

# CASE STUDY



**Client:** Nimrod Overwing

**Product:** Bespoke Stagings

“ THE STAGINGS  
WERE DESIGNED,  
MANUFACTURED,  
TESTED AND  
**INSTALLED ON  
TIME AND ON  
BUDGET** ”

## THE CHALLENGE

The Royal Airforce approached Youngman to design, manufacture and install Nimrod overwing stagings (port and starboard) at its RAF Waddington Base over a six week period.

## THE BRIEF

A number of constraints and design criteria for the staging were briefed to the Youngman design team by the MOD.

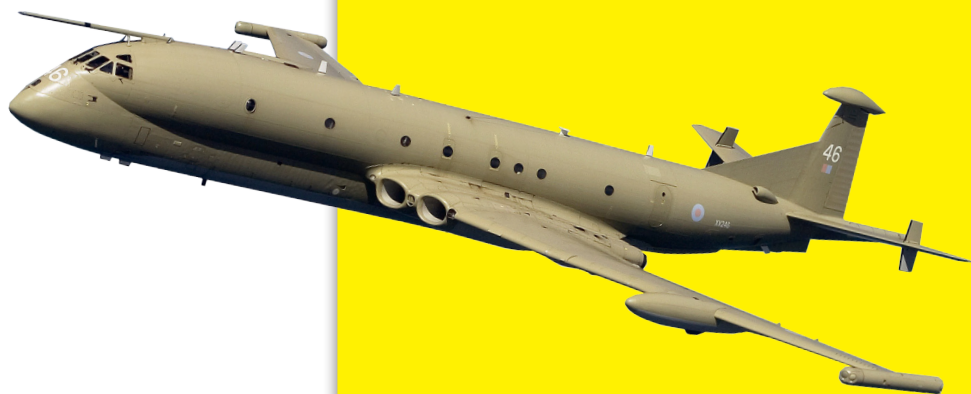
They required the staging to be lightweight and mobile, with the ability to carry loads of up to 350kg in the centre of the span of the platform.

A span of 11 metres was required without touching any part of the wing, with access for personnel and equipment at either end. Access to the aircraft's existing door hatches required no obstructions whilst the maintenance was being carried out.

## THE SOLUTION

The stagings were designed, manufactured, tested and installed on time and within budget. The structure comprised of steel bases and an aluminium superstructure.

Finite Element Analysis (FEA) was carried out to assess the point load deflection when loaded and the stress analysis of the structure when loaded with a uniformly distributed load.



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