

WATTS SHAFT ENGINE HOUSE, OLD MILLCLOSE MINE

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Watts Shaft is situated on the southern slopes of Clough Wood, Wensley, at SK 258 618. The surface remains, which consist of a partially standing beam-engine house and the foundations of its associated structures, date from 1859 when E. M. Wass reopened Watts Shaft and erected a 50 inches pumping engine made by Thornewill and Wareham of Burton-on-Trent. The engine worked until 1874 and was then moved to Warrencarr shaft at the new Millclose Mine. Both Gregory and Ford (1975; p.101) and Kirkham (1963, p.74) believe that the London Lead Company's 42" pumping engine of 1848 was operating on a shaft some 100 m to the south and it can therefore be assumed that the building remains at Watts date from the period 1859-74.

The engine house, and surrounding area was cleared of top soil and rubble in 1977-78 by members of the Enthoven Social Club and, following deterioration of some of the exposed features, was surveyed in June 1982. With the exception of the engine house, most of the buildings were only represented by their foundation courses, and any internal features were either unexcavated or had become obscured and destroyed by surface exposure. A full understanding of the site calls for re-excavation.

The number headings below refer to the areas shown on Fig. 1. Interpretation is based on the survey evidence and two photographs of the shaft top taken in the early 1870s (reproduced in Rieuwerts 1972).

Area 1, The Engine House (see also Fig. 2). The main feature of this building is the bob wall which has a ground thickness of 1.45 m and a maximum external height of 8.90 m. It is constructed out of regular dressed gritstone through blocks and is pierced by the arched opening of the plug rod door and the smaller opening below which carried the eduction pipes to the cistern. The 1870s photographs show that the wall is now at only half its original height; the massive masonry would have continued vertically for another two courses (approx. 1.20 m) at which point the engine beam was pivoted on the wall in an arched opening similar to the plug rod door. The wall above was built with smaller grit coursing and supported a conventional pitched roof.

The cylinder and side walls, not having to carry the same load as the bob wall, are of a uniform thickness of 0.80 m and enclose an area of 6.75 x 5.40 m. Directly behind the bob wall is the cataract pit from which the engine bed rises in three 0.35 m high tiers to the cylinder wall and door. Two holes for the cylinder holding bolts remain in the stonework of the second tier.

Area 2, The Boiler House. A rectangular building, 7.60 x 9.15 m, with its north-eastern edge being the side wall of the engine house. No internal features were observed but the north-western wall, which acts as a retaining wall for the bank behind, has three brick-lined arch openings at floor level which would have acted as boiler flues.

