

**REEVE CASTLE,  
BOW, DEVON**

**HISTORIC BUILDING RECORDING  
OF STEEL PYLON**

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Project 168

# HISTORIC BUILDING RECORDING OF A STEEL PYLON AT REEVE CASTLE, BOW, DEVON

## Summary

*A steel pylon standing in an artificial quarry, created as part of a Japanese garden at Reeve Castle in the early 20th century, was recorded prior to demolition. The Castle was built by/for William Carter-Pedlar in c.1900 and the pylon formed part of a mechanism for starting a generator, for producing electricity. It is an unusual – possibly unique – survival of late Victorian technical ingenuity for producing power. The mechanism is now incomplete and the original generator has not survived, although the circular generator room remains below the terrace to the south of the Castle.*

## Introduction

The recording of a steel pylon in the grounds of Reeve Castle was carried out at the request of Nigel Cant, planning consultant, on behalf of the property owner.

The pylon is within the curtilage of Reeve Castle, in the civil parish of Zeal Monachorum, Mid Devon District. The Castle is listed Grade II and for group value; the listing also includes the adjoining glasshouse, engine house, terrace, ponds, bridges and garden paths (Listed Building No.95626, Appendix A).

A non-intrusive visual survey of the pylon and associated features was carried out by Martin and Sue Watts in April 2008. The pylon was not physically accessible, due to health and safety considerations, but was surveyed visually and photographed from all sides. Background information has been compiled from a variety of sources, which are acknowledged and referenced. The historic building recording conforms to English Heritage Levels 1-2.

The site record and photographs will be deposited with the Royal Albert Memorial Museum, Exeter, under accession number 135/2008. The OASIS reference number for this project is martinwal-45227.

## Location

The pylon is situated on the north side of a quarry, immediately to the south of the terrace of Reeve Castle, NGR SS 7098 0292. Beneath the terrace are a series of passages and the former generator house, with which the pylon was associated. A high level footbridge leads from the passage opposite the generator house to the top of the pylon. The legs of the pylon are built into the slope of the ground at the edge of the quarry, which appears to be an artificial creation as a landscape feature associated with the castle.

## Historical background

Comparison between the first and second editions of the 1:2500 OS maps (Figs.1 and 2) shows that Reeve Castle was built on a new site. According to Cherry & Pevsner (1989, 927) the Castle was built in 1900 by William Carter Pedler (*sic*) for himself. It is described as ‘A late fling at a Gothic folly. Octagonal, with top-lit central hall, taller polygonal tower, and projecting bays of various shapes to take advantage of the splendid views. Large moulded pointed and round-arched openings throughout, elaborate cornices and pierced balustrade, all of glazed yellow brick. Best seen from a distance.’ The listing description describes the Castle as ‘A most unusual house, a romantic late

Victorian fantasy'. According to *Who's Who in Devonshire* (1934, 46-7), William Carter-Pedlar, of Reeve Castle, Bow, was born in 1854, son of Robert Pedlar of Burston, Devon. He married Lizzie King in 1901 and his son and heir, Robert, was born in 1908. He held a number of local political and social appointments, including being a parish and a county councillor, and became a Justice of the Peace in 1906. During World War I convalescent overseas officers were entertained at Reeve Castle.

### **Description of the pylon**

The steel pylon is built close to the rock face on the north side of what appears to be an artificial quarry, created as part of a Japanese garden. It formed an essential part of the mechanism for starting an engine; the listed building description notes: 'Under the lower terrace is the boiler house. Outside (south) the ground drops very sharply and a bridge from the engine house connects with the top of a tall iron-framed tower. This contains a weight and pulley connected to the boiler engine. When the weight was dropped the engine was started.'

The engine or generator 'house' is a circular room 4.57m (15 feet) in diameter, built below the terrace to the south-west of the house, immediately above the quarry to the south. The room is accessible from a passage that runs east-west under the south side of the terrace (see Fig.3), with a flight of brick steps up to terrace level at its west end. The steps are built with nosed red bricks, some displaced examples of which carry the maker's name, W. THOMAS & Co WELLINGTON. The main passage is about 0.9m wide, with a brick-arched ceiling. The generator room is entered on its south side through a doorway with a semi-circular brick-arched head, with a small rectangular opening through the wall above. The walls are cement rendered and the space is lit by an octagonal timber-framed roof light, which stands above the terrace over. The generator room has a concrete floor, with steps up from the passage level to the main floor, and a raised concrete base to which the original generator would have been bolted down. To the west of this mounting block is a small Lister internal combustion engine, No.753FR16, rated at 8 horsepower, running at 1500 rpm. There are the remains of some switch gear, also by Lister (FR28482) on the west side of the room.

