8 November 2023

SAFETY WEBINAR

Objects left on the Line

Innovative Solutions

Darryl Hopper, RSSB

INTERNATIONAL UNION OF RAILWAYS

Overview

OOTL Issue	Technical Solution	Suppliers used
Incorrectly placing objects on the line	Geofencing	Onwave, Tended, Track Tracker
Leaving objects on the line	Geotagging, Geofencing	Onwave, Tended, Track Tracker
Objects fouling the line	Limiting devices with Geofencing, trackside hand back to signaler	Onwave, Tended, Track Tracker, ZKL, Trackside Guardian
Approaching infrastructure objects	Train Protection and Warning System – Continuous Supervision (TPWS-CS)	Thales
Runaway objects onto the line	Runaway Risk Model	RSSB

About Geofencing Technology

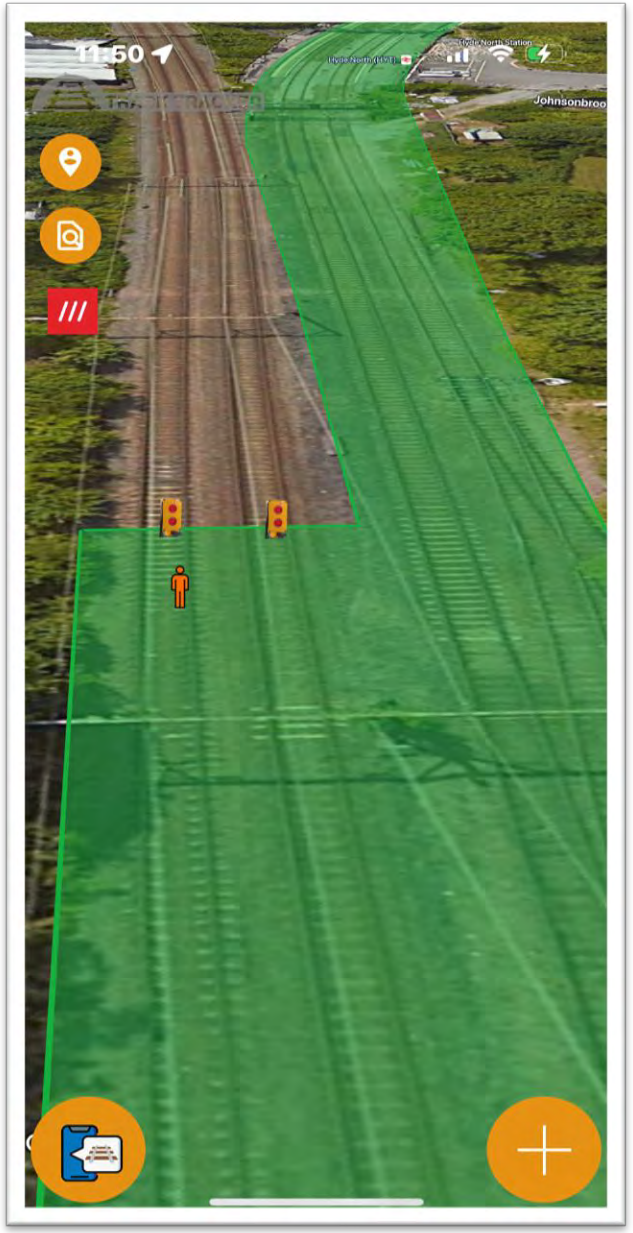
onwave

TRACK TRACKER

tended

Incorrectly placing objects on the line

Believing they had been told to place the marker boards, the COSS accessed the track and walked to the required position and placed the marker board on the Down line, whilst placing the marker board they heard a train coming and moved quickly onto the open Up line as the train hit the marker board.

