

Claim 1: “A 20mph limit will reduce bus services”.

This assertion is wrong. The truth is:

- 1) Hardly any of the roads used as bus routes are included in proposed scheme
- 2) Detailed calculations show the maximum possible theoretical delay is 140 seconds on a round trip bus route.
- 3) Examination of Compass Bus timetables shows that their timings do not vary during the day despite congestion at rush hour peaks. They also include several minutes spare time at the turn around point to allow buses to maintain timings.

Supporting evidence:

Link to a map showing all bus routes in Worthing:

<http://www.20splentyforworthing.org.uk/sites/20splentyforworthing.org.uk/files/Buses%20-%20Worthing%20All%20Operators%20Ntwk%20Map%20A5%20Sept%202013.pdf>

Link to a map showing roads excluded from the proposed 20 mph scheme (excluded roads are shown in colour or white, only grey shaded areas are included):

http://www.westsussex.gov.uk/living/communities/active_communities/20mph/worthing_20mph.aspx

(Note map and FAQ document can be downloaded at the bottom of this page).

Link to Compass Bus timetables:

<http://www.compass-travel.co.uk/compass-timetables/bus-timetables/>

Detailed analysis of the potential impact on Compass Bus services has been conducted using a measurement tool available in Google maps to establish exact lengths of route affected (see full details below). Note that these calculations show the *theoretical maximum delay* assuming that currently buses are able to maintain 30 mph for the *entire* lengths of the sections of road affected. This is clearly unrealistic since they will need to slow/stop for bus stops(!), junctions, speed humps, mini roundabouts etc. all of which feature on the affected roads.

CALCULATION METHODOLOGY

Using a Google-maps tool, it is easy to measure road distances extremely accurately. This allows the total distance travelled on each route under the new lower speed limit to be calculated. IF it was possible to drive the buses at the absolute maximum speed limit (presumably only appropriate on a dry road, with plenty of visibility, no traffic etc. etc.) then:

One mile at 30 mph = 2 minutes

One mile at 20 mph = 3 minutes

i.e. each mile travelled under the new lower speed limits takes a theoretical maximum of 60 seconds longer.

Route 7 - Note: Cotswold Road (top section); Cheviot Road; Exmoor Drive are all shown as excluded from the Option 2b map.

Hayling Rise = 0.58 mile (4 bus stops in one direction, 1 in the other?)
Charmandean Road (including Leigh Road) = 0.43 mile x 2 for round trip (3 bus stops in each direction, speed humps and mini roundabout on Charmandean Road!)

Total = 1.44 miles

Absolute maximum extra time = 86 seconds

Route 8

Bath Road = 0.32 miles (2 bus stops in one direction, 1 in the other and road narrowed by [parked cars both sides](#))
Pevensy Road = 0.29 miles (3 bus stops in one direction, 1 in the other, with an S-bend which I'd be surprised if you considered appropriate for a bus to take at 30 mph)
Alinora Crescent (west section) = 0.33 miles (3 bus stops in one direction, 2 in the other)

Total = 0.94 miles x 2 for round trip = 1.88 miles

Absolute maximum extra time = 113 seconds

Route 8A

Alinora Crescent ('west section') = 0.33 miles (3 bus stops in one direction, 2 in the other, shopping area congestion,)
Petworth Avenue = 0.18 miles (bus stop each way, short distance - unlikely to reach 30 mph before next junction?)
Arlington Avenue = 0.25 miles (includes a 'roundabout' with bus stops on which I'd be surprised could be negotiated at 30 mph)
Ashurst Drive (west end) = 0.09 miles (has bus stop on it and is very short distance - unlikely that you'd reach 30 mph before next junction)
Fernhurst Drive = 0.19 miles (junction round blind bend, bus stops and short distance - unlikely to reach 30 mph before next junction)
Rudgewick Avenue = 0.13 miles (short distance - unlikely to reach 30 mph before next junction)

Total = 1.17 miles x 2 for round trip = 2.34 miles

Absolute maximum extra time = 140 seconds

Route 16 -

Northcourt Road = 0.28 miles x 2 for round trip ([narrow with parked cars both sides](#), and [congestion](#))
Wiston Avenue = 0.5 miles (4 bus stops and speed humps)
St Lawrence Avenue = 0.5 miles (

A total of 1.56 miles

Absolute maximum extra time = 94 seconds

Claim 2: “A 20mph limit will increase driver frustration”

We are not aware of any evidence specifically looking at the effect of 20 mph limits on driver frustration. There are several possible causes of driver frustration. Perhaps two of the most common are congestion and inconsiderate driving. The 20 mph scheme aims to reduce both these.

