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# Survey Report

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Reference: **Survey Report No. 68**

Author: **GM Johnston & Liz  
McShane**

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In association with:



Location:  
**Survey of Revolving Summer  
House  
Sea Plantation,  
Mount Stewart,  
County Down**



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Cover illustration: View of Revolving Summer House from the east c1930 National Trust

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## 1. Summary

A site survey was undertaken at the remains of a revolving summer house, in the townland of Mount Stewart, County Down on 24 March 2018. This feature was one of several in the area of an abandoned swimming pool, which was also surveyed by the Ulster Archaeological Society (Johnston and McShane 2019). The survey was the first in a series of planned surveys undertaken by members of the Ulster Archaeological Society (UAS) during 2018

### 1.1 Location

On the shore of Strangford lough



Figure 01: Location map *Ordnance Survey*

### 1.2 Aims

In order to enhance the archaeological record of this site, the aims of this survey were to produce accurate plan drawings of the monument and carry out a photographic survey. This information was compiled into a report and copies submitted to the National Trust and to the archives of the Ulster Archaeological Society.



Figure 02: Survey Group members at the summer house close to west gate of the swimming pool

## 2. Introduction

### 2.1 Background

The survey of the Mount Stewart revolving summer house was undertaken on Saturday 24 March 2018. It was carried out by members of the Ulster Archaeological Society, in response to a decision taken by the committee of the society to extend an opportunity to members to participate in practical surveys of archaeological monuments that had not previously been recorded. This followed a bequest to the society from the late Dr Ann Hamlin, from which the items of survey equipment were purchased. During discussions with Malachy Conway, Archaeologist of the National Trust in Northern Ireland, it was noted that many archaeological sites on National Trust property had not been subject to a detailed archaeological survey. It was therefore agreed that members of the society would commence a program to survey these sites and the revolving summer house was subsequently chosen to be the sixty-eighth of these.

### 2.2 Previous archaeological surveys

As far as is known, there have not been any previous archaeological surveys at this feature.

### 2.3 Cartographic Evidence

There is no record of the swimming pool or revolving summer house on any of the Ordnance Survey County Series maps, but it is clear that swimming activities took place in the area prior to 1834.



