
# Smart Motorways

Smart motorways use traffic management methods designed to maximise road usability and decrease congestion in busy areas. They have been in progress since 2006 with hundreds of miles of motorway having been converted into smart motorways since and is an ongoing development.


There are three main types of smart motorway:

**Controlled**

This type of smart motorway has mandatory speed limits with a hard shoulder available for emergencies only.

**Hard Shoulder Running**

The hard shoulder can be opened during busy, peak times on the motorway when needed, reducing congestion.

**All lane running schemes**

This type of smart motorway opens all lanes for traffic to use including a former hard shoulder and makes use of variable speed limits.

Only in the event of an incident is the hard shoulder lane closed to traffic.

A lane closure is indicated by a big red X on the gantry overhead. This means that, if you are already in lane 1 (the hard shoulder), you must exit it as soon as possible, as it indicates an obstruction in that lane. Ignoring the X sign can be extremely dangerous and will bag you a fine and points on your license.


Speed limits on smart motorways actually change depending on the traffic conditions, the variation is designed to act as a calming measure. The gantry overhead displays the current speed limit for a lane and if there is no speed limit displayed, then the national speed limit applies. Speed limits are enforced by speed cameras.

Should drivers break down or be involved in an accident, there are emergency refuge areas (ERAs) at the side of the carriageway to use. These are clearly marked by blue signs as in the image below with orange SOS telephone symbols and are spaced at roughly 1.5 miles apart.


In summary, smart motorways:

- Use CCTV, radar and sensors to keep an eye on traffic.
- Enforce speed restrictions and lanes closures if there’s an incident or congestion.
- Use traffic calming measures like variable speed limits (of 40, 50 or 60mph), red 'X' lanes or driving on the hard shoulder.
- Use overhead gantry signs and large roadside information signs to warn you about queues, speed limits, closed lanes and diversions.
- Feature emergency refuge areas (ERAs) which are used for emergency purposes.