



MENLOUGH CASTLE
GALWAY CITY

CMF23-1-GC001

Final Report

NOVEMBER 2023

1. PREAMBLE

This report is prepared following the third phase of conservation repairs to the ruined castle at Menlough set along the eastern bank of the river Corrib on the outskirts of Galway city. It follows the recommendations of the Conservation Management Plan for the site prepared in 2015.

Phase 1 & Phase 2 works for essential structural repairs to ensure the stability of the monument were carried out under the previous contract under S14 ministerial consent C001030, later extended. Last year, Phase 2 was supported by CMF Stream 1 grant, and GCC were successful in obtaining a grant for Phase 3 as part of CMF 2023. The scope and methodology outlined in the application for funding has not substantially changed, with further detail now provided.

A description of Menlough, its archaeological significance and its historic background is provided in the accompanying report prepared by Martin Fitzpatrick IAI of Through Time Ltd. Drawings and specifications for the proposed works have been prepared by CORA Consulting Engineers.





2. CONDITION

Menlough Castle is a large, multi-phase residence dating from the sixteenth to the nineteenth century which suffered a catastrophic fire in 1910, which resulted in a fatality and after which the house was never used again. Following the removal of a thick covering of ivy in 2021, its phasing is more clearly observed than at any time in recent decades. Its north end consists of a tower house, which was opened up to its south side and extended with a gabled fortified house with corner bartizans and exceptionally tall windows to the east in the seventeenth century. A further large residential wing with distinctive gabled chimneys and slate weatherings was added to the west in the eighteenth century with ornate pinnacles along the parapet.

Later alterations included the addition of a belvedere in the form of a castellated parapet and stone room high up on the spine wall between the west and east ranges in the nineteenth century, installed to enjoy exceptional views up and down the river. The house remains a well-loved landmark for the city and was recorded in numerous topographic views down the centuries. It is also known as a habitat for snowy owl in recent years on the west wall, and annually as a summer roost for long-eared bats who reside in the east side of the spine wall. Jackdaws also nest in former fireplaces on the west wing.

The castle has suffered regular instances of vandalism including deliberate disturbance of the wildlife. Having lost its roof and floors, and due to gradual rotting out of lintels, the castle is in a concerning state. Its walls, while still standing tall for the most part, are at risk of complete collapse, aside from occasional loss of stone from its openings and tops which put visitors at risk of injury. Heaps of stone and debris from earlier collapses are likely to survive underfoot as the ground is very uneven internally.



3. PREVIOUS PHASES

In 2021, under ministerial consent C001030, ivy clearance followed the installation of a temporary perimeter fence to secure the castle from unauthorised access. A limited programme of essential structural repairs was also undertaken including the installation of steel supports and consolidation of voids at low level to provide support to the walls.

We required the clearance of ivy to make a proper assessment of the castle walls, especially at high level. Thankfully, the ivy came from the walls without disturbing the underlying stonework. Where this remained a risk, ivy roots were cut back and left in place. The design team undertook a visual survey of the entire structure from a hoist, and the building was recorded using photogrammetry.

The assessment of the condition of the castle identified priority areas. Intervention will be required to all parts of the castle to make it safe for visitors, and that this will require significant capital investment that will require an extended phased approach. Our objective would be to conserve Menlough Castle as a stabilised roofless ruin, like nearby Tirellan Castle that was repaired under CMF 2021 Stream 1.

Phase 2: North End & Spine Wall

In 2022, the existing contract was extended to address the structural stability of the former tower house to the north end, along with the junctions with the east and west ranges. The west shoulder had fallen close to first floor height, so that there was little support in this corner. On the opposite side, a long crack was repaired using stainless steel sock anchors from ground to high level where the two phases were at risk of separating over time.



At high level, the wall tops were relatively sound, and the drainage stones along the parapet were found to be very well preserved. Openings to the walls and flues were at risk of collapse and were strengthened to ensure their stability. Some additional salvaged stone was added to ensure that the lintels over the surviving openings were properly loaded and stable. Fortunately, much of the external render has survived, so that there was little repointing required to these surfaces. Repointing was required to the internal wall surface to strengthen walls where mortar has washed out over time. Brickwork to the bartizan was found to be in fair condition, and it was decided not to proceed with a lime shelter coat.

At the spine wall, the works were confined to the east side to minimise disturbance of the summer roost of the long-eared bat. Of most concern in this location was the loss of the structural support to the belvedere, the small stone room set at parapet level. The cut stone arch that supported its west wall has lost its bearing end, so was at immediate risk of collapse. A new stone corbel carved by Galway Stone Design was installed to support this arch without the necessity of it being taken down, or using permanent steelwork. Adjacent pinnacles, chimneys and wall tops were choked with ivy and were cappings were re-seated where loose and open joints repointed. Due to additional funding we were able to repair some adjacent areas to the south and west walls at high level.