Figure 03: OS County Series, First Edition, Down Sheet 11 (part of) 1834



Figure 04: OS County Series, Second Edition, Down Sheet 11 (part of) 1859

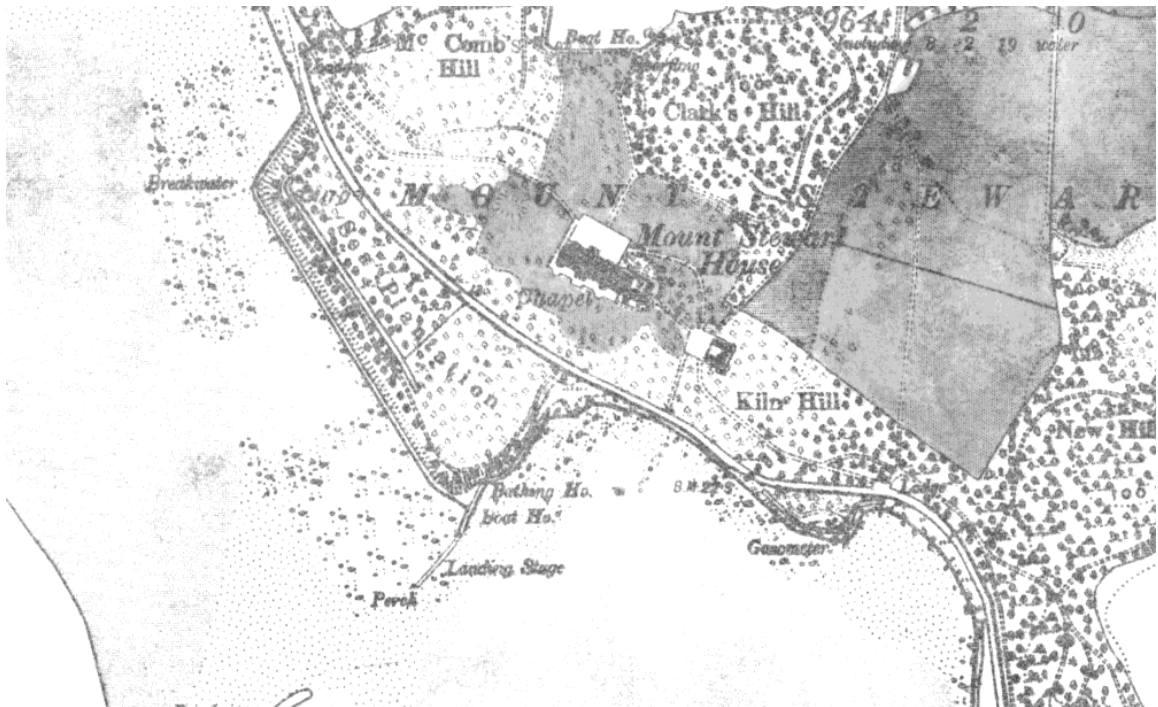


Figure 05: OS County Series, Third Edition, Down Sheet 11 (part of) 1904



## 2.4 Archiving

Copies of this report have been deposited with the National Trust and the Ulster Archaeological Society. All site records have been archived by the National Trust at Rowallane, Saintfield, County Down.

## 2.5 Credits and Acknowledgements

The survey was led by Harry Welsh and included Michael Catney, David Craig, June Welsh, Lee Gordon, Liz McShane, Duncan Berryman, Hilary Boyd, Colin Boyd, Janna McDonald, David Irving, George Rutherford, Randal Scott and Grace McAlister. The Ulster Archaeological Society is particularly grateful to Malachy Conway, Archaeologist of the National Trust, who worked closely with the survey team in choosing the site and facilitating access.

# **3. The UAS Survey 2018 and additional work 2020**

## 3.1 Methodology

It was decided that the survey would take the form of the production of plan drawings and elevations, accompanied by a photographic survey. This report was compiled using the information obtained from these sources, in addition to background documentary material.

## 3.2 Production of plan drawings

Plan drawings and elevations were completed, using data obtained from the field survey. Measurements were obtained by using the society's *Leica Sprinter 100* electronic measuring device. Sketch plans at 1:50 scale were completed on site by recording these measurements on drafting film secured to a plane table and backing up the data on a field notebook for subsequent reference. Field plans were later transferred to a computer-based format for printing.

