PROJECT CASE STUDY

# DIRFT II and III

## Daventry International Rail Freight Terminal

Train control and signalling

FENIX RAIL SYSTEMS



# The Background and Mission

The expansion of Daventry International Rail Freight Terminal into DIRFT III required a control system capable of supporting a larger, more complex rail operation. Manual points, stop boards and verbal instructions would place increasing demands on terminal staff as traffic grew.

Fenix's mission was to provide digital control across DIRFT II and III, enabling efficient train movements, reducing trackside manual operations and integrating a level crossing located centrally within the layout, while preserving the existing DIRFT I interface with the West Coast Main Line.



# The Project Delivered

Fenix provided a terminal control solution based on the Tie-FenLock 400 system, bringing together computer-based interlocking, powered point control, train detection and signalling through a central operator workstation.

The graphical display provided visibility of track occupancy, point positions and signal status, with entrance-exit (NX) route setting. The centrally located level crossing was interfaced with the signalling system to coordinate crossing operation with train movements.

The solution connected the existing DIRFT II infrastructure with the new DIRFT III development.



# The Challenges and Solution

A central challenge was integrating the expanded terminal without altering the existing DIRFT I control panel, relay interlocking or Network Rail interface. Fenix retained the established method of working between DIRFT I and II while introducing digital control across DIRFT II and III.

The level crossing introduced a further interface at the centre of the layout. Connecting it to the signalling system allowed crossing operation and train movement control to work together.

The solution also accommodated clamp-lock point equipment already procured for DIRFT III through interfaces using signalling safety relays. Its configuration supported phased implementation, allowing equipment to be brought into operation as the terminal developed.



# KEY ACHIEVEMENTS

- Unified control of the existing DIRFT II and new DIRFT III operational areas.
- Centralised route setting, point control and signalling.
- Integrated the central level crossing with the signalling system.
- Reduced reliance on manual point operation and verbal movement instructions.
- Preserved the existing DIRFT I control arrangements and mainline interface.
- Incorporated previously procured clamp-lock equipment.
- Supported the operational requirements of an expansion planned to accommodate up to 32 trains per day.



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# Thank you


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