

CAIRNCROSS

PROJECT EXPERIENCE

Civil Engineering & Bespoke Projects



Cairn Cross are a multi-disciplined design and build specialist main contractor for rail depots and bespoke projects.

Our promise is complete client satisfaction, every project, every time.

Get in touch

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Services we provide

As a multi-discipline Design and Build specialist, we deliver a wide range of services across all sectors for private, public and frameworks.



Bespoke Projects

Our civil engineering experience includes piling, concrete forming and repair, roads and bridges and structural design



Rail Infrastructure

From modifications to complete new depot facilities, including wheel lathes, carriage washes, bogie drop facilities, fuelling, CET and AdBlue.

Additional services & capabilities include:

- ▶ Mechanical & Electrical
- ▶ Product Innovation
- ▶ Fabrication
- ▶ Pollution Control
- ▶ Water
- ▶ Design & Build

Milestones

5+

Carriage Wash Installations

9

Wheel Lathe Installations

15+

Bridges

20+

CET Installations

40+

Rail Depots

50+

Nationwide team

Previous clients



Accreditations and awards

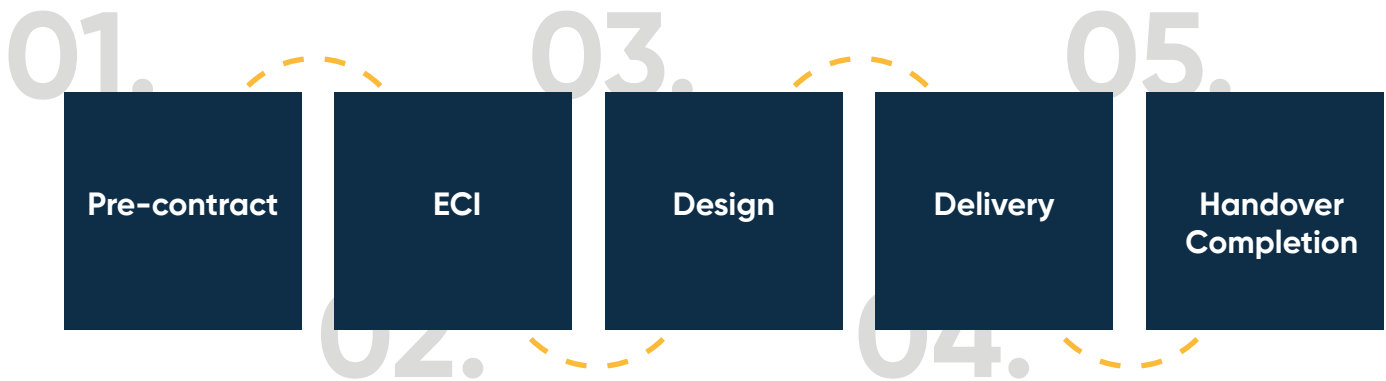


We're a design & build main contractor

For over a decade, Cairn Cross has developed our specialist, dedicated in-house design team to ensure we can complete a project from the initial pen sketch to the delivery of the finished build. This commitment to having one source of contact for your whole project ensures a more seamless and transparent approach, which enhances efficiency.



Our Process



Design services

Consultancy & Design
Management Services

Topographical & Cloud
Point Surveys

Pre-construction
services

Desktop Studies &
Feasibility Reports

Calculation &
Temporary Works
Design Packages

Outline &
Detailed Design

Our values

Our promise is complete client satisfaction, every project, every time.

Our core values focus on the people, planet and our performance of works. Everyone strives together to serve employees, clients, and the broader community to the best of our abilities.



Our Work Safe Live Safe strategy for the Health and Safety of our workforce is driven by our desire to create a positive safety culture and ensuring all levels of staff and supply chain are incorporated into our efforts. This strategy looks to go beyond the traditional health and safety role of preventing harm and promote a vigilant and proactive culture towards everyone's health and safety in the workplace.



Community committed

We engage with our local working communities from school activities, university lectures and sustainable donations.



We pledge to plant over 200 trees in 2024

Cairn Cross is committed to sustainability and practices to offset and lower our carbon footprint



Bridges, Roads and Infrastructure

Transforming landscapes with our expert bridge and road construction, delivery exceptional civil engineering capabilities to your next project.



