

Guest article: Stephenson Harwood

## Signalling: proceed with caution

By Tammy Samuel, Partner and Darren Fodey, Associate

The introduction of on-board cab signalling represents a fundamental change in the way the railway will be operated. Signalling – traditionally a Network Rail responsibility – will become a joint endeavour of both Network Rail and the train operator – whether freight or passenger. Whilst there is a 25-year timetable for the introduction of the European Rail Traffic Management System (ERTMS) on the GB rail network, freight operators should not be complacent about the impact this will have on their businesses in the short term. The introduction of ERTMS is something which all rail businesses – particularly freight – need to engage with now.

### What is happening?

Ultimately, on many sections of railway the traditional colour light signals will be removed and so trains will not be able to operate unless the European Train Control System (ETCS) is fitted to the locomotive. In place of colour light signals, balises/beacons will be installed along the track, which will communicate with the on-train signalling system and the central signalling control centre. GPS will track each train and movement authorities will be communicated to the driver through the in-cab signalling display.

The nature of the freight business means that locomotives could be expected to travel all over the country on various lines – unlike most passenger rolling stock, freight rolling

stock is not used primarily on specific routes. This means it will be vital for all freight locomotives which could be used on ERTMS-enabled lines to be fitted early in the ERTMS timetable. Failure to do so risks the locomotive being unable to run. This article considers some of the benefits of ERTMS for freight operators, the procurement programme, as well as some of the potential increases in risk to be aware of.

### Timeline

The East Coast mainline will be the initial recipient of the new signalling system during Control Period 5, with the routes from King's Cross to Welwyn Garden City/Peterborough being the first to convert.



The driver of a Class 158 on the Cambrian with the ERTMS screen (Driver Machine Interface) showing target speed.

The Great Western mainline signalling is also being upgraded to facilitate the introduction of the Crossrail and IEP services. In Control Period 6, the Midland Mainline from London to Leicester will have ERTMS installed, with certain Scottish routes following shortly thereafter. Preparations are happening now – and operators will need to make sure their businesses are ready.

### Benefits

The introduction of ERTMS is designed to increase available capacity on the railway, which may give freight operators opportunity to secure additional or different train paths. This will be possible through the introduction of moving block signalling, meaning trains can run safely closer together. Improved safety is another anticipated advantage of the new signalling system. For Network Rail, there will also be a significant decrease in the cost of maintaining line-side signals and responding to signal failures.

However, these benefits do not come without initial capital investment – investment which is being made now.

### Procurement

Whilst passenger franchise operators will ultimately fund the installation of ETCS through the franchise agreement (either through subsidy from government or passenger revenue) this is not an option open to freight operators in a competitive market, who will sometimes own the rolling stock rather than leasing it from ROSCOs.



The ERTMS test train under development at Alstom's Wembley facility.

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Recognising this, Network Rail will be responsible for procuring the ETCS technology for the freight (and heritage) fleets – and, importantly, will also fund its installation.

The freight and heritage aspects are part of a wider programme involving both the ROSCOs and Network Rail. ETCS technology will be procured for all train fleets which will be impacted by the installation of the new signalling system. The wider programme of procurement is already well underway.

### Freight operators

With Network Rail leading the procurement and selecting the successful supplier, freight operators will need to ensure they obtain the benefits of Network Rail's contract, as well as having the right to enforce its terms against the successful supplier. Where a freight operator owns – rather than leases – the locomotive, it is even more important for there to be a direct contractual relationship between supplier and operator: unlike passenger operations where there is the ROSCO interface, there will be no equivalent leasing relationship between Network Rail and the freight operator.

This direct relationship is also key because any delays or defects are more likely to have a direct impact on the business if a locomotive is unavailable or cannot be used on the intended routes.

Of course, there will also be a need to interface with the supplier for essential maintenance work, without which the locomotive will not be able to operate.

The freight operator will also have to plan its operations carefully, to ensure locomotives can be taken out of service at an appropriate time to fit the ETCS equipment. Operators may wish consider whether this should tie in with scheduled maintenance cycles – both on initial installation and subsequent maintenance.

There will also be a need to ensure drivers and maintainers are available for training on the new systems. Drivers are expected to need up to two weeks of training to be able to operate the new system – and it will be essential for this training to take place before the removal of the line-side signals. Careful planning will be needed to ensure this can take place in tandem with ongoing business as usual. There will also be some cost to be factored in: whilst Network Rail will be paying for the hardware, it will be the responsibility of the operator to ensure their employees are fully trained.

### Exclusivity

From a practical perspective, it seems likely that one ETCS supplier will supply the technology across the whole of a particular class of rolling stock, offering Network Rail (in terms of initial procurement) and the operator (in terms of ongoing maintenance) better value for money. Steps are being taken at the procurement stage to ensure best value for money is obtained for the whole fleet. It remains to be seen whether suppliers have an appetite for a direct relationship with the operator: if liabilities could be increased, this may not be appealing. Nevertheless, the supplier will need cooperation from and the support of the operator to ensure ETCS

is successfully implemented: there will be interdependencies between all of the parties to the transaction, necessitating close partnership working to ensure the project is successful.

Without a functioning on-board signalling system, the train will not be able to operate on lines with ERTMS fitted. This may mean there is scope for negotiating arrangements between the operator and ETCS-supplier given the ongoing requirement for maintenance.

### Potential liabilities

The introduction of the new signalling system represents a fundamental change for the rail industry – one which may increase potential liabilities for freight operators. In future, a signal failure may not be Network Rail's responsibility – it could be as a result of the on-train equipment failing, for which the freight operator may be liable. Whether the freight operator is able to pass on any liability to the signalling maintainer may have a significant impact on the operator's business and potential financial liabilities. There is a need for a rethink of traditional delay attribution principles, with the industry coming together cooperatively to optimise the success of the ERTMS project.

It is also likely to be important for the freight operator to consider its arrangements with insurers. As the operator will be taking on part of what was previously a Network Rail responsibility, efforts may be needed to ensure cover remains comprehensive.

The ERTMS project involves a significant change in the operation of the railway – and is one which should not be approached lightly. The ultimate success of the project will require a number of parties with diverging commercial interests to work together. Whilst we have every confidence that the industry will work together to make the project a success, the challenge should not be underestimated.



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