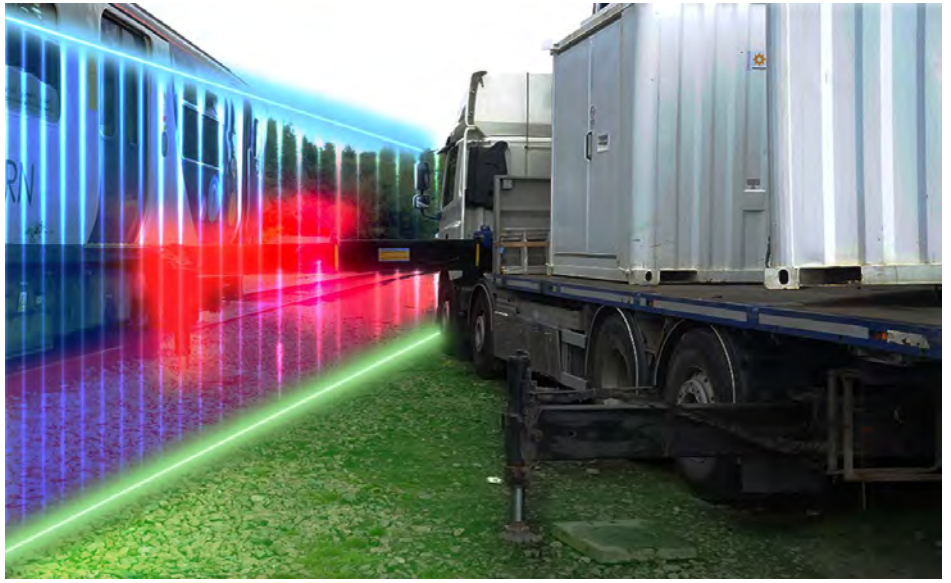


TRACK TRACKER

Providing total visibility of all Worksite Marker Boards. Allowing the ES and ES support to have 100% confirmation that they have placed their protection in the correct location.

The technology is able to confirm locations of possession support staff and display ELR, Miles, Chains, Yards of all assets on the network.