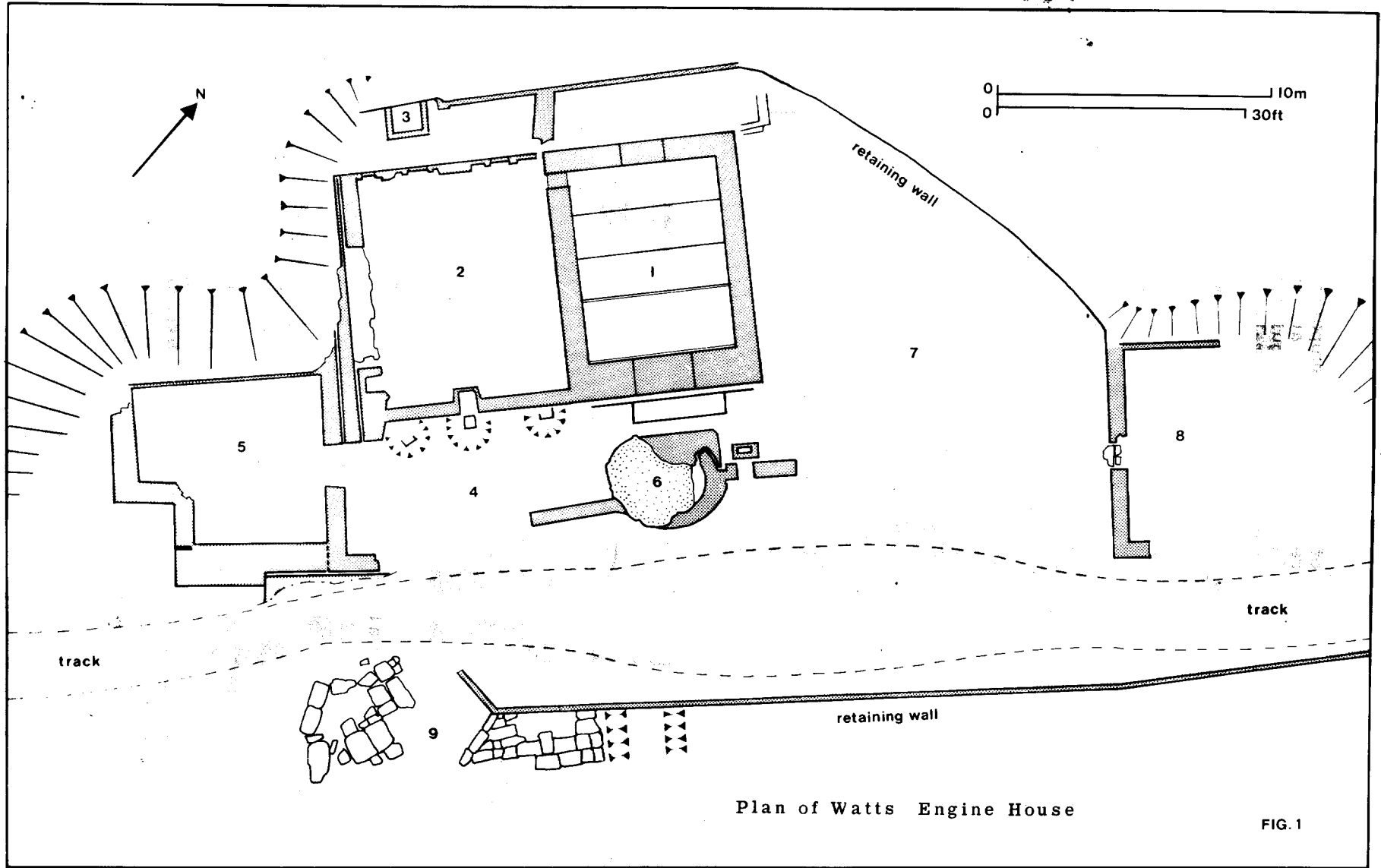
Area 3, The Chimney. The chimney is 1.40 m square, brick lined, and connects with the three boiler flues described in 2 above. It does not appear in the photographs and its original form and height are not known.

Area 4. This is a featureless area between the southeast wall of the boiler house and the modern track. The 1870s photographs show a pitched roof structure in this area with slatted timber walls and iron support columns. The balance box for the pump rods was also in this section.

Area 5. An irregular-shaped building butting against, but not bonded with, the southern corner of the boiler house. It is out of alignment with the other buildings on the site and this suggests a different period of construction. The photographs show a (horizontal?) winding engine here, working the shaft through a pulley set into the shear legs. If the building is interpreted as a winding house then the longer, western part may represent a small boiler house and the thick (1.40 m wide) southeastern wall may be seen as the load-bearing wall for a winding drum. Wall foundations associated with Building 5 run to the east beneath the track but have not been excavated.

Area 6, The Shaft. Circular, with dressed gritstone ginging, and a recent concrete cap. Foundation slots for the shear legs and other timber structures surround the shaft and the stone-lined cistern lies to the northwest against the bob wall.

Area 7. This area appears to be unexcavated and is bordered to the north by a substantial, curved, retaining wall. The photographs show the pump capstan here.



Plan of Watts Engine House

FIG. 1

Area 8: Only the southwestern wall of this building survives and it is broken by a 0.90 m wide paved doorway. The building appears on the photographs as a pitch-roofed, double-chimneyed cottage with no apparent industrial function.

Area 9. The eastern side of the track is supported by a random-rubble retaining wall. Some clearance has taken place at its southern end and exposed a jumbled area of paving slabs and two gulleys or beam slots which run into the wall. The excavated area is too small and confused to allow interpretation.

