A Short History of Wokingham Climatological Station.

Bernard Burton

It was in October 1975 that the first discussions were held between myself and the then Town Clerk, Mr Jones, concerning the setting up of a weather station for the town of Wokingham.

At Mr Jones's request, I drew up an estimate of the likely cost of the project, assuming that we had to start from scratch and purchase everything new. This was put to the Council's Amenities Committee, but they found that they were unable to sanction the expenditure. I then had further discussions with Mr Jones, pointing out my willingness to get the project started, but stating also that I was not then in a position to provide the funds (I had a young family and a big mortgage), or the site for the instruments. We talked about possible sites on Council land, but thought that security would be a problem. I agreed to approach the local schools to gauge their interest in the project, with a view to setting up a basic rainfall station, with plans to add other climatological instruments when feasible.

I contacted the heads of Holt and Emmbrook schools, as these were nearest to where I live, and got favourable responses from both. Emmbrook was chosen over Holt because the latter were having building work done and would not wish to set up the weather station for at least a year.

As a stroke of good fortune, Emmbrook School already possessed a thermometer screen and raingauge, and a Six's maximum/minimum thermometer, uncalibrated. After discussion with Mr Carter, the then headmaster, and with the head of geography, it was agreed that the screen and raingauge could be deployed on the area of ground where the present station is located, on a flat grassed area next to the Emm.

The installation was completed in time for the start of 1976, and readings commenced on the 1st January.

It immediately became evident that the Six's thermometer was not providing accurate readings, and an order was placed with Casella Ltd. for standard mercury in glass maximum and alcohol in glass minimum thermometers together with NPL calibration certificates. These were delivered in June 1976, and readings from these instruments commenced on the 25th June.

During 1978 agreement was reached with the school governors and the Town Council to have a chain-link fence erected around the weather station in preparation for extending the range of climatological data obtained to include grass minimum temperature and earth temperature at 30 cm depth. However, the installation of the fence was delayed until October 1979, firstly at the request of the headmaster, to await the end of building work going on at the school, then because the contractor booked to erect the fence went out of business, and a new one had to be found.

After the fence was erected, the additional thermometers were deployed and readings commenced on 1st November 1979. Also during that year a motor mower was purchased so that I could personally cut the grass in the station enclosure and prevent accidental damage to the ground deployed instruments.

In the autumn of 1980, a second-hand Kew pattern mercury barometer was purchased and installed at Cantley Crescent, allowing accurate measurement of air pressure.

In 1981 a second-hand thermometer screen was purchased, and after refurbishing was installed on the 18th July. The original screen was then removed for refurbishing and returned on the 26th September. In the same month, a second-hand thermograph was obtained and deployed in the new screen.

During 1984 a second-hand 5 inch MO pattern raingauge was purchased and deployed in the enclosure. Also that year I was fortunate to purchase a second-hand Munro Mk4 anemometer and vane and anemograph recorder for about 10 % of the cost new. Although it was hoped to erect the instrument above the flat roof of the geography block at Emmbrook, after initial verbal agreement of the school and Clerk of Works, early in 1985 a number of stipulations about how the mast could be affixed to the building were made by the Council, and this entailed redrawing the plans for the mast, and raised a number of problems. Once more, agreement was reached, then I was informed that we would have to apply for planning permission, and the Council insisted on writing to all the nearby householders in case there were objections to the mast.

So it was well into 1986 before written permission was finally given, but by then other building work at the school during the summer and autumn delayed installation. In the meantime, another second-hand thermometer screen, large pattern, came onto the market, was purchased and refurbished during the spring, and installed at the site in May 1986 in place of one of the small screens.

In the summer of 1987 the long-awaited installation of the anemometer mast and instrument, and the anemograph recorder, was completed. However, we had to wait until October before a necessary mains power socket was provided, even though the work had been ordered many months previously. On October 1st 1987 the first anemograph recordings were obtained. Then 2 weeks later, the October storm caused damage to our new mast. The anemometer and vane had to be removed as they had also suffered slight damage, mainly as a result of water ingress, and were dismantled and refurbished. A new mast and stronger fittings, plus additional lateral support, was erected on the 20th November 1987, and reading recommenced then, and continue to this day.

In June 1988 another second-hand MO pattern raingauge was purchased and installed in place of the ageing original school gauge. One year later, in June 1989 an new earth thermometer and steel tube were purchased for deployment at 1 metre depth, with readings starting on the 1st July.

