CPAT Report No. 1604

Stanage Park Lake, Knighton, Powys

Archaeological Evaluation

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CLWYD-POWYS ARCHAEOLOGICAL TRUST

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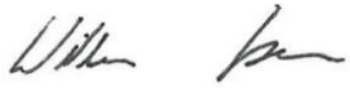		
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Bibliographic reference:

Logan, W. 2018. *Stanage Park Lake, Knighton, Powys*: *Archaeological Evaluation*. Unpublished report. CPAT Report No. 1604.

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The Clwyd-Powys Archaeological Trust is a Registered Organisation with the Chartered Institute for Archaeologists

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Summary

In July 2018 the Clwyd Powys Archaeological Trust (CPAT) carried out an archaeological evaluation to investigate the dam structure for a lake located on the east drive at Stanage Park, near Knighton, in Powys.

The sluice had been washed away by a breach in the centre of the dam, revealing the remains of part of the wooden supporting structure which supported the dam on either side of the sluice, which survived on the south side.

A trench excavated at the north end of the dam revealed a V-shaped ditch running across the top of the structure into a dry channel to the east of the lake. The backfilled remains of a possible second channel were revealed slightly to the south.

The extant overflow located at the south end of the dam was cleared of vegetation and examined for traces of an earlier structure. No in situ structural remains relating to an earlier overflow were identified, although the presence of a number of large, possibly worked stone blocks in the overflow channel and concrete base for the modern overflow may have come from an earlier structure.

1 Introduction

1.1. In July 2018 the Clwyd Powys Archaeological Trust (CPAT) were instructed by Garner Southall, acting on behalf of Johnathan Coltman-Rogers, to carry out an archaeological evaluation in order to inform the repair strategy in respect of damage to the dam structure retaining the lake located on the east drive at Stanage Park, near Knighton, in Powys (Fig. 1; SO 33904 72108).

Fig. 1 Location of the lake (circled in red)

1.2. The lake is currently dry and silted up. There is a breach in the dam approximately 1m in width where the sluice was formerly located. The remainder of the dam

structure, which is of rammed earth construction, is in good condition. The northern outlet is no longer extant as a feature on the dam, although the channel running east from the outlet is still visible. The southern outlet is a modern construction using building blocks and concrete sections. This has started to disintegrate and the soil to the side of the structure has eroded, allowing water to bypass the outlet itself.

2 Historical Background

2.1. Stanage is a Grade II* listed castellated house set amongst extensive and intact picturesque gardens and parkland laid out by Humphry Repton at the beginning of the 19th Century. Stanage Park is designated as a Grade I Registered Historic Park and Garden and the lake is identified as a specific element in the listing description.

2.2. The main house faces eastwards in an elevated position. It is accessed via two drives. The west drive descends down a valley with a stream and woodland towards Knighton. The east drive descends down a more open valley with a stream towards Brampton Bryan. The lake lies halfway along the east drive as the valley starts to narrow. The purpose of the lake appears to have been ornamental as there is another lake identified as the fish pond at the top of the west drive near the house.

