britpave
The British In-situ Concrete Paving Association

CONCRETE SLAB TRACK:

engineered for a lifetime - the permanent way

Permanent track fixed alignment

Concrete slab track is a modern form of railway track construction which, in its simplest form, uses concrete instead of ballast to provide stability to the track structure. It is used throughout the world for all types of railway systems including high speed lines, heavy rail, light rail and tram systems. Slab track systems have been in widespread use throughout the world for over forty years.

Concrete slab track systems offer a permanent track solution with a fixed alignment, that unlike traditional ballasted track, does not moved under operational loading, and requires minimal maintenance.

Concrete Slab Track – Germany

Concrete Slab Track – The Netherlands

Long operational life and stable track quality

Slab track systems have proven higher performance and a longer life than traditional ballasted track.

Slab track provides the necessary stability for high speed operation. Slab track fixes the track alignment and so track quality is stable, unlike ballasted track where track quality deteriorates between maintenance interventions.

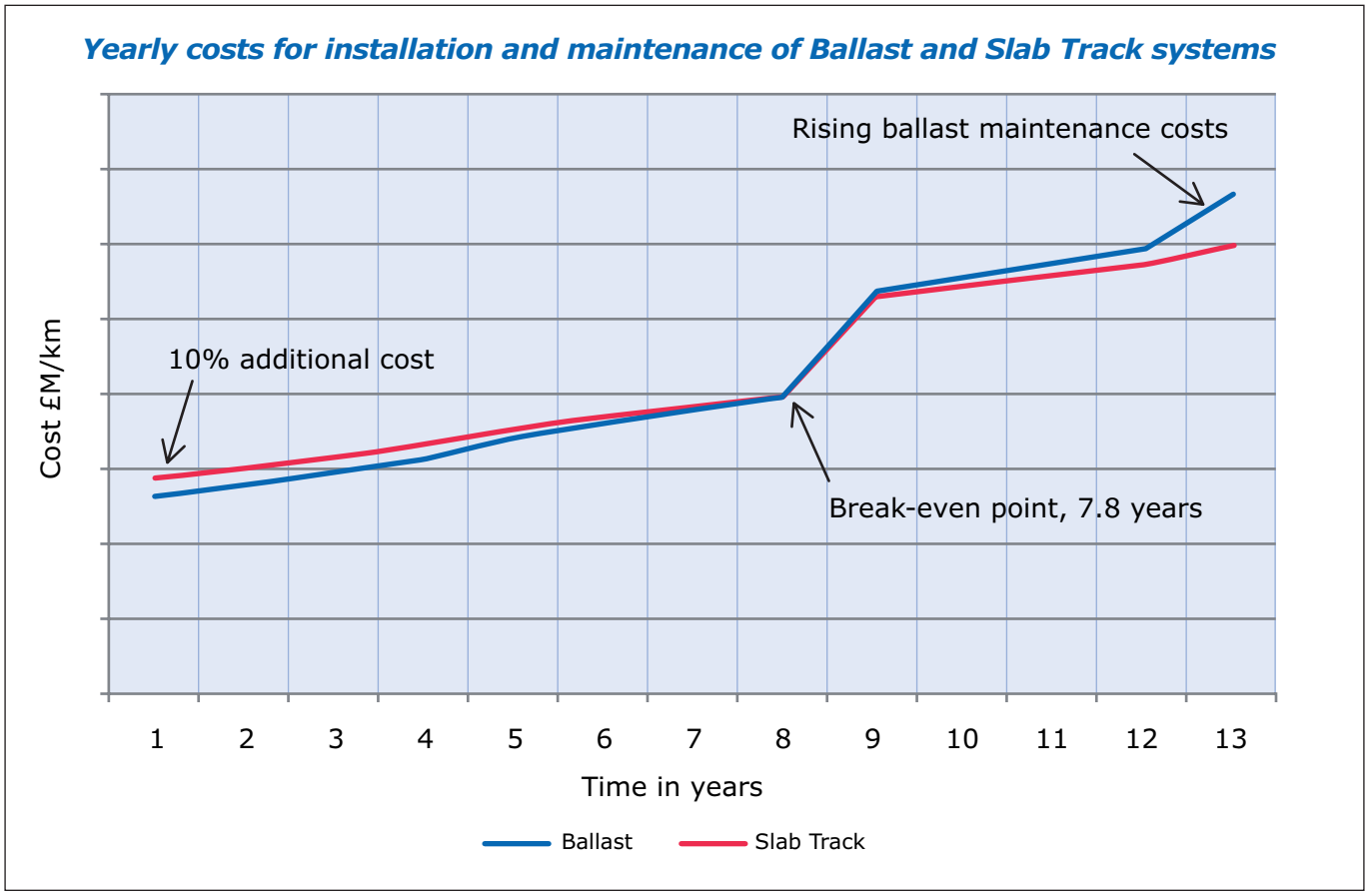
Engineered Acoustic performance

In sensitive areas airborne noise can be mitigated by the addition of acoustic barriers and absorptive treatments to the surface of the concrete.

Mitigation of ground borne noise and vibration in sensitive areas is achieved through engineering the slab track system. Increasing mass and resilience in the system will increase the damping effect.

High Attenuation Sleeper for noise and vibration reduction

The sustainable track system with Lower Whole Life Cost



- Slab Track installation costs are typically only 10% more than ballast installation costs (and can be less)
- Yearly Maintenance costs for slab track are significantly lower than ballast, giving a breakeven point within 8 years of operation. After year 12 ballast maintenance costs rise significantly.
- Overall whole life costs are significantly better for Slab Track due to a design life double that of ballast.
- When total system costs (e.g. derailment containment, reduced cross section width) are taken into account, slab track and ballast installation costs can be comparable.


North-South Link, Berlin


Ballasted track renewal works

The full publication provides an overview of concrete slab track technology in use around the world and discusses the advantages and long-term benefits that can be achieved, delivering sustainable railway infrastructure with lower whole life cost.

The full publication can be requested at:

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