3 CENTURIES OF SPANNING THE FORTH
First came the monumental Forth Bridge, opened to rail traffic in 1890. Often referred to as the “Queen of Victorian bridges”, it represents the pinnacle of 19th century civil engineering prowess and is one of the world’s most recognisable and popular engineering wonders. An international symbol for Scotland, the Forth Bridge perfectly reflects the “great age of steam”. In its 128th year of operation, 2011, it was nominated as a UNESCO World Heritage Site.

The majestic Forth Road Bridge represents the technological advances made by the mid 20th century in response to the burgeoning age of the motor car. It replaced the ferries which had plied the historic route for over 900 years. The UK’s first long-span suspension bridge, it was also the longest suspension bridge outside of the USA when opened in 1964.

Now, in the 21st century, a new state-of-the-art road bridge is under construction which will take its place alongside its illustrious neighbours, giving pride to a new generation of Scots. In March 2011, the Forth Crossing Act gave the green light for the project to proceed. Construction work got underway in summer 2011 and the new bridge is scheduled to open in late 2016.

Where else in the world can you find three iconic bridges spanning three centuries and representing the highest standards of civil engineering achieved in each?
21ST CENTURY: THE FORTH REPLACEMENT CROSSING

// Construction started: Summer 2011
// Scheduled opening: Autumn 2016
// Contract value: £790 million
// Why? A new road bridge is needed due to deterioration in the condition of the existing bridge and concerns over its long term viability.
// Design: Cable-stayed bridge with 3 towers reflecting design of world famous Forth Bridge
// Design & Construction Contractor: FCBC
// Contractor’s designers: JV between Ramboll, gifford, grontmij and Leonhardt Andrià in collaboration with FCBC
// Length: 2.7km (1.6 miles)

// Height of towers: 207 metres above high tide (683 ft), equivalent to approx. 27 London buses and 50 metres (25%) higher than existing Forth Road Bridge
// Volume of steel: 30,000 tonnes
// Volume of concrete: 150,000 cubic metres
// Volume of wire: 6,300 tonnes – or 23,000 miles – of stay cabling
// Road: 2 lane motorway with hard shoulder
// Special feature: modern wind-shielding to protect traffic from effects of wind buffeting

2011 (Construction started) 2016 (Scheduled opening) 2017 (Construction started) 2023,000 (Scheduled opening)
Construction started: 1958
Bridge opened: 4th September 1964
Cost of bridge: £19.5 million
Design: Suspension road bridge
Designed by: Mott, Hay & Anderson and Freeman Fox & Partners
Consultant Architect: Sir Giles Gilbert Scott, designer of the world famous British telephone kiosk
Contractor: ACD (Arrol, Cleveland, Dorman Long)
Length: 2.5km (1.5 miles)
Central span: 1,006 metres (3,320ft) – longest in Europe at the time
Height of towers: 150m (495ft) above mean water level, 50% higher than towers of the Forth Bridge
Volume of steel: 39,600 tonnes
Volume of concrete: 125,000 cubic metres
Volume of wire: 6,350 tonnes or 30,000 miles – enough to stretch 1.25 times round the world
Traffic: Each year, almost 24 million vehicles cross the bridge. Statistics show that typically, 2% more vehicles head south than north

20TH CENTURY: THE FORTH ROAD BRIDGE

1958 Construction started
1964 Bridge opened by HM The Queen
30,000 Number of vehicles per annum
24 million Volume of concrete: 125,000 cubic metres
Construction started: 1883
Bridge opened: 4th March 1890
Cost of bridge: £3.2 million
Design: Cantilever rail bridge
Designed by: Sir John Fowler and Sir Benjamin Baker
Contractor: Tancred Arrol
Length: 2.5km (1.5 miles). The longest cantilever bridge in the world until 1917
Height of towers: 100 metres (330 ft) above mean water level
Volume of steel: 65,000 tonnes. The first all-steel bridge in the UK
No. of rivets: 6.5 million. The last rivet was inserted by HRH The Prince of Wales (later King Edward VII)
Manpower: At its peak, 4,600 men were employed on the project

Myth: Contrary to popular belief, painting the bridge was never continuous. However, a maintenance crew is permanently active on-site

Myth: It takes over 200,000 litres of paint to cover the Forth Bridge's 145 acres of surface

Myth: The Eiffel Tower in Paris, opened in 1889, is 324 metres high and contains 7,300 tonnes of wrought iron

19TH CENTURY: THE FORTH BRIDGE

Comparison: The Eiffel Tower in Paris, opened in 1889, is 324 metres high and contains 7,300 tonnes of wrought iron

Names: The 3 famous double cantilevers have names: Queensferry, Inchgarvie and Fife

Refurbishment: A 10 year, £130m bridge refurbishment programme was completed in late 2011. A new long life polymer coating, as used on North Sea oil platforms, will last 25 years

Volume of steel: 65,000 tonnes. The first all-steel bridge in the UK
No. of rivets: 6.5 million. The last rivet was inserted by HRH The Prince of Wales (later King Edward VII)
Manpower: At its peak, 4,600 men were employed on the project

Myth: Contrary to popular belief, painting the bridge was never continuous. However, a maintenance crew is permanently active on-site

Paint: It takes over 200,000 litres of paint to cover the Forth Bridge's 145 acres of surface

Refurbishment: A 10 year, £130m bridge refurbishment programme was completed in late 2011. A new long life polymer coating, as used on North Sea oil platforms, will last 25 years

Names: The 3 famous double cantilevers have names: Queensferry, Inchgarvie and Fife

Comparison: The Eiffel Tower in Paris, opened in 1889, is 324 metres high and contains 7,300 tonnes of wrought iron

Manpower: At its peak, 4,600 men were employed on the project

Myth: Contrary to popular belief, painting the bridge was never continuous. However, a maintenance crew is permanently active on-site

Paint: It takes over 200,000 litres of paint to cover the Forth Bridge's 145 acres of surface

Refurbishment: A 10 year, £130m bridge refurbishment programme was completed in late 2011. A new long life polymer coating, as used on North Sea oil platforms, will last 25 years

Names: The 3 famous double cantilevers have names: Queensferry, Inchgarvie and Fife

Comparison: The Eiffel Tower in Paris, opened in 1889, is 324 metres high and contains 7,300 tonnes of wrought iron

1883 Construction started
1890 Bridge opened
6.5million No. of rivets
2,500 Volume of steel (the world's only bridge with a steel frame and deck)
FCBC
The design & construct contract for the Forth Replacement Crossing project was awarded to FCBC (Forth Crossing Bridge Constructors), an international consortium comprising Hochtief Solutions, American Bridge International, Dragados and Morrison Construction. Together, the four partner companies bring to the project unparalleled experience on major civil engineering projects around the world.

TRANSPORT SCOTLAND
The client on the Forth Replacement Crossing project is the Scottish government which is represented on site by Transport Scotland, the national transport agency for Scotland whose responsibilities cover trunk roads, rail, aviation and ferry transportation. Transport Scotland is accountable to the Scottish Parliament and the public through Scottish Ministers.

For further information or to contact the contractors involved with the Forth Replacement Crossing, please use the dedicated 24 hour Project Hotline: 0800 078 6910 (Free from landlines. Mobile phone operators may charge)

Or find out much more online: www.forthreplacementcrossing.info

Community email: enquiries@forthreplacementcrossing.info

CONTACT US

Or call into the Contact & Education Centre
C/o Forth Road Bridge Administration Office
South Queensferry
West Lothian
EH30 9SF

Opening times:
Mon–Fri: 09.00 – 17.30
Sat: 10.00 – 16.00