



Crossings: Methods of detection

METHOD	DETECTION	COMMENTS AND RECOMMENDATIONS
<p>Push (or call) button</p>	<ul style="list-style-type: none"> • Pedestrians are usually detected when they press a push button. • After pressing the push button, a detected pedestrian should have their presence acknowledged so they know the signals are working and they will receive a crossing signal. If their detection is shown to be cancelled (possibly by walking away from the detector) they can re-call their phase. • This detection acknowledgement may be by: <ul style="list-style-type: none"> ○ an audible sound. ○ the opposite or nearside pedestrian signal head showing the steady red figure. 	<ul style="list-style-type: none"> • Push (or call) buttons can be complemented by kerbside detection methods – see below. • To acknowledge detection after pushing the button one other way that could be introduced would be a large indicator light near or around the push button, similar for people on bicycles below.  <ul style="list-style-type: none"> • Or similar to overseas examples where something lights up after the button is pushed. 
<p>Kerbside</p>	<ul style="list-style-type: none"> • Kerbside detection holds the demand when a person arrives at the crossing but cancels the demand if the person has either crossed without a pedestrian phase or has walked away from the detection area, which would allow the traffic to continue as they are not required to stop. Pedestrians are detected through pressure-sensitive mats or cameras (in-ground or above ground). • Kerbside detection is not always required, for example in situations where pedestrian flows are high and there are few 	<ul style="list-style-type: none"> • It is recommended that intelligent detection systems should be supported by a push button system, and that it is more essential in this instance for users to know they have been detected. • Where wide crossings are used in areas of high pedestrian demand additional kerbside detectors are required to ensure the full width of the crossing is covered. For example, they should cover the same area as the warning tactile paving. • There are a number of other factors to be taken into consideration when looking at the pedestrian wait area and the kerbside detection: • Speed of the road and vehicle classification (percent of heavy vehicles). At a busy, fast road with lots of trucks, people may stand back to feel more comfortable and so the detectors should still identify a person waiting.

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	<p>opportunities to cancel demands, or the signals are linked to an adjacent intersection.</p>	<ul style="list-style-type: none"> If there are issues with ponding and or drainage, the detection area may need to be moved from the immediate area until the issue is fixed.
<p>Vehicle actuation and linking with other traffic signals</p>	<ul style="list-style-type: none"> In a connected signal network, signal timings are most frequently based on minimising vehicle delays, which results in a poor level of service and increased delays to pedestrians. Pedestrians having to wait for an apparent excessive time due to the linking with other traffic signals, may take risks and cross against the traffic. 	<ul style="list-style-type: none"> In general, the signalised crossing should operate independently of adjacent traffic signal-controlled intersections. However, in more dense urban networks, if located close to a signalised intersection for example, then it is likely that the two traffic signals will be co-ordinated.
<p>On-crossing pedestrian detection</p>	<ul style="list-style-type: none"> On crossing pedestrian detection is used to extend the pedestrian clearance period whilst pedestrians are still on the crossing. Thus, catering for: <ul style="list-style-type: none"> Large groups of pedestrians Pedestrians with lower walking speeds Pedestrians that start to cross towards the end of the pedestrian green. The on-crossing detection allows the onset of the vehicle green phase as soon as the crossing is clear. 	<ul style="list-style-type: none"> If people cross outside of the crosswalk detector zone, their phase will not be extended, and the traffic will be able to proceed.