



# CROMARTY BRIDGE





OPENING OF

# THE CROMARTY BRIDGE

BY

**THE RIGHT HONOURABLE GREGOR MACKENZIE, M.P., MINISTER OF STATE FOR SCOTLAND**

THURSDAY, 12th APRIL, 1979

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Consulting Engineers

**CROUCH & HOGG**

Main Contractors

**FAIRCLOUGH CIVIL ENGINEERING LIMITED**

Sub-Contractors

A. Johnston Construction Co. Ltd.

Hi-Fab Ltd.

Losinger Systems Ltd.

G. McWilliam & Son Ltd.

Sifran Civil Engineering Ltd.

Malcolm Morrison

for

**The Scottish Development Department**





The Cromarty Bridge carries the realigned A9 Trunk Road, crossing the Black Isle from Kessock, across the tidal waters of the Cromarty Firth three miles east of Dingwall.

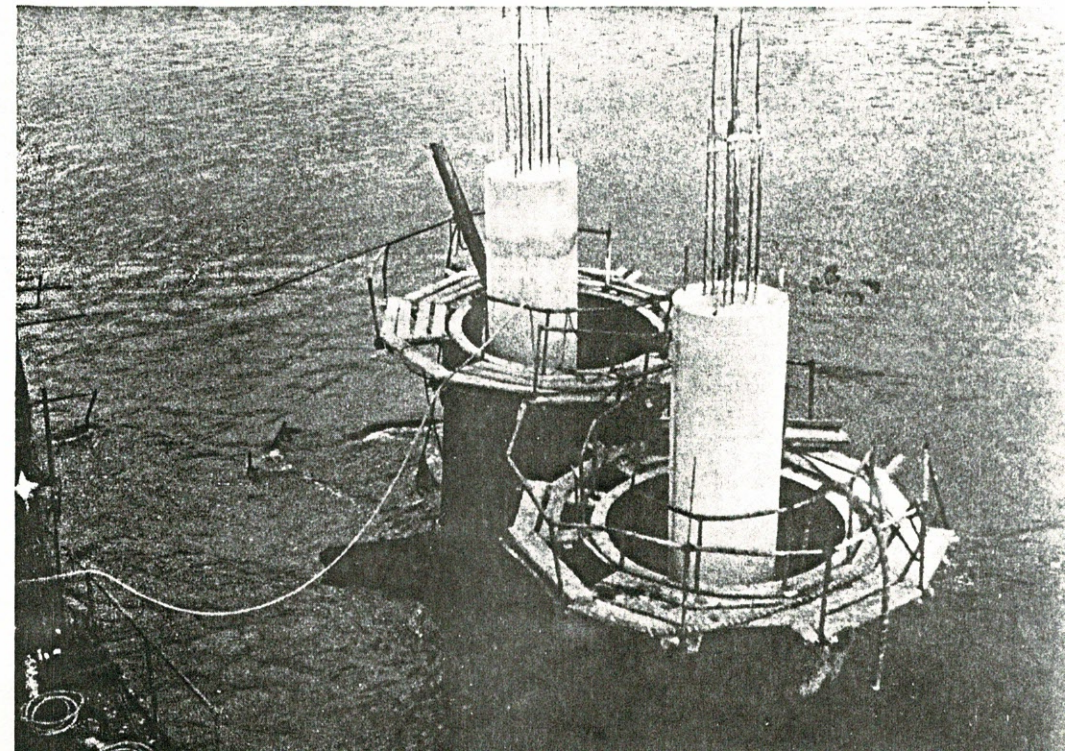
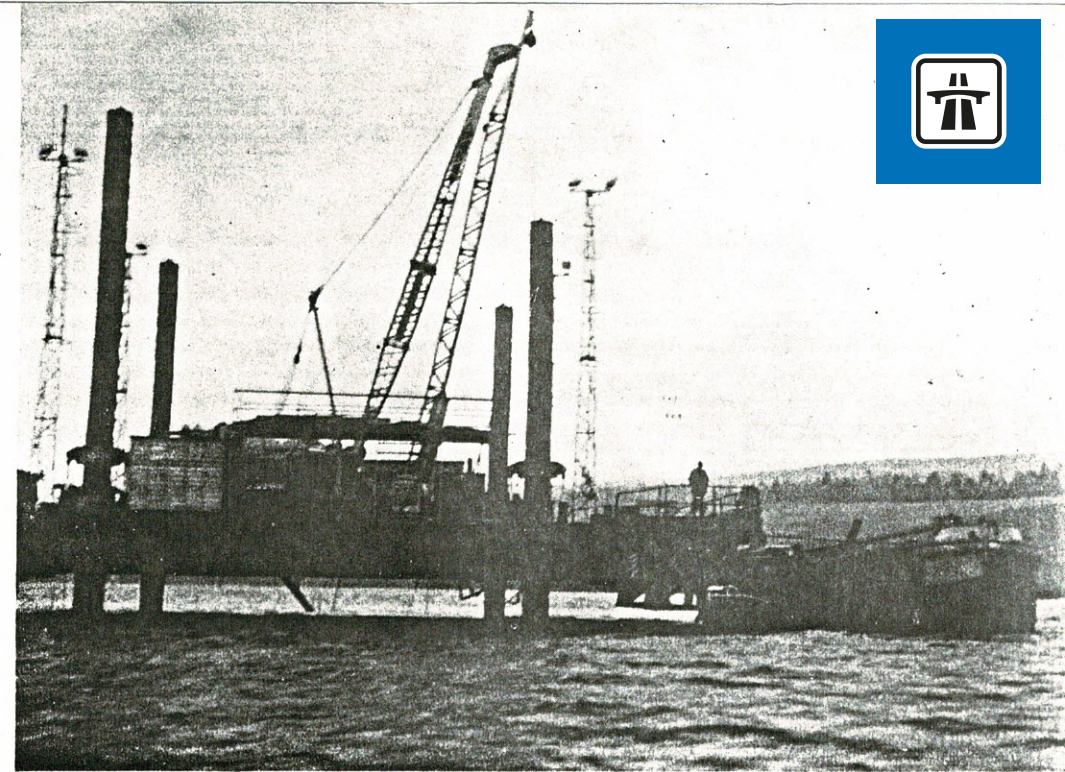
Nearly one mile in length, with rockfilled causeways at either end, the bridge has 68 equal spans of 21.5 metres built to a long flat horizontal curve of 3280 metres radius.

