



# caunton

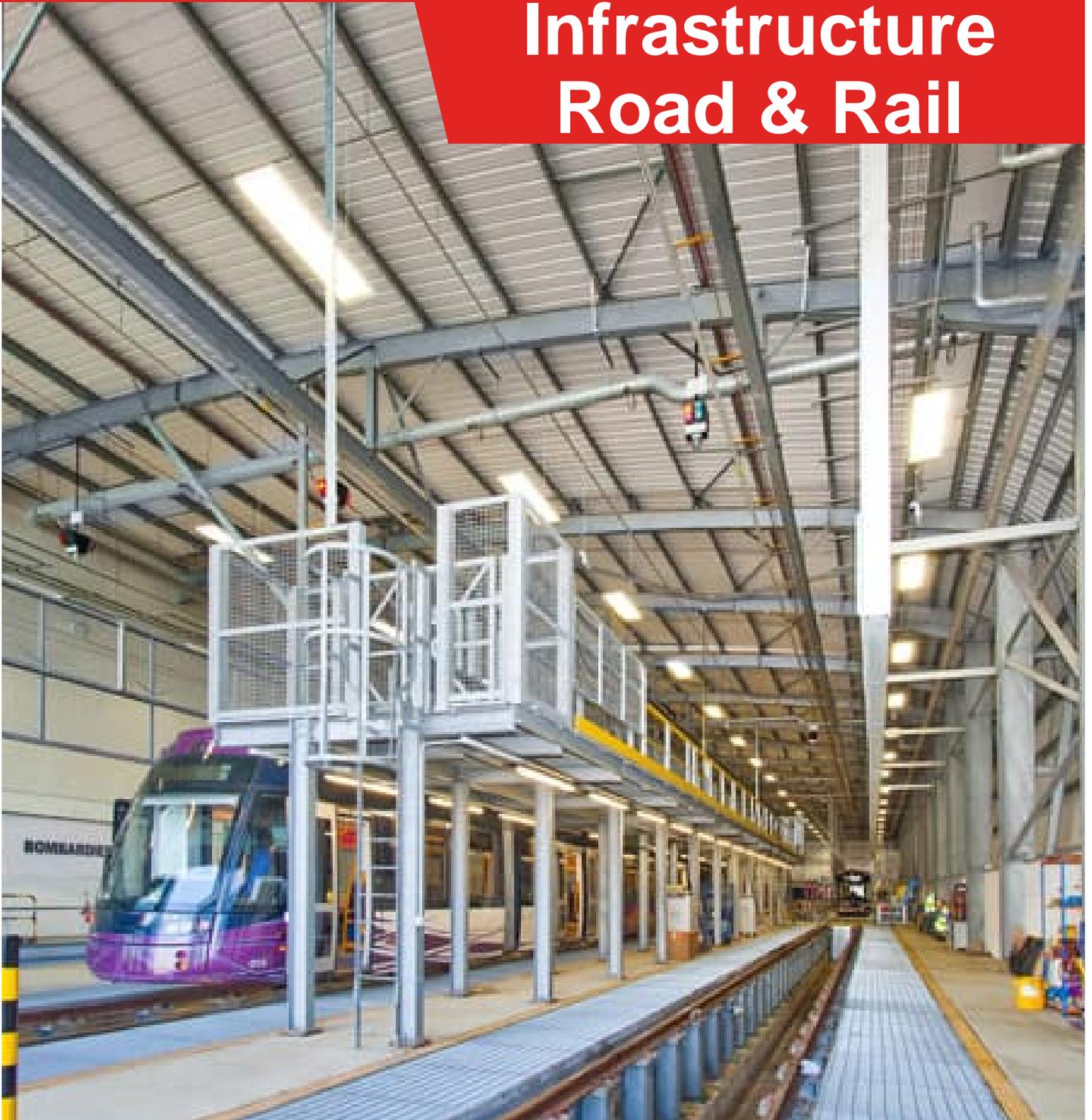
ENGINEERING



[www.caunton.co.uk](http://www.caunton.co.uk)

Steelwork for

## Infrastructure Road & Rail



Blackpool Tramway

Caunton Engineering Limited  
Caunton House, 2 Coombe Road  
Moorgreen Industrial Park  
Newthorpe, Nottingham  
NG16 3SU

[www.caunton.co.uk](http://www.caunton.co.uk)

Tel: 01773 531 111

Caunton Engineering is one of the UK's leading steelwork contractors, fabricating in excess of 40,000 tonnes per annum with a turnover in the region of £100m. Supported with over 50 years' experience we specialise in the design, fabrication and erection of structural and secondary steelwork, operating across all sectors of the construction industry.

Caunton Engineering's reputation is for engineering excellence in the Design and Build sector and working with Consulting Engineers on major developments.

We pride ourselves on our ability to remain agile and, as a result, offer a personalised service to our clients. The company is a Gold Status holder within the Steel Construction Sustainability Charter and committed to delivering Net Zero by 2050.