Fig. 2 Extract from the Ordnance Survey Surveyors' drawing of 1815

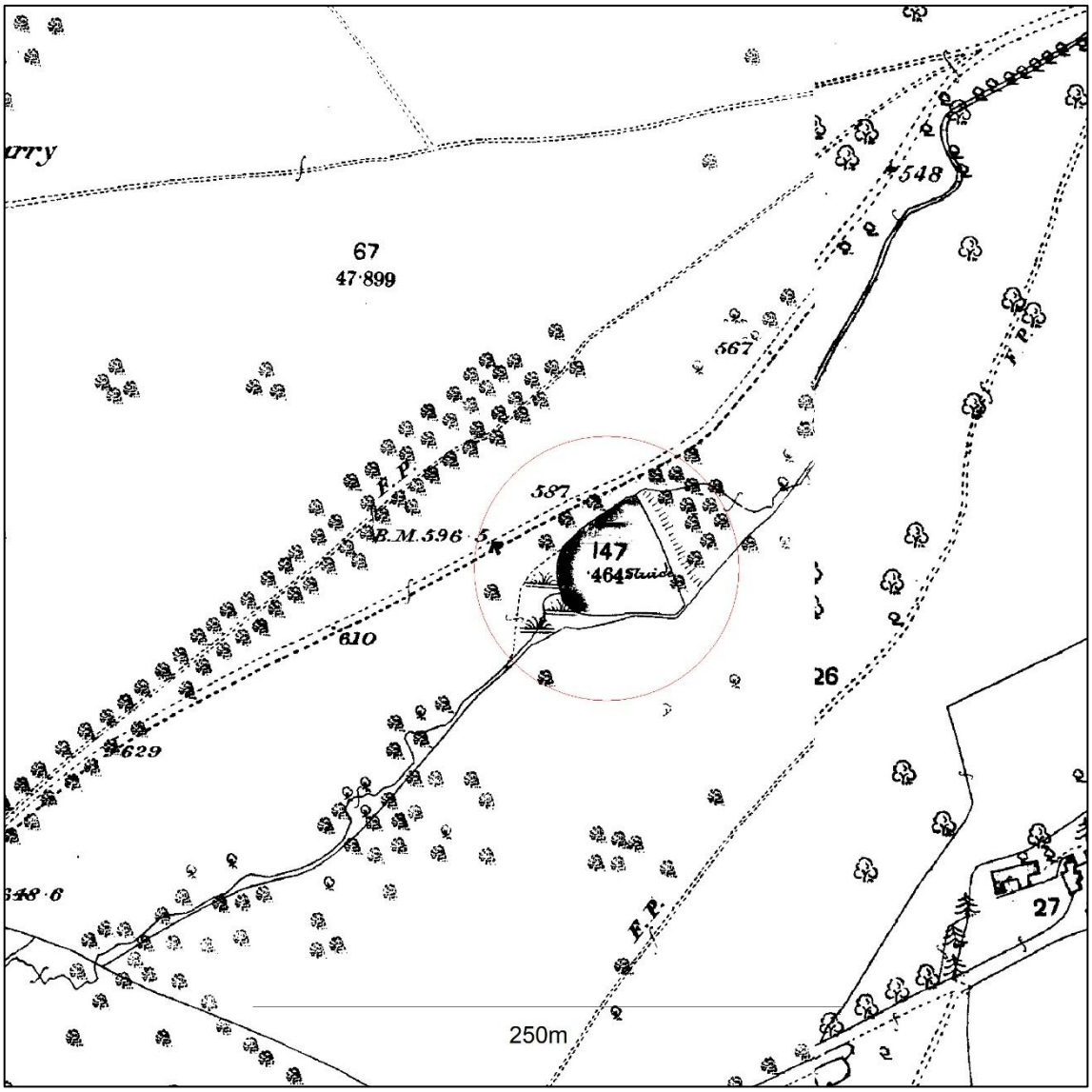

Fig. 3 Extract from the Ordnance Survey 1st edition 1:2500 map of 1889

2.3. The Ordnance Survey 1st edition 25″ map of 1889 (Fig. 3) shows the lake in its current form, the south-western extent is depicted as marshland having apparently silted up. The map records the position of the sluice and both a northern and southern outlet.