The bed of the Firth comprises soft silts and silty sands up to 120 metres in depth and the bridge is supported on over 600 precast concrete piles driven into the bed and capped with reinforced concrete at bed level.

The depth of water is very shallow over two-thirds of the width of the Firth and this restricted the movement of floating plant to certain states of the tide.

The bridge was designed to have the maximum number of standard components and to be built by standardised repetitive cycles of operations. The construction techniques adopted are unusual but have proved remarkably successful, in particular the jack-up platform which rendered the piling operations independent of the rise and fall of the tide; the steel cylinder cofferdams placed on the bed of the Firth and pumped out to enable the columns to be constructed "in the dry"; and the Bailey Bridge launching gantry which placed the deck beams and completed two spans of deck every nine days.

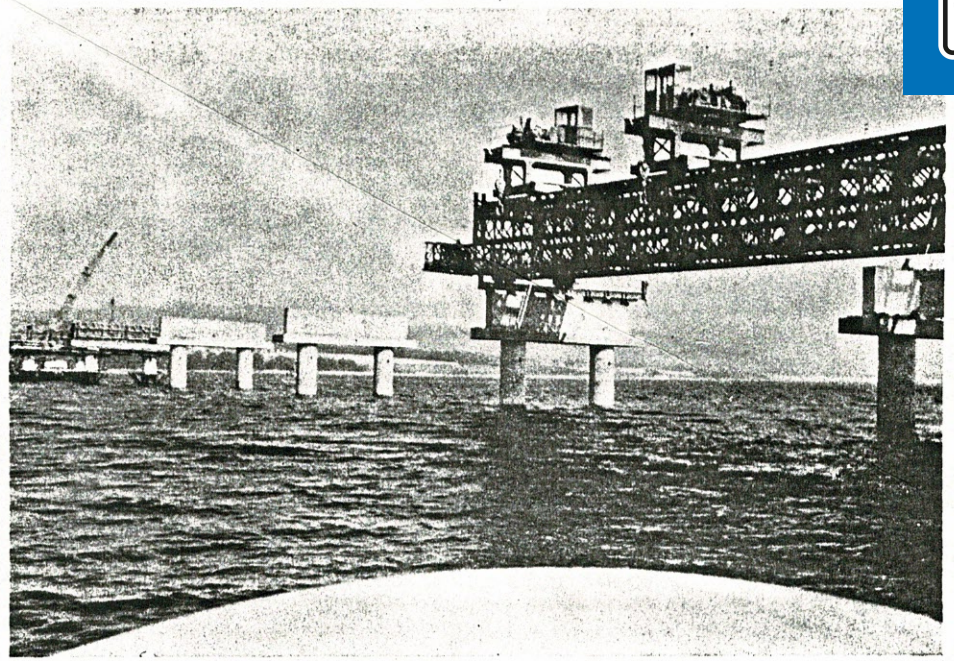
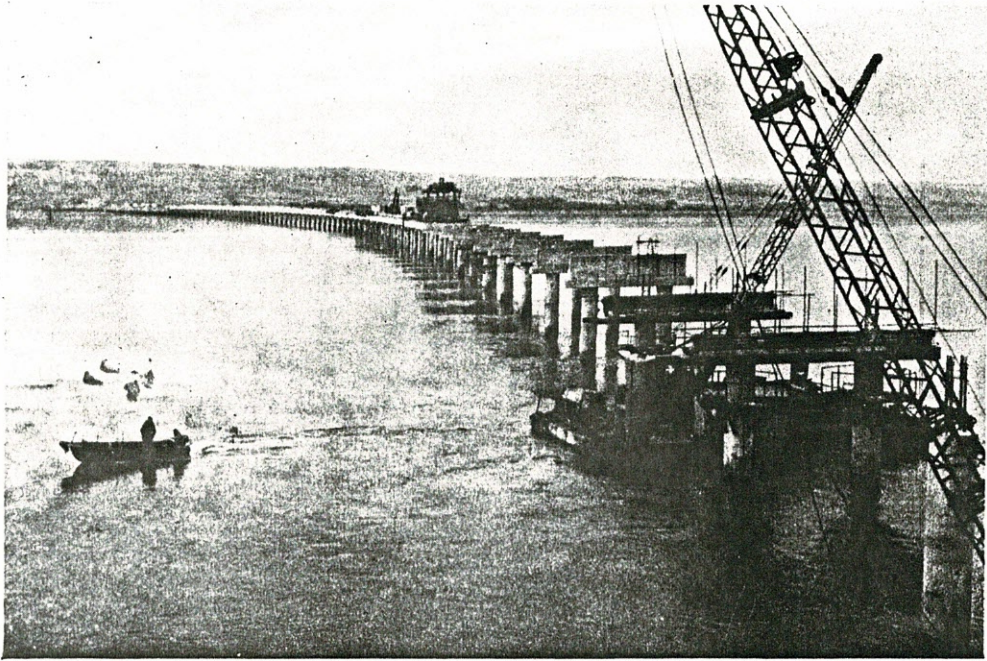
Work started early in 1977 and the bridge has taken just over two years to complete.



*Top right: Jack-up platform for piling*

*Bottom right: Cofferdams for pier columns*





*Above: Construction work in progress*

*Top right: Bailey Bridge launching gantry*

*Bottom right: Floating batching plant for concrete*

