

# **The Welford & Weston Local History Society**

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**Newsletter 29 February 2016**

## **‘Brunel - A Victorian Genius’**

*An illustrated talk by Ray Sturdy  
to be given in the Memorial Hall, Welford on Avon  
on Friday 18<sup>th</sup> March 2016, at 7:30 pm*



*Isambard Kingdom Brunel (9 April 1806 – 15 September 1859), was an English mechanical and civil engineer who is considered one of the most ingenious and prolific figures in engineering history, one of the 19th century engineering giants, and one of the greatest figures of the Industrial Revolution. He changed the face of the English landscape with his groundbreaking designs & ingenious constructions. Brunel built dockyards, the Great Western Railway, a series of steamships including the first*

*propeller-driven transatlantic steamship & numerous important bridges and tunnels. His designs revolutionised public transport & modern engineering. Though Brunel's projects were not always successful, they often contained innovative solutions to long-standing engineering problems. During his career, Brunel achieved many engineering "firsts", including assisting in the building of the first tunnel under a navigable river and development of SS Great Britain, the first propeller-driven ocean-going iron ship, which was at the time (1843) also the largest ship ever built.*

*Brunel set the standard for a well-built railway, using careful surveys to minimise grades and curves. This necessitated expensive construction techniques and new bridges and viaducts, and the two-mile-long Box Tunnel.*

*One controversial feature was the wide gauge, a "broad gauge" of 7 ft  $\frac{1}{4}$  in (2,140 mm), instead of what was later to be known as 'standard gauge' of 4 ft 8  $\frac{1}{2}$  in (1,435 mm). The wider gauge added to passenger comfort but made construction much more expensive and caused difficulties when eventually it had to interconnect with other railways using the narrower gauge. As a result of the Regulating the Gauge of Railways Act 1846, the gauge was changed to standard gauge throughout the GWR network.*

*Brunel astonished Britain by proposing to extend the Great Western Railway westward to North America by building steam-powered iron-hulled ships. He designed and built three ships that revolutionised naval engineering.*

*In 2002, Brunel was placed second in a BBC public poll to determine the "100 Greatest Britons".*

Rosemary Hale 750682, Sue Hook 751400, Paul King 750123,  
Brad Plimmer 750716, Doreen Walkden 750436