Design

Our in-house dedicated design team are experts in civil engineering, providing a wide range of knowledge and experience to every project.

Build

As main contractors, Cairn Cross has built everything from superstructures and buildings to car parks, attenuation and drainage facilities.



Capabilities

Cairn Cross are versatile and can undertake a range of civil engineering requirements as the main contractor. Abilities include, but are not limited to:

- ▶ Bridges
- ▶ EV Infrastructure
- ▶ Groundworks and Drainage
- ▶ Piling
- ▶ Road Construction
- ▶ Soft and Hard Landscaping
- ▶ Strengthening
- ▶ S38 Works
- ▶ S728 Works
- ▶ Traffic Management



Thornhill Bridge Strengthening

This project was to supply grit blast painting and a new concrete bridge deck to comply with highway loadings.



Client
Network Rail

Value
£750,000

Location
Dewsbury

PROJECT OVERVIEW

- ▶ Bridge Maintenance
- ▶ Grit Blasting
- ▶ Reinforced Concrete
- ▶ Roadway Paintings
- ▶ Traffic Management
- ▶ Principal Contractor
- ▶ Scaffolding
- ▶ Walkways
- ▶ Waterproofing



The Challenge

With the new legislation on bridge loading capacity, Cairn Cross strengthened the bridge to comply with the new guidelines. Responsibility for the Traffic Management during the works, were included within the scope of works. Narrowing of the footpaths were made to reduce Traffic Management changeovers.

The Solution

The bridge site was secured by specially designed and manufactured temporary curtains implementing an industrial Velcro fastening system to ensure the highest level of safety. Grit blast painting of all exposed metal works were also carried out. An new concrete bridge deck was installed to comply with highway loadings, and waterproofing works were carried out to protect the bridge from weathering.



The Result

The works were near two schools, so we undertook early community engagement to ensure all nearby residents were aware of the works and had contact details should they wish to express any concerns. The new B6117 bridge now complies with the required weight-bearing and can continue easing traffic through the village. We was awarded the Winner of the CECA Linda Grant Safety Award 2011 Award.

Old Flatts Bridge Strengthening Works

Due to the shortening of the span between the abutment faces, the client required rehabilitation to restrengthen the bridge.



Client
Eurovia Contracting

Value
£680,000

Location
Rotherham, Yorkshire

PROJECT OVERVIEW

- ▶ Bridges
- ▶ Bridge Deck Replacement
- ▶ Concrete Waterproofing
- ▶ Jointing Work
- ▶ Road Maintenance
- ▶ Railway
- ▶ Steel Sheet Piling
- ▶ Structural Reinforcement
- ▶ Structural Repairs



The Challenge

Cairn Cross acted as the Specialist Subcontractor to restrengthen the A630 Rotherham Gateway road over rail bridge. An inspection found that the span between the abutment faces had shorted by 216mm in comparison to the as-built drawings. The bearings were beyond repair and needed replacement.

The Solution

Works were carried out to remove the existing curtain walls on the East and West of the bridge. Structural repairs were implemented to the existing concrete to increase longevity and strength. Further installation of steel sheet piling, concrete waterproofing, and jointing work enabled the structural reinforcing and worked to be carried out, whilst still allowing the vehicle traffic to use the bridge.



The Result

The Old Flatts Bridge continues to serve its purpose as a critical link between Rotherham, Sheffield, the M1 and nearby industrial and business parks. The works carried out by Cairn Cross help to defer more maintenance in the future to the bridge.

Todwick Road Bridge Deck Replacement

Working as a specialist subcontractor, Cairn Cross helped deliver the deck replacement on behalf of Ringway.



Customer
Ringway

Value
£600,000

Location
Dinnington, Sheffield

PROJECT OVERVIEW

- ▶ Abutments
- ▶ Bridge Replacement
- ▶ Concrete Omnia Planks
- ▶ Crane
- ▶ Deck Construction
- ▶ Drainage
- ▶ Permanent Soffit
- ▶ Road Management
- ▶ Specialist Subcontractor



1. The Challenge

The project was to replace the Todwick Bridge deck with new road construction and associated safety measures.

The Solution

To carry out the work, in-situ reinforced deck construction took place on-site to maximise efficiency. Concrete Omnia planks were placed as permanent soffit during the weekend rail possessions. Abutments were also pre-cast on site adjacent to the bridge location and lifted in by crane during rail possession times. New parapet support system tie rods encapsulated the construction deck before kerbs and drainage were installed.