Immediately opposite the entrance to the generator room a short passage through the buttressed terrace wall gives access onto a footbridge about 5.5m long and 0.58m wide, constructed of two parallel square steel tubes with diagonal bracing between, supporting timber boards, with galvanised pipe handrails along both sides. The footbridge provided access to the upper part of the pylon tower, for maintenance and lubrication.

The pylon is built of galvanised steel angle sections. It is square on plan and tapers from bottom to top. The two south legs are longer than those on the north side, where the pylon is built into the ground. The structure is of 8 'bays' up to the platform, each bay being defined by horizontal angle sections bolted between the legs, with cross ties between every two horizontals. It is built in 5 stages or lifts, the leg sections being bolted together with square-headed bolts and nuts. There are pairs of cross ties between every two horizontals, which are fixed with hexagonal-headed bolts and nuts. The design and construction of the pylon is very reminiscent of that used for the towers of steel wind pumps, or wind engines, which were developed in the USA in the 1870s and were made in Britain from the 1880s (Watts 2005, 116-7). A ladder, with 32 rungs, runs up the south face. The approximate height of the pylon is estimated at about 12m. Close access was not available for detailed dimensions or examination of the structure to be undertaken.

The top section of the pylon, which starts just above the footbridge handrail level, tapers quite steeply to the apex. There is an access/maintenance platform towards the top of the pylon, which is reached by a short angled metal ladder with 6 flat metal strip rungs from the footbridge. The platform is approximately square on plan, formed of galvanised steel angle, with a neat tubular steel handrail between stanchions positioned at each corner. It was formerly floored with timber boards. In the centre of the structure, above the maintenance platform, is a pulley block, with 6 sheaves for wire ropes. These ropes would have allowed weights to be hung vertically downwards, within the structure of the pylon, and ran horizontally, above the footbridge, through a rectangular recess over the doorway in the retaining wall and across the brick-arched passageway, through the rectangular opening above the generator room doorway. There is a manhole at the edge of terrace above, which gave access to the wire rope run, presumably for inspection and maintenance.

A final feature noted was that the two horizontal side rails of the pylon immediately below the footbridge level show clear signs of distortion, apparently from having been damaged by the weight or weights falling on them at some time during use.

### **Dating and discussion**

The pylon is considered to date from the initial building phase of Reeve Castle in *c.*1900, and formed part of an integral scheme for providing electricity to the house. Domestic lighting schemes associated with country houses in England date from *c.*1880, the earliest making use of hydropower (Watts 2005, 114). The exact form and operation of the original generator at Reeve Castle has not been researched, and its maker and origin are at present unknown, but the steel pylon represents an unusual and interesting survival of late Victorian technology, standing as it does in an artificially-created quarry and Japanese garden, yet being part of an ingenious mechanism for starting a generator for supplying power. Its construction is similar to that of the tower of a wind engine, an example of which stood nearby, for pumping water up to a water tower, to feed an elaborate system of water gardens, ponds etc. (DCC HES Monument 40863).

### **In conclusion**

The steel pylon and the generating system of which it formed part are of both local and regional significance. It would be of interest if more information could be found concerning its design and installation. The foregoing description and attached photographs record the structure *in situ*, as currently accessible. It is considered that further recording should be undertaken as and when the pylon is dismantled and more information about its construction can be ascertained.

