

# THE SIGNAL BOX

## Welcome to the Second Issue of The Signal Box

Quarterly News and Updates from Fenix

April 2016

Fenix is celebrating its 12 months since we opened the doors and what a year it has been.

We successfully completed Phase II of the RETB (Radio Electronic Token Block) Project with telent Technology Ltd in the West Highlands of Scotland, delivered on time in budget despite the challenges of storm "Douglas".

RETB for the Far North Line is ongoing alongside a number of other complex and interesting projects that give us some exciting opportunities for 2016 and beyond.

From the "first day in the office" we have developed and delivered our original business model to secure complex niche projects with high technical content.

Our journey so far would not have been such a success without the support, dedication and technical expertise of the Fenix Team.

Fenix ensures that the knowledge and skills of the group are fully engaged and every opportunity to develop those skills is explored to maximise client benefit.

We know that our business is founded on the collaborative knowledge, experience and skills that are "Fenix" and our objective to credibly deliver signalling projects to our clients.

We look forward to the next 12 months with anticipation and enthusiasm for the challenges that lie ahead on the Fenix way ahead.

## Fenix Signalling and Telent complete West Highland Line TPWS signalling testing for RETB Project



Fenix Signalling, in collaboration with Telent, has successfully delivered the Train Protection Warning System (TPWS) signalling testing works on the West Highland Line in Scotland. This milestone is the first part of the Radio Electronic Token Block (RETB) Next Generation project taking place on the West Highland and Far North Lines.

RETB is an electronic development of the physical token system for controlling traffic on single lines, with the driver receiving movement authority via a cab display radio (CDR). Fenix Signalling is responsible for the signalling design and the signalling testing and commissioning works for the project under the management of Eddie Murphy, Fenix Head of Projects, and supported by the Fenix specialist team.

The current RETB legacy operating frequencies are being reallocated by OFCOM to digital TV throughout Europe, requiring all RETB radio infrastructure to be upgraded to support the new frequencies.

[Read more](#)



### Depot control system for Chiltern railways

Engineers from Fenix Signalling have visited PintschTiefenbach in Germany to receive product training as part of a project to deliver a Depot Control System for the Chiltern Light Maintenance Depot in Banbury where Fenix have been retained by the Buckingham Construction Group Ltd to deliver the signalling control system and interface.

[Read more](#)

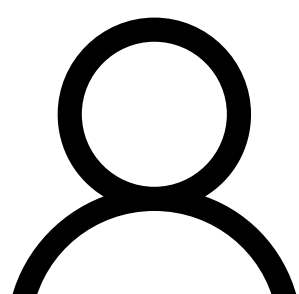


### 365 days of success and counting

Formed just one year ago, rail services provider Fenix Signalling is now a company in full flight, having already delivered a number of highly varied projects to the UK rail industry.

The select team of signalling specialists has a combined knowledge of more than 90 years in the rail industry.

[Read more](#)



### Fenix Signalling continue to encourage skill development

The training and development of individuals is crucial for the long term future of the Rail Industry.

Here at Fenix Signalling we continually commit to the development of our staff members and we are keen to support and encourage individuals looking to pursue a career within the rail industry.

[Read more](#)



### Complexities of document control and management

The British rail network is seeing the biggest investment programme in a generation, upgrading a network originally established by our Victorian Ancestors.

[Read more](#)

## Meet Eddie Murphy

### Head Projects and Business Development

At Fenix Signalling, Eddie Murphy is responsible for the management and development of all aspects of client signalling projects, as well as the promotion of the company's capabilities within the broad rail signalling sector.

Eddie's wealth of experience spans over 25 years in the industry, both in the UK and at a number of worldwide destinations, focusing on project management during the last 20 years.

[Read more](#)



## Jargon Buster

### Richard Hill joins Fenix Signalling for work experience



In its simplest explanation principles testing is a methodical process to test if the equipment designed and built operates as expected, in line with the associated principles.

- Is it safe?
- Does the job it should?
- Has the right thing been designed and built?

### Firstly, we must understand an interlocking:



A signalling interlocking is an arrangement or system of signal equipment which prevents the conflicting movement of trains through an area of track such as a junction or crossing.

### Principles Testing



Computer controlled interlockings allow the Tester an opportunity to prove the principle using a state-of-the-art computer based simulator. The simulator allows the equipment to be fully tested remote from the final site installation.

The Principles Tester will then effectively "test to break" to see if it fails in an operational settings. For example, do the points move only when the conditions are right? Or is the system preventing other operations happening when the points are not in their correct position?

### Functional Testing



This is where the Functional Tester checks that the equipment designed and installed has been built right, performs as expected and responds to a set of control inputs. Testing a set of points, for example will make sure that the points perform normally when the relevant relays are up and that the right detection relays are in place.

### Summary



There is no margin for error with rail signalling, the consequences of incorrect practice are unthinkable.

Principles testing creates a further opportunity to ensure system resilience and functionality using a state-of-the-art simulator. It can be argued that there are similarities with the practices experienced by airline pilots moving to a new type of aircraft. Despite their proven knowledge and capability, they too are vigorously tested and accredited on simulators (principles testing) prior to their in-flight training (functional testing)



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