

## Speed cushions



A speed cushion is a short, raised, rounded device, normally in the centre of a road lane. Speed cushions are designed to be slightly wider than a car, so car drivers need to slow down and drive over the centre of the speed cushion to reduce discomfort. Buses are wider than cars, so they can drive over speed cushions without passengers feeling anything. In Cambridgeshire, speed cushions are normally 1.6m-1.8m wide.

## Effectiveness

Generally, vertical treatments - such as speed humps - are expected to reduce accidents. Speed cushions are effective at reducing motor vehicle speeds, however they are not as effective as speed tables or speed humps. Reducing motor vehicle speeds increases safety because:

- The vehicle has travelled a shorter distance by the time a driver can react to a hazard
- Braking distance is reduced, so the vehicle can stop more quickly before a hazard
- Higher speed crashes tend to result in higher severity injuries

## Design

Speed cushions can be made in three different ways, with each being used in Cambridgeshire. They can be made from rubber sections, which are attached to the road; made from raised layers of shaped tarmac; or made from pre-cast concrete sections, which are dropped into the road. Rubber cushions are now the most favoured design in Cambridgeshire because they have reduced costs and require less maintenance.

Advantages	Disadvantages
	<ul style="list-style-type: none"> <li>• Cars drive considerably faster over speed</li> </ul>

- Buses don't need to slow down
- More effective than horizontal treatments at reducing speed
- Emergency vehicles can travel drive more quickly over cushions than speed humps or tables
- Can be avoided by cyclists
- Drainage should not be affected

cushions than speed humps or speed tables

- Bus companies and emergency services may oppose wider speed cushions (e.g. 1.7m wide) which are proven to be more effective at slowing down cars
- Some traffic is likely to transfer onto alternative routes, potentially causing a problem somewhere else
- Noise and vibrations can impact local residents
- Additional cost may be required to resurface sections of the road before new cushions are installed

## Considerations

- May cause traffic to divert to other routes
- Speed cushions could create noise and vibration which is heard and felt in residences nearby.
- Speed cushions are normally used in residential areas, or local distributor roads.
- Speed cushions can only be installed if there is a suitable system of street lighting through the residential area.
- Requires a [Traffic Regulation Order](#) and a [Road Safety Audit](#)

## Cost

Equipment	£5,000 - £11,000
Works	£3,500 - £6,500
Traffic Regulation Order	£1,000
Road Safety Audit	£2,000

**Total** £11,500 - £20,500

Costs above are to supply and install four pairs of cushions that includes associated signing and lining. Costs vary depending on type of cushion used (tarmac, rubber or concrete).

## Speed humps



Speed humps have a short rounded top which is typically 75mm high. The ramps either side are painted with white arrows to make them more obvious to motor vehicle drivers. The aim of the speed hump is to slow motor vehicle traffic to a safe speed, as the ramps become uncomfortable for vehicle drivers if they are driven over too fast.

## Effectiveness

Generally, vertical treatments - such as speed humps - are expected to reduce accidents. Speed humps do not slow motor vehicle traffic as much as speed tables, however they are more effective than speed cushions. Reducing motor vehicle speeds increases safety because:

- The vehicle has travelled a shorter distance by the time a driver can react to a hazard
- Braking distance is reduced, so the vehicle can stop more quickly before a hazard
- Higher speed crashes tend to result in higher severity injuries

Advantages	Disadvantages
<ul style="list-style-type: none"> <li>• More effective than speed cushions and horizontal treatments</li> <li>• Can be adapted so that drainage should not be affected</li> </ul>	<ul style="list-style-type: none"> <li>• Buses, cyclists and emergency vehicles may need to slow down</li> <li>• Bus companies normally oppose speed humps</li> <li>• Some motor vehicle traffic is likely to transfer onto alternative routes, potentially causing a problem somewhere else</li> <li>• Noise can impact local residents</li> <li>• Additional cost may be required to resurface sections of the road before new cushions are installed</li> </ul>

## Considerations

- May cause traffic to divert to other routes
- Speed humps could create noise which is heard in residences nearby.
- Speed humps are normally used in residential areas, or local distributor roads.
- Speed humps can only be installed if there is a suitable system of street lighting through the residential area.

Cost	
Equipment	£7,000 - £12,000
Works	£4,500 - £7,500
Traffic Regulation Order	£1,000
Road Safety Audit	£2,000
<b>Total:</b>	<b>£14,500 - £22,500</b>
<p>Costs above are to supply and install four humps that includes associated signing and lining. Costs vary depending on location</p>	

- Requires a [Traffic Regulation Order](#) and a [Road Safety Audit](#)

## Speed tables



Speed tables are a raised section of road, with a ramp on both sides. The ramps are painted with white arrows to make them more obvious to motor vehicle drivers. The aim of the speed table is to slow motor vehicle traffic to a safe speed, as the ramps become uncomfortable for vehicle drivers if they are driven over too fast. A speed table is normally around 75mm high, and can vary in length.

## Effectiveness

Generally, vertical treatments - such as speed tables - are expected to reduce accidents. These speed tables should achieve the lowest speeds of all traffic calming treatments being compared, which means the greatest safety benefit can be expected.

Reducing motor vehicle speeds increases safety because:

- The vehicle has travelled a shorter distance by the time a driver can react to a hazard
- Braking distance is reduced, so the vehicle can stop more quickly before a hazard
- Higher speed crashes tend to result in higher severity injuries

Advantages	Disadvantages
<ul style="list-style-type: none"> <li>• Most effective traffic calming treatment</li> <li>• Can be used as part of an informal crossing for pedestrians</li> <li>• More acceptable than speed humps to buses</li> </ul>	<ul style="list-style-type: none"> <li>• Large speed tables are expensive</li> <li>• Managing water drainage could be complex and costly</li> <li>• Buses, cyclists and emergency vehicles will need to reduce their speed</li> <li>• Some traffic is likely to transfer onto alternative routes,</li> </ul>

- The size of the speed table is flexible to fit an area with a safety concern. It could span all parts of a four-arm junction, or be placed on a single straight section of road

potentially causing a problem somewhere else

- Noise and vibrations can impact local residents
- Additional cost may be required to resurface sections of the road before new cushions are installed

## Considerations

- May cause traffic to divert to other routes
- Speed tables could create noise and vibration which is heard and felt in residences nearby.
- Speed tables are normally used in residential areas or busy pedestrian areas
- May be unacceptable on a busy bus route
- Speed tables can only be installed if there is a suitable system of street lighting through the residential area.
- Requires a [Traffic Regulation Order](#) and [Road Safety Audit](#)
- When a table is installed, it will put extra pressure on the road drainage either side. If the drainage is unsuitable, there may be additional costs to ensure flooding doesn't become an issue.



Large speed table for use at junctions

## Cost

	Small table	Large table
Equipment	£3,000 - £4,000	£7,000 - £10,000
Works	£1,500 - £2,500	£4,500 - £7,500
Traffic Regulation Order	£1,000	£1,000
Road Safety Audit	£2,000	£2,000
<b>Total</b>	<b>£7,500 - £9,500</b>	<b>£14,500 - £20,500</b>

Costs above are to supply a speed table that includes associated signing and lining. Costs vary depending on location and condition of existing road surface.