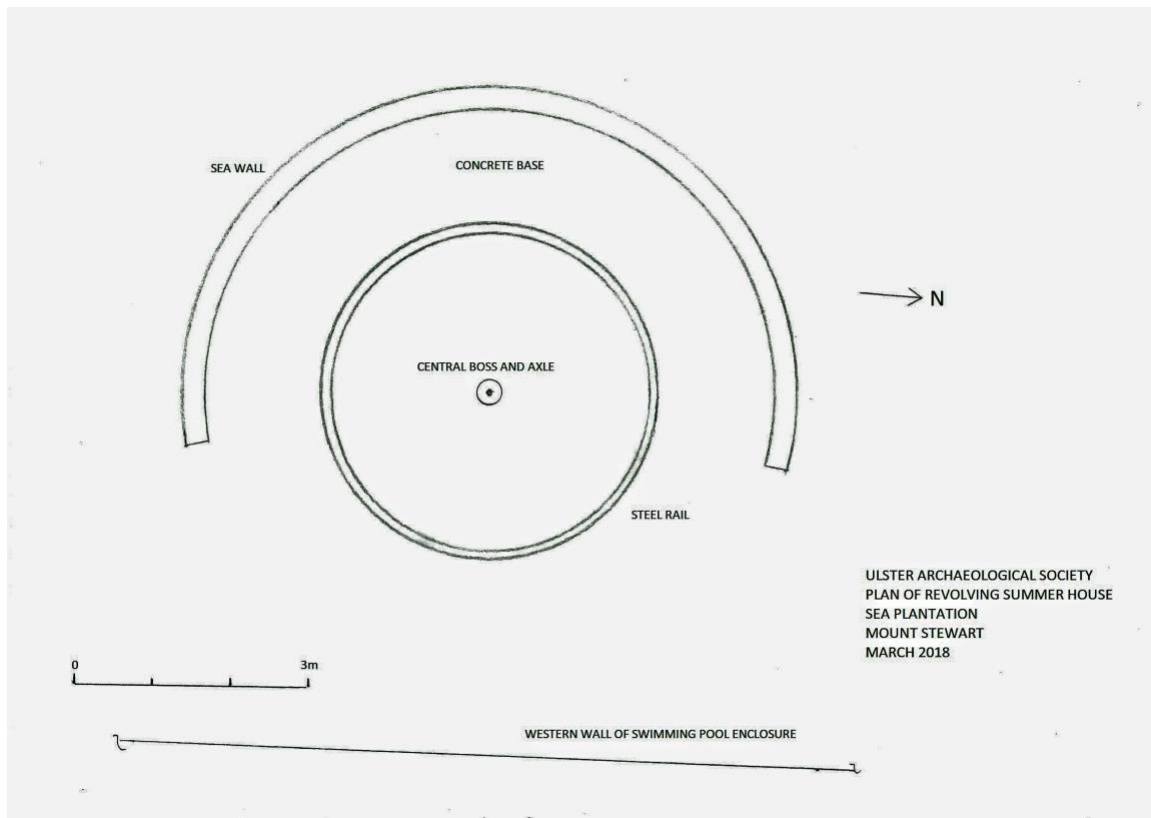


Figure 06: Plan of revolving summer house base **Harry please check the direction arrow**

### 3.3 Photographic archive

A photographic record of the site was taken by using a *Ricoh G600* 8 megapixel digital camera and a photographic record sheet was employed, corresponding to photographs taken during the site survey on 24 March 2018 and subsequent visits. The National Trust provided photographs of the site when in use. These were probably taken by Lady Rose and are held at the Public Record Office of Northern Ireland. Copies are held at the National Trust and attributed here where appropriate. The archive has been compiled in jpeg format and saved to compact disc. A photographic archive sheet was compiled to accompany this report.

### 3.4 The revolving summer house when in use.

The revolving summer house can be seen in photographs of the swimming pool complex taken in the 1930's, see below, but it was removed long before the pool complex was demolished. (Local knowledge)

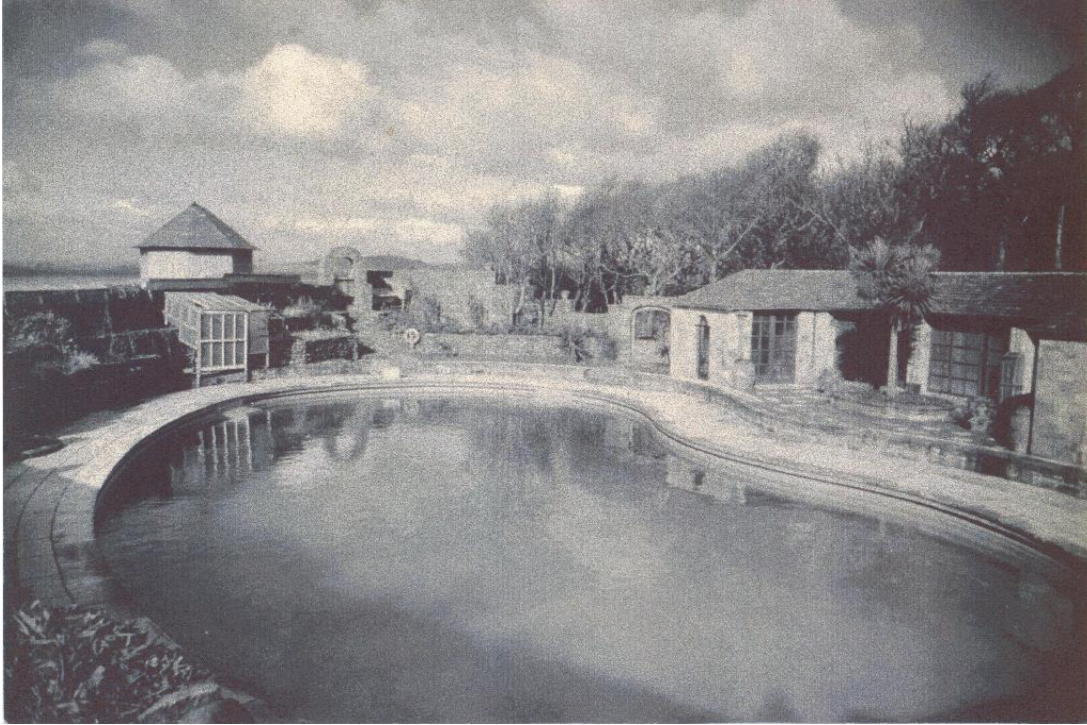


Figure 07: View of swimming pool with the summer house at the lough shore outside *National Trust*



Figure 08: Revolving summer house and the wall protecting it from the sea. The wooden gate is the most westerly entrance, without an arch into the swimming pool enclosure. *National Trust*

### 3.5 How the revolving summer house worked

The wooden summer house was set on a chassis which ran on a circular metal rail, the chassis was six-sided and each corner had a wheel like a very large castor and a spoke connecting it to a central shaft or axle on which the bearing of the summer house turned. It was moved manually to follow the sun in this open location.



