


# SiYtE Smart Analytics – Bridge Strike


## SiYtE Smart Analytics


Purple Transform's mission is to harness AI to enable the rail industry to improve safety and achieve train performance targets, using our Smart Analytics platform, SiYtE.

SiYtE provides solutions for **Trespass Detection and Reduction, CNI Situational and Environmental Awareness, Extreme Weather Insights and Alerts, Level Crossings** and **Smarter, Safer Stations**.

## Impact of Bridge Strikes

 In the UK, 1,572 bridge strikes were reported in 22/23 with a total cost the UK taxpayer of ~£23m per year, ~£13,000 per strike

 When a bridge is hit, the driver is expected to call for an assessment. This will either stop trains or run the first train at 5mph to inspect track alignment and debris, with subsequent trains at 20mph until the bridge is inspected. This all can cause significant delay and cost.

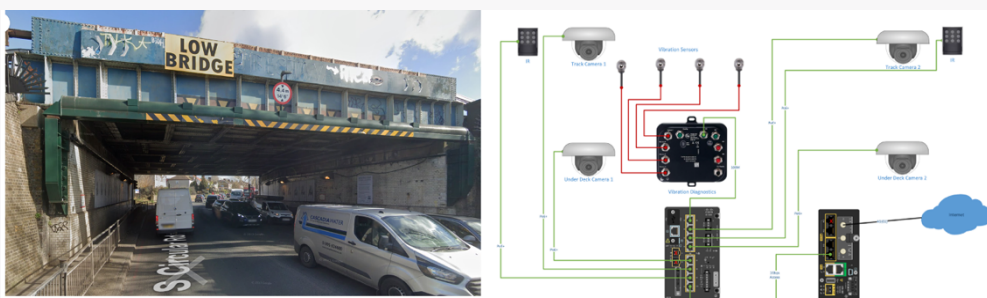
 Many strikes may go unreported, creating a safety risk. Current bridge strike technology solutions do not focus on detection, only on providing imaging for inspection.

## SiYtE Smart Analytics for Bridge

SiYtE combines analytics from existing **cameras, sensors and third-party data** to detect incidents and report on safety and operational metrics. The SiYtE Bridge Strike solution utilises the SiYtE service, packaged with solar and 4G for a connected bridge strike detection and inspection system.

Wired vibration sensors, either on the bridge structure or collision protection beam monitor for sudden vibration events, with in-built analytics to filter train and traffic noise. On detection, the SiYtE service powers up under-bridge and track view cameras to access snapshot images to send to inspection teams.

- **Improve safety by detecting unreported bridge strikes:** The SiYtE Bridge Strike solution not only provides remote inspection capability, but also detects strike events.
- **Reduce delays through faster inspections:** On detection events, SiYtE provides access to both reference and current imaging to remote inspection teams.
- **Reduce costs - fast to deploy:** The solution has a low power budget as cameras are dormant until there is a detection event. As such, it can be deployed over solar and 4G. All equipment can be deployed on one side of the road to avoid full road closures.



For information or a demonstration please contact [info@purpletransform.com](mailto:info@purpletransform.com)

