COMMENDATION

BAE Govan, Glasgow

PROJECT TEAM

Architect: Corstorphine & Wright Architects

Structural Engineer: Robert Bird Group

Steelwork Contractor: Severfield

Main Contractor: McLaughlin & Harvey

Client: BAE Systems

JUDGES' COMMENT

"This impressive workshop, 50m high and measuring 170m x 88m, now enables BAE Systems to fabricate frigates for the Royal Navy throughout the year. Construction of such a huge structure required close collaboration between the entire team, enabling completion within three years."

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BAE Govan is a major shipbuilding facility at the Govan yard on the River Clyde, designed to transform construction of the Royal Navy's Type 26 frigates. Measuring approximately 171m long, 88m wide and 50m high, the fully enclosed workshop can accommodate two vessels simultaneously, enabling fabrication to continue throughout the year and supporting a faster production programme.

Creating the required footprint involved infilling the existing wet dock, establishing a structural base for the building while retaining direct access for launching completed vessels. Above this substantial substructure, structural steelwork provides the long spans and open interior needed for large-scale ship assembly.

The frame comprises 35m-high lattice columns supported on 10m-high concrete walls. Eighteen roof trusses span the hall, while full-length crane beams support two 100t and two 20t gantry cranes. Connection design accounted for fatigue arising from frequent crane operation, combining heavy lifting requirements with an efficient long-span structure capable of rapid erection.

Ship and material movements shaped both ends of the building. At the southern elevation, a 16m-high access door accommodates material deliveries, while a much larger vertically opening door at the northern end allows completed vessels to move from the workshop towards the water. Achieving the required erection tolerances around these large openings demanded precise fabrication and installation.

The scale and pace of construction required extensive prefabrication. Lattice columns and other large assemblies were configured within road transport limits, while mechanical and electrical services were installed on roof-truss sections at ground level before lifting. Heavy fittings were also attached so they could be slid or rotated along members, avoiding manual handling during erection.

Site access was limited to one route shared with other trades. Detailed sequencing coordinated deliveries and work areas, while erection peaked at seven steelwork squads. Reusable temporary works were developed where required, and permanent steel elements provided global temporary stability wherever possible, reducing additional temporary steelwork.

Progressing from an initial sketch in the third quarter of 2022 to becoming an operational facility in the second quarter of 2025, BAE Govan demonstrates what structural steelwork can achieve at exceptional scale and speed. Its long-span frame, heavy crane capacity and carefully engineered access create a game-changing all-weather environment for constructing two frigates simultaneously within an articulated and efficient industrial structure.