

What's happening?

Best Practice on TLP KO2

Hinged Lightweight Signal Post Design

Overview:

The SRA TLP Project Engineers worked in conjunction with signal post supplier Collis Engineering to design a lighter, hinged signal post. The weight of the hinged lightweight signal post is approximately 100 kg, whereas traditional signal post designs weigh in at around 500 kg.



Benefits

Key benefits over traditional post designs include:

- A saving of approximately 400 kg of steel per structure (embodied carbon and cost savings)
- Easier to install compared with traditional frames
- The hinge placed at the bottom of the post allows the signal head to be lowered to ground when maintenance works are required, thereby removing the need to work at height
- During decommissioned of the structure, the steel of the frame can be recycled

Embodied energy / carbon

Embodied carbon refers to carbon emissions emitted during creation of a product or material, including mining, raw material extraction, processing, manufacturing and transportation. For the hinged lightweight signal post, embodied carbon emissions will be lower than the traditional post as there is a saving of steel of 400 kg (per piece). In order to calculate embodied carbon emissions saving the exact number of posts ordered for TLP is required. This information is currently outstanding but at last count the number of Collis posts was 44. This amounts to 17,600 kg of steel saved, roughly **24,112 kg CO₂-equivalent embodied carbon** (using a 1.37emission factor from the Inventory of Carbon and Energy)

Meeting TLP objectives and targets

- This initiative is aligned with TLP Sustainability Strategy *Objective 17* 'To increase the life of materials and reduce the consumption of virgin and unsustainable sources of materials'
- It is also aligned with *Objective 15* 'to minimise the levels of carbon generated over the whole life of TLP'