SHELL UK LIMITED
SKIFF FIELD DEVELOPMENT
Platform Installation by Jackup Rig, North Sea

ICON Engineering was commissioned by Shell UK Limited to provide assistance with the installation of the Skiff platform in the Southern North Sea. The platform was installed by a jackup drilling rig in April 2000. This is the first platform to be installed by this means in the UK sector of the North Sea. The result was an installed cost of a third to half less than by conventional methods.

The project won the British Government Construction Industry Civil Engineering Award for 2000 in recognition of the novel design and installation method which challenged traditional practices.

ICON's involvement at the client level allowed Shell to take advantage of our site experience with this style of installation. ICON's scope included review of: installation methodology, critical success factors, schedule, key deliverable's for contractors, installation criteria and risk (safety and schedule) reduction. ICON also assisted with management of key interfaces and contractors and attended offshore during the installation.

Topsides Installation

Transportation arrangement and Jacket Lift-off

Jacket Installation

The platform jacket and topsides were transported to site on a small flat top barge. Transporting the Jacket vertically eliminated the need for upending. The barge was moored to the rig legs. Four 30 inch skirt piles were preloaded into the pile sleeves to reduce rig time during pile make-up.

The platform mudmat is minimal as the structure is stabilised by the rig during piling. After lift-off and placement the piles were installed using a drill-drive procedure which limits formation damage and guarantees penetration.

Topsides Installation

Topsides installation occurred after piling. Drilling commenced immediately after the topsides installation.

Installation Complete – Drilling Phase

Platform Data

Waterdepth	30 m
Jacket Lift Weight	450 t (incl pre-loaded piles)
Topsides Weight	200 t
Well Slots	6
Legs	4 vertical
Piles	4 vertical