Incorrectly placing objects on the line



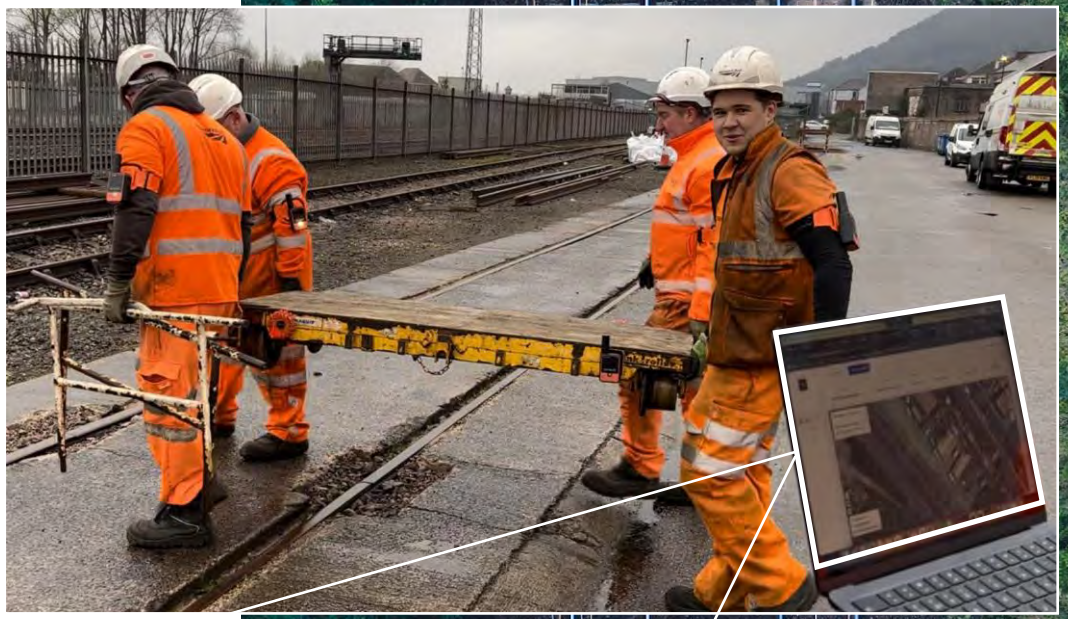
onwave

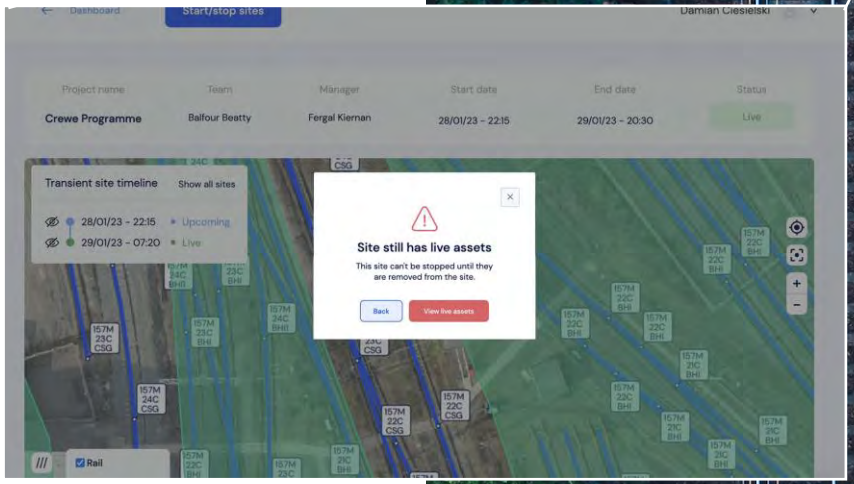
OWL

Leaving Objects on the Line

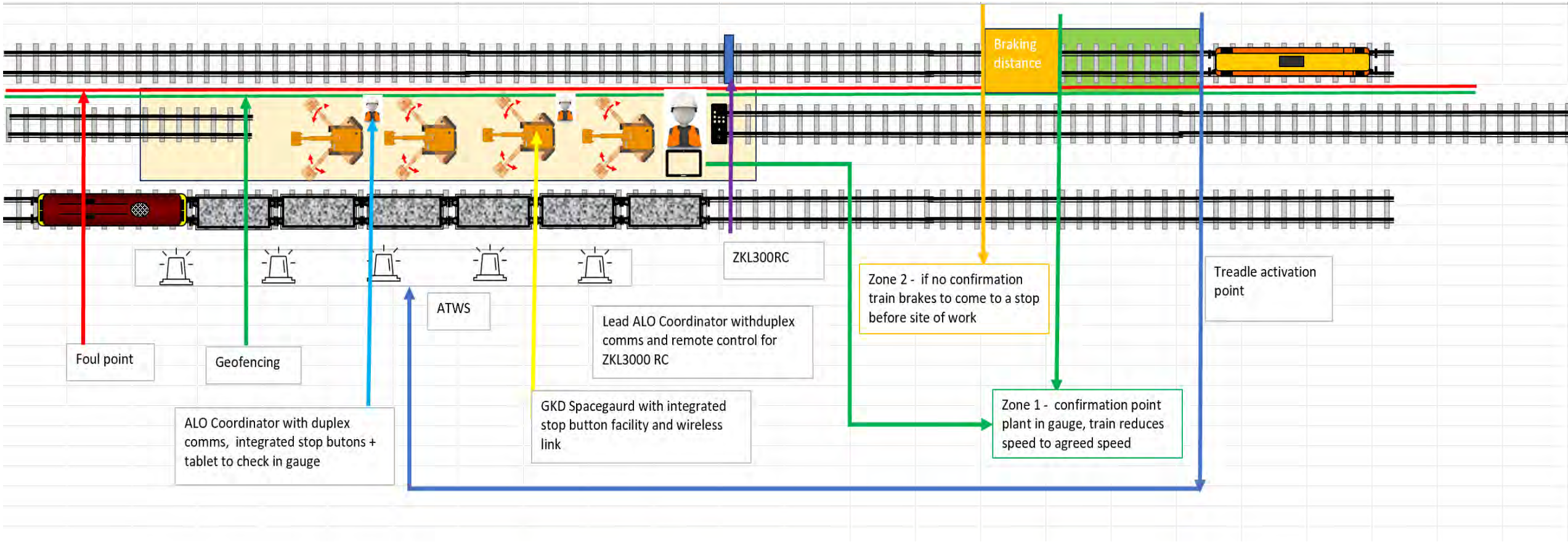
- Line clear verification
- Asset placement
- Live location
- Dashboard notifications

tended





Objects fouling the line



Definition:

