

APPLETON WATER TOWER, SANDRINGHAM, NORFOLK

In 1871, the then Prince of Wales (the future King Edward VII) fell ill with typhoid while at Sandringham. Three years later, so too did his eldest son. Both royal illnesses must have vividly brought to mind the death of the Prince's father, Prince Albert, from the same disease while at Windsor Castle. Following that tragedy the engineer Robert Rawlinson was asked to report on the drainage of the Castle (it proved to be underlain by numerous foul cesspools, almost certainly the source of the Prince Consort's infection). The Sandringham water supply must have at once come under suspicion, and indeed tests showed it to be "unsatisfactory". As a matter of urgency, the house and indeed the whole estate had to be provided with a reliable and clean water supply.

The engineer responsible for the design of the new waterworks was James Mansergh (he is said to have been assisted by an amateur architect named Martin Ffolkes, but there is little evidence for this). Rawlinson was appointed to supervise the construction of the new waterworks; he and Mansergh had previously worked together successfully on the Birmingham water supply.

It was decided to take the new supply from a chalk spring a mile or so from Sandringham House. The level of the spring was more than 20 feet below that of the house, so a pumping station was needed. Moreover, the highest point of the Sandringham estate was still only about 5 feet above the roof of the house, and in order to ensure that there would be sufficient pressure for fire-extinguishing purposes a service reservoir would be needed: this is the 32,000-gallon cast-iron tank that tops the Appleton Water Tower, and it is this tank that is the 60-foot Tower's *raison d'être*. Incidentally, the height and the elevated position of the Tower ensure that it is a conspicuous feature visible from many miles around.

Mansergh's polychromic design, described as "neo-Byzantine" and carried out in differently coloured red bricks and local stone, exploited this position in more ways than one. Realising that the upper levels of the tower would command a dazzling view of much of Norfolk, he reserved the second-floor room for the use of the royal family and their guests when shooting parties or picnickers required a base during the day. A floor above the viewing room accommodated the valve gear, and the two lower floors made a dwelling for either the engineer in charge of the pumping station or perhaps a caretaker. A separate entrance and stair were made within the smaller tower to give independent access to the viewing room.

Work began in the summer of 1877 – the Princess of Wales, her brother and two of the young princes all laid foundation stones – and finished about a year later. Water flowed from the spring under gravity through stoneware pipes for some 750 yards to the pumping station, where it was softened and pumped via a further 400 yards of pipes and a four-inch rising main into the tank. (In winter the water in the tank was kept from freezing by the heat from the fireplaces below, the flues of which passed through the middle of the tank.) From here it ran under pressure for more than a mile to the house and the surrounding cottages, via branch mains that carried a dozen hydrants encircling the house. When all was complete the hydrants were tested by the famously energetic and strikingly handsome Captain Shaw of the Metropolitan Fire Brigade (immortalised by Gilbert in one of the songs in *Iolanthe*), "to his entire satisfaction", three or four jets being played simultaneously over the roof of the house. Not only, therefore, had the Prince of Wales now supplied his household with a "pure and wholesome" water supply, but he had placed it in "a condition of security from fire possessed by few of the great country houses of England".

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RESTORATION BY THE LANDMARK TRUST

The Appleton waterworks served the Sandringham estate well for many years as a private concern, but eventually came to be operated by the local water authority. By 1973, however, it had become surplus to their requirements, and stood empty for three years after which it was then leased to the Landmark Trust, a charity that specialises in rescuing buildings of architectural and historic importance.

The Trust was delighted to be given the rare opportunity of saving a fully functional building of such high quality. The architects Michael and Sheila Gooch, a husband and wife partnership from Norwich, were commissioned to carry out the restoration, the builders being the local firm of Fisher and Sons, of Fakenham.

The old outbuildings were demolished, to leave the Tower free-standing in its clearing in the woods. The roofs of the tank and for the turret of the staircase tower were decayed, and had to be replaced. The intricate details of the elaborate brickwork were all carefully repaired and repointed, and cracks in the tank's ironwork were repaired; in addition, replicas were specially made to replace missing details of the ornamental ironwork. New windows and doors were fitted, and a new kitchen and shower room formed on the ground floor. One of the most significant changes was the construction of an extended internal staircase linking the viewing room on the second floor to the floors below, which meant that the Tower became for the first time a fully integrated dwelling. It received its first visitors exactly a century after the Princess of Wales laid the first foundation stone. Happily if fortuitously, in the same year the Norfolk Industrial Archaeology Society restored the old steam engines in the pumping station.

As you see it today, however, the Water Tower has recently undergone a further rejuvenation, carried out in the light of twenty years of Landmarkers' experiences of living in this much-loved if eccentric "holiday cottage". Under the guidance of the architect Will Hawkes of Hawkes Cave and Edwards, Stratford-upon-Avon, and with Linfords of Lichfield as the main contractor, the building has been fully rewired, replumbed and redecorated, and a new heating system has been installed. The ground-floor shower room and kitchen have also been refurbished. Perhaps the most practical change has been that a way has been found to bring part of the top floor, the old valve room beneath the tank, into service as additional living accommodation in the shape of a much-needed extra bathroom.

The old sitting room next to the kitchen on the ground floor has now become the dining room, while perhaps the best room in the Tower – the viewing room on the second floor – has been redesigned as a bed-sitting room. As a result, while you are staying in the Tower you can, if you choose, spend as much as possible of your day here, gazing at the Norfolk landscape spread out below you, and in the evening watch the seabirds quietly flying home to the distant sandbanks of the Wash.

The Landmark Trust is a building preservation charity that rescues historic buildings at risk and lets them for holidays. Appleton Water Tower sleeps up to 4 people. To book the building or any other Landmark property for a holiday, please contact us.