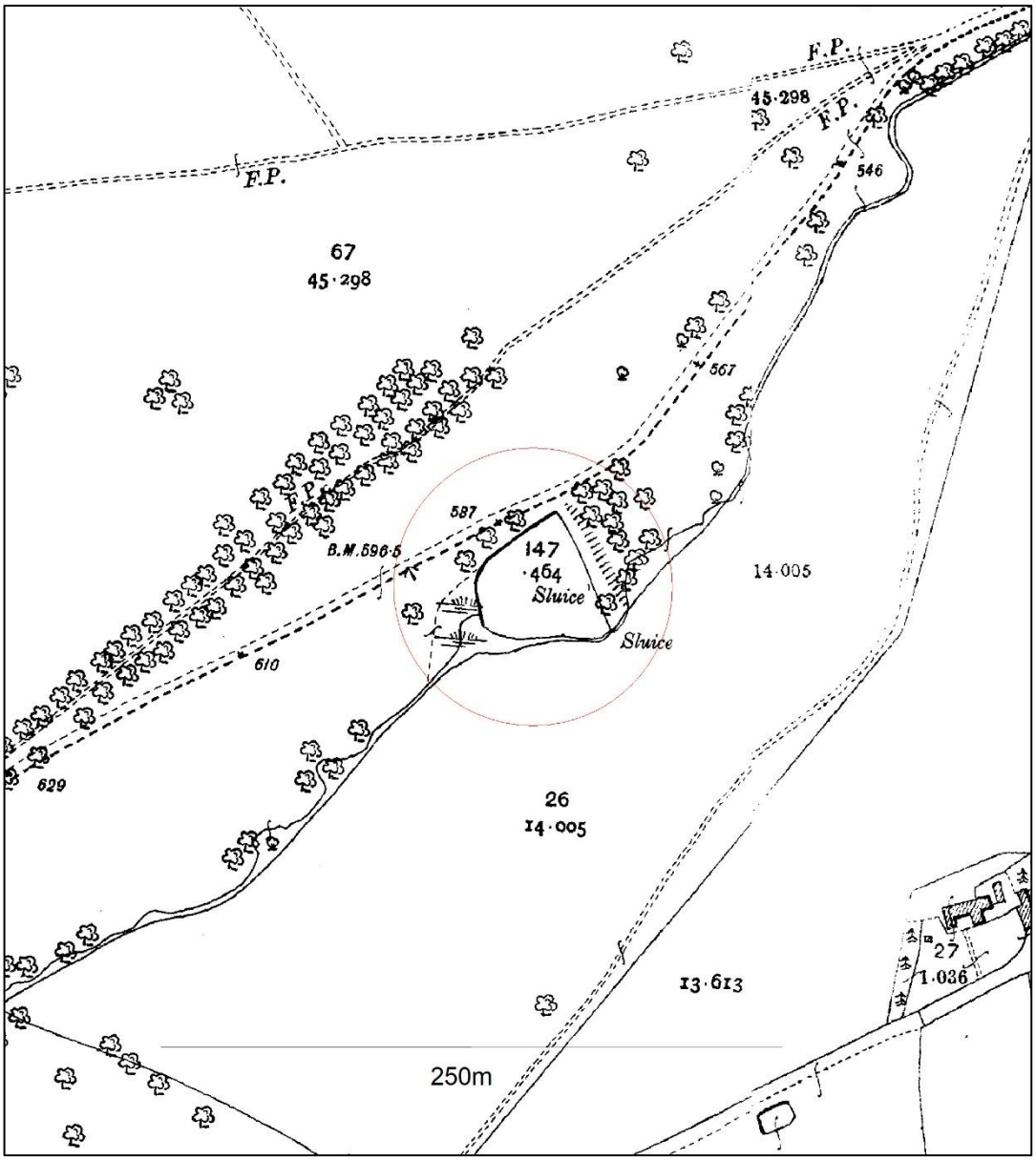

Fig. 4 Extract from the Ordnance Survey 2nd edition 1:2500 map of 1903

2.4. The 1903 Ordnance Survey 2nd edition 25" map (Fig. 4) does not depict the northern outlet, which would suggest that it was not extant by this time. However the northern outlet is depicted on the 1928 Ordnance Survey map (Fig. 5) although the position of the outlet appears to have shifted somewhat to the south. This arrangement appears to have continued until after the Second World War as the Ordnance Survey 1953 plan also depicts the same arrangement as in 1928.

2.5. Modern sources indicate that the lake silted up and became a fenced off wooded area by the end of the 20th century. A row of *Malus* (apple or crab apple) trees were planted along the inside edge of the dam and were still extant in 2009. It has been suggested by the owner that the presence of these trees may have exacerbated the damage to the dam which led to it becoming breached as the wind action upon the trees may have caused them to rock, loosening the soil around the roots.

