

## “The Orwell Park Observatory”

Talk given to the Suffolk Institute of Archaeology and History on **2nd December 2017** by **Dr Paul Whiting**, Outreach Astronomer, Fellow of the Royal Astronomical Society, Treasurer of Orwell Astronomical Society

On the banks of the River Orwell at Nacton in Suffolk stands the Orwell Park Observatory, one of the finest surviving Victorian observatories in regular use.

Its story began with “Old Grog”, Admiral Edward Vernon, a naval hero whose greatest exploit came in 1739, when he captured from the Spanish the heavily fortified port city of Porto Bello in Panama. During one of the peaceful interludes between conflicts he had purchased land at Nacton where he built Orwell Park mansion, where he lived from 1725 until his death in 1757, but the estate remained in the family until 1848.

In 1848 Colonel George Tomline purchased Orwell Park from Sir Robert Harland, ending the Vernon family connection. Tomline, (a colonel only in a Lincolnshire militia regiment), had inherited enormous wealth from both parents, and was Eton educated. He subsequently added many acres of surrounding land so that his estates finally amounted to 30,000 acres in Suffolk and a further 20,000 in Norfolk. He had Orwell Park Mansion extensively remodelled and extended, but still lived mainly in London.

Tomline developed extensive business interests. He relocated Nacton village, built hotels and houses on the south seafront at Felixstowe, built Orwell railway station and line, and was involved in establishing Felixstowe docks.

Tomline had a limited interest in astronomy, a very fashionable science at the time. Being of enormous wealth, he could impress his guests by commissioning Orwell Park Observatory in the early 1870s, during a major extension to the mansion involving the addition of many guest bedrooms.

The architect of the observatory was John Macvicar Anderson, later president of RIBA (the Royal Institution of British Architects). Responsible for specification of scientific instruments in the observatory was Wilfrid Airy, civil engineer and second son of the 7<sup>th</sup> Astronomer Royal, Sir George Biddell Airy.

Construction of the observatory was undoubtedly challenging, but money was no object. Airy specified that the telescope be mounted 16 m above ground, giving a clear horizon over surrounding roofs and minimising the loss of observing opportunities caused by mist rising above the nearby River Orwell. This gave Macvicar Anderson scope to design the observatory tower on five floors, incorporating many features not normally associated with an observatory.

- Basement: the steam room of a Turkish bath suite
- Ground floor: the tepid and cool rooms of the Turkish bath suite.
- First floor: a muniment room for storing valuable documents.
- Second floor: a belvedere giving access to balconies from which to admire the extensive lands surrounding the mansion.
- Third floor: the equatorial room housing the 10 inch, (26 cm) telescope nowadays referred to as the Tomline Refractor.

The Tomline Refractor was constructed in 1874 by Troughton & Simms, leading telescope makers of the time, costing £1,345.12s.8d. The leading German optical company Merz ground the object lens for £333.6.8d. Although there is no maker's plaque on the mount, it is almost certainly a product of the Orwell Foundry of Ransomes, during the period when it was known as Ransomes, Sims & Head.

When first built this was one of the top 20 telescopes in the world. In early 1874, Tomline began searching for a professional astronomer to operate Orwell Park Observatory. He approached George Airy, who recommended John Isaac Plummer, an able mathematician, interested in positional astronomy and comets. Tomline allowed him to volunteer for duty with the RGO to observe the transit of Venus in December 1882. He was put in charge of the expedition which observed from Bermuda, and the trip took him away from Orwell Park for four months.

Tomline died at his London home on 23 August 1889. His heir was Captain Ernest Pretyman. Pretyman was not interested in astronomy and made Plummer redundant. Plummer had to leave his tied house and lived for a while in Ipswich then, in May 1891, took up the post of Chief Assistant at Hong Kong Observatory (HKO). At HKO, his duties involved some astronomy but were mainly meteorological and the study of typhoons.

Pretyman's interests lay in boat racing on the Orwell, and he offered the telescope to Eton College, but the cost of removing it was prohibitive. The observatory was left largely neglected until 1930. In

1930, an amateur astronomer living in Ipswich, Edward Collinson, asked permission from Pretyman to use the telescope. Permission was granted and, during the six years until 1935, he used the instrument to observe principally Mars and Jupiter. His observing notes indicate that, at the time, the observatory was still in a good state of repair. In 1935, he purchased his own large telescope, and ceased using Orwell Park.

In 1936, Aldeburgh Lodge School purchased the mansion, relocating there in 1937 and changing its name to Orwell Park School. The headmaster at the time was Mr N H Wilkinson. He was lucky to find, living in retirement in Nacton, a Mr Hancock who had looked after and worked the telescope while it was in Captain Pretyman's ownership. Hancock taught Wilkinson how to use the telescope, and Wilkinson used the instrument until 1939 to instruct the schoolboys in astronomy.

In 1939, on the outbreak of the Second World War, the School moved out of Orwell Park, and the 22<sup>nd</sup> Armoured Brigade of the Seventh Armoured Division, the *Desert Rats*, moved in. They were blamed for a lot of damage to the building and its fittings, including damage to the observatory clock and the loss of most of the eyepieces. In 1946, the School returned to Orwell Park, and Wilkinson resumed using the telescope. He purchased new eyepieces and had the object lens taken out and cleaned by a firm in London.

From 1949 to 1958 the Ipswich and District Astronomy Society, led by Roland Clarkson undertook some limited repairs to the observatory, but during this time the fabric of the building further deteriorated.

By 1967, the observatory had fallen into a very serious state of disrepair. The Orwell Astronomical Society was set up with 13 members basically in order to bring the telescope back into use by a programme of emergency repairs. By the present time it has grown to 110 members.

The Belvedere now houses the smaller 5 and 10 inch telescopes and a library. The drive mechanisms have been changed several times, and are now controlled by wi-fi. The observatory is still registered as IAU Observatory no. 582, but it is estimated that £500,000 is needed to bring the building and its infrastructure into a stable state, with a full restoration needing several £millions.

Full details of the history and current usage of the observatory are available on the Society website at [www.oasi.org.uk](http://www.oasi.org.uk)