3. The Result

A newly renovated two-way road bridge deck replacement complete with diaphragm walls and parapets.

Hayle Bridge Strengthening Works

Strengthening works to the bridge spanning the Copperhouse Pool tidal reservoir



Customer
Home Bargains

Value
£570,000

Location
Hayle, Cornwall

PROJECT OVERVIEW

- ▶ Bridges
- ▶ Concrete Bases
- ▶ Drainage
- ▶ Grit Blasting
- ▶ Principal Contractor
- ▶ River Defences
- ▶ Scaffolding
- ▶ Structural Repair
- ▶ Traffic Management



The Challenge

Home Bargains is situated on the edge of the Copperhouse Pool tidal reservoir in Hayle. The bridge required strengthening works and additional maintenance to ensure the bridge would continue to support the influx of traffic. The aim was to complete the works with the Copper Terrace road still operational to gain access to the retailer.

The Solution

To gain safe access to the bridge, temporary road management traffic lights were installed and monitored. Scaffolding was erected to undertake the works by installing a temporary concrete platform in the riverbed to access the bridges' underside. Grit blasting and beam strengthening was carried out to futureproof the longevity of the bridge.



The Result

Cairn Cross completed the works within the time frame whilst keeping the Copper Terrace road operational throughout. The bridge now continues to service the access route to Home Bargains.



Elland Road Bridge Replacement

Cairn Cross worked as a Specialist Subcontractor to help deliver a replacement of a two-track bridge in Leeds, Yorkshire.



Customer
May Gurney

Value
£520,000

Location
Leeds, Yorkshire

PROJECT OVERVIEW

- ▶ Anti-Collision Beams
- ▶ Back Filling
- ▶ Bridge
- ▶ Deck Construction
- ▶ Multi-Axle Trailer
- ▶ Pre-cast Approach
- ▶ Abutments
- ▶ Reinforced Concrete
- ▶ Retaining Walls



1 The Challenge

This contract was to replace a rail over road bridge just South of Elland Road football stadium. The main works had to be carried out under a weekend possession and the main deck was prefabricated within an adjacent car park. We carried out all the reinforced concrete works associated with the deck construction. Also remotely from the site in the precast yard we made the two precast approach abutments, the precast retaining walls and two anti-collision beams that were erected on each side of the deck.

The Solution

Once the possession started the old bridge was supported on a second multi axle trailer and we broke out the existing apartments to release the bridge. The bridge was taken away to the car park for disassembly. We then carried out works to the embankments that were re-levelled and screeded in preparation for the landing of the new bridge complete with apartments attached. Once the new bridge was landed we carried out local backfilling and installed the precast retaining walls and once these were in place we carried on backfilling to the underside of rail construction.



2 The Result

The works needed to be planned well in advance with the cooperation of all the various subcontractors and suppliers involved in the works. The possession dates were met and the bridge was handed back on time within the possession.





A511 Junction & Level Crossing Works

This project formed part of the Bardon Hill Quarry Extension Project – Phase 1 upgrading the A511 highway existing Level Crossing.



Customer
Aggregate Industries

Value
£1,800,000

Location
Leicester

PROJECT OVERVIEW

- ▶ Drainage
- ▶ Footpaths
- ▶ Hard Landscaping
- ▶ Kerbing
- ▶ Lighting
- ▶ Principal Contractor
- ▶ Road Surfacing
- ▶ Soft Landscaping
- ▶ Traffic Management



1 The Challenge

As part of the Bardon Hill Extension Project – Phase 1 there was a requirement for upgraded works to the A511 highway and an upgrade to the existing level crossing.

Cairn Cross worked as Principal Contractor to deliver the relevant upgrades to the highway while allowing the road to remain operationally open.

The Solution

After the clearing of vegetation, works began with: the set up of the Cairn Cross compound, widening of the footpaths or road, sub-base was laid and compacted where required, tactile paving, islands, edgings and kerbs were installed, followed by resurfacing works later on in the project. This work was required to increase the visibility splays for vehicles exiting the junction on to the A511.



The Result

Cairn Cross delivered the project on time, in May 2019. The new road allows the continued growth, development and access to the new quarry extension.