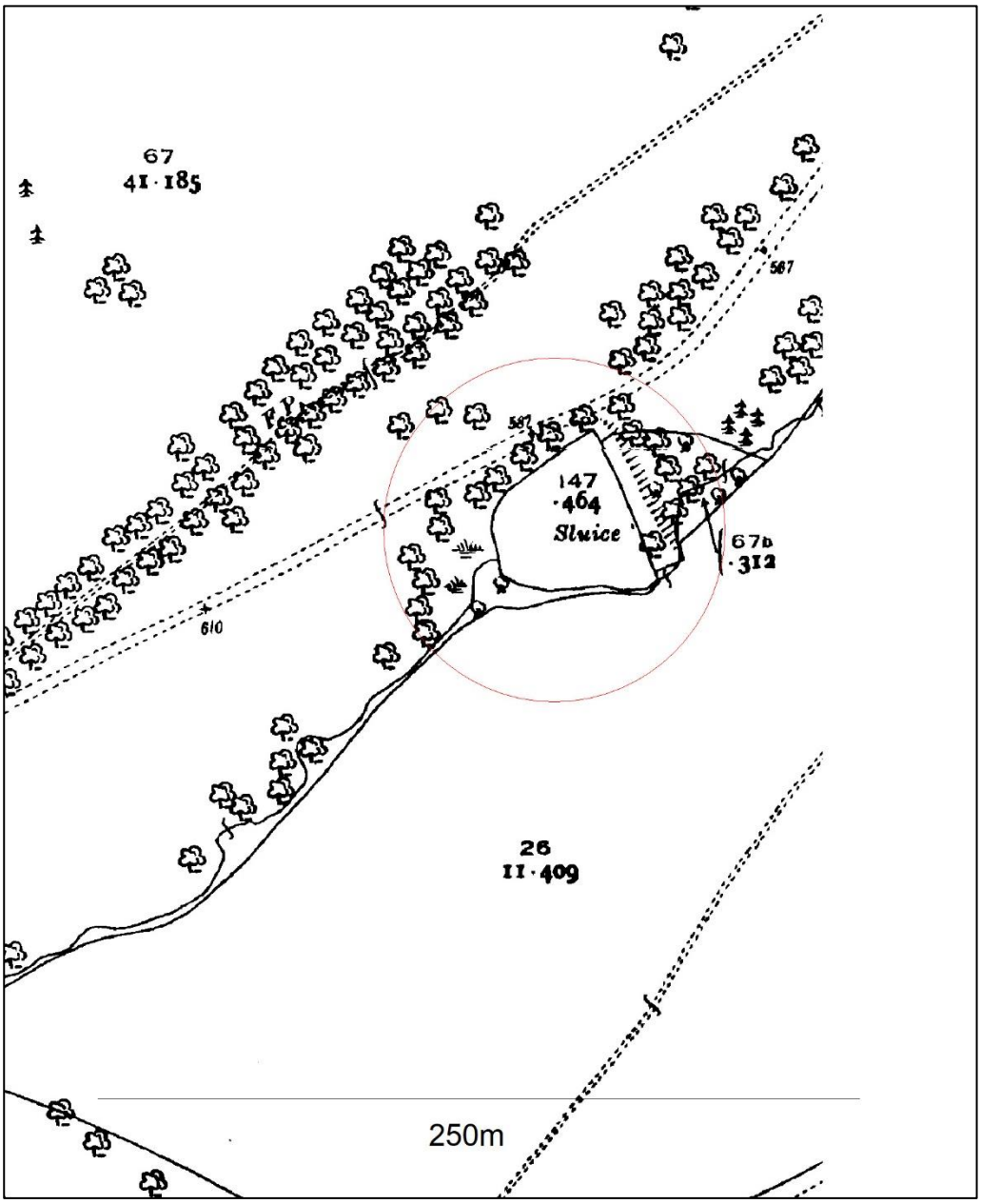

Fig. 5 Extract from the Ordnance Survey 3rd edition 1:2500 map of 1928

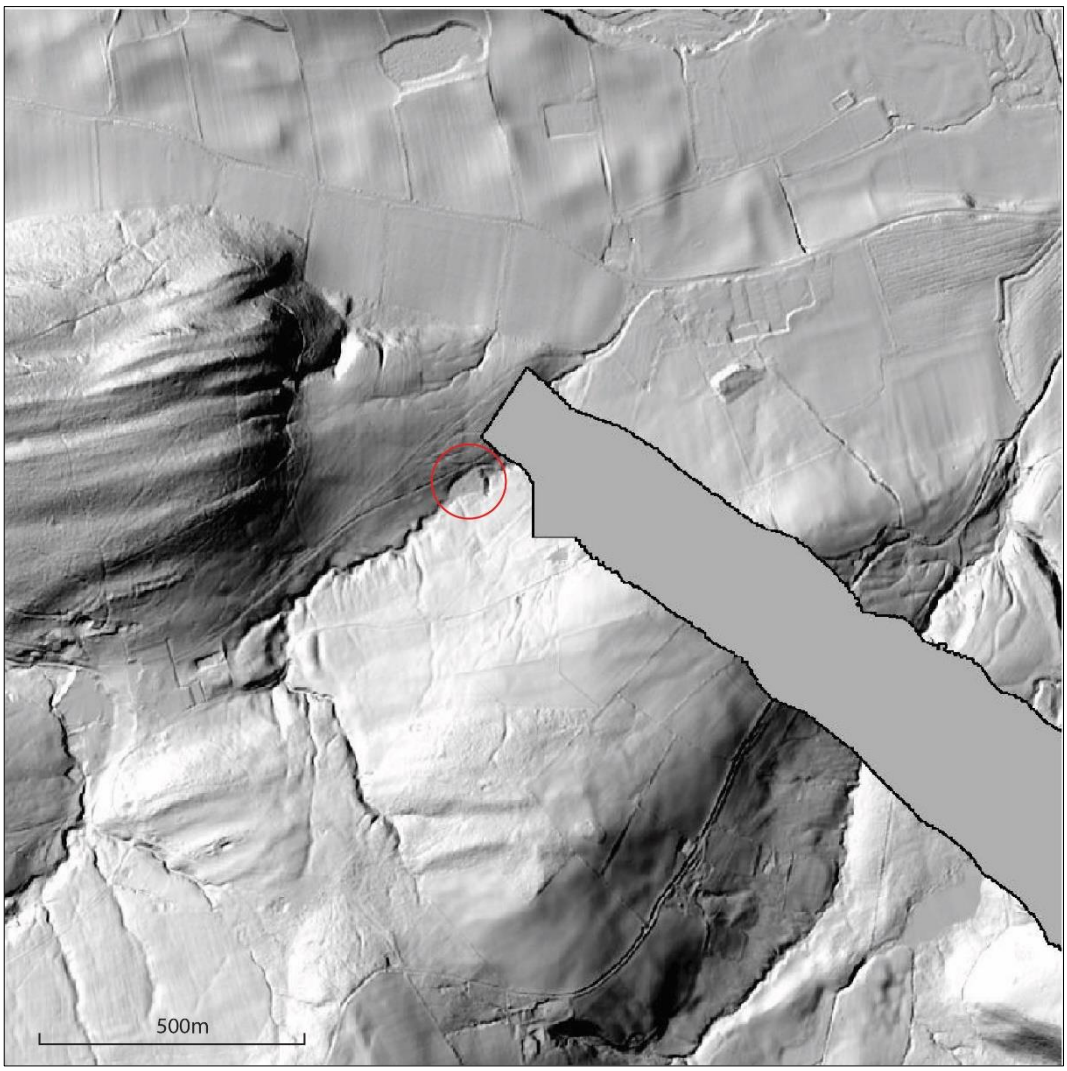

Fig. 6 2m-resolution LiDAR Digital Terrain Model, showing the topography around the lake (circled in red)

3 Archaeological Evaluation

3.1. The evaluation targeted three areas of the dam structure. All groundworks were carried out by Will Logan and Rob Billington, with the kind assistance of Johnathan Coltman-Rogers, owner of Stanage Park and Mike Garner of Garner Southall Partnership.

3.2. Two trenches (Fig. 7, 1 and 2) were excavated at the northern end of the dam in order to locate two outlets recorded on 1st and 3rd edition Ordnance Survey 25" mapping. The location of these trenches was informed by the location of the outlet channels which formed a Y-shape to the east, indicating that there were two outlets. Preliminary augering was also carried out, which did not provide any indication as to the location of either outlet but did reveal the makeup of the dam construction and the natural landform underlying it.

