national highways

INFORMATION

Safety Alert

Heat effects on safety barrier beams

08 September 2025

Background information

- During recent hot weather, several safety barrier beams have experienced significant thermal distortion and there have been isolated incidents (2no.) of beam to post connection failure (refer to photograph).
- Safety barrier manufacturers initially advised that beam distortion would not significantly impact barrier performance and beam alignment would eventually straighten when temperatures reduce.
- However, to avoid future distortion and potential bolt failure, manufacturers are developing expansion beam assemblies which can be retrofitted to reduce the risk of this deformation occurring in the future.
- The following conditions have been initially identified as increasing that the risk of distortion:

➢ *The barrier consists of single height corrugated profile beam designed by a manufacturer (i.e. not Tensioned Corrugated Beam safety barrier);*

➢ *Safety barrier post spacing is 6.0m or greater (although it is possible that the effects can be seen in barriers with post spacing less than 6.0m);*

➢ *Consistently (over two days) high ambient temperatures (28˚C, and where the nighttime ambient temperature does not fall below 20˚C);*

➢ *These effects have been seen in both single- and double-sided systems.*

Lessons Learnt

The investigation is ongoing and further advice or guidance will be issued when available.

- Designers and manufacturers should consider the impact of thermal expansion on barrier layout particularly for systems with higher post spacings.
- Through existing inspection and maintenance activities asset managers and inspectors should identify any previous or new locations where barrier beam deformation (due to heat effects) has been with witnessed.
- Details should be notified to the SES VRS team at VRSEnquiries@nationalhighways.co.uk

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If you have any queries about this safety alert information announcement or any other safety announcement then please contact HealthSafety&Wellbeingteam@nationalhighways.co.uk

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