Figure 09: The chassis of a modern revolving summer house on which the wooden structure would be built. The original Mount Stewart one would have been very similar.

### 3.6 The revolving summer house at the time of the survey.

The circular platform structure of the summer house is still in place.



Fig10 Summer house protective wall, circular platform, iron rail and central axle.



Fig 11 Close up of the central iron axle with a mounting plate



Fig 12 Close up of the base of the axle showing corrosion

### 3.7 The present day summer house from the beach

These photographs show the position of the summer house on the bank above the beach, the structure of the wall and the foundation base and the present condition of both.



Fig13 Summer house from the beach, the base, the protective wall and the foundation.



Fig14 Hole in the wall showing cracks going right through the wall.



Fig15 Looking through the hole in the wall to the western arched gate of the swimming pool.



Fig16 Cracks going three ways, vertical and horizontal. The horizontal cracks follow the junction of the protective wall and the platform.



Fig 17 Cracks on the concrete circular platform for the summer house near the iron rail

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This space has been left blank deliberately



### 3.8 The summer house base

The foundation base of the summer house below the protective wall is made up of layers of different layers of concrete with different mixes and several concrete patches. The base has been eroded by the water and weather conditions over time and has begun to fall away especially from the red clay of the bank. Repairs using concrete have been made at different times. The photographs below illustrate this.

Fig 18 the summer house base foundation



- Fig 19 remains of wooden shuttering at the bottom of base
- Fig 20 three different concrete mixes on the surface of the skirt
- Fig 21 patched grey stone
- Fig 22 close up of base, three different concrete layers/mixes
- Fig 23 close up of packed stone filling
- Fig 24 red clay exposed, had been covered by the skirt
- Fig 25 concrete on the triangular stone

Fig 26 more undermining of the base east of fig 24



Fig 19 remains of wooden shuttering at the bottom of the base. Again note the layers of different concrete



Fig 20 three different concrete mixes on top of base skirt. Note the crack in the stone at the bottom of the picture.



Fig 21 Patched grey stone work, patches at different times



Fig 22 Close up of base, three different concrete mixes, very poor quality aggregate including seashells.



Fig 23 close up of packed stone filling a gap at the clay bank, where the base has been undermined.



Fig24 Red clay exposed, which had been covered by the skirt.



Fig 25 the concrete on the triangular stone is the same as on the adjacent stones on the surface of the skirt, showing that everything from below the surface of the skirt to the clay layer has been washed out.



Fig 26 More undermining of the base, east of Fig 24



Fig27 Undermining at the east side of the skirt.  
The eastern side of the base skirt is in similar condition to the west side.



Fig 28 Waves covering the base on a normal tide.

### 3.9 possible second summer house base

A few meters to the East of the revolving summer house there are the remains of another circular concrete base, the base of another possible summer house. None of the photos of the swimming pool complex show any building or structure on this base. Perhaps nothing was ever built on it, as it is very close to sea level so would often be submerged and covered in seaweed. It is also not in a good position for the afternoon summer sun. There is no sign of a metal rail or central axle so perhaps it was a static summer house, not a revolving one.



Fig 29 Circular concrete base of possible second summer house  
Note the sea weed on the grass on land ward side of the base



Fig 30 Undermining of the base of second summer house

#### 4 Discussion:

4.1 Revolving summer houses, or summer houses, were popular during the Victorian and Edwardian periods and in recent years they have become popular again. The revolving summer house at Mount Stewart can be seen in photographs of the swimming pool taken in the 1930's.

We know from the old photos that the revolving summer house was part of the Mount Stewart swimming pool complex when it was in use, although from local knowledge, we know that it was removed long before the pool was destroyed. Like the pool's design, architecture, ornate pavilion, planned garden surrounds and stone features, it is assumed that the summer house would have been designed and constructed to a similar high standard. The swimming pool also utilised the latest technology and engineering knowledge in its drainage system and managing the flow of the tides. Likewise the summer house and its revolving mechanism drew on the latest designs available at the time.

The construction of the pool complex was via a tendering exercise with the best engineering firms of the time, with the aim of building a high standard facility. (PRONI Londonderry papers) Even after approximately 90 years and the deliberate dismantling of the structures, a substantial footprint still exists. However the passage of time and its location on the shores of Strangford Lough, subject to wind and waves, (Fig 24) has caused the condition of the remaining summer house structures to deteriorate. Efforts have been made over the years to repair damage, but the current condition of the summer house is recorded here to highlight concerns about further deterioration.