In the UK ALO refers to Any Line Open working meaning that train traffic is able to pass whilst infrastructure work is happening

Task:

We are seeking solutions to optimise the performance of ALO whilst maintaining safety

Microsoft Teams

UIC catch up

2023-11-02 08:42 UTC

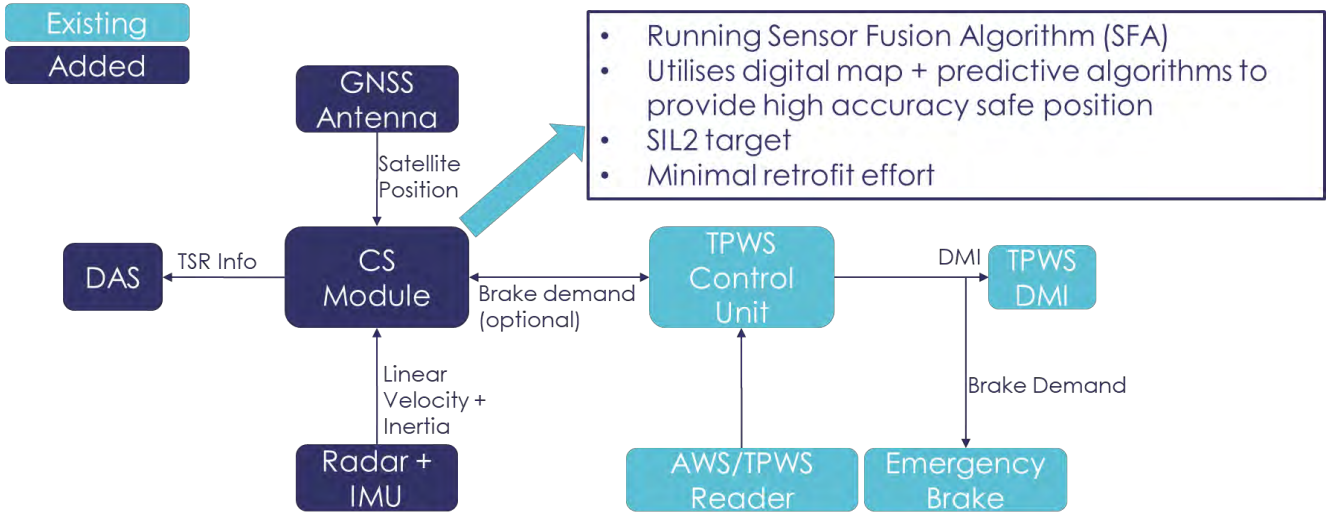
Recorded by
Darryl Hopper

Organized by
Darryl Hopper

Train Protection and Warning System – Continuous Supervision (TPWS-CS)

By interfacing a geospatial positioning system to the existing Class B system (TPWS) – a continuous supervision of the train is enabled without requiring trackside assets

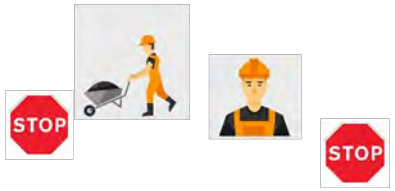
Enables geofencing of areas of interest, e.g. possessions or objects on track, and applying movement rules / restrictions to automatically stop trains entering



TSRs/ESRs

Accept and supervise against both temporary and emergency speed restrictions. Configurable to be with or without a driver interface to provide the opportunity to minimise business change or maximise benefits.