Martin Watts  
May 2008

### **References**

- Cherry, Bridget & Pevsner, Nikolaus. 1989. *Devon. The Buildings of England*, Penguin
- Watts, Martin. 2005. *Water and Wind Power*, Shire Publications

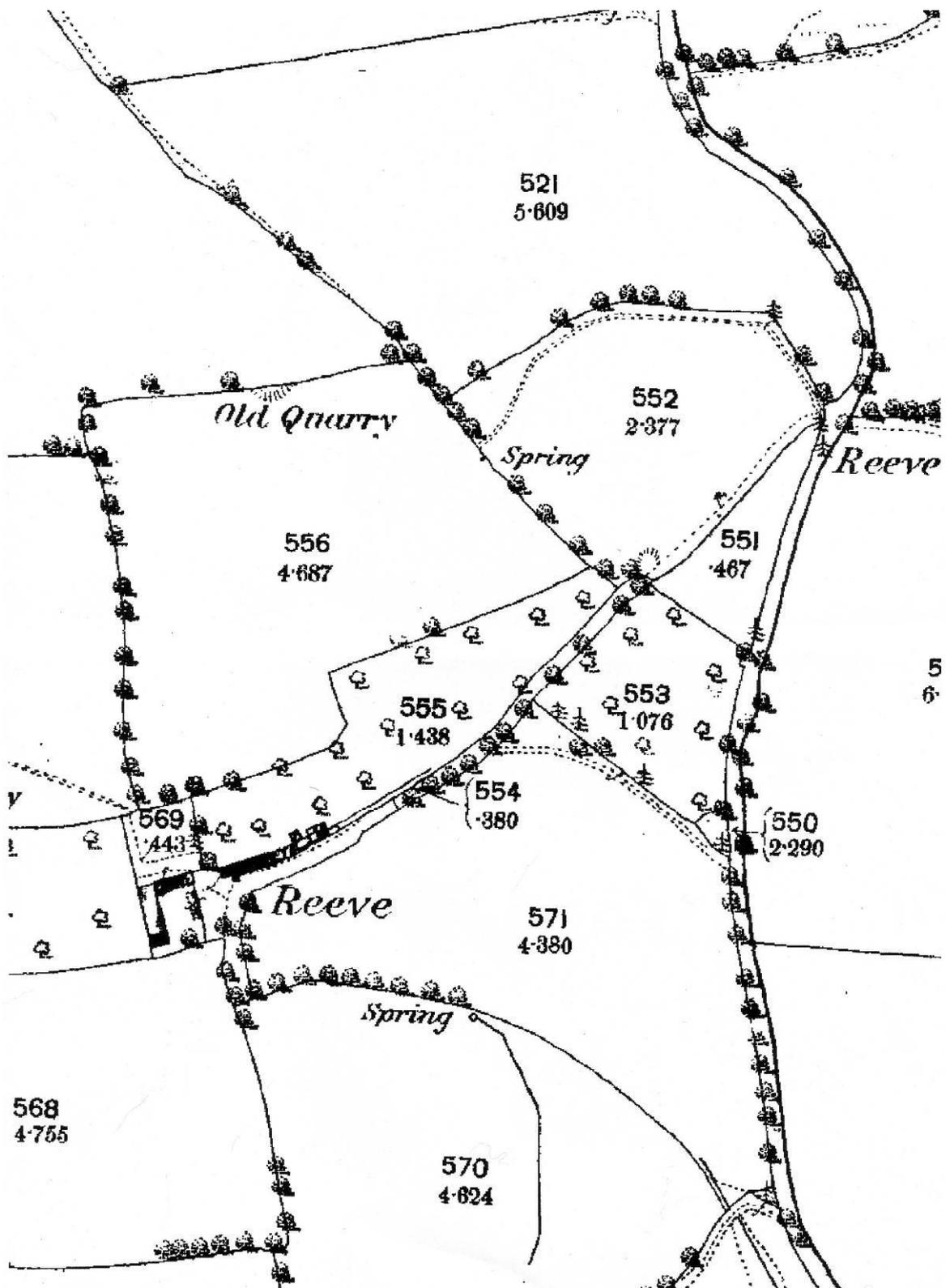


Fig.1 Reeve, Zeal Monachorum: the site. OS 1:2500 1st edition, 1880-90  
 Not reproduced to scale

