



Newcalfex Development

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Contractor

Mansell Construction
Services

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Steelwork Design

Caunton Engineering

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Engineer

KF. Shadbolt and Partners

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Steel Tonnage

800 tonnes

On a design and build contractor, Caunton Engineering supplied 800 tonnes of main lattice frameworks, on behalf of main contractor Mansell Construction Services, to a factory on the banks of the Tyne, entitled 'Newcalfex'. The building roughly 83 metres by 49 metres in plan, was made up of a large high-bay area, which housed the VHAM machine and a lower lean to structure, which houses several cranes and an office block.

The impressive height of this structure was 57.8 metres high (floor to parapet), with an internal clear height to the underside of the truss of approximately 52 metres. This was the same as a 20 to 23 storey building. The columns were fabricated in four lengths. For economy and efficient erection to third column splice, Caunton used a Tadano ATF45-3 mobile crane. This model had 34 metres of boom and so with 8.7 metres of fly-jib fitted, was able to erect up to and including the third section of column. The high-bay roof was constructed from 40 metres long trusses. Laced between these trusses were a series of runway beams and a high level multi-storey access pod (erected as one completed element), which gave access to the roof and afford maintenance access to the machine.

The project benefited from Building Information Modelling, BIM, which was coordinated by main contractor, Mansell. BIM, by definition is a digital representation of physical and functional characteristics of a facility, creating a shared knowledge resource for information about it, forming a reliable basis for decisions during its life cycle, from earliest conception to demolition. In this case, and at the very least, it minimised the chances of clashes between machinery, services and steelwork.

