

# AN ATMOSPHERIC STAR

**MAIN PHOTO:** A Great Western Railway Class 150 Sprinter slows to a stop at Starcross Station on the west side of the River Exe estuary.

A village on the west side of the Exe estuary in Devon is home to a unique relic of a railway idea that didn't really work out. **Brian Gooding** went to see.

**B**ack in mid-March, I had a business appointment south of Exeter but arriving a bit too early, I decided to follow the road towards Dawlish for a few miles to kill time. After a few minutes, I came to Starcross, a village of around 1,800 people on the west bank of the river Exe Estuary.

Between the village houses and the estuary are the main road to Dawlish and the railway from Exeter to the West Country, and it is the railway that makes this Devon village well known among railway enthusiasts, especially aficionados of Isambard Kingdom Brunel.

The car park for the village is to the north of the railway station, and the path to the station runs alongside the railway, the railway fence being punctuated in a couple of places by cast iron gate posts made by Bayliss of Wolverhampton, and certainly of a Victorian age. The fence is tensioned by old pieces of broad gauge bridge rail.

Before reaching the station, on the opposite side of the road is a pub named 'The Atmospheric Railway', a very apt name as will become clear. The view to the other side across the railway is of the wide river estuary, across to Exmouth at the seaward end, and Lymington, the

Royal Marines Commandoes training base half way along.

As it nears the station, the path drops down to road level, and so access to the station is up a flight of steps. The station itself is nothing to really write home about, though it is served by Class 150 Sprinter stopping trains, while the expresses, mainly the 'new' electric or diesel Intercity Express Trains introduced in late 2017 speed through, an impressive sight.

Looking south from the station, a square red sandstone tower is visible beyond some other buildings. This tower was once much taller and is part



One of the foot crossings over the railway with cast iron posts and bridge rail supports for the fencing.



The Atmospheric Railway pub whose name is a reminder of the railway's first incarnation.



Looking across the estuary from the south end of the station platform, with Exmouth and the sea in the distance.



Today the pumping engine house is home to the local fishing and cruising club. This is the old boiler house.

The tower with the Union flag is the truncated former chimney of the pumping house. Seen from the south end of the station.



Seen from the road is the former engine house, still an ornate building. The boiler house is just visible to the right.

of a building that dates to the original opening of the railway. Today the building is the home of the Starcross Fishing & Cruising Club, the name emblazoned over the door of the building. Close by is a brass plaque with the legend:

*'Isambard Kingdom Brunel,  
Atmospheric Railway Pumping House,  
Built 1845-1846'*

The plaque commemorates that the building was once the Starcross Atmospheric Pumping Station, a stationary steam engine house on Brunel's Atmospheric Railway which

ran from Exeter to Newton (later Newton Abbot).

Known as the South Devon Railway, the line was a single track broad gauge line, controversially worked by the experimental system of atmospheric propulsion. The current station at Starcross was built in 1861 when the track was twinned.

The system used a 15 inch pipe with a slit along the top that was covered with a flap valve to maintain an internal vacuum, positioned between the rails. The valve had a leather seal which was greased, initially with lime soap and later with cod oil and soap. Pumping stations



This plaque commemorates the original function of the building.

were constructed every three miles at Exeter St Davids, Countess Wear, Turf, Starcross, Dawlish, Teignmouth, Bishopsteignton and Newton Abbot. Each pumping station would evacuate the pipe of air, according to the timetable, which proved to be very wasteful if the train was not ready to leave the previous stop.



The former boiler and engine house as seen from the road. Even the boiler house had ornate window frames.

Beneath the leading carriage hung a 15ft long piston shaped like a dumbbell, with small wheels outside the pipe that opened and pressed close the iron and leather flap valve. The piston entered

the end of the pipe from which the air had been evacuated, the brakes released, and pressure from the atmosphere would push the piston up the pipe, behind the vacuum created by the pumping engine.

The valve in the pipe gave problems, and the pumping engines were taking longer than expected to exhaust all the air from the pipe ready for a train. This increased coal consumption at the pumping stations, and hence costs.

In August 1848, the Board of the South Devon Railway Company decided that atmospheric working would cease on 9th September and steam locomotives replaced the pumping houses, and the atmospheric equipment sold off. The only reminder of Brunel's atmospheric railway is the engine house at Starcross.

The pumping station at Starcross was built in an Italianate style, popular at the time. The two engines used to stand about 30ft high in the main part of the

building though they have long since disappeared. The top of the chimney (the tower) was removed as it presented a danger to the main railway line that runs along the top of the sea wall in the foreground.

The railway was relaid from broad gauge to standard gauge in the 1890s and is now a busy and vital link between London and Penzance, and is the only rail link between Devon and Cornwall, a fragile link as proved when the line was washed out at Dawlish a few years ago.

I am sure many people drive through Starcross with barely a look at the interesting red building on a narrow part of the main A379 road to Dawlish and ultimately Torquay. Although not open to the public, the building at Starcross is a unique memorial to a flawed system of railway operation. Brunel was a great engineer but he didn't always get it right! ■