

Forth Replacement Crossing

# project update

May 2015



## Project Directors' Update

History in the making: an overview of progress in recent months on the Queensferry Crossing.

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## Working in the Community

Latest news from recent Family Days and the popular Bridges to Schools initiative.

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## Photo Update

Our photo collage takes you right into the heart of the action!

**Centre pages**



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The only way is up! The Queensferry Crossing's three towers have now reached a height of around 150 metres (500ft) above sea level, approximately three-quarters of their final height.

## Steady progress on all fronts

Welcome to a "Photo Special" edition of the Forth Replacement Crossing "Project Update". They say a picture is worth a thousand words, so this month we take a break from the usual series of feature articles describing the progress of our construction works out in the Forth Estuary – and on the land either side of it. This time, we focus on some recent photographs which take our readers right out to the heart of the action. We hope you enjoy it. As ever, we welcome your feedback.

Good progress continues to be made across the Project. Since the last issue of the "Project Update", construction of the towers has continued ever upwards. At the time of writing, we have completed 40 out of a total of 54 "lifts" (individual 4m concrete sections) per tower and are on track to achieve "top out" at 210m on the Centre Tower during the summer. In April, the first of the steel anchor boxes was installed inside the North Tower. These boxes will anchor the bridge's steel cable 'stays' which, in turn, will support the road deck beneath. The next milestone will be the installation of the first cable which is due in the summer. This will then trigger operations to lift into place the bridge's individual deck segments.

At the moment, these segments are in our dockside fabrication yard where work continues on the installation of the reinforced concrete surfaces which are installed on each segment prior to it being taken out by barge to the towers for erection.

Turning to the approach viaducts, work is nearing completion on Pier S3 which will then enable the final launch into position

of the 543m long, 5,617 tonne southern approach viaducts. On the north side, Pier N2 is complete and work is progressing well on the legs of Pier N1. Under the large white tent, clearly visible to motorists on the A90, several weeks of welding work on the individual sections which make up the north approach viaduct have gone successfully. With the forthcoming completion of the North Abutment and the installation of the necessary temporary works, we expect to launch the viaduct out over the two piers on schedule later this year.

Passers-by will also see continuous change in the connecting road works on either side of the Forth. To the south, work is continuing to finish the new B800 bridge over the A90 dual carriageway. We expect to complete surfacing work and utility services diversions by late summer at which time the bridge will open to traffic and the existing bridge will be demolished. Work is continuing on the route of the new M90 extension which will connect traffic from the Queensferry Crossing to the M9 and A90. On the northside, work has been completed



Michael Martin & David Climie

to install the 18 steel beams (total weight approximately 2,000 tonnes) forming the new Ferrytoll motorway viaduct which will carry traffic to and from the Queensferry Crossing.

We continue to be delighted at the level of public interest shown in our construction works. Numbers of visitors to the Contact & Education Centre in South Queensferry continue to rise, as does the number of people visiting the project website.

This all reflects the fact that the Queensferry Crossing is a once-in-a-generation construction project which all of us are proud to be involved with. We are delighted to share information with members of the public through a number of channels, including this newsletter.

**David Climie**  
Transport Scotland  
Project Director

**Michael Martin**  
FCBC  
Project Director

## Visiting the Queensferry Crossing or live nearby?

*Become a part of the Project's legacy with a quick click of your camera or smartphone.*

Take a photo of yourself, family and/or friends with the bridge works in the background and you can become part of "Frame the Bridge"! Upload your photograph to help build the fantastic online "People's Bridge" mosaic. Your photos will also form a key part of the celebrations when the bridge opens. It couldn't be easier.



Find out more at [www.framethebridge.co.uk](http://www.framethebridge.co.uk)





**DECK:** 1 The enormous Taklift 6 sheerleg crane delivers one of the first deck segments to the North Tower. 2 Taking pride in the job. 3 Two members of the team give scale to the erection traveller hoists. 4 A view of the North Tower showing the temporary steel trestles, the temporary steel platform, the initial permanent deck segments and the blue erection traveller hoists which, later this year, will start lifting subsequent deck segments into place. 5 One of the 122 main crossing deck segments is manoeuvred at the dockside Fabrication Yard where the reinforced concrete deck will be installed prior to the segment being transported by barge out to the towers later this year. 6 Work continues on the 'soffit' shuttering on the deck sections already installed at the South Tower. The next operation will be the installation of steel reinforcement followed by the pouring of the concrete deck slab. 7 Work proceeds on the installation of the temporary steel platform on the Centre Tower which supports the initial four permanent deck segments.