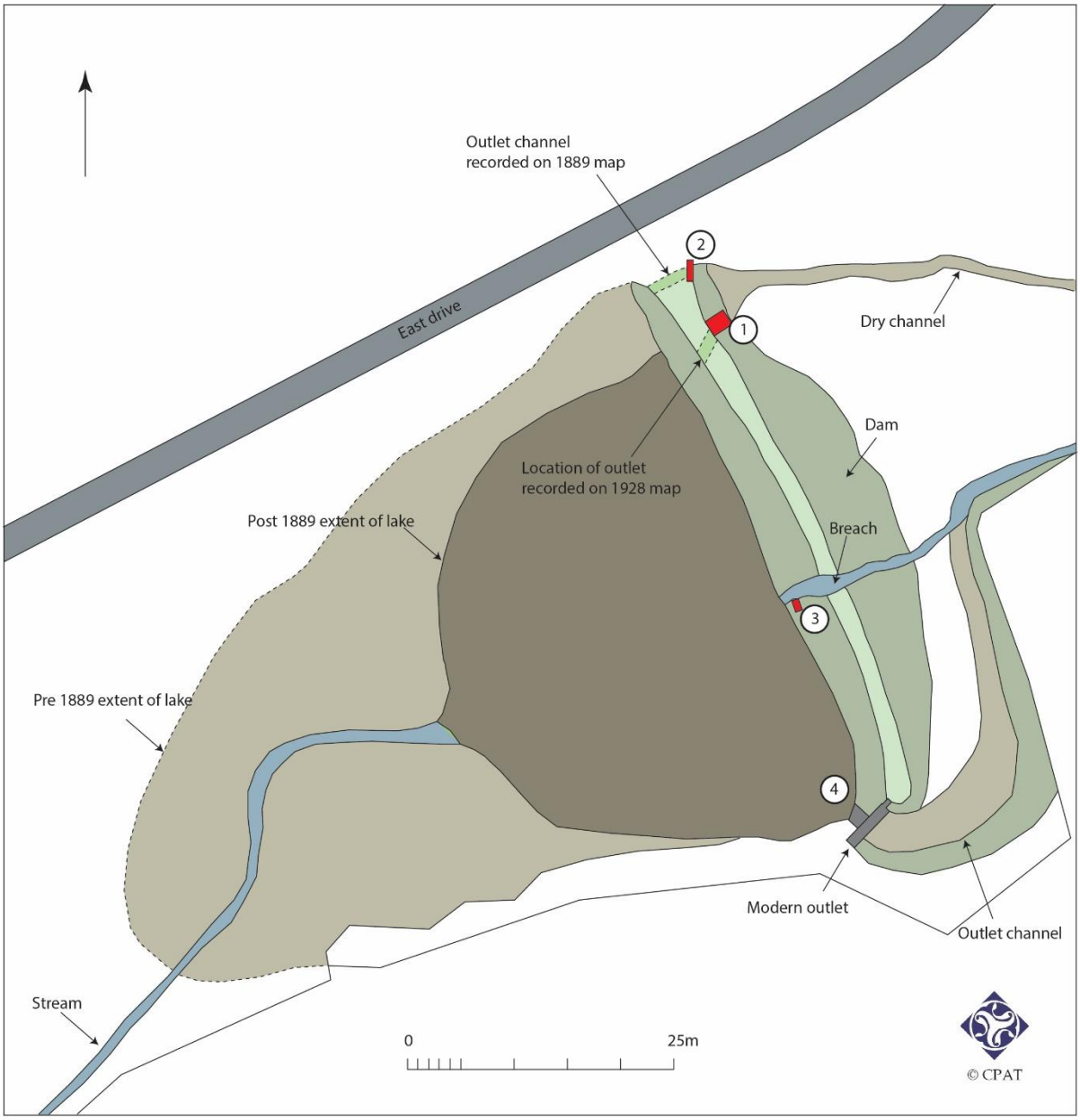

Fig. 7 Plan of lake showing evaluation trenches (marked in red) and features investigated (numbered)

Trench 1

3.3. Trench 1 (Fig. 7, 1) measured approximately 1.2m by 1.5m and was positioned to locate an outlet recorded on the 1928 Ordnance Survey 25" map, but also inferred by the shape of the channel located to the east of the dam. Underlying the topsoil (101) was a firm reddish silt 0.2m in thickness. Underlying 102 a compact, light grey silt deposit (103) was revealed extending across the entire trench but also appearing to fill a steep sided cut [104], >0.2m deep and >0.9m in width, broadly orientated north-east. The south-east side of the cut fell outside of the excavated area. The fill contained a number of very large pieces of sandstone and part of an iron door hinge. Underlying 103 and cut by 104 was a light orangey brown silt (105) containing moderate sub-angular stones.

Fig. 8 Trench 1 viewed from the north. Photo CPAT 4523-0007

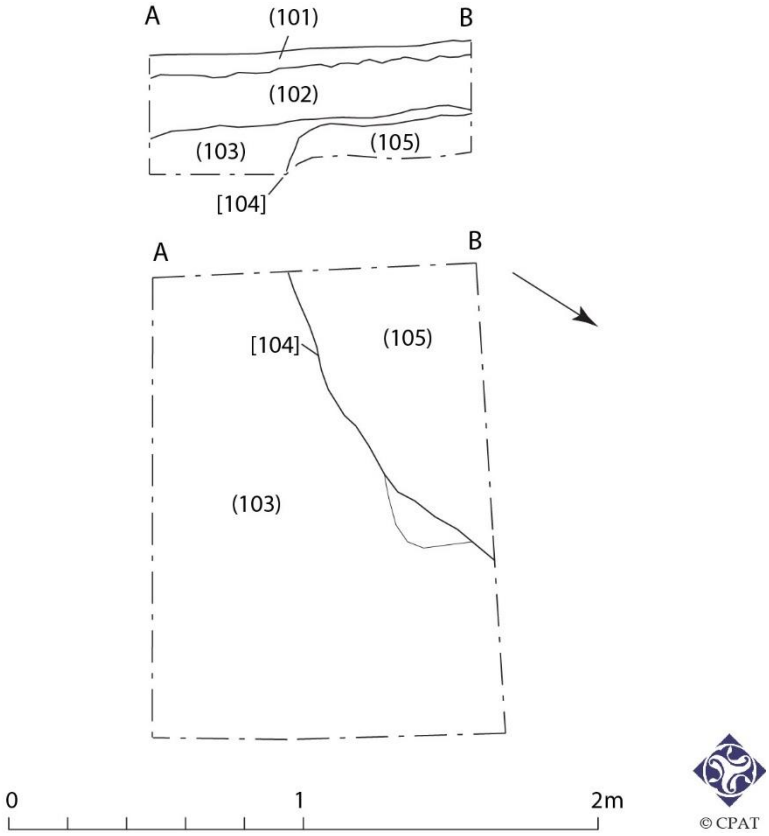

Fig. 9 North-north-east facing section and plan of Trench 1

Trench 2

3.4. Trench 2 (Fig. 7, 2) measured 2m by 0.5m and was located approximately 5m to the north of Trench 1 in order to determine the form of an outlet recorded on the Ordnance Survey 25" map of 1889, but also inferred by the shape of the channel to the east. Removal of the topsoil (201) revealed a compacted, friable reddish brown silt (204) and degraded sandstone deposition. Cutting this was a V-shaped ditch [203] 0.9m in width and 0.37m deep, oriented broadly east-west and running across the north end of the dam. The line of the ditch was also discernible as a faint depression in the top of the dam structure. Within the ditch was a firm mid-reddish brown clayey silting fill (202). Underlying 204 was a buried soil horizon composed of a greyish clayey silt , which formed the line of the natural slope underneath the dam.

