

# Use of Passively Safe Street Furniture on Warwickshire County Council Highways

## 1. Purpose

The purpose of this document is to provide guidance on when and where passively safe street furniture should be installed so that resources are targeted only at those sites where maximum road safety benefits may be achieved for Warwickshire's road users.

## 2. Background

In 2010, UK Roads Ltd produced a report on the use of passively safe street furniture on British roads. UK Roads Ltd is an independent business dedicated to encouraging a better understanding of the current standards, advice and issues relating to the provision and maintenance of features on our roads. The report draws heavily on the requirements of British Standard BS EN 12767:2019 which sets out design standards, where passively safe posts should be used and is referenced in Design Manual for Roads and Bridges (DMRB).

The approach the above document has taken is to prioritise roads by type, class and speed limit, according to collision risk, as follows:

Priority 1	All rural A roads
Priority 2	40mph urban A roads
Priority 3	All rural B roads
Priority 4	40mph urban B roads
Priority 5	30mph urban A roads
Priority 6	30mph urban B roads

Of lower priority are the following roads, which are unlikely to require passively safe infrastructure, unless specific site conditions and/or collision history indicate otherwise:

- roads with 20mph speed limits
- roads usually lined with parked cars
- residential and industrial estate roads where average traffic speeds are unlikely to exceed 25mph
- country lanes and roads with low traffic volumes.

The collision data for Warwickshire over a twelve-month period from October 2018 to September 2019 (pre Covid-19 pandemic) indicates that fatal and serious injury collisions involving street furniture are very rare. In this time period there were a total of 39 fatal and 268 serious injury collisions on Warwickshire's roads. Of these, none of the fatal collisions and just five of the serious collisions involved street furniture.

Speed and location also play their part in the severity of collisions. Within Warwickshire, routes with speed limits of 50mph or over are more prone to serious and fatal accidents. Rural A roads see higher numbers of deaths and serious injury than do urban highways.

Pedestrians and other vulnerable road users such as cyclists must also be considered when developing a procedure for the use of passively safe street furniture. The risk to vulnerable road users is largely from falling lighting columns or signposts following impact by vehicles and depends strongly on the numbers exposed.

Current recommendations are that passively safe posts may not be appropriate where there are likely to be pedestrians or other vulnerable road users on a regular basis. This would apply to most of Warwickshire's urban areas. At traffic signal junctions where pedestrian facilities are implemented on certain approaches but not all, and informal crossing points are likely to exist, then it may be appropriate to install non-passively safe poles across the entire site.

### **3. Requirement for Passively Safe Street Furniture**

Risk of death or serious injury from collision with street furniture on Warwickshire highways is very low. The widescale introduction of passively safe furniture in line with the recommendations of Roads UK Ltd is therefore not justified throughout the County.

Passively safe posts, signal and lighting columns will not be required where road restraint systems are already in place or proposed to be installed. Justifying the introduction of expensive Road Restraint Systems (RRSs) to reduce risk is a challenge for local highway authorities, especially at a time when funding for maintenance and improvements scheme is already limited. Authorities must therefore be confident that any safety measures taken represent good value for money.

Rural A roads with a speed limit of 50mph or more should be considered suitable for the installation of passively safe street furniture. For the purposes of this procedure, rural roads are defined as those where housing and other indications of urban life are generally isolated rather than located together in settlements.

Signage should be compliant with BS EN 12767:2019 (Passive safety of support structures for road equipment) and BS EN 12899-5:2007 (Fixed, vertical road traffic signs) or any subsequent superseding standard. Passively safe street furniture should therefore be the default option for all new and replacement street furniture on rural A roads with speed limits of 50mph or more.

However, before installing passively safe items, consideration must also be given to the overall cost and safety benefits of installing such equipment. This consideration should take into account the risk of serious personal injury collisions involving street furniture by looking at the site's collision history, and the cost of installing and maintaining passively safe equipment for the lifetime of the infrastructure.

Where passively safe equipment is the default position, that is, on 50mph or above speed limits on rural A roads, an engineer must, in all cases, carry out an assessment and document the reasons based on the above factors where a decision not to install passively safe street furniture has been reached.

Information on the collision history of specific locations may be obtained by reference to official collision statistics or to WCC

Safety Engineering colleagues.

For all other roads, all signage should be designed in accordance with best practice design principles and passively safe posts will not be used, unless there are convincing safety reasons where to do so would have a direct and beneficial impact on collision and casualty statistics.

Temporary signage that will be removed within twelve months of installation should be designed in accordance with best practice design principles and passively safe posts will not be used unless there are significant safety reasons to do so.

In emergency situations, where immediate response and action are necessary, there may be insufficient time to procure and install passively safe street furniture. In these situations, to address the immediate public safety concerns, it will be acceptable to use standard, non-passively safe posts.

#### **4. Approach summary**

Within this procedure rural roads are defined as those where housing and other indications of urban life are generally isolated rather than located together in settlements.

##### **4.1 Rural A roads with speed limit of 50mph or above**

Passively safe street furniture (signposts, street lighting columns and traffic signals) should be installed on all Warwickshire's rural A roads where speed limits are 50mph or above.

**Unless** any of the following apply:

- A road restraint system (RRS) is in place or proposed and the street furniture will be protected by the RRS.
- Street furniture can be installed 4.5 metres or more from the edge of the carriageway.
- Pedestrians and other vulnerable road users may be at risk from secondary collisions with falling lighting columns or posts.

- The risk of injury or death from collisions with street furniture, as assessed by analysing the preceding three-year collision history at the site, shows that the installation of such items is likely to have no effect on personal injury collisions.
- The cost of installing and maintaining passively safe street furniture throughout its lifetime outweighs the cost benefit of reducing personal injury collisions (using the latest figures from DfT “Average value of prevention per reported casualty and per reported road accident” analysis).
- An emergency deployment of non-passively safe street furniture is necessary on pressing public safety grounds.

Passively safe street furniture must be compliant with BS EN 12767:2019 (Passive safety of support structures for road equipment) and BS EN 12899-5:2007 (Fixed, vertical road traffic signs) or any subsequent superseding standard.

#### **4.2 All other roads**

On all other roads for which Warwickshire County Council is the Highways Authority, passively safe street furniture will not be installed, unless a site specific collision history indicates otherwise.