

## Forth Crossing Bridge Constructors

HOCHTIEF Solutions American Bridge International DRAGADOS Morrison Construction

Dear Neighbour,

FCBC, the contractor working on the Forth Replacement Crossing principal contract on behalf of Transport Scotland, is shortly due to commence major foundation works in the Forth Estuary. The purpose of these works is to create foundations to support the piers and towers which will, in turn, support the new bridge.

In parallel with the foundations operation we will be continuing with the dredging operation which now has a revised completion date of mid June 2012.

This phase of the foundation works, which will include the installation of cofferdams and caissons (temporary and permanent steel structures used to create a water-free environment within which the foundations will be constructed), will commence with the programmed arrival by barge of the base sections of caissons (up to 32.8 metres diameter and 30 metres high) in mid May 2012. The works involved in sinking these structures shall be continuous through to September 2012.

The complete foundation programme will extend into Spring/Summer of 2013.

The foundation works are critical to the scheduled completion of the overall project and highly dependent on good weather. In addition, the type of construction works involved means that, in general, work needs to be carried out on a continual basis, 24 hours per day, seven days a week all as explained in the project Code of Construction Practice.

During the overall construction programme breaks will be provided through enforced downtime due to adverse weather, sea conditions and equipment malfunction. It is assessed that this will contribute to breaks in excess of 20% of the construction programme with respite provided due to periods of inactivity or reduced operations. In addition, natural phases of planning, monitoring, inspections and mobilisation will provide further periods of reduced operations. FCBC will be seeking to co-ordinate work to provide appropriate breaks throughout the duration of the marine works.

## **Activity Description**

Dredging – as at present - will be continuous until mid June 2012.

**Rock excavation** - (similar to Beamer rock but no blasting) at S5 (south approach viaduct pier 5) which is 90 metres off shore and N1 (north approach viaduct pier 1) which is 70 metres off shore. Rock excavation will be by hydraulic hammer, rock milling by rotary cutter and excavation by excavator bucket.

**Caisson installation** – Caissons shall be manoeuvred into position on semi submersible barges, lifted off and sunk to the desired level. Soil shall be removed from the inside of the caissons by excavator and grab and loaded for disposal onto barges. Once the caissons are sunk to the desired level excavation shall continue to rockhead and underwater concrete shall be installed to the starting level of the reinforced concrete foundations. Caissons shall be located at the South Tower

(approx 670 metres off shore), the North Tower (approx 290 metres off shore) and approach viaduct pier S1 (approx 450 metres off shore).

**Cofferdam installation** – Cofferdams shall be transported to location by barge and lifted and placed at south viaduct piers S2, S3, S4 and S5 (90 metres off shore), the Central Tower (Beamer Rock) and north pier N1 (70 metres off shore). The cofferdams are large rectangular temporary structures pre-fabricated from steel sheet piles and steel beams, concreted into the estuary bed and designed to create a dry environment to enable reinforced concrete foundations to be constructed.

The remaining viaduct foundations, namely, S6, S7, S8 and N2 are landbased and shall be constructed during standard daytime hours.

Description of the plant to be deployed

The main plant to be deployed shall be:-

Dipper dredger consisting of barge and 360 degree excavator (working up to 24 hrs/day) and a cable dredger consisting of barge and cable excavator (generally daytime only). Other equipment shall include tug boat, crew boat, safety boat and generator,4 crane barges, 3 transport barges, various multicats and tugs, 2 concrete barge, 2 crew boats, piling rigs and excavators for landbased work. Noise and vibration levels are likely to be relatively low. Daily reviews of noise and vibration levels shall be undertaken throughout the operation.

Timing and Hours of Work

The works shall be carried out, in accordance with the Code of Construction Practice, starting during week commencing 14<sup>th</sup> May 2012 and continuing up to 24 hours per day with breaks in the work as explained previously.

Whilst we will make every effort to adhere to the programme the dates may alter due to unforseen circumstances.

The works as described above are an essential part of the overall Forth Replacement Crossing project, which is necessary due to concerns over the long term viability of the existing road bridge. The new crossing will maintain a vital link in the east of Scotland road network which is key to the wider Scottish economy.

We would like to take this opportunity to apologise, in advance, for any inconvenience our activities may cause and also to thank you for your patience and consideration to date.

## For up to date information on the project please see Transport Scotland's FRC project website <u>www.forthreplacementcrossing.info</u>.

Should you have any queries, please contact our email

<u>enquiries@forthreplacementcrossing.info</u> or our Hotline on 0800 078 6910. In addition, our temporary Contact and Education Centre, currently located in the Forth Road Bridge offices on the south side of the existing Forth Road Bridge is manned 09:00hrs to 17:30hrs, Monday to Friday, and Saturdays 10:00hrs to 16:00hrs to deal with enquiries and to supply information.

Issued to – Residents in the vicinity of the foundation works on the north and south shores of the Forth Estuary and community councils.

Issue date –Wednesday 9<sup>th</sup> May2012