Fig. 10 East-facing section of Trench 2 Photo CPAT 4523-0004

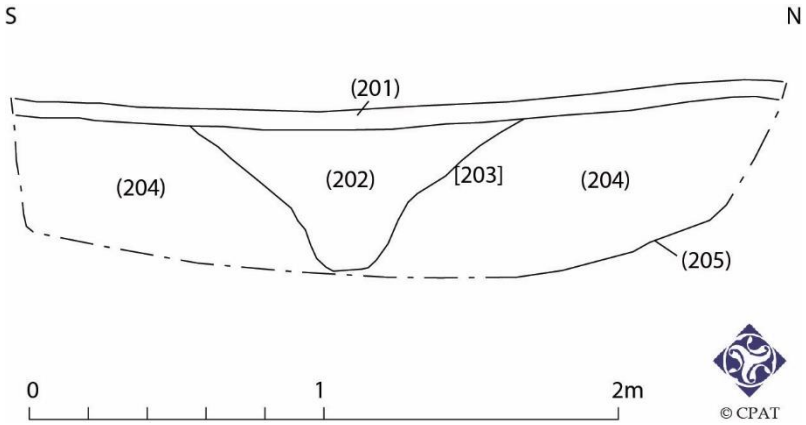

Fig. 11 East-facing section of Trench 2

Trench 3

3.5. Trench 3 (Fig. 7, 3) was excavated in order to investigate a series of timbers located to the south of a modern breach in the dam structure, which appeared to be part of a structure designed to strengthen and shore up the dam construction in the vicinity of the sluice. The breach itself was also investigated in order to determine if any trace of the sluice mechanism had survived.

Fig. 12 View from the north-west of the breach and the wooden bank retaining structure south of the sluice. Photo CPAT 4523-0021

Fig. 13 View from the west of the bank retaining structure. Photo CPAT 4523-0017

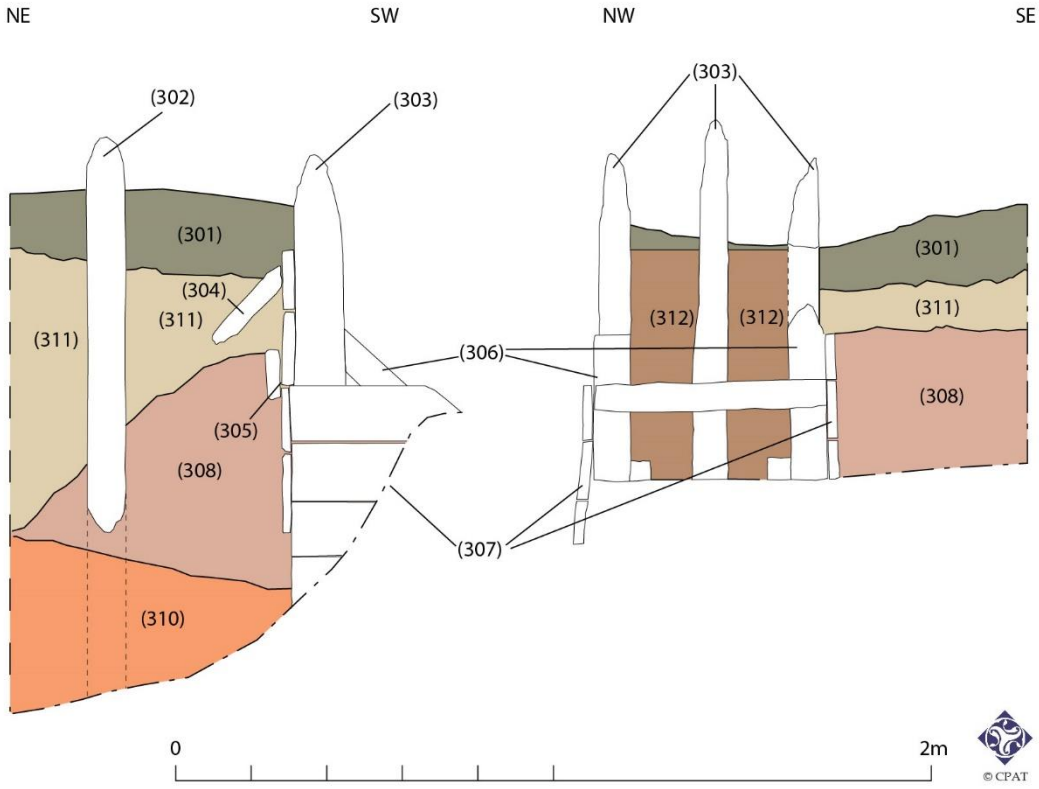

Fig. 14 North-west and south-west facing section showing the dam construction and wooden retaining structure to the south of the breach

3.6. The sluice mechanism and presumably the retaining structure to the north of the sluice had been destroyed by the breach. A section of ceramic pipework recorded by Mike Garner in 2016 in the north-west facing section of the breach was not present at the time of the survey, although a similar section was noted on the east side of the breach having apparently been dislodged by water erosion.

