

**Moat Pit, Culross, Fife:  
Archaeological Survey**

Report

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## Overview

1. This report is for a programme of archaeological works requested by Fife Council in respect to the continuing study of the Moat Pit, Culross and other related mine workings. The archaeological works were designed to provide a detailed survey of the surviving remains of the Moat Pit to be accompanied by a drawn plan and a photographic survey of the Moat Pit and related structures.
2. The archaeological works were intended to be carried out in two stages with an initial investigation and preliminary survey to be followed by clearing of the upstanding remains and finally a more detailed survey with the intention of producing a complete plan. Site access and better management of the survey data meant that the original schedule was not strictly adhered to. The project works, as finally carried out, were designed to best fulfil the requirements of Fife Council while working within the timeframe available.

## Project Works

3. The programme of works was undertaken from the 11<sup>th</sup> to the 13<sup>th</sup> of August and the 7<sup>th</sup> to the 8<sup>th</sup> of October 2009. The survey and photographic works were consolidated on 9<sup>th</sup> of October 2009 in order to produce the data which accompanies this document. Data accompanying this document includes:
  - Shp files of the basic Total Station Survey data for Moat pit and the inland/surrounding features (geo-referenced against OS Landline data c. 2007);
  - Two jpeg images showing example views of the above shp files;
  - One jpeg image showing the Moat Pit drawn in more detail through adobe illustrator CS;
  - The corresponding adobe illustrator file for the above image;
  - All of the digital photographic images taken during the survey work.
4. All works were conducted in accordance with the Institute of Field Archaeology's Standards and Policy Statements and Code of Conduct and Historic Scotland Policy Statements.

## Moat Pit

5. Of primary interest in this project did the surviving upstanding remains of the Moat Pit exist some 400m into the tidal flats to the south of Culross, in the Firth of Forth. The Moat pit exists at the end of a mussel bed which extends south-west past the old Culross Pier. This mussel bed marks the line of a change in the underlying geology and a marked lessening of the extent of erosion. Presumably the Moat Pit was constructed at a point of convergence between this hard geology, the underlying mine workings and the accessibility of low tide.
6. Upon initial examination the Moat Pit existed as upstanding, concentric wall faces; the spaces between which and some of the surrounding area were covered with rubble and the whole structure and area was heavily overgrown with seaweed. Much of the rubble covering the space between the outer wall faces and the central shaft was composed of dressed sandstone blocks identical to those used in the construction of the Moat Pit. Similarly, dressed stone blocks are evident in the surrounding flats especially in two concentrations; one to the south and one to the west.
7. It is known historically that the Moat Pit was deliberately robbed of material after it fell into disuse; however, upstanding remains do still exist. The central shaft has been infilled with rubble and estuarine sediments. The remainder of the structure has been almost reduced to the level of the surrounding bedrock. Obviously the Moat Pit is only exposed for a few hours when the tide is low but when exposed it also floods from the central shaft. For all the time that the Moat Pit is exposed water pours from the central shaft out over the south wall faces.

8. The stone lining of the central shaft existed to a height of three courses on the north side and was reduced to one course above the current ground level on the south side. The shaft lining was composed of large, dressed sandstone blocks approximately 800mm by 400mm. Some of these blocks showed masons' marks either in the form of an 'N' or a hexagon. The lower two observable courses were laid in two concentric lines of stone creating two exposed faces with the third course being laid crosswise and all stone cut accordingly. The central shaft appears stable and has been backfilled with rubble and estuarine sediment but as water pours from it presumably voids exist at depth.
9. Being mostly covered by rubble and estuarine sediments the inner face of the large outer wall was much more difficult to define. After clearance of small loose rubble and seaweed it could be traced only in the eastern half of the site. This face was defined by wooden panels fixed to the remains of wooden posts behind which a wall face was constructed. Those few blocks of the wall face which could be seen were dressed on the outer face with the inward facing of the wall face left as rough stone. The space between this wall face and the central shaft was filled with rubble and estuarine sediment. Brief hand excavation in this area revealed only estuarine sediments and no evidence of deposited clay.
10. The outer face of the outer wall was composed of large blocks of stone which had been dressed on the outer face and left as rough stone in the interior. It would seem likely that the outer wall of the Moat Pit was therefore composed of two faces of large stone blocks with a rubble core. The outer face also had the remains of wooden posts at regular (roughly 2m) intervals round the outer circumference. Those on the south were exposed; perhaps due to the more severe reduction of the wall in this area. However, those on the remainder of the circumference had been capped with a specifically cut piece of masonry. This suggests that the wooden posts were part of the initial construction process which became obsolete as the foundations of the wall were put in place.
11. As already stated the Moat Pit sits on the south-western extremity of a natural outcropping of rock and as such the walls, particularly the outer wall, are deliberately founded on bedrock. Evidence of dressed stone blocks can be seen in the immediately surrounding landscape for a distance of several meters. However, no evidence of additional structure; for example piers, fenders or harbours, can be seen. Presumably if such structures did exist in association with the Moat Pit they were built of wood and/or have been completely removed. To the north and north-east two large circular stones are noted one of which has a hole through the centre. These may have been used as moorings but their association with the Moat Pit is uncertain.