Captain Street Redevelopment

Various civil engineering works at the old school buildings in Captain Street, Bradford, were converted into apartments.



Customer
MMR

Value
£77,000

Location
Bradford

PROJECT OVERVIEW

- ▶ Car Park
- ▶ Concrete Slab
- ▶ Design & Build
- ▶ Drainage
- ▶ Hard & Soft Landscaping
- ▶ Pavings & Walkways
- ▶ Residential Redevelopment
- ▶ Road Markings
- ▶ Steel Frame Building



01 The Challenge

Civil works including hard landscaping, car-parking, footpaths, foul and surface water drainage were required to transform the old school building into a new complex of apartments.

The Solution

The central area was cleared and landscaped with drainage to capture surface water. Supplying pavings, stone walkways, asphalt access footpaths and a concrete slab for a cycle store create a suitable area for the residential development. Cairn Cross completed the new access route to the car park with marked outlines.



02 The Result

Cairn Cross delivered the project within a tight deadline, with the final design reflects the design and style of the renovated building.

03.

Structures and Landscaping

Expertly crafting resilient structures and stunning landscapes to enhance and endure.



Design

Expertly designed in-house, we can offer complete design and build capabilities to fulfil your project. See page four for more details.

Build

Our team of dedicated and experienced civil engineering experts is equipped to handle every aspect of your project as the main contractor



Capabilities

Cairn Cross are versatile and can undertake a range of civil engineering requirements as the main contractor. Abilities include, but are not limited to:

- ▶ Basements
- ▶ Concrete Forming
- ▶ Foundations
- ▶ Piling
- ▶ Soft and Hard Landscaping
- ▶ Strengthening
- ▶ Structural Design

Tingley Mills Phase 1 Infrastructure Works

As part of the Tingley Mills Residential Phase One redevelopment, Cairn Cross supplied various groundworks, drainage, storm attenuation and S278 surfacing works.



Customer
MMR

Value
£875,000

Location
Tingley, Leeds

PROJECT OVERVIEW

- ▶ Car Park
- ▶ Drainage
- ▶ Groundwork
- ▶ Kerbing
- ▶ Piling
- ▶ Storm Attenuation
- ▶ Stone Work
- ▶ S278 Surfacing Works
- ▶ Soft & Hard Landscaping



The Challenge

Civils work to convert the premises into luxury flats included the groundworks, drainage, storm attenuation and surfacing works at the Tingley Mills Development.

The Solution

S278 works included relocating the interactive bus stop on Bridge Street, constructing a retaining wall surrounding the plot, road markings and associated kerb and tactile paving.

The soft and hard landscaping was carried out, including gullies, kerbing, car park, surfacing, block paving, and landscaping completed the compounds usability and establishing the luxury appeal.



The Result

The Tingley Mills Phase 1 Residential Redevelopment was completed in February 2020. An upgraded car-park and entrance leads to a luxury complex of residential flats.

Greenholme Mills Luxury Apartments

Groundworks to renovate a textile mill into luxury apartments.



Client
MMR

Value
£2,850,000

Location
Burley In Wharfedale

PROJECT OVERVIEW

- ▶ Access Roads
- ▶ Attenuation
- ▶ Concrete foundations
- ▶ Excavation
- ▶ Flood Defence Wall
- ▶ Hard & Soft Landscaping
- ▶ Kerbing
- ▶ Mechanical & Electrical
- ▶ Residential Building



1 The Challenge

The team delivered infrastructure and groundworks to support renovating one of the largest UK decommissioned Victorian water-driven textile mills into luxury apartments. The location required significant foundation and ground works including installation of an attenuation storage tank in the event of rising river levels from the adjacent river Wharfe.

The Solution

The core work included structural foundations, drainage upgrades, and repairs to the existing river wall. Several retaining walls were installed around the complex to work with the sloping landscape.

Above ground, a new substation, car parking, hard and soft surfacing and access roads were installed.



3 The Result

The new luxury apartment complex is completed with modern drainage and flood defence solutions, new access roads with kerbing and car parking space for EV car charging options too.

Oxford Beech House Basement

The project required the excavation and installation of a new waterproof reinforced concrete basement to support a five-story student accommodation building.