4.2 The visible remains of the summer house are the protective wall around it, which still has a complete finished surface, the circular platform of the summer house, with the circular iron rail, and the central iron axle for the revolving mechanism, which shows



signs of corrosion. Below the wall from the bank to the shore, the base of the whole structure is being undermined, especially at the edge of the red clay bank. There are layers of concrete patched and cracked in places, in other places the volume of concrete has been increased by inserting quite large stones and the area has been patched with concrete with, poor quality aggregate. The remains of the wooden shuttering used at the bottom of the base structure are still visible. It is doubtful that what is visible below the surface of the platform was provided by a civil engineering contractor, such as was employed in the original construction of the pool complex.

## 5. Conclusions and Recommendations

### 5.1 Conclusion

It is still possible to see the remains of the revolving summer house, but they are in very poor condition and its location is the most exposed on the Sea Plantation. Without very serious rebuilding of the skirt below the wall it will not be long before it becomes an unrecognisable ruin.

### 5.2 Recommendations.

It is recommended that consideration be given by the National Trust to stabilising the existing revolving summer house structure before it is lost completely. It seems likely that further images and documentary evidence for the construction and use of the revolving summer house are available in the archives of the National Trust and at the Public Record Office for Northern Ireland. Time constraints prevented further research at the time of this report. There may also be research material for old features of the Mount Stewart estate such as the dove cote, stables and gas works.

It is recommended that further research and archaeological surveys into these be undertaken at the earliest opportunity to inform the National Trust management team at Mount Stewart about making these accessible to the public in the future, perhaps by videos in the visitor centre.

## 6. Bibliography

Johnston,G.M. and McShane,L. 2019 *Survey of Swimming Pool at the Sea Plantation, Mount Stewart, County Down*, Survey Report No. 76, Belfast, Ulster Archaeological Society.

Preston, R.2017, *Military Base, Mount Stewart, County Down*, Survey Report No.58, Belfast, Ulster Archaeological Society.

Stevenson,C. 2018, *Mount Stewarts's Southern Quadrant Shelter*, Mount Stewart, County Down, Survey Report No. 70, Belfast, Ulster Archaeological Society.

Public Record Office of Northern Ireland: Londonderry Papers

File D654, 1612-c1940

File D 654/N5/18: Construction of Swimming pool

### Photographic Record Form

Site : Revolving Summer House, the Sea Plantation, Mount Stewart, County Down

Dates: March 24th 2018, Feb-March 2020

UAS Photographs ... Ricoh G600 and GMJ's mobile phone

Old photographs from Lady Rose and PRONI, dates and cameras unknown labelled LRP

National Trust photographs, dates and cameras unknown labelled NT.

Frame No.	Source	Details
NT 01	LRP	Cover page, Summer house from the east
RIMG 100	UAS	Fig 02 Outside west gate of swimming pool
NT 02	LRP	Fig 07 View of summer house from the swimming pool
NT 03	LRP	Fig 08 Summer house and protecting wall
GMJ 01	UAS	Fig 09 Chassis of modern revolving summer house
RIMG 85	UAS	Fig 10 Summer house base, wall, iron rail and axle
RIMG 24	UAS	Fig 11 Close up central axle
GMJ 02	UAS	Fig 12 Close up axle deterioration
RIMG 07	UAS	Fig 13 Summer house from beach
RIMG 37	UAS	Fig 14 Hole in base wall
RIMG 39	UAS	Fig 15 Looking through hole in wall to swimming pool
RIMG 38	UAS	Fig 16 3 way cracks in the wall
RIMG 07	UAS	Fig 17 Cracks on circular concrete base of summer house
RIMG	UAS	Fig 18 The foundation of the summer house base
GMJ 03	UAS	Fig 19 Remains of wooden shuttering at bottom of base
GMJ 04	UAS	Fig 20 Three different concrete mixes on base skirt
GMJ 05	UAS	Fig 21 Patched grey stone
GMJ 06	UAS	Fig 22 close up of base, 3 different concrete mixes
GMJ 07	UAS	Fig 23 Close up of packed stone filling a gap
GMJ 08	UAS	Fig 24 Red clay exposed, stone protection fallen away
GMJ 09	UAS	Fig 25 Concrete on triangular stone
GMJ 10	UAS	Fig 26 More undermining of the base
GMJ 11	UAS	Fig 27 Undermining at east side of wall
GMJ 12	UAS	Fig 28 Waves covering skirt on a normal tide
GMJ 13	UAS	Fig 29 Concrete base of possible second summer house
GMJ 14	UAS	Fig 30 Undermining of the base of second summer