

Cable Safe Sleeper

Smart protection for signalling and electrical infrastructure.

Innovation in Cable Protection

Developed through collaboration between Vossloh Sleeper Technologies Australia, Queensland Rail, and Hitachi the **Cable Safe Sleeper** provides a safe and effective solution for transferring electrical and signalling cables from one track side to the other.

The design integrates a **hollow-core sleeper** and an end shroud assembly that protects cables from mechanical damage during ballast tamping, regulating, and other maintenance operations — ensuring long-term network reliability.

Engineered for Performance

- › **Integrated cable duct:** The sleeper's 55mm hollow core securely houses electrical and signalling cables, protecting them from impact, abrasion, and ballast movement.
- › **End shroud protection:** A purpose-designed shroud shields the cable exit point and allows controlled cable bending and slack storage during tamping lift.
- › **Maintenance-safe design:** Withstands on-track maintenance activities without exposing or damaging cables or fittings.
- › **Compatible installation:** Works with existing ballast track structures, enabling seamless integration with minimal modification to installation practices.

Designed with Safety and Collaboration in Mind

This system was developed through extensive Safety in Design workshops involving track, civil, and signalling specialists.

Key outcomes include:

- › Use of armoured ducting (55mm Internal Diameter) through the sleeper conduit.
- › Protective shroud coatings for long-term environmental durability and protection against ballast regulators.

A Collaborative Innovation

The Cable Safe Sleeper represents a joint achievement by Vossloh Sleeper Technologies Australia, Queensland Rail, and Hitachi, combining design expertise, safety innovation, and real-world operational insight to deliver a smarter, safer rail solution.

Key Benefits

- › Protects critical electrical and signalling cables from damage during track maintenance activities.
- › Reduces downtime and maintenance costs
- › Improves safety and system reliability
- › Simple installation within existing track layouts
- › Backed by extensive engineering validation and industry collaboration

**Protecting what powers the network —
Innovation built into every sleeper.**