## Inshore Workings

12. An additional element of this survey work was to examine, if any, the inshore mine workings. Previous documentation has noted the existence of mine workings on the shore line thought to be the site of the Egyptian Wheel drainage system, a mine shaft further inland behind the line of houses and further up the line of the river a dam which provided power to the mine workings. The aim of the survey was to locate and briefly record the character of these structures.
13. Directly north of the Moat Pit, at the point where the high tide line meets the railway which passes along the shoreline from Longannet Power Station. Two rough half circles of stonework intersect on the south side of the railway. The two walls are composed of roughly dressed stone and survive to a height of approximately 3m. It appears that not all of the stonework is original and that the walls have been consolidated, possibly on more than one occasion. This is generally accepted as the most likely location of the Egyptian Wheel drainage system relating to both the Moat Pit and the Castlehill Mine.
14. The remains of the Castlehill Mine shaft exist further inland to the north of Balgownie West and behind the row of houses in a field used as rough pasture. The remains of the mine shaft exist at the western edge of the field in close proximity to a small burn. The mine shaft has been surrounded and overgrown by large trees and, in modern times, partially unfilled. It exists now as a shallow hollow about 6m in diameter and 1.5m deep.

No structural remains of other archaeological features were noted in proximity to the shaft.

15. Several recent and historical sources refer to a dam providing power to the mine workings and located in the burn adjacent to the shaft. The burn has cut a steep sided gorge out of the natural drift geology and in places, especially further from the shore, the burn runs on bedrock. At no point along this burn is there any evidence of a dam, which is not to say that one didn't exist simply that the evidence has been removed. The sides of the gorge show considerable evidence of tree planting and several trees have collapsed into the burn. This suggests that the sides of the gorge; especially the area close to the burn, is an extremely mobile environment where insubstantial archaeological evidence is unlikely to survive.

## Recommendations

16. The archaeological work carried out so far has provided a comprehensive survey of the surviving remains of the Moat Pit in so far as they are accessible. A basic survey of the related on shore workings has also been carried out. The work done so far has allowed us to make some suggestions about the detail of the construction of the Moat Pits and also to confirm or deny some of the previously held beliefs about its form and character.
17. However, despite this work there remain unanswered questions about the character of the Moat Pit, its form and construction. Some of these questions may be answered by building on the existing survey work. Further clearance of the site; including removing rubble and seaweed, could reveal detail about the construction of the shaft and the outer wall. The inner face of the outer wall has only been confidently traced on the east side of the Moat Pit and largely through observation of wood panelling. With further clearance it may be possible to follow the complete circumference of the wall face and gain some insight into make up of the wall core.
18. In addition shallow excavation work in and around the Moat Pit may provide information on the foundations of the structure, the location of bedrock and any deliberately deposited sediments which may survive in the interior. Significantly the survey this far has been primarily aimed at locating the Moat Pit and defining its character in plan. Further work could be carried out to expand the existing survey and record the Moat Pit accurately in three dimensions. This may provide a greater understanding of the finished form of the structure keeping in mind that the available information so far comes from the foundation courses.

## Conclusion

19. This report described a programme of archaeological works requested by Fife Council in respect to the continuing study of the Moat Pit, Culross and other related mine workings. The archaeological works provided a detailed survey of the surviving remains of the Moat Pit, a drawn plan and a photographic survey of the Moat Pit and related structures.
20. The archaeological works have demonstrated the potential for understanding the form and function of the Moat Pit by closer examination of the surviving remains. However, further cleaning and survey is required in order to form a complete picture of the Moat Pit. Certain issues have been raised by the work done here with targeted cleaning and additional recording could clarify.

## References

### *Documentary*

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### *Cartographic*

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Ordnance Survey   1860            1<sup>st</sup> edition map  
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