



ACCESS PLATFORM

This case study highlights the key details of an engineering project completed at JB Engineering (Hatton) Ltd. The platform project was for a longstanding customer based within the manufacturing sector. The project was delivered on time and within the quoted price. Our BS EN1090 accreditation supported this structural manufacture with adherence to those standards throughout this project, ensuring our compliance and that of our customers with the Construction Products Regulation (CPR).

Scope

The platform is designed to improve the maintenance teams' access to perform machinery inspections and other tasks. It features a conventional staircase and solid tread plate flooring for safety and stability, eliminating the need for uneven scaffolding and ladders. This improvement will also speed up maintenance response times during breakdowns, providing safe access whilst supporting safe working procedures. Industrial staircases and platforms provide safety when climbing or descending, in line with the three-point-of-contact rule, which supports stability and prevents falls. The customer's project scope was established with the support and guidance from our JB Engineering fabrication team, which has the required skills and experience in structural fabrication and installation. At JB Engineering, we have a multidisciplinary team covering AutoCAD, laser operators, welders, fabricators, mechanical engineers, project management, and support teams, i.e accounts. The material and component certificates for the access platform project were in accordance to BS EN1090 + 9001 and the final product was delivered by the engineering team.

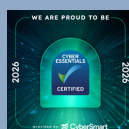
Process

- **Communications:** Site visits were completed, enabling an accurate job specification and AutoCAD drawings to meet the customer's needs and industry standards (CPR). Progress project photos and updates were provided either via email, phone or site meetings. Costs and processes were continuously audited throughout the project.
- **Fabrication:** Fabrication was completed in-house in accordance with the relevant certifications and industry standards (CPR). Visual quality control was conducted throughout the project. A final trial assembly took place, and checks were completed. The platform structure was sent to a supplier on JB's accredited supplier list for galvanising. The platform was then delivered to the customer's site by JB Engineering.
- **Installation:** All the necessary Health & Safety documentation was completed, and an installation date was agreed. Customer checks were completed to ensure they were satisfied with the access platform throughout the project.

BS EN 1090 EXC2
BS EN ISO 9001: 2015



Certificate Number 16517



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Challenges

- During the galvanising process, the tread plate flooring experienced distortion as a result of thermal stress and material movement. This distortion manifested as buckling across the plate surface, altering its original flatness and dimensional stability. As a consequence of this deformation, the tread plate no longer aligned correctly with the pre-drilled fixing holes in the supporting platform structure. The positional shift created a mismatch between the hole centres, preventing straightforward installation and necessitating corrective action to achieve proper fit-up.
- During installation, the weight of the upper cross sections beams were deemed to be too heavy to safely lift without mechanical assistance.

Solutions

- The tread plate flooring was mechanically restrained and clamped into position in order to counteract the bowing introduced during the galvanising process. Controlled clamping pressure was applied to progressively reduce the distortion and restore the plate as close as practicable to its intended profile and alignment with the supporting structure. Once the flooring had been adequately realigned, the fixing bolts were installed and tightened in a systematic sequence. This staged tightening process ensured that the plate was drawn evenly into its final position against the platform framework, minimising the risk of introducing further stress concentrations or secondary distortion while achieving secure and stable fixation.
- A PASMA scaffold tower was erected to provide access to the ceiling beams to allow a girder clamp and chain blocks to be fitted to assist lifting the platform steels into position.