Client
Winvic Construction LTD

Value
£1,400,000

Location
Oxford

PROJECT OVERVIEW

- ▶ Basements
- ▶ Concrete Bases
- ▶ Excavation
- ▶ Groundwork
- ▶ Piling
- ▶ Residential Building
- ▶ Secant Pile Works
- ▶ Troughing
- ▶ Waterproofing



1 The Challenge

Providing support to the new residential construction of a five-story student accommodation building for Oxford Brookes University students, Cairn Cross carried out excavation works to prepare the groundworks.

The Solution

To complete the works, piling and secant piled walls (CFA piles) with capping beam were formed around the proposed foundation perimeter and capped with steel reinforcing cages. Excavation works were carried out allowing the pile cap concrete works and base waterproof concrete slabs to be installed. Finally, steel-reinforced basement walls were formed with RMDs. A waterproofing system involved the application of Voltex DS membrane to the secant pile walls and the basement floor.



2 The Result

The project was delivered within time allowing the other contracting companies to fulfil their roles. The building opened in September 2017 and houses 167 students.

3.

Tim Horton's Restaurant

Cairn Cross was instructed to undertake all external civils works on a build only basis for a new restaurant chain.



Client
Thompsons

Value
£100,000

Location
Braintree

PROJECT OVERVIEW

- ▶ Block Paving
- ▶ Reinforced Concrete Aprons
- ▶ Landscaping
- ▶ Rerouting of Sub-Surface
- ▶ Drainage & Inspection Chambers
- ▶ Concrete Retaining Wall
- ▶ Install Rainwater Pipework
- ▶ Perimeter Kerbing



1 The Challenge

Situated at a redundant fast-food restaurant site, Cairn Cross undertook all external civil works on a build-only basis for a new restaurant chain. Work included the installation of a new drive-through access road, including reinforced concrete aprons, landscaping, and tarmac. In addition, all the external drainage was rerouted to ensure the safe disposal of surface water and foul sewage, including introducing new inspection chambers.

2 The Solution

Cairn Cross collaborated with an external design team and the client to mitigate any issues determined whilst on site. The area around the building was excavated to formation level in preparation for the rerouting of drainage. Whilst on location, a gas main was found. Following a design review, the drainage and power services were installed in preparation for tarmac and lining.



3 The Result

Working collaboratively, all boarding was installed on the concrete aprons, tarmac laid, and lining was completed to clients' specifications. In addition, the drainage and rainwater services were routed, and power services were installed. Despite challenging conditions, particularly with buried services, Cairn Cross completed the project.

St Nicholas Church Retaining Walls

Reconstruction of a Church boundary retaining wall and hard landscaping



Client
St. Nicholas Church

Value
£72,000

Location
Bradfield

PROJECT OVERVIEW

- ▶ Gabion Baskets
- ▶ Hard Landscaping
- ▶ Main Contractor & Designer
- ▶ Masonry Works
- ▶ Retaining Walls
- ▶ Soft Landscaping
- ▶ Steel Works
- ▶ Structural Concrete
- ▶ Traffic Management



1 The Challenge

Due to gradual ground movements, the retaining boundary wall collapsed and needed repair and additional support. Extra protection was taken in case of archaeological discoveries. Cairn Cross worked as a main contractor and designer.

2 The Solution

The working area was protected from the public to ensure safety, and existing the masonry were carefully removed, inspected and reused where possible. The area was excavated back with new concrete foundations, and gabion baskets were added to strengthen the new retaining wall. The new stone wall was rebuilt by Cairn Cross, using as many of the original stones as possible.



3 The Result

The new retaining wall offers complete protection for the church's boundary area and the public. The new hard landscaping offers a restored look to the area and provides future protection.

CECA Awards 2023
Project of the Year
- Highly Commended -

Hull Botanic Gardens

Maintenance shed extension and new facilities



Customer
Northern Rail

Value
£3,100,000

Location
Hull

PROJECT OVERVIEW

- ▶ CET
- ▶ Drainage & Walkways
- ▶ Electrical & CCTV
- ▶ Fuelling & AdBlue
- ▶ Fume Extraction
- ▶ Jacking
- ▶ P-way
- ▶ Steelwork & Cladding
- ▶ Tanking



The Challenge

Northern Rail required an extension to their existing maintenance depot and new roofing in order to increase servicing of their new rolling stock. The depot was to remain open and operational throughout the project.