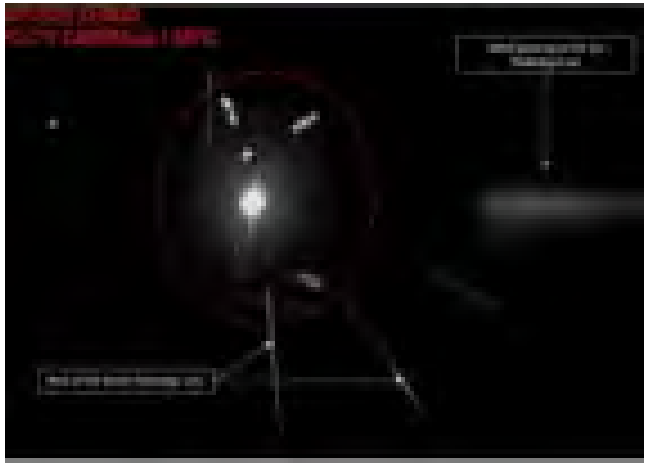
Possession Protection

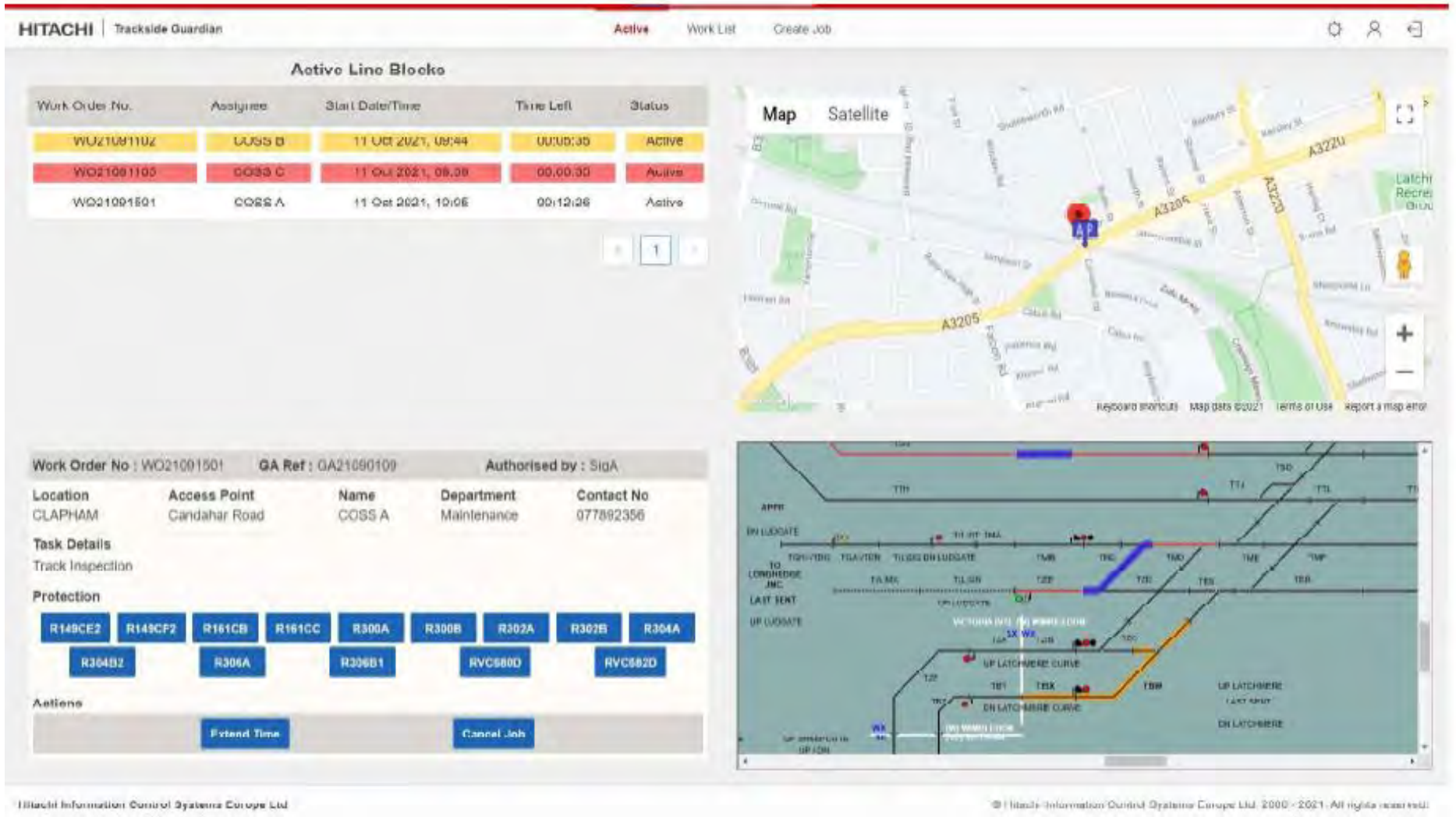


Through provision of an interface to either local signallers or the Person In Charge of Possession (PICOP), TPWS-CS can provide the ability to geofence possessions to ensure all fitted trains cannot enter possessions without permission.

