

# LOCAL LANDMARK

## Emley Mast: The Ups and Downs – by Chris Knowles



**“Fell down across Jagger Lane  
(corner of Common Lane) at  
17.01:45. Police, I.T.A HQ, R.O  
etc. all notified.”**

This was the duty engineer’s entry in the Emley Mast station log book on Wednesday 19<sup>th</sup> March 1969, the day the sky-piercing structure plummeted down from 1,265 ft, scattering enormous sections of broken steel across the quiet country roads of the West Yorkshire village.

Beginning service on 3<sup>rd</sup> November 1956, Emley Moor’s original 445-ft. telecommunications mast provided huge areas of Yorkshire with independent television broadcasts through one of the strongest TV aerials in the country.

The location for the structure was agreed on after numerous scientific studies were performed at many sites across Yorkshire. These studies were carried out in order to not only determine which site would offer the best coverage, but also which location would meet the transmission demands of millions of people located across the region. Balloon transmission tests were executed at four potential locations before the Independent Television Authority eventually chose Emley Moor - 841 ft. above sea level - as the site for their 405-line VHF transmitting station.

In 1966 the station was improved when it was transferred to a new structure which proudly stood almost three times higher than its ‘little sister’; at the time, it was one of the tallest structures in Europe. However, many elements of the design were flawed and huge areas near the summit of the structure attracted substantial coatings of ice during the winter months. Consequently, this created a severely hazardous environment as huge blocks of thawed ice fell from the ill-fated mast, causing the authorities to place red warning lights on the tower to indicate when this danger was present.

The previous log book entry to the one above, on 19<sup>th</sup> March, warned of falling icicles and, thankfully, the roads surrounding the tower were closed until further notice. Just after 5pm, the increasingly unstable structure buckled under the unbelievable strain of the ice and, as the steel foundations gave

way, gravity sent the giant aerial crashing down to the countryside below, causing a loss of service for six million viewers. Remarkably, no-one was killed or seriously injured by the accident and there was even a story of unbelievable good fortune - supporting wires from the structure ripped through the roof of a church below which, 30 minutes earlier, had been visited by the church warden before he was called back for his dinner!

As investigations took place, the enquiries committee placed the cause of the accident not only on a form of turbulent oscillation, which whistled through the Pennines at a low wind speed, but the accumulation of ice that had formed on the mast and its supporting cable guys.

Provisional guidelines were established, and a few months after numerous emergency masts were erected to resume transmission, a new structure was designed, constructed (using reinforced concrete) and security-tested in order to guarantee no further disasters.



The new structure, which was a completely new design after residents of the village protested against the older-style masts, stands 1,084 ft. tall and reaching the tower room (900 ft.), takes seven minutes in the maintenance lift! It is the tallest self-supporting mast in Britain and features a 55-ft. lattice which is lined with transmitting aerial panels. The Emley Moor tower broadcasts to an area of approximately 10,000 km<sup>2</sup>.