## Road Network

# Stop 24 Motorway Service Area - Folkestone, Kent

**An innovative catering concept demanded sophisticated fabricated steelwork**

Caunton Engineering completed the erection of over 450te of structural steelwork for the new Stop 24 Motorway Service Station at J11 on the M20 near Folkestone. Stop 24, a £9.2m project, is designed as a new concept in motorway service areas (MSA's). The area will be concentrating on catering for the cross channel traveller. The aim is for Stop 24's amenity building to provide an exciting retail and food offer for those looking to make their first or last stop in the UK. This will include a number of operators more commonly found in airports, the high street or in shopping centres. The high class development draws on the concept of the scheme providing a 'departure lounge' for cross-channel travellers to Continental Europe. As part of this concept, developer Henry Boot Developments is holding discussions with cross-channel operators with a view to providing real time information on arrivals and departures of the various services.

Caunton's steelwork for the 50,000 square feet Reception Area comprises a Mixed Portal Frame design. The lower level portal comprises a traditional rafter and the second higher level is manufactured from feature tapered girder rafters and columns. This in turn forms the roof construction for the arrivals area.



**Client:** Henry Boot Developments  
**Main Contractor:** Crispin & Borst - A Vinci Plc Company  
**Engineer:** Waterman Structures  
**Architect:** Collado Collins  
**Tonnage:** 450 tonnes



## Mansfield Transport Interchange

73m-long footbridge at Mansfield's new multi-million pound bus station



**Client:** Nottinghamshire County Council  
**Main Contractor:** Kier Marriott  
**Engineer:** NCC Environment  
**Tonnage:** 210 tonnes

In a complex and meticulously planned lifting operation that took place in the middle of the night, Cauntan Engineering, working alongside the main contractor Kier Central's site team craned a 73 m-long footbridge into place at Mansfield's new multi-million pound bus station.

The process began over two weeks in advance with the delivery of the bridge to the site adjacent to Mansfield's railway station, in four sections. Day one saw the assembly of two of these sections, one weighing in at 18-ton and the other at 12-ton, which were bolted together to form one half of the bridge. This process was repeated the following day to assemble the second half of the structure. In total the 73m-long link bridge weighs in at over 60 tons.

The close proximity of the link bridge to the existing railway line and viaduct meant the operation to lift the two sections of bridge into place had to be carried out at night under a Network Rail possession. The site team assembled at 10pm and, after an induction and briefing, began setting up the 350-ton mobile crane that would be used to lift the two halves of the bridge into place. Lifting began just after 1am and after some initial repositioning of lifting gear, the first section of the bridge was craned into position without any problems.

Due to its position between the first section of bridge and the new bus station, both now being fixed points, lifting the second half of the bridge into place was always going to be the most challenging aspect of the operation - the team had to get it right first time with just a tiny margin for error. But the meticulous preparation and expertise of the team paid dividends and the second piece was lifted into place with perfect precision.

Mansfield's new bus station, which is being constructed by Kier for Nottinghamshire County Council, is situated less than 200 yards away from the market place and is an integral part of Mansfield's town regeneration plan. The newly erected footbridge forms an important link between the town's railway station, and a new bus station whose steel framing is again by Cauntan – see the photograph. This will benefit the five million passengers who used the old bus station each year and will encourage more people to travel by public transport. Cauntan are delighted to have been a contributor to this regeneration.



# Blackpool Tramway - Starr Gate Depot

## New depot to house twenty new 'supertrams'

Caunton worked on a new £20million depot to house twenty new Supertrams for Blackpool after the tramway's upgrade.

The building comprises four high level and four low level roof units. Each high level unit alternates with a low level one - working down the building. A high level unit in plan is 66 metre span and 12 metre wide. The low level units are the same. The photograph shows the half way stage for the steelwork ahead

of the sheeting and cladding operations.

The overall roof is supported by rafters which in the main are curved in elevation; comprising two distinct curves in two opposite directions to create the appearance of a flowing wave effect imaginatively designed in order to reflect the proximity of the sea.

concave curve meeting a convex one. The low level comprises also a single universal beam (similarly spliced) – but the profile in this case comprises in the first place a straight section, before meeting first a concave profile and finally a convex. (Numerically - the radii of curvature for high level are 100 metres and 115 metres and the low level 200m and 75 m).



The rafters, for both high and low level units, span directly between similar columns. The high level rafter comprises a single universal beam (albeit spliced) – the profile is a

Manufacture of the rafters required highly sophisticated modelling, engineering and fabrication techniques. These Caunton Engineering have developed most successfully over the years.

**Client:** Blackpool Transport Services  
**Main Contractor:** VolkerFitzpatrick Contractors  
**Engineer:** RPS Burks Green

# Siemens Train-care Facility - Southampton

**Three buildings erected at times only 3 metres from "live" rail line**

Caunton constructed the steelwork for the Northam Traincare Facility. This was to be the Service and Maintenance Depot for the new Siemens fleet for SouthWest Trains, built near Southampton.

structures comprise over 800 tonnes of structural steelwork. The maintenance facility & train-wash buildings were constructed only three metres from the "live" main line. Exacting rail possessions had to be secured, to enable Caunton to comply with the rigorous demands of client Railtrack and their safe working practices.

The depot itself features three main buildings - the core maintenance facility (at 233mx23m the largest building), the wheel lathe building and the train-wash building. In total, these

**Main Contractor:** VolkerFitzpatrick Contractors  
**Engineer:** RPS Burks Green  
**Architect:** RPS Burks Green  
**Tonnage:** 800 tonnes



## Further Infrastructure by Caunton

- Traincare Depot - Northampton - Siemens Transportation Systems
- Thameslink Depot—Hornsey
- Thameslink Depot—Three Bridges, Crawley
- Train-Care Maintenance Depot—East London Line Project

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