THALES

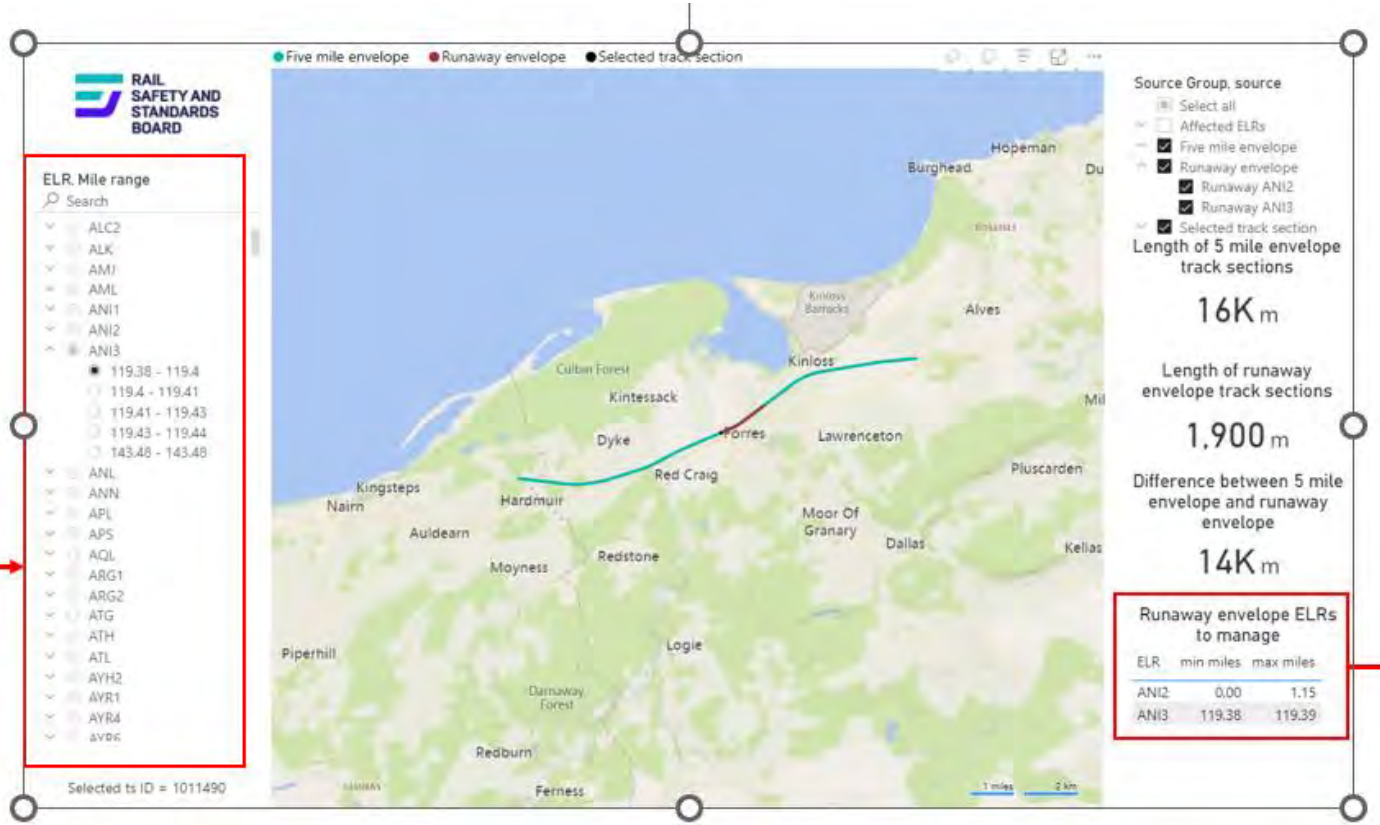
Hitachi Trackside Guardian





Runaways becoming objects on the line

Works location

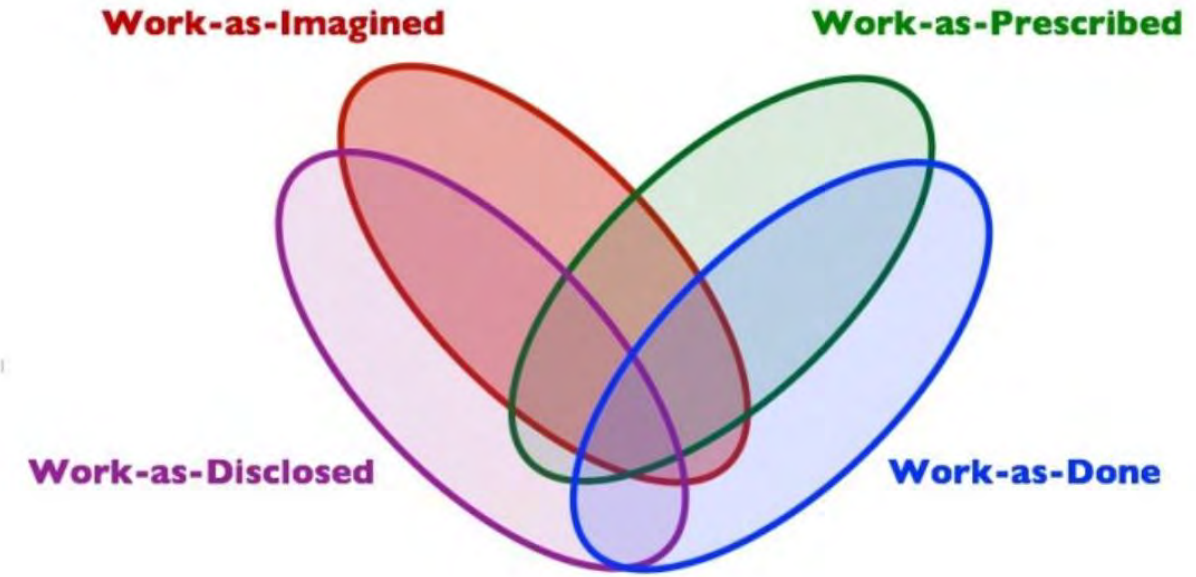


Runaway envelope

Human Factors and technology – WAD v WAI

Figure 18: The train and hand trolley after the collision at Twickenham (courtesy of Network Rail)

Figure 2: The train once stopped and the handle from the hand trolley wedged under it (courtesy of Network Rail)



Engineering Possession (Jan 2023)

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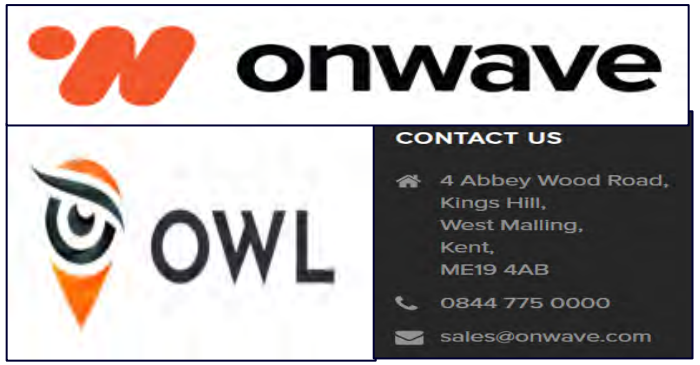
onwave
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8 November 2023

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THANK YOU FOR YOUR PARTICIPATION!

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