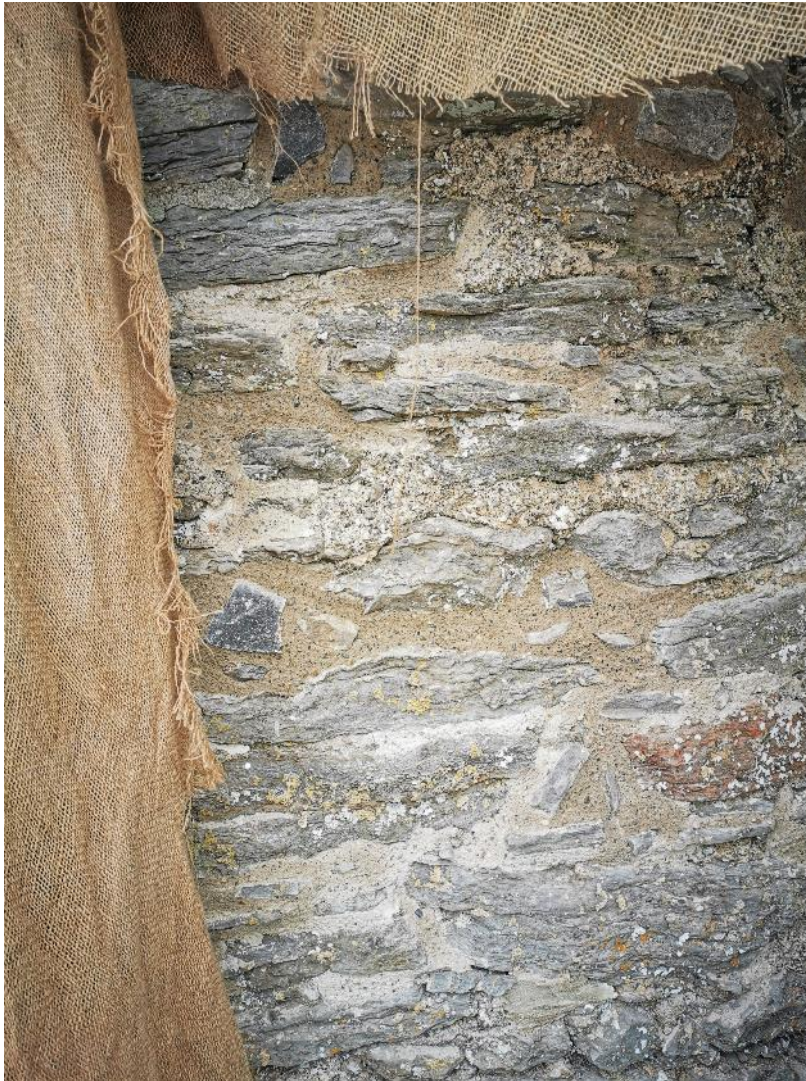
The upper three floors of the round tower were indicated for this work, and this was duly carried out. A line of wind-scouring had been noted on the tower in the 2021 report. This appeared to dissipate higher up, perhaps the taper of the tower reduced the distance sufficiently between the two towers to negate the effect of the W and SW prevailing winds.



View of the south-east section of the tower prior to conservation with portion of possibly wind-scoured area at bottom left



View of the fifth floor, exterior of the tower showing re-pointed joints. Note the presence of small pieces of brick within the existing render



Close-up of a section of re-pointed wall

While the works on the medieval tower were ongoing they were not as advanced on the first site visit and the second focused on taking samples and the works were still in progress. The conservation engineer's report is referred to for images of that work.

Collecting samples for analysis

A total of six samples were taken for the purpose of analysing the make-up of the mortar/render. Four were taken from the round tower and two from the church tower.

Swords Round Tower Sample Locations	
1	Underside of Roof NE corner
2	Exterior, south facing midway down, sample of render
3	Inside South window, east wall
4	External render beside west window
5	Church Tower, interior, mortar from bell-floor level
6	Church Tower, External Render from crenellation on the N. Face

Table 1: Samples taken for analysis

It was hoped that the samples of render from the exterior of both towers, Samples 2, 4 and 6 when analysed and compared may indicate whether similarities exist or not thus indicating whether the



work on modifying both towers was of similar period. Further, if differences between samples 2 and 4 occur it might indicate that there is more than one phase of pointing/render on the round tower. Differences in mortars had previously been noted, but unfortunately when taking the samples the areas noted could not be located with certainty.

Possible example of different pointing/render mortars on the exterior wall of the tower, note the buff coloured piece in the centre contrasting with the grey render around it

A very small sample was retrieved from within the wall of the south window on the east side, (Sample 3). This may date to the original construction of the tower and appeared to contain a significant percentage of clay.

Two samples were taken from the medieval church tower, one of the render on the crenellations and one from within the bell room level. The latter sample, No. 6, in theory should relate to when the crenellations were added to the tower.



The render is quite patchy, but obviously may have been replaced in the past 30 years.

View looking south at the north wall of the Church Tower showing the crenellations

Birds nest material removal

The accumulation of nest material evident at the south window level within the round tower, that is the fourth floor level was removed after several attempts. The depth from the south window sill level to the floor level marked by an incomplete wooden floor level was approximately 0.6m (John Lonergan pers comm). The corresponding relationship of the windows to the existing floors could not be ascertained with any confidence as the process of abseiling the interior of the tower and removing the accumulated debris was hazardous and didn't lend itself to much careful observance of such details. Some photographs and a short video were made by the individual doing the work but the overall quality is fuzzy and not much can be seen.



Looking in the South window at the accumulation of birds' nesting material; this picture was taken after several bags had already been removed