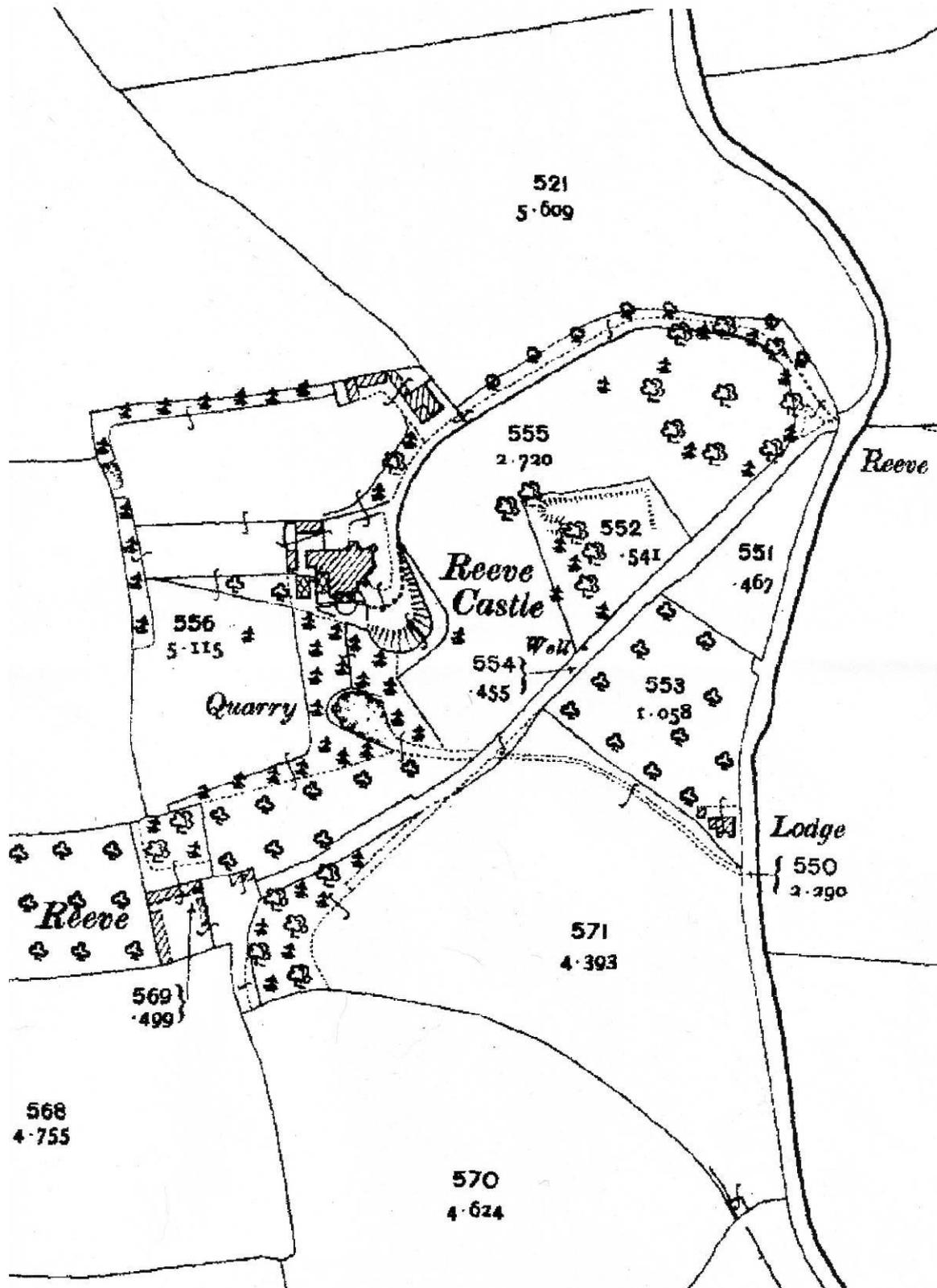


Fig.2 Reeve Castle and quarry. OS 1:2500 2nd edition, 1904-6  
Not reproduced to scale

