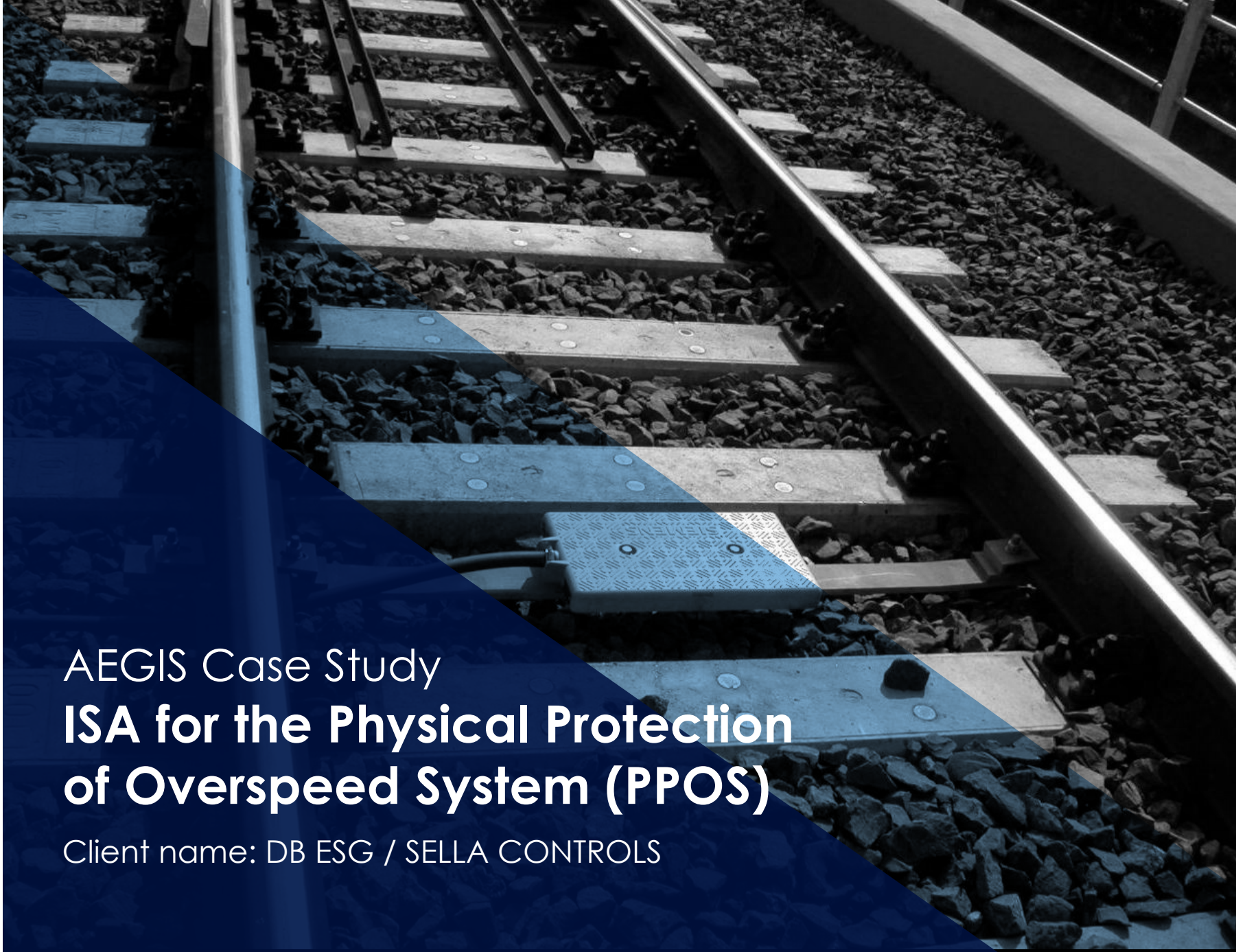




The Positive Choice

A photograph of railway tracks with gravel ballast, viewed from a low angle looking down the tracks. A large, dark blue diagonal shape is overlaid on the bottom-left portion of the image, containing the text.

# AEGIS Case Study ISA for the Physical Protection of Overspeed System (PPOS)

Client name: DB ESG / SELLA CONTROLS

## AEGIS Certification Services

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## SCOPE/OBJECTIVE

Deutsche Bahn-owned DB ESG was awarded a contract by Transport for London as part of competitive tendering process to provide a Physical Protection of Overspeed (PPOS) system for installation on the fleets of trams operated by London Trams in the Croydon area. DB ESG partnered with SELLA CONTROLS, who provided the hardware and software for the PPOS system. The project also included the provision of beacons for installation on the railway infrastructure and equipment in the depot for reporting PPOS related events to the Control Room personnel.

PPOS is a protection system of 'last resort' supplementary to other speed management initiatives already implemented.

PPOS produce a brake demand signal if the tram is exceeding an over speed limit at a designated high-risk location.

The objective of the project was to provide a system design, equipment, integration, testing, installation, commissioning documentation and assurance for the PPOS system, as limited by the design scope.

## HOW WE HELPED

AAEGIS supported DB ESG/SELLA CONTROLS by providing its services as ISA of PPOS system against BS EN 50126-1/2 and BS EN 50129 standards SIL 2 requirements throughout the whole project.

AEGIS supported the client with the definition of the assessment scope and delivered the ISA Plan.

The ISA activities were reported to the client through regular meetings and seven Feedback Lists, each one covering a phase of the project. The phases were:

1. Preliminary Observations.
2. Concept and System Definition.
3. Risk analysis and evaluation, Specification of system requirements, Architecture and apportionment of system requirements and Design and implementation.
4. Fault Tree Analysis.
5. Detailed Design and Integration
6. Safety Verification Report.
7. System Validation and Acceptance.

The Feedback Lists were adequately closed, meaning that the project has been developed in accordance with the standards.

## OUTCOME

Our strong relationship with DB/ESG and system expertise has allowed us to effectively manage the assessment project.

The joint work with DB/ESG has led to the issue of the Safety Assessment Report declaring that PPOS system is suitable to realize its intended functions and is compliant with SIL 2 requirements of BS EN 50126-1/2 and BS EN 50129, allowing its integration and commissioning.

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