

BRIT 46

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## HIGHWAYS AGENCY INSTRUCT USE OF CONCRETE BARRIER AS PREFERRED OPTION

Convinced of the increased safety, maintenance and cost benefits of motorway concrete barriers compared to steel, the Highways Agency has issued instructions that the new concrete step barrier is the preferred option for future motorway dual carriageways barrier installation and replacement works where the Average Annual Daily Traffic (AADT) exceeds 25,000 vehicles per day. The Agency's decision has been welcomed by Britpave, the transport infrastructure group, as the way forward to increase the safety of Britain's roads and to eliminate the cost and congestion caused by the frequent repair and maintenance of less robust steel barriers.

The Highways Agency new Interim Advice Note 60/50 states that where AADT exceed 25,000 vehicles per day, there are significant benefits in using rigid concrete rather than deformable steel barriers. These include improved health and safety, reduced repair and maintenance requirements and greater Whole Life Cost benefits

Developed in Holland, the concrete step barrier has proved successful in preventing that most dangerous of motorway accidents: the crossover. This is where the central barriers have failed to restrain a vehicle from crashing and crossing over into the face of on-coming traffic. In the UK crossover accidents account for over 200 motorway accidents and some 40 deaths a year. With a containment level of H2, the concrete step barrier is able to contain vehicles of 13 tonnes such as coaches or heavy good vehicles. This is in comparison to the containment level of N2 for steel barriers which is only able to contain smaller vehicles of up to 1.5 tonnes.

Whole Life Cost analysis carried out by the Highways Agency has concluded that rigid concrete safety barriers, with a containment performance class of H2 has the greatest benefit in terms of cost and safety. Although concrete can be up to 30% more expensive to install, the average scheme costs of installing concrete barrier are assessed as being just 0.2% greater than steel, although this may be greater where changes to the central reserve drainage are required. However, even with this consideration the additional costs for concrete will be offset by the reduction in maintenance and associated traffic management costs. Further cost savings will result from improving safety and reducing the likelihood of crossover accidents.

Concrete crash barriers have proved their worth in terms of no cross over accidents and no maintenance on those sections of the M25 where they have been installed for the last ten years. Installation of concrete step barriers could contribute to a future where there are no cross over accidents and no ongoing barrier repair and maintenance programmes.

The Highways Agency decision is welcomed by David Jones, Director of Britpave, who said: "The safety, maintenance and financial arguments for using the concrete step barriers are compelling. They eliminate cross over accidents. Despite evidence of vehicular impact on the M25 concrete barriers their inherent strength and robustness has meant no repair or replacement is necessary. Compare this to the cost and congestion caused by the ongoing and continual repair and replacement programmes necessary for less-robust steel barriers. A further cost benefit is that the strength of the concrete barrier means only one line of barrier need to be installed compared to the often two lanes of steel barriers."

"The Highways Agency's decision underlines the fact that steel barriers and wire fences, like their predecessors the hedge barriers of rose bushes and thorn trees used on the first motorways built in the 1960's, are now longer adequate to meet the demands of today's traffic," said Jones. "Designed to last for up to 50 years, the concrete step barrier provides a proven and cost-effective solution that meets the traffic demands of today and tomorrow".

**ENDS**

Notes to editors.

1. A copy of 'Intermin Advice Note 60/05 (IAN 60/05) The Introduction of a new Highways Agency policy for the performance requirements for central reserve safety barriers on motorways' is enclosed for your information.
2. Britpave (British In-situ Concrete Paving Association) promotes the better and greater use of concrete for transportation solutions. It members include major contractors, specialist contracting companies, specialist equipment and material suppliers, consulting engineers and interested trade associations. Together they provide a single voice for the in-situ concrete paving industry. For further information see [www.britpave.org.uk](http://www.britpave.org.uk)
2. A CDrom giving technical details of the concrete step barrier and jpeg images are available from Steve Elliott, Constructive Dialogue, tel: 01276 36735, email: [condialogue@aol.com](mailto:condialogue@aol.com)

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