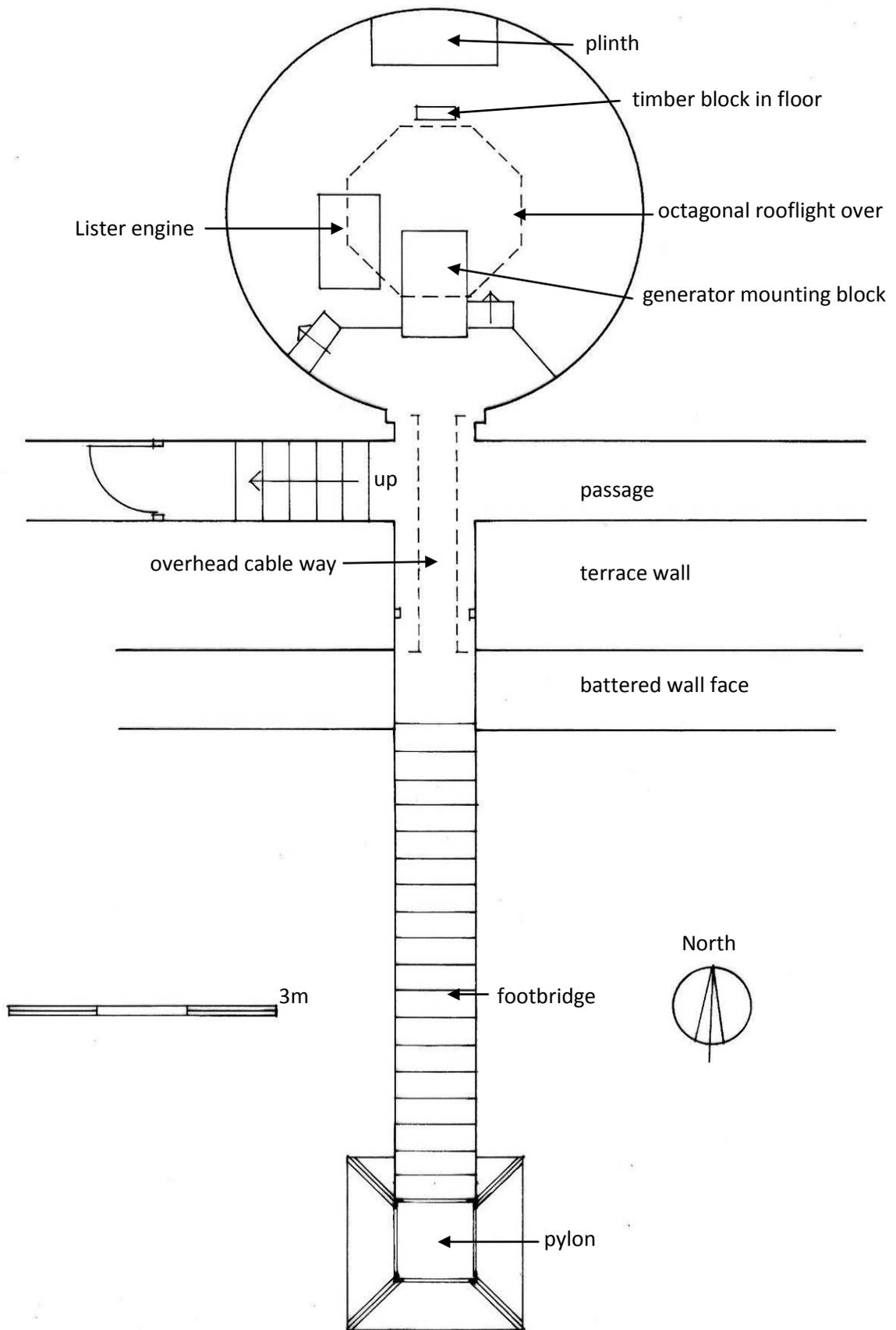
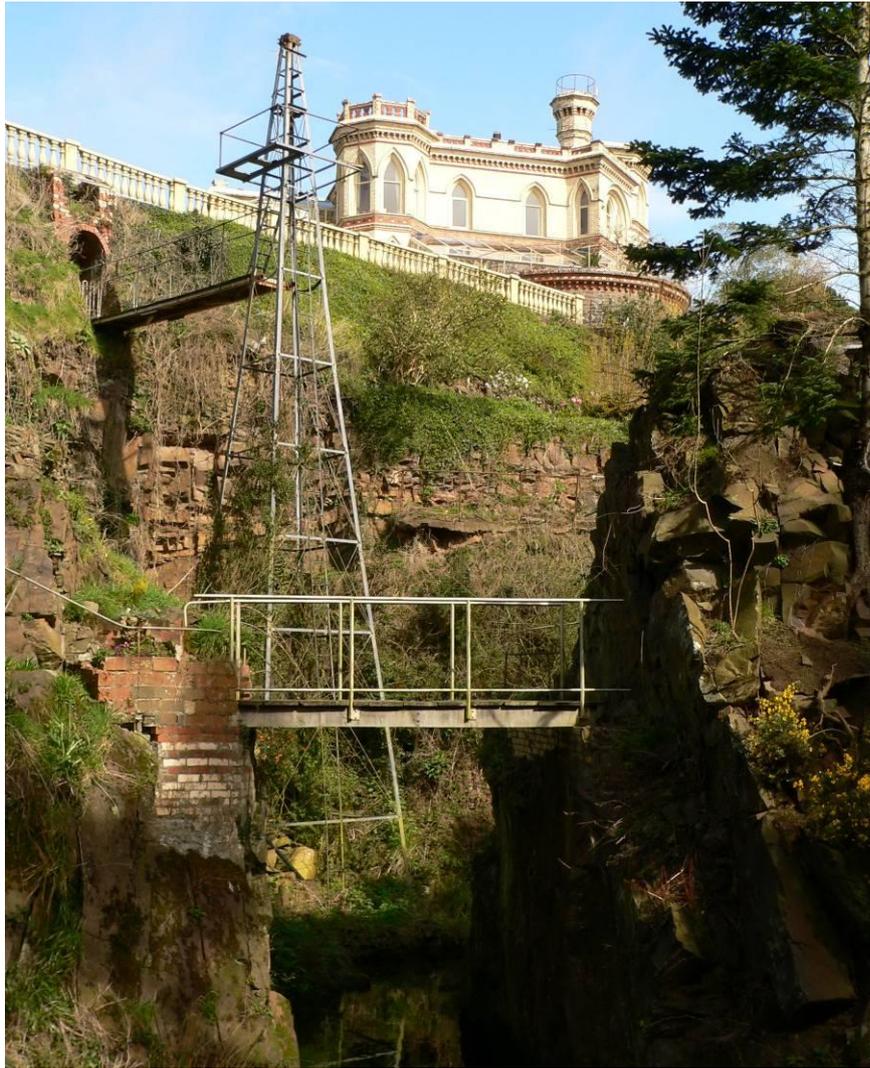
