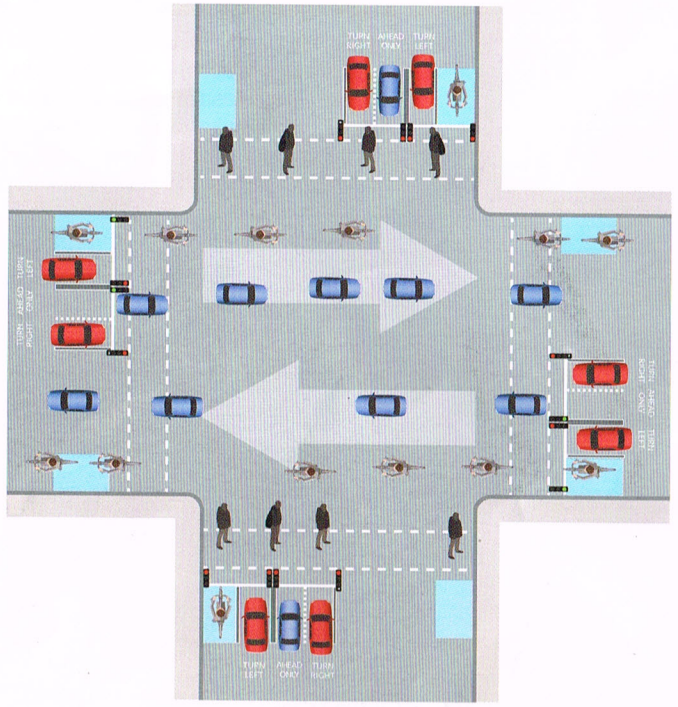
'CYCLE SEGREGATED' JUNCTIONS EXPLAINED

Left-hook and right-hook collisions can be countered by redesigning our junctions. LCC's junctions team explains how it works

The 'cycle segregated' junction is one which LCC has championed for two years. We're now starting to see versions of it in TfL's plans and we think there's scope to introduce this type of junction in many more areas of London. It's safer than the 'early start' junction, also seen in TfL plans, which give no protection from left-hooks unless you are at the head of the queue when the lights change.

The 'cycle segregated' junction is better for pedestrians too, as they get the same amount of 'green time' as motor traffic.

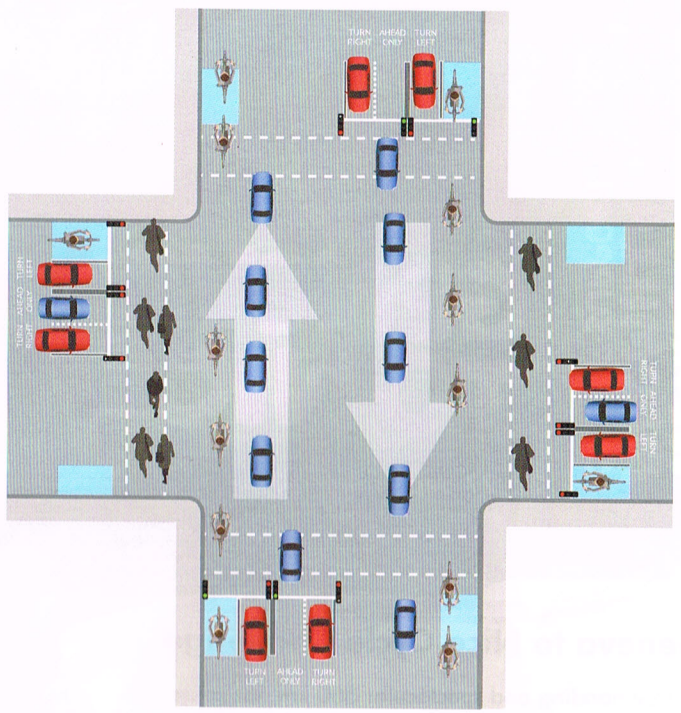
The solution illustrated below is for major junctions only – there are also variants for major/minor junctions, like Fleet Street. These can be seen on our website (lcc.org.uk/better-junctions), along with an explanation of the cyclist's 'two-stage right turn' commonly seen in cities like Berlin and Copenhagen which we don't have room to illustrate here.



PHASE 1

In this diagram traffic lights are red for traffic turning left and right, and green for traffic – drivers and cyclists – going straight ahead.

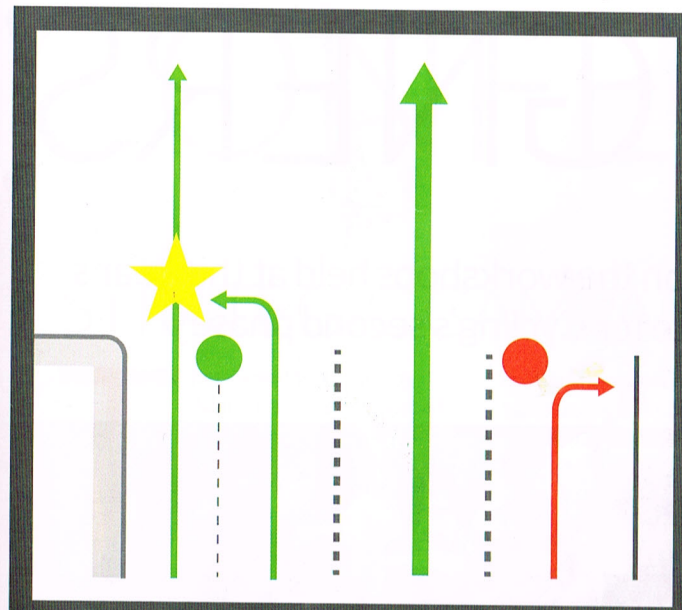
East and west-bound traffic can go at the same time and pedestrians can cross at the same time as the ahead traffic.