**ROADS:** 1 Members of the Network Connections team celebrate the successful positioning of the first of the steel beams forming the new Ferrytoll motorway viaduct north of the Queensferry Crossing. 2 Installing the steel beams – 18 in total with a combined weight of 2,000 tonnes – which will form the new Ferrytoll M90 viaduct. 3 Bird's eye view of the new Queensferry Junction and the new stretch of M90 to the west and south of South Queensferry which will link the new bridge to the existing trunk road network. 4 An aerial view of the Northern Approach Viaduct under construction and, on the right, the newly positioned steel beams which will form the new Ferrytoll motorway viaduct taking traffic to and from the Queensferry Crossing. 5 Looking south over the Ferrytoll area, the Park & Ride station in the centre, Castlandhill Road on the right and the north approaches to the Queensferry Crossing in the background. 6 Work is progressing well on the construction of the reinforced earth retaining wall and embankment, adjacent to Castlandhill Road, which will support the new section of M90 motorway leading to and from the new bridge. 7 Looking north over the new M90 Queensferry Junction to the Southern Approach Viaduct and the three bridges in the background. This is the only place in the world where you can find three major bridges, adjacent to each other, built in three consecutive centuries, each cutting edge technology in their time.



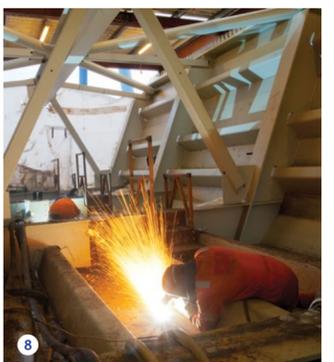
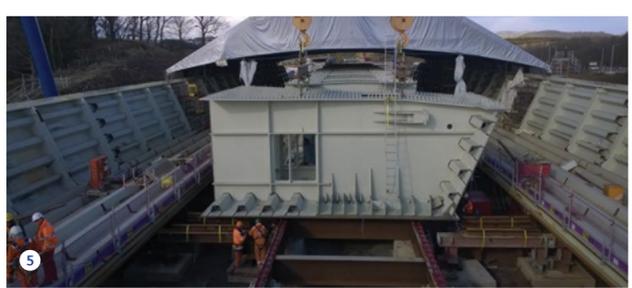
Recent photographs show the scope of the construction works 'in the round'.



**TOWERS:** 1 Members of the Towers team get ready to move one of the cable anchor boxes. 2 Team members celebrating the completion of another concrete pour at the South Tower. 3 A fleet of barges, each with six on-board static mixers, takes the concrete from the batching plant to the towers. The concrete is then pumped through a pipework system to the top of the towers. 4 160 metres up, work continues on installing the steel reinforcement ready for the next concrete pour. 5 Positioning steel reinforcement sections at the top of the South Tower. 6 The Centre Tower floodlit at night appears like a giant piece of modern sculpture. 7 A prefabricated section of steel reinforcement "cage" is lifted into position at the top of the North Tower ahead of the next concrete pour. 8 In April, the first cable anchor box was installed at the North Tower. Here, waiting silently on the dockside, a series of anchor boxes await their turn to be installed. 9 A cable anchor box is manoeuvred in the dock area prior to being transported out to one of the towers. 10 Members of the concrete batching team pose in front of the FCBC batching plant in Rosyth Docks. Virtually all of the 500,000 tonnes of concrete to be used in the Project will be batched on-site in this plant, one of the most modern of its kind in the UK.



