

## TRAFFIC CALMING OPTIONS REVIEWED

TRAFFIC MEASURE	HIGHWAY REGULATIONS & LOCAL LIMITATIONS
<p><b>Vertical Deflections</b></p> <ul style="list-style-type: none"> <li>• Raised speed tables (flat topped)</li> <li>• Speed humps/bumps</li> <li>• Speed cushions</li> </ul> <p><b>Horizontal Deflections</b></p> <ul style="list-style-type: none"> <li>• Kerb buildouts (kerb extensions)</li> <li>• Chicanes</li> <li>• Pinch points</li> <li>• Traffic islands</li> <li>• Pedestrian refuge-islands</li> </ul>	<p><b>Vertical Deflections</b></p> <ul style="list-style-type: none"> <li>• KCC highway policy does not permit vertical deflections on ‘A’ or ‘B’ class roads.</li> <li>• Vertical deflections require street lighting unless in a 20mph limit or zone.</li> <li>• Vertical deflections are only permitted where average vehicle speeds are 24mph or below.</li> <li>• All measures must have sufficient visibility.</li> </ul> <p style="text-align: center;"><u>Local Limitations</u></p> <ul style="list-style-type: none"> <li>• Average vehicle speeds too high for vertical deflections in all roads except the High Street and Pilgrims Way East.</li> <li>• Lack of street lighting rules out vertical deflections outside the proposed 20mph limits.</li> </ul> <p><b>Horizontal Deflections</b></p> <ul style="list-style-type: none"> <li>• Buildouts, chicanes and pinch points only permitted where speed limit is 40mph or below, street lighting required unless in a 20mph limit.</li> <li>• Priority Give Way not permitted where traffic volume is too high as could result in unacceptable congestion.</li> <li>• Pedestrian refuge-islands permitted where speed limit is 40mph or below, require reflective bollards only. Pedestrian refuge-islands must include a path either side of the refuge-island, dropped kerbs and tactile paving.</li> </ul> <p style="text-align: center;"><u>Local Limitations</u></p> <ul style="list-style-type: none"> <li>• Lack of street lighting rules out buildouts, chicanes and pinch points outside the proposed 20mph limit, except on Sevenoaks Road where there is some street lighting.</li> <li>• Pedestrian refuge-islands and traffic islands have not been possible in Shoreham Road, Pilgrims Way East, and the lower section of Station Road near Colets Orchard, due to insufficient road width or no scope to widen road.</li> <li>• Avoiding obstruction of driveways and other access points has increased difficulties in finding suitable locations for physical traffic calming measures. Road topography has been another limiting factor.</li> </ul>

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<b>TRAFFIC MEASURE</b>	<b>HIGHWAY REGULATIONS &amp; LOCAL LIMITATIONS</b>
<p><b>Other Traffic Calming Options</b></p> <ul style="list-style-type: none"> <li>• Mini roundabouts</li> <li>• Rumble strips</li> <li>• Gateway features</li> </ul>	<p><b>Other Traffic Calming Options</b></p> <ul style="list-style-type: none"> <li>• Mini roundabouts permitted where the speed limit is 30mph or less, and 85th percentile vehicle speed is less than 35mph within a distance of 70 metres from Give Way Lines.</li> <li>• Rumble strips not permitted near residential properties and generally not accepted by KCC due to maintenance costs.</li> <li>• Gateway features must comply with KCC Highways specifications and at a distance of 450mm from carriageway.</li> </ul> <p><u>Local Limitations</u></p> <ul style="list-style-type: none"> <li>• Mini roundabouts proposed not permitted due to insufficient forward visibility, otherwise meet all highway criteria.</li> <li>• Rumble strips proposed not permitted due to proximity of residential properties at suitable locations.</li> </ul>
<p><b>Psychological Traffic Calming</b></p> <ul style="list-style-type: none"> <li>• Virtual kerb buildouts</li> <li>• Edge of carriage way markings</li> <li>• Central hatching</li> <li>• Coloured road surfacing</li> <li>• Textured road services</li> <li>• Planting</li> </ul>	<p><b>Psychological Traffic Calming</b></p> <ul style="list-style-type: none"> <li>• Virtual buildouts use white line markings to visually narrow the carriageway, permitted where there is sufficient road width for two vehicles to pass.</li> <li>• Edge of carriageway white lines visually narrow the carriageway, permitted where there is sufficient road width.</li> <li>• Central hatching visually narrows the carriageway, permitted where there is sufficient road width.</li> <li>• Coloured surfacing is used to highlight speed limit changes and to visually narrow road width.</li> <li>• Textured road services create noise and therefore not permitted near residential properties and generally not accepted by KCC due to cost of maintenance.</li> <li>• Planting of trees and shrubs for traffic calming permitted where this is sufficient forward visibility and road width.</li> </ul> <p><u>Local Limitations</u></p> <ul style="list-style-type: none"> <li>• Insufficient road widths for virtual buildouts on most roads in the scheme, to be introduced on Shoreham Road only.</li> <li>• Topography suitable on Station Road and Pilgrims Way West for planting only.</li> <li>• Use of red surfacing restricted by KCC due to high cost of maintenance. A limited amount of red surfacing is proposed for all roads in the traffic calming scheme except Pilgrims Way East.</li> </ul>