3.7. The retaining structure was covered by a soft, mottled silt deposit (312), 0.5m in thickness, overlying the uppermost layer of the dam construction, which comprised a friable mid-greyish brown sandy silt (301), 0.22m thick. A partially displaced timber arranged horizontally above the sluice (304) was revealed at this level. Underlying layer 301 was a friable stony clay silt (311), 0.75m thick, containing frequent angular stones, representing the main deposit of material forming the dam. Underlying 311 was a hard, compacted, reddish silt (308), 0.63m thick, containing degraded stone, which lay directly above the natural subsoil, a clay silt.

3.8. The structure broadly comprised four structural elements; three posts (303) retained by two angled supports at either end (306) with boards attached to the sides (307) and rear (305) of the posts. The structure measured >1.2m in height, >0.7m in width and 0.67m in length.

3.9. A crude post (302) of uncertain date may have been inserted to prevent lateral movement of the ceramic sluice pipe. This was located 0.4m north-east of a wooden structure noted above.

3.10. The outlet located on the south end of the dam was cleared of vegetation and examined to determine if any trace of the earlier outlet had survived. The outlet was late 20th-century in date and built in concrete blockwork with two outlet pipes. Water flow had eroded away the dam construction around the sides of the concrete.

Fig. 15 View from the north-west of the southern overflow showing the erosion of the dam construction on the north-east end. Photo CPAT 4523-0015

Fig. 16 Stonework in the outlet channel south of the southern channel. Photo CPAT 4523-0013

3.11. The base of the outlet channel and the sides of the outlet were examined to see if any trace of an earlier outlet, first depicted on Ordnance Survey 25" mapping in 1815 had survived. No in situ remains of an earlier structure were discernible, although a number of sandstone blocks were identified in the outlet channel including some incorporated into the concrete foundation of the extant structure.

4 Conclusions

4.1. Excavations in Trench 1 confirmed the position of the outlet ditch suggested by the Ordnance Survey 25" map of 1928, as well as revealing the shape of the disused channel to the east of the dam, at the north end. This channel, which was presumably an open U- or V-shaped ditch running across the upper dam, apparently superseded an earlier outlet located immediately to the north.

4.2. Trench 2 revealed a V-shaped ditch, interpreted as an open outlet, running across the top of the dam. This feature was recorded on the Ordnance Survey 25" map of 1889, and also fed into the channel later used by the outlet identified in Trench 1.

4.3. Both outlets in Trench 1 and 2 extended approximately 0.5m in depth below the current height of the dam. There was a layer of soil (102) overlying the outlet identified in Trench 1, possibly evidence of a localised repair to the upper dam structure, after the outlet fell into disuse.

4.4. The sluice mechanism located on the centre of the dam had been washed away by the breach in the earthen bank. Analysis of the construction of a wooden retaining structure, and the structure of the dam itself where it was revealed in section, suggests that the sluice was an original feature of the dam construction. The undisturbed natural subsoil upon which the dam was constructed was revealed at depth of approximately 1.6m below the top of the dam. The position of the sluice pipe was difficult to ascertain but was probably 1.2 metres below the top of the dam.

4.5. An examination of the modern concrete outlet located on the south end of the dam revealed no in situ remains for an earlier feature, which was first depicted on the Ordnance Survey 25" map of 1815. It is unclear, based on the available evidence, what form this may have taken, although the presence of a number of roughly worked sandstone blocks in the base of the outlet channel suggests it may have been constructed from stone.

5 Sources

Published Sources

Cadw/ICOMOS, 1999. *Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales. Part 1: Parks and Gardens: Powys,* Cadw, ICOMOS UK.

Cartographic Sources

1815 Ordnance Survey Surveyors' Drawing

1889 Ordnance Survey 1:2500 1st edition Shropshire 76.16

1903 Ordnance Survey 1:2500 2nd edition Shropshire 76.16

1928 Ordnance Survey 1:2500 3rd edition Radnorshire 11.16

1953 Ordnance Survey 1:10560 4th edition Radnorshire 11.SE

Web based sources

Google Streetview accessed 25/07/2018

6 Archive deposition Statement

The project archive has been prepared according to the CPAT Archive Policy and in line with the CIfA *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives guidance* (2014). The digital archive only will be deposited with the Historic Environment Record, Clwyd-Powys Archaeological Trust and the paper/drawn/digital archive with the National Monuments Record (RCAHMW).

Archive summary

CPAT Event PRN: 140249

2 A2 plans

3 trench recording forms

51 digital photographs Film No. CPAT 4523