PHASE 2

At the next phase, north and south-bound traffic can go.

Result? No risk of traffic turning across the cyclists' path – therefore no left-hook collisions. And because cyclists and pedestrians get the same amount of 'green time' as motor traffic, it's more efficient for everyone.

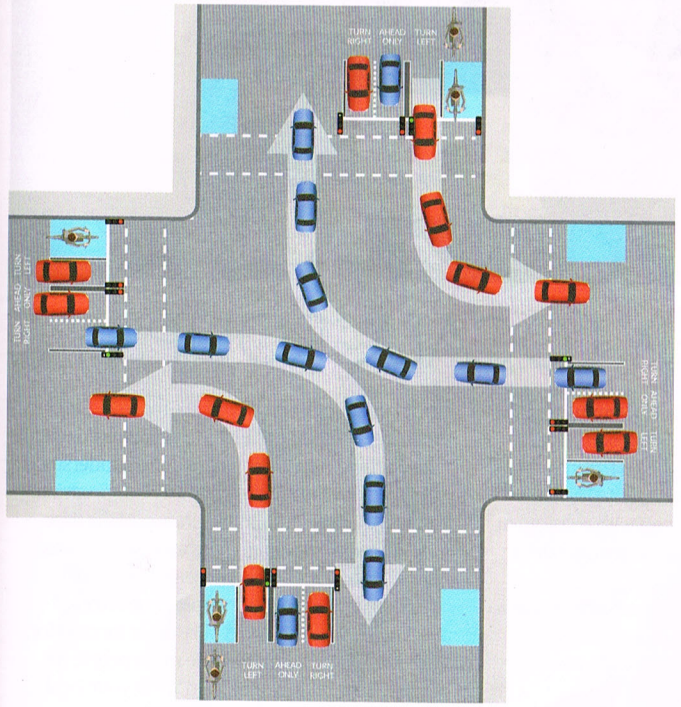


What's wrong with ASLs /'Early Start'?

Well over 70% of serious injuries or fatal collisions to cyclists happen at major road junctions in the capital each year — a sobering statistic. A major cause of these injuries and deaths is left-turning motor traffic, known as 'left-hooks' (referring to vehicles crossing a cyclist's path).

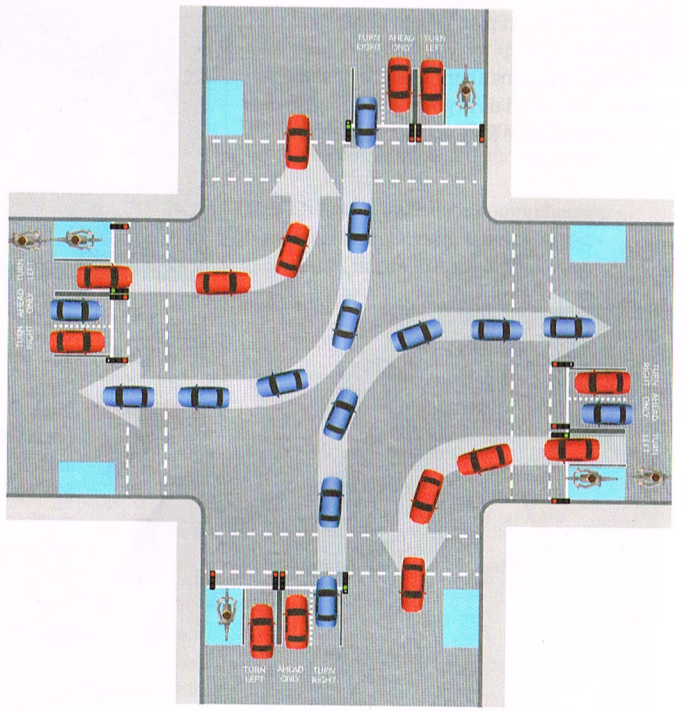
Advanced Stop Lines (ASLs), which were first implemented with the intention of making cyclists more visible and reducing the risk of conflict with motor vehicles, do not eliminate the risk of left-hooks. ASLs also can't eliminate the risk of 'shunts' (when a vehicle hits a cyclist from behind), or 'right-hooks', which represent the next biggest threats to cyclists. 'Early start' is just a variant of ASL and it does not prevent left-hooks either.

Research has suggested between 9 and 54% of motor vehicles encroach on ASLs by at least 25%. But the main problem is that ASLs can't protect cyclists from being hit by motor vehicles. They do absolutely nothing to help cyclists arriving when traffic lights are green, nor does 'early start'.



PHASE 3

Next, the traffic lights go green for north and south-bound left turns, and east and west-bound right turns. All this traffic can go at the same time.



PHASE 4

And finally, the traffic lights go green for north and south-bound right turns, and east and west-bound left turns.

We've put an animated version of this on our website – visit **lcc.org.uk/better-junctions** to see it.