April 1993 saw the installation of an autographic raingauge, provided gratis by the National Rivers Authority. This instrument gives a permanent record of rainfall against time, allowing the time and intensity of significant events to be ascertained. During 1993 a home-made electronic sunshine recorder was installed on the roof of the school on a trial basis.

During 1999 a new commercial electronic sunshine recorder was installed, and became operational after a short period of comparison with the home-made instrument. In August 1999 a second-hand Mk4 anemograph was purchased for a nominal sum from Reading University. After cleaning, repairs and modifications, this was brought into operational use on 19th August, the old recorder being held for spares.

In May 2000 a building extension to the geography wing of the school necessitated the moving of the anemograph recorder from its first floor location to the ground floor geography room annexe. This required the rerouting and extension of the multicore cables between the anemometer and vane and recorder. By good fortune, some small amount of spare cable remained after the initial installation, and this was put to good use. In the event, careful preparation paid off and the move was completed with the loss of only 30 minutes of wind record.

In August 2002 the first example of serious vandalism occurred, and resulted in damage to the large thermometer screen. Although the entire screen was thrown to the ground, the roof having taken most of the shock, only 1 of 4 glass thermometers inside was broken, together with the rain measure. Surprisingly too, the thermograph recorder was also undamaged. No readings were lost, as a spare set of thermometers was held in the small screen on the same site. After remedial work to splintered woodwork over the next few weeks, the large screen was returned to operational use.

During 2004 an ultra-sonic anemometer was purchased and installed at Cantley Crescent, for comparison with the Munro instrument at the school, with a view to maintaining the wind record in the event of the use of the school being lost. Also in 2004 the chain-link fence enclosing the weather station, in need of repair after over 25 years service, was replaced. The original concrete posts and wooden gate were in good condition and have been retained.

During all these years, the support of the school has been vital. For much of the time before I retired in 1997, the term-time weekday readings were taken by the pupils, under the direction of the geography master. Except when working in remote locations, I always attended the site at least once a day, at a time that work permitted, and was able to ensure the veracity of the readings, and indeed found very little to complain about for the majority of the time. Weekends and holidays were covered by numerous deputy observers. Over the years these have included keener members from the pupil observers, teachers at the school, members of my own family, and neighbours. There was even a period from 1982 to 1985 when I was detached to Manchester, then Shetland, then Wiltshire, and could be away from Wokingham for up to 10 days at a time. Highly reliable pupils, and my wife and son at weekends/holidays, took the readings, and I handled occasional problems by 'phone. There was no interruption to the daily readings. In recent years, sadly the interest of the school seems to have waned, in part due to constraints of the curriculum, and also because of less interest by members of staff after the head of humanities, Mr Wilkes, who had been a staunch supporter of the project, changed posts. However, in my retirement, I am happy to continue to maintain the Wokingham Climatological Station, with the occasional help of retired colleagues to cover for holidays.

In 2003/2004, there were indications that the school may ask for the return of the land on which the climatological station was located. Planned enlargement of the school meant that extra parking space would be required. To counter this, an application was made to the District Council for a lease of the land on which the weather station stood, in order to give us some security of tenure, as the whole project was based on a verbal agreement between the various

head teachers and myself. While the terms of this lease were still being negotiated by the Town Council, I was informed that the proposed car park was to go ahead, and we should remove the instruments by the end of the 2006 school summer holidays.

The first priority was to find another suitable site for the climatological station. Several possible locations were visited, including the Emmbrook Junior School, which had the benefit of being relatively close to the old site. The headmistress of the junior school, Mrs Robertson, gave her willing approval to my request, and a suitable site was fenced off during the summer of 2006. Some instruments were installed at the new site in July, and intercomparison readings commenced. Our tenure at the old site ended on the 26th September, when contractors arrived to remove the fence and prepare the ground for the car park. All the remaining instruments were transferred to the new site on that date, and the junior school site became the official Wokingham Climatological Station from that date.

With the move to the new site, an opportunity was taken to install an automatic weather station (AWS) there, in addition to the manual one. The AWS is built around a Campbell Scientific CR10X data logger attached to temperature, humidity and rainfall instruments. The data logger can be interrogated remotely, and the data transferred to a remote PC. Examples of the data obtained can be seen on Page 6 of the Wokingham Weather web site.

The Town Council have sought a lease for the ground at the new site, and early indications are that this will be forthcoming.

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