

**Tower Bridge** is a combined bascule and suspension bridge over the River Thames. It is close to the Tower of London, which gives it its name. It has become an iconic symbol of London.

The bridge consists of two towers, which are tied together at the upper level by means of two horizontal walkways, which are designed to withstand the horizontal forces exerted by the suspended sections of the bridge on the landward sides of the towers. The vertical component of the forces in the suspended sections and the vertical reactions of the two walkways are carried by the two towers. The bascule pivots and operating machinery are housed in the base of each tower.

Originally Tower Bridge was painted a chocolate brown colour.

Tower Bridge is sometimes mistakenly referred to as London Bridge, which is actually the next bridge upstream.

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In the second half of the 19th century, increased commercial development in the [East End of London](#) led to a requirement for a new river crossing downstream of London Bridge. A traditional fixed bridge could not be built because it would cut off access by [tall](#) ships to the port facilities in the [Pool of London](#), between London Bridge and the Tower of London.

A *Special Bridge or Subway Committee* was formed in 1876, chaired by Sir Albert Joseph Altman, to find a solution to the river crossing problem. It opened the design of the crossing to public competition. Over 50 designs were submitted. The evaluation of the designs was surrounded by controversy, and it was not until 1884 that a design submitted by Sir [Horace Jones](#), the City Architect, was approved.

Jones' engineer, [Sir John Wolfe Barry](#), devised the idea of a [bascule bridge](#) with two towers built on piers. The central span was split into two equal bascules, which could be raised to allow river traffic to pass. The two side-spans were suspension bridges, with the suspension rods anchored both at the abutments and through rods contained within the bridge's upper walkways.

## **Construction**

Construction started in 1886 and took eight years and employed 432 construction workers.

Two massive piers, containing over 70,000 tons of [concrete](#), were sunk into the riverbed to support the construction. Over 11,000 tons of [steel](#) provided the framework for the towers and walkways. This was then clad in [Cornish granite](#) and [Portland stone](#), both to protect the underlying steelwork and to give the bridge a pleasing appearance.

Jones died in 1887 and George D. Stevenson took over the project. Stevenson replaced Jones' original brick facade with the more ornate [Victorian Gothic](#) style, which makes the bridge a

distinctive landmark, and was intended to harmonise the bridge with the nearby [Tower of London](#).

## **Opening**

The bridge was officially opened on June the 30<sup>th</sup>, 1894 by The Prince of Wales (the future [King Edward VII](#)), and his wife, The Princess of Wales ([Alexandra of Denmark](#)).

Until the bridge was opened, the [Tower Subway](#) – 400 m to the west – was the shortest way to cross the river from [Tower Hill](#) to [Tooley Street](#). Opened in 1870, Tower Subway was the world's first underground railway, but closed after just three months and was re-opened as a pedestrian foot tunnel. Once Tower Bridge was open, the majority of foot traffic transferred to using the bridge, there being no toll to pay to use it. Having lost most of its income, the tunnel was closed in 1898.

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## **Road traffic**

Tower Bridge is still a busy and vital crossing of the Thames: it is crossed by over 40,000 people every day.

In order to maintain the integrity of the historic structure, the City of London Corporation have imposed a 20 miles per hour (32 km/h) speed restriction, and an 18 tonne weight limit on vehicles using the bridge. A sophisticated camera system measures the speed of traffic crossing the bridge.

## **River traffic**

The bascules are raised around 1000 times a year. River traffic is now much reduced, but it still takes priority over road traffic. Today, 24 hours' notice is required before opening the bridge. There is no charge for vessels.

A computer system was installed in 2000 to control the raising and lowering of the bascules remotely.

## **Tower Bridge Exhibition**

Tower Bridge Exhibition is housed in the bridge's twin towers, the high-level walkways and the Victorian engine rooms. The walkways boast stunning views of the River Thames and many famous London sites. The exhibition also uses films, photos and interactive displays to explain why and how Tower Bridge was built.