4. PHASE 3 WORKS (2023)

A CFT was published by GCC in March 2023 for design team services for the next phase of conservation and public realm works to the 3 Castles. The team led by 7L were appointed on 16 May.

In 2023, works continued to the west range, as given its height and the extent of flues, it is at greater risk of loss than the east range. Pre-tender estimates provided by Austin Reddy scoped out a phase of work just under €200,000 ex.VAT, which allowed us to progress with an invited tender, as required by GCC.

7L issued an extension application for C001030 Ministerial Consent on 30 May based on the agreed scope of works, response from NMS

received 15 August. Frank Coyne of Aegis Archaeology withdrew from the project on 12 June due to prior commitments, and Martin Fitzpatrick joined the team. Sherlock Archaeology were also not available.

Works were tendered to five selected firms on 2 August 2023 with the return 18 August, when only one was returned. Cunningham Civil & Marine (CCM) were the contractor on the two previous phases of work on the castle and returned a tender €191,671.00 ex.VAT. After reviewing the tender, we recommended proceeding with CCM on 21 August. Due to changes in personnel, there was a considerable delay in the issue of the Letter of Acceptance, which was issued on September 13.

During the month of September, MKO team ecologists, in liaison with the NPWS, carried out several night-time surveys in the castle to try to identify whether the pair of barn owls using the castle had nested, if there was a brood and its location, and whether these had fledged or were ready to do so. Decision to allow the works to proceed was given on 28 September.

A pre-works meeting was carried out on site on 3 October. Further visits were undertaken by 7L Architects on 17, 26 October and 8, 20 November, with CORA visiting independently on 15 November. Martin Fitzpatrick oversaw the sorting of stone piles to the east range during the course of the works. Works were substantially complete by 24 November, except for the fireplace at ground level which was difficult to access with the scaffold in place.

Enlarged openings were strengthened with new lintels and jambs where necessary, and damaged or cracked lintels repaired. Large cracks to the chimneys were stitched with stainless steel ties, retrofitting to those installed in the last phase. The distinctive slate wall coverings to the upper levels were checked for loose slates and were re-bedded in quicklime mortar after raking out loose or





unsuitable bedding to ensure good adhesion. Sound slates were left in place. Works will proceed so as not to disturb nesting birds or their nests. During this phase, suitable stone was retrieved from piles in the east range under archaeological supervision where it fell following the fire in 1910, for use in the consolidation of the openings and pinnacles. Unfortunately, very little stone cappings for the pinnacles were identified, perhaps having been taken off site following the fire.

Repairs were carried out using lime mortars and specialist masonry repair techniques by CCM and Galway Stone Design who have extensive experience in working in historic masonry structures in their repair, especially where they are in poor condition or unstable. Rough racking and stone pinning of exposed wall tops and wall core progressed in areas. Flaunching of the ruined, uneven wall heads

along the wall tops using small flat stones and lime mortar (NHL3.5) to weather the top surface in these more exposed locations.

Consolidation of voids was necessary to the walls at each level, and repair of displaced or loose stone, especially around the openings. Much of the work involved the Installation of limestone lintels to



windows and fireplaces, using precast concrete lintels where required for wider spans, set between limestone lintels to exposed faces. This has made this tallest of the walls of the castle with the largest number of flues to be far more stable.

The consolidation of the slate weatherings progressed well. Slates were retrieved from the ground nearby, and along with any loose slates, were used to support the edges of surviving slates, all using lime mortar. Given the extent of loose render, there will continue to be losses over time, but there were concerns that to continue to remove loose plaster by hand would open up areas that there was no time to address.



MIX PROPORTIONS

Hydraulic Mortar: For wall tops

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

- Structural repairs: 1 part NHL 3.5 lime to 2.5 - 3.0 parts graded sharp sand.
- Wall tops and slopes as above but gauge the NHL3.5 with Metastar according to manufacturer's instructions

Gauged Hot Mix Mortar: For exposed wall core face work such as rebuilding sections of stonework, repointing and for pouring into voids

- 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 including addition of up to 10% 10mm aggregate pebble



FURTHER WORKS & MAINTENANCE

- Follow up maintenance will be required to ensure that the rebuilding and repointing has properly cured and are not at risk of frost damage, and that ivy does not re-establish.
- There are significant areas of lower order herbaceous plants colonising the 2022 phase of works. These should be removed when circumstances allow.
- Works to the castle should proceed to the south (river) elevation in 2024, subject to CMF funding.
- There are considerable issues with the condition of the carved stone windows, which would benefit from stone grafts and replacement, re-using fragments found on the ground wherever possible.