Isambard Kingdom Brunel
Civil Engineer
Isambard Kingdom Brunel

- Described as one of the 19th century engineering giants, who changed the face of the English landscape with his groundbreaking designs and ingenious constructions.

- 2nd in “100 Greatest Britons” poll (2002)
Isambard Kingdom Brunel

Born: 9 April 1806
Portsmouth, England

Died: 15 September 1859 (aged 53)
Westminster, London, England

Spouse: Mary Elizabeth Horsley (m. 1836–1859)

Children: Isambard Brunel Junior
Henry Marc Brunel
Florence Mary Brunel

Parents: Marc Isambard Brunel
Sophia Kingdom
Isambard Kingdom Brunel

Thames Tunnel

- Rotherhithe, London UK
- 11 m wide
- 6 m high
- 396 m long
- 23 m below high water
- Engineer: Marc Brunel
- Resident Engineer: IK Brunel
- Built: 1825 - 1843
- First navigable river tunnel
- Owner: London Transport
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Great Western Railway

- GWR Formed 1833
- Engineer: IK Brunel
- Opened:
  - 1838 to Maidenhead
  - 1840 to Bath
  - 1841 to Bridgewater
- longest, flattest broadest line in Britain
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Broad vs. Standard Gauge

- 7’ 0¼” – smoother, faster ride
- More passenger room
- Safer – lower C of G
- Interface with 4’ 8½” – mixed gauge
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Surviving portion of Broad Gauge Track, Sutton Harbour, UK
Maidenhead Railway Bridge

- Four-span brick arch
- Built 1838
- Two river spans:
  - 39 m long
  - 7 m rise
- Longest flattest brick arches in the world when built
- Four-tracked in 1920s
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Maidenhead Railway Bridge
Isambard Kingdom Brunel
Timber Railway Viaducts

Carvedras Viaduct, Truro
Isambard Kingdom Brunel

Royal Albert Bridge, Saltash

Two 138 m long, 30 m high wrought-iron lenticular trusses (1859)
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SS Great Britain

First iron ship – world’s largest when built in 1843
Rescued from Falklands Islands in 1970
Restored in Bristol dry dock where it was built
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Steam Ship Engine Building (1839)
– Portland Cement Floor

• 400 mm thick floor – discovered 2008
• First known use of Portland cement
• Four years before Portland cement was patented
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SS Great Eastern

World’s largest when built in 1858 (scrapped 1889)
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Clifton Suspension Bridge

214 m span, 76 m above the River Avon
Construction started: 1831
Completed by others: 1864
World’s longest span (1864)
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Civil Engineer
1806 - 1859