The Solution

A new steel super-structure canopy was constructed over the existing depot adding an additional road to the left of the depot. Along with associated civil ground works such as foundations, drainage and lightning, the Cairn Cross team installed CET, fuelling, stabling and AdBlue to the site.



The Result

The new depot allows Northern Rail to provide maintenance and B exams to members of its Class 170 and Class 155 fleets.



Peterborough Rail Maintenance Hub

A Design & Build project to construct a rail maintenance depot



Customer
GB Railfreight

Value
£5,700,000

Location
Peterborough

PROJECT OVERVIEW

- ▶ Design & Build
- ▶ Principal Contractor
- ▶ Mechanical & Electrical
- ▶ Portal Frame Building
- ▶ Tandem Wheel Lathe
- ▶ S & C Automated Points
- ▶ New Power Supply
- ▶ New P-Way Siding
- ▶ Swarf Conveyor
- ▶ Fume Extraction System
- ▶ Depot Protection System



The Challenge

A design and build project for a new 95-metre superstructure shed with two roads, a gantry crane and jacking systems to provide maintenance facilities.

The Solution

The state-of-art maintenance hub improves safety and reliability across GRBF's wagon fleet, using smart sensor technology to quickly analyse wagon conditions and identify faults much earlier quickly and accurately. The Hub, which is larger than six-Olympic swimming pools, was built on derelict land bringing new economic activity and around 20 permanent jobs to the local area.



The Result

The new facility was completed and handed over to the client within 10 months of ground work commencing. Transport Secretary MP Mark Harper who opened the new maintenance facility said 'It's a fantastic achievement, built in 10 months, my ears did prick up a little bit when you said it was built on time and on budget, that's always very attractive'.



Queens Road New Maintenance Depot

Design and build contract for the provision of a maintenance workshop and associated works.



Customer
Stagecoach Metrolink

Value
£2,400,000

Location
Queens Road, Manchester

PROJECT OVERVIEW

- ▶ AVIS
- ▶ Bogie Drops
- ▶ Cable Installation
- ▶ Carriage Wash
- ▶ Concrete Bases
- ▶ Depot Maintenance
- ▶ Design & Build
- ▶ Inspection Pit
- ▶ Steel Structures



1 The Challenge

As part of the Manchester Phase 1 and 2 Upgrade and Renewals Programme, Metrolink added a fleet of new trains onto the line. The existing depot needed upgrading to manage the 44 new vehicles. This project included the repair, upgrade and installation of new services.

The Solution

The project works included the construction of an additional new shed with an inspection pit, 120 metres long. We removed the existing rail track before constructing the new cavity and building the enclosed new steel structure building. New CFA (Continuous flight auger) and driver platforms were installed along with an overhead monorail crane, depot protection system, compressed air system, oil distribution and a radiant heating system.



3 The Result

The project was completed within the proposed time frame, allowing Metrolink to issue out and sufficiently offer maintenance to their new fleet of vehicles.

Oxley Depot Subsidence

Due to subsidence issues, Cairn Cross replaced 137m length of the Road 16 rail pit walls and associated works.



Customer
Alstom

Value
£2,375,000

Location
Oxley, Wolverhampton

PROJECT OVERVIEW

- ▶ Cable Installation
- ▶ Concrete Bases
- ▶ Depot Modifications
- ▶ Drainage
- ▶ Electrical Installation
- ▶ Lighting
- ▶ Maintenance Pits
- ▶ P-Way
- ▶ Floor Painting



1 The Challenge

Due to subsidence issues, approximately sixty metres of permanent way rail track and maintenance pit were closed due to safety concerns. Cairn Cross took the possession of the shed from the North East entrance through to the end of the new pit construction to excavate the pit and reinstate 137 metres of new rail tracks and maintenance pits in the depot.

The Solution

Cairn Cross temporarily removed the interior access platforms to gain safe access to remove 137 metres of subsided track and pit. The rail was removed and stored for reuse, and the pit walls and walkways were excavated. Once demolished, new reinforced steel and formwork was lifted into place, and concrete poured and struck. Once the new pit walls, walkways and track was implemented, we carried out the lighting and associated works.



3 The Result

The new depot allows for the maximum efficiency of maintenance work to be carried out throughout the entire length of the shed. New safety stairwells and lighting within the pit improve the overall safety of the depot.

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and build specialist main contractor for rail
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