**VIADUCTS:** 1 Pier N2 on the Northern Approach Viaduct is now complete. 2 The Southern Approach Viaduct waits in the background to be launched out over the almost completed Pier S3. This final launch of the viaduct into position is scheduled to take place in Summer 2015. 3 Aerial view of the Northern Approach Viaduct under construction. 4 The north and southbound carriageways of the Southern Approach Viaduct from the air. 5 Sections of the Northern Approach Viaduct are manoeuvred into position prior to welding. 6 A welding enclosure has been used night and day to enable welding of the Northern Approach Viaduct in all weather conditions. 7 The Southern Approach Viaduct steelwork will be 543 metres in length with a total weight of 5,617 tonnes. Both carriageways – one each for northbound and southbound traffic – are launched incrementally over the supporting piers. 8 Steel sections are welded together on-site to form the completed Northern Approach Viaduct.





## Bridges to Schools

Almost 300 pupils from ten local schools visited the FRC Contact & Education Centre for a week in April to take part in the 'Bridges to Schools' week hosted in association with the Institution of Civil Engineers. Local primary school pupils enjoyed building their own cable-stayed bridges, giving them an insight into the challenges of civil engineering while having some fun along the way. Dressed in hard hats and hi-viz vests, they were tasked with constructing a 12 metre long model of a cable-stayed bridge, supervised by volunteer civil engineers. The pupils were then able to walk across the bridge before dismantling it. In addition to learning about the Queensferry Crossing and civil engineering in general, the focus was on Health & Safety and teamwork. The FRC Contact & Education Centre has now hosted over 9000 school pupil visits through the ever popular wider schools education programme.



## Family Days

Almost 900 visitors attended two fun Family Days at the Contact & Education Centre during the Easter holidays. All age groups enjoyed a wide range of activities including building a cable-stayed bridge model and a bridge deck section, taking part in the "Design & Build" bridge challenge to find the bridge design which could support the most weight, erecting towers from wooden blocks, drawing a picture of the Firth of Forth in Spring 2017, constructing different types of bridges and taking part in a number of Queensferry Crossing related quizzes.



## FRC CONTACT & EDUCATION CENTRE

# Project Exhibition and Presentation Series

The FRC Project Exhibition is open every Saturday (10am – 4pm) until the end of October 2015. Visitors are able to learn about the Project, ask engineers questions and view the exhibition and 3D models.

The FRC Presentation Series is held on the last Friday of every month (10am – 4pm) until the end of October 2015. These presentations provide an in-depth look at the construction of the Queensferry Crossing and its connecting roads.



All welcome! Further details are available on the project website: [www.forthreplacementcrossing.info](http://www.forthreplacementcrossing.info)



**GENERAL:** 1 One of FCBC's crew boats comes alongside the Centre Tower at dusk to take team members home for a well earned rest. These boats provide a round-the-clock service ferrying personnel to and from the towers. 2 The three towers at dusk. 3 Time for reflection before knocking off for the day. 4 Significant progress was made with landscape planting during the latest planting season from November 2014 to March 2015. Approximately 30,000 trees were planted beside the south network road, providing a lasting woodland legacy for the Queensferry Crossing project. A further 15,000 trees in the Echline area and 6,000 trees beside Ferrytoll embankment were also planted this season. This means that more than 50% of the 400,000 trees, shrubs and hedging plants which will be planted in total have now been planted since February 2012. Overall, more trees will be planted than removed. This provides a significant environmental benefit in advance of completing the Queensferry Crossing and connecting roads. All the trees are native species with local provenance, to ensure the best landscape and ecological 'fit' with the surrounding woodlands.



## Contacting the FRC team

There are a number of ways you can contact us to ask questions, provide comments, make a complaint or find out more about the Forth Replacement Crossing project:

- Call the dedicated 24 hour Project Hotline **0800 078 6910**
- Email the team **enquiries@forthreplacementcrossing.info**
- Look for us online:
  - [www.forthreplacementcrossing.info](http://www.forthreplacementcrossing.info)
  - [www.queensferrycrossing.co.uk](http://www.queensferrycrossing.co.uk)
  - [@FRC\\_Queensferry](https://twitter.com/FRC_Queensferry)
  - Or go to the Queensferry Crossing YouTube channel

Or drop into the **Contact & Education Centre** Adjacent Forth Road Bridge Administration Office, South Queensferry, Edinburgh EH30 9SF

**Opening times**  
Mon-Thu: 0900-1700, Fri: 0900-1600, Sat: 1000-1600