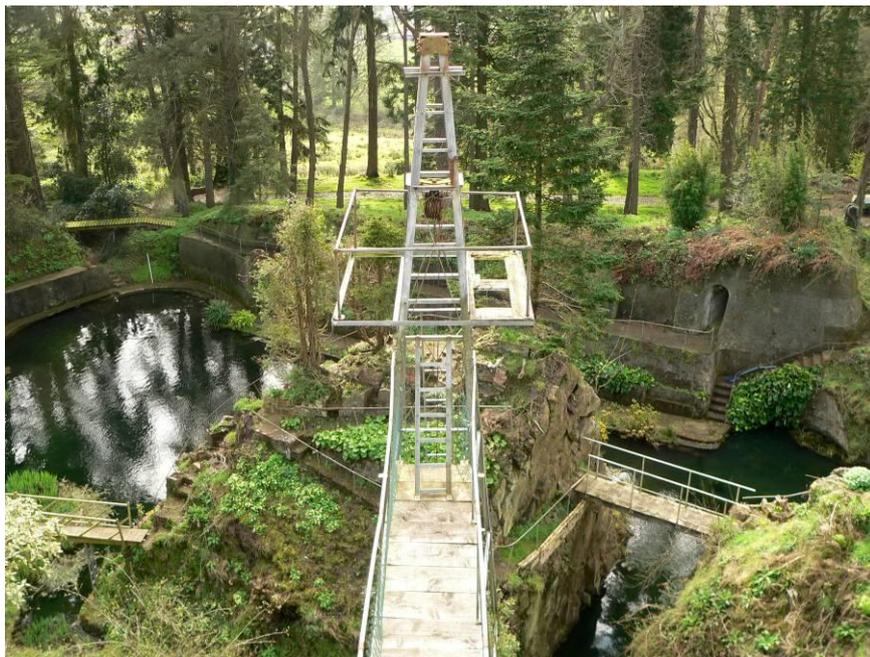