I would like to acknowledge the help of G. A. Pickin in the preparation of the survey.

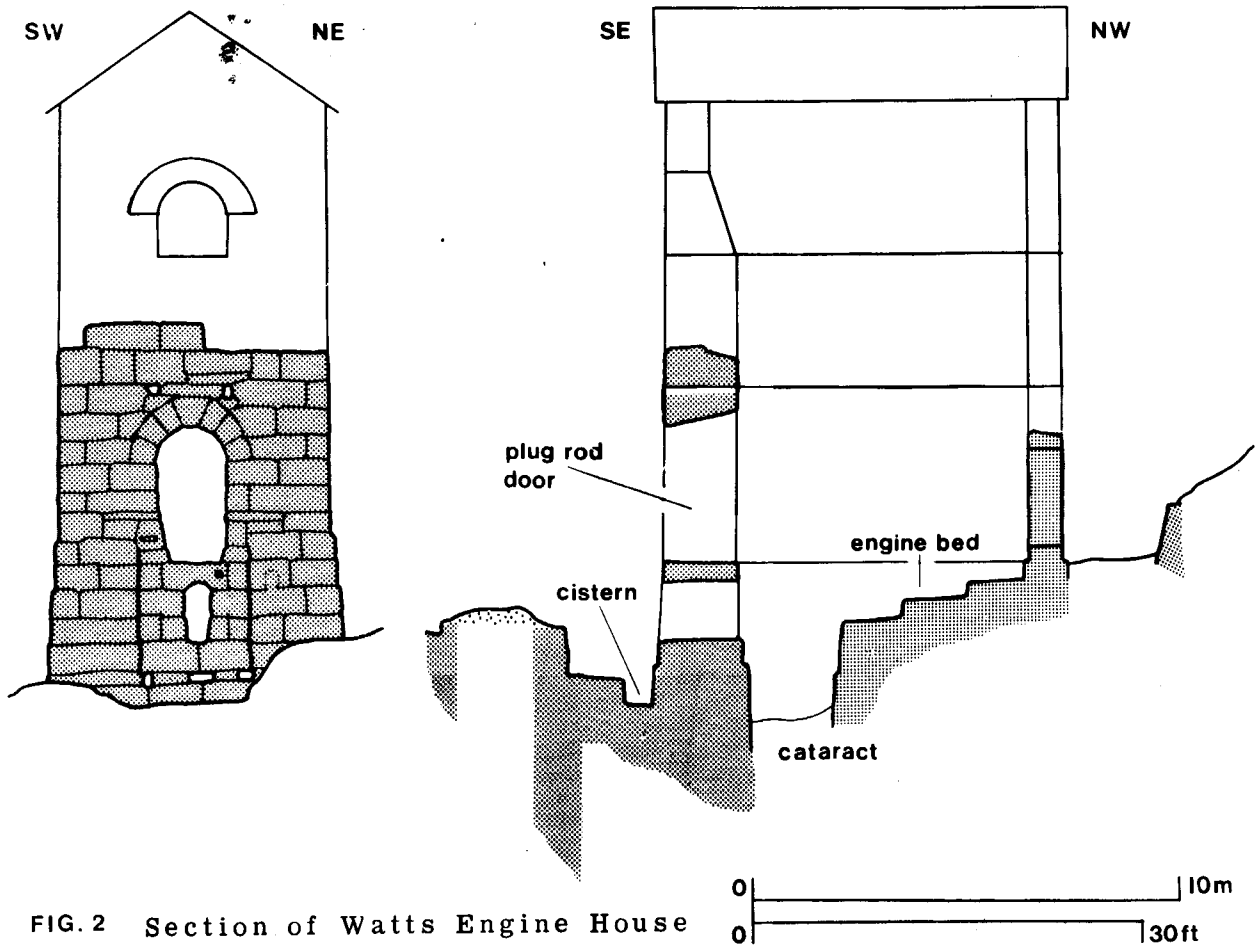


FIG. 2 Section of Watts Engine House

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