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<p><b>20mph Limits &amp; Zones</b></p>	<p><b>20mph Limits &amp; Zones</b></p> <ul style="list-style-type: none"> <li>• Not permitted where average mean speeds are greater than 24mph. Where average mean speeds are 28mph or less, a 20mph limit will be considered, however would require traffic calming to reduce speeds to 24mph or below.</li> <li>• The built environment must give a clear impression that a 20mph speed limit is the most appropriate speed.</li> <li>• Street lighting is not required for traffic calming features in a 20mph limit or zone.</li> </ul> <p><u>Local Limitations</u></p> <ul style="list-style-type: none"> <li>• Only the High Street, Pilgrims Way East and the lower section of Station Road have traffic speeds low enough to meet the criteria for 20mph limits.</li> </ul>
<p><b>Speed Cameras</b></p>	<p><b>Speed Cameras</b></p> <ul style="list-style-type: none"> <li>• Fixed safety speed cameras are only considered where there have been three or more fatalities or seriously injured speed-related crashes over 1.5km stretch of road in a three-year period.</li> <li>• The use of safety cameras should be seen as a last resort once all other justifiable solutions have been exhausted.</li> <li>• Some studies have reported that while red light cameras reduce front-into-side collisions and overall injury crashes, they can increase rear-end crashes.</li> <li>• The number of vehicles breaking the speed limit typically reduces by 10% and 35% at speed camera sites.</li> <li>• Suitable safe locations on a relatively straight road required.</li> </ul> <p><u>Local Limitations</u></p> <ul style="list-style-type: none"> <li>• Traffic calming solutions required before speed cameras will be considered.</li> <li>• Accident records for all roads in the village do not meet the current criteria for speed cameras.</li> <li>• Cost and installation of speed cameras is prohibitive at between £20,000 - £40,000 per speed camera.</li> <li>• Annual maintenance and running costs per camera site average at £8,500.</li> <li>• Expected life of a speed camera is 10 to 15 years.</li> </ul>

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<p><b>Pedestrian Crossings</b></p> <ul style="list-style-type: none"> <li>• Zebra crossings</li> <li>• Pedestrian refuge crossings</li> <li>• Informal pedestrian crossing</li> <li>• Puffin and Pelican crossings</li> </ul>	<p><b>Zebra Crossings</b></p> <ul style="list-style-type: none"> <li>• Not suitable where average traffic speeds are 35mph or greater.</li> <li>• Not permitted where pedestrian footfall is low.</li> <li>• Only permitted where drivers have good visibility.</li> </ul> <p style="text-align: center;"><u>Local Limitations</u></p> <ul style="list-style-type: none"> <li>• Locations outside the High Street do not meet the criteria for a new zebra crossing.</li> </ul> <p><b>Informal Crossings</b></p> <ul style="list-style-type: none"> <li>• Pedestrian refuge crossings have a central island. Permitted where there is sufficient road width and visibility.</li> <li>• Informal crossing points have dropped kerbs. Permitted where there is good visibility, and ideally located where there are clear desire lines and space for dropped curbs and tactiles.</li> </ul> <p style="text-align: center;"><u>Local Limitations</u></p> <ul style="list-style-type: none"> <li>• Informal crossings: Difficult to find suitable locations with good visibility and space between access points.</li> <li>• Pedestrian refuge-islands: Road width constraints in many locations and limited space between access points.</li> </ul> <p><b>Puffin and Pelican Crossings</b></p> <ul style="list-style-type: none"> <li>• Puffin and Pelican crossings use traffic lights to stop traffic. Require street lighting and good visibility.</li> </ul> <p style="text-align: center;"><u>Local Limitations</u></p> <ul style="list-style-type: none"> <li>• Puffin crossings have sensors which increase crossing times and can lead to unacceptable levels congestion.</li> <li>• Puffin and Pelican crossings are extremely expensive to install (between £60-£80,000 per crossing).</li> <li>• Traffic light signals considered inappropriate for Otford.</li> <li>• Lack of street lighting.</li> </ul>