Fig.3 Plan of pylon and generator room, Reeve Castle April 2008 Martin Watts



Pylon and Reeve Castle, from the south-west



Pylon and artificial quarry setting, from the terrace



Access footbridge and top section of pylon



Detail of access platform and wire rope pulleys



Reeve Castle, from the south-west. The generator room is below the octagonal skylight



Generator room, looking south to access bridge and pylon, with Lister engine to right



General view of pylon, access bridge and terrace, from south

## Appendix A

### English Heritage Listing for Reeve Castle, Zeal Monachorum, Devon

**LBS Number:** 95626

**Grade:** II

**Date Listed:** 15/12/1986

Reeve Castle including adjoining glasshouse, engine house, terrace, ponds, bridges and garden paths. Large house. Dated 1900 and built for and by William Carter-Pedlar. Interior and roof completely renovated from ruinous slate 1977-85. Stone rubble walls, nearly all faced with cream-coloured Barnstaple machine-brick which includes decorative bands of red brick (and some black brick to rear); roof material unknown. A most unusual house, a romantic late Victorian fantasy. The plan was dictated by Carter-Pedlar's interest in playing the organ, and therefore the rooms are ranged around a massive stair well which was designed to house a large organ. Essentially the house is rectangular with its main front facing south and overlooking the terrace and Japanese garden. On the left front (south-west) and right rear (north-east) corners are projecting turrets and the right front (south-eastern) corner is cut back at an angle providing the entrance front with another corner turret. The service rooms are on the north side and include a small wing projecting left rear. 2 storeys with cellars and 3-storey entrance porch. It is a clever synthesis of styles; basically a kind of Venetian Gothic but also hints at Arabic inspiration. The walls have a red brick plinth and at first floor level a band of moulded and contrasting bricks, a top cornice projecting in similar fashion and a pierced parapet. The south-west and north-east tower parapets are slightly taller. The porch has no parapet. On ground and first floor levels drip courses are interrupted by moulded hoods over the windows. All the windows have moulded brick reveals. Most of the windows are lancets with pointed heads and 3 are grouped under a round-headed hoodmould at first floor level to right of the porch and in the turret to left of the porch. Both these last 2 are above large round-headed windows. The original glazing had all been knocked out before 1977 but apparently the heads contained coloured leaded glass. The front door, also in an arch-headed frame, also dates from 1977. Over the doorway are 2 grey limestone plaques, one inscribed with the initials of William Carter-Pedlar and date, and the other containing a motto in Greek. Just behind the porch an observation tower rises from the roof like a large chimney or minaret, It has plain external cast-iron steps and railings. The garden front has 2 windows between the angle turrets and across the front a glass-roofed verandah supported on plain cast iron posts. It is floored with tiles. To the left, in the angle between the main block and the service block is an iron-framed conservatory with mansard roof and floor of small shaped Minton tiles of various colours. The rear elevation, the service rooms, is simpler than the main front and part is exposed rubble with red brick dressing. The main roof is flat except for a large iron-framed glass vault over the stairwell. Interior: all the original joinery, plaster and other fittings were stripped out or vandalised beyond repair between 1952-1977 and therefore have been replaced.

According to the owners many of the doors had panels of leaded glass over panels painted with Chinese or Arabic designs. The doorways are pointed arches of moulded red brick, originally exposed but now painted over. Old photographs show the stairhall surrounded by Arabic motifs and Greek mottos. The house is heated by a hypocaust system.

From the front (south) the ground drops away rapidly to a former quarry, now the Japanese garden and includes 2 terraces. The upper terrace in front of the verandah projects forward with a round end. It is grassed with slightly battered retaining walls with brick coping and plain iron railings. The lower terrace includes concrete-lined ponds and service walkways to the cellars. To left (west) of the upper terrace an iron bridge over one of the walkways leads over to a hothouse with a round vaulted iron frame but now missing its glass. Under the lower terrace is the boiler house. Outside (south) the ground drops very sharply and a bridge from the engine house connects with the top of a tall iron-framed tower. This contains a weight and pulley connected to the boiler engine. When the weight was dropped the engine was started. From the front a series of winding concrete and brick paths with simple iron rails and including several simple timber and iron footbridges wind down the steep slopes of the former quarry which has been landscaped as a Japanese garden including a large concrete-lined lake with islands. The paths also wind off through water gardens, rookeries, other series of ponds, tennis court, croquet green, bear pit etc. The series of lakes, ponds and waterfall are fed by an elaborate system of overflow pipes and fed by a nearby spring and water tower.