Congestion: A main aim of 20 mph limits is to improve safety for walking and cycling. This in turn is expected to encourage more people to walk or cycle for short journeys, helping to reduce congestion. There is also evidence that junctions flow better with reduced tailbacks when there are lower traffic speeds as it is easier to pull out safely into a slower moving traffic stream. (See separate section on Congestion for links to evidence).

Inconsiderate driving: Encouraging drivers to be more considerate of others, including other drivers, has also been a key aim of the 20's Plenty campaign. The intention is to change behaviours, reducing aggressive driving and tailgating, instead encouraging slower, smoother driving. Driving a little more slowly also makes it easier to allow others to pull out of junctions.

Claim 3: “A 20mph limit will not affect serious accidents”

The 20's Pointless campaign argues that serious injuries in Portsmouth have increased since the introduction of 20 mph limits. However this is based on flawed interpretation of data.

Due to the relatively small sample sizes involved, statistics for those 'killed and seriously injured' (KSIs) in one town fluctuate from year to year. For this reason when road safety professionals assess the effectiveness of a scheme, they take an average of ALL injuries (including slight injuries) from at least three years of data from before a scheme was introduced and three years data from after.

For Portsmouth, looking at four years data before and after the 20 mph scheme, there has been an average of 19% reduction. It must be noted however that while this is likely to be at least partly due to the introduction of 20 mph limits, there may be other background changes that have contributed to this. It should also be noted that the data used to calculate this percentage examines ALL roads in Portsmouth, not just those included in the 20 mph scheme. (Data available here: <https://www.gov.uk/government/collections/road-accidents-and-safety-statistics>)

The DfT interim report examining only those roads included in the scheme compared three years before/two years after data and concluded “Comparing the 3 years before the scheme was implemented and the 2 years afterwards, the number of recorded road casualties has fallen by 22% from 183 per year to 142 per year.” It also commented that KSI injuries had gone up but explained this saying that “the total numbers of KSI accidents are small across all sectors and are therefore susceptible to variations.”

Report available here: <http://assets.dft.gov.uk/publications/speed-limits-portsmouth/speed-limits-portsmouth.pdf>

Claim 4: “A 20mph limit will increase pollution and congestion”

Pollution: The graph used by 20’s Pointless as evidence to suggest pollution will increase should not and cannot be used to assess the impacts of a speed limit change (and this has been pointed out to them). It is known as an ‘emissions factor’ curve and the Department for Transport stated in an email I have on this subject:

“Emissions factors curves, which show higher emissions at lower traffic speeds and upon which arguments against low speed limits are sometimes based, look at traffic streams travelling at particular average speeds. Traffic streams travelling at average speeds of, for instance, 20 or 30 mph are unlikely to be on roads with those speed limits (as, for example, average speeds in 20 mph zones are actually around 17 mph). Vehicles in traffic streams moving at lower speeds generally spend more time stationary, and accelerate and brake more frequently than those in free-flowing traffic streams. The higher emissions at lower speeds are a consequence of intermittent progress and overall driving behaviour, and have little to do with the speed limit.”

The 20’s Plenty for Worthing campaign has tried to provide an honest and balanced assessment of the likely impact on pollution stating that:

IF it results in slower, smoother driving then it is likely to reduce pollution. Since a key aim is also to encourage walking and cycling for short journeys instead of driving then the likely net affect is a reduction in pollution.

Congestion: There is actually evidence to suggest that 20 mph speed limits can contribute to a reduction in congestion:

1)They can encourage people to walk or cycle instead of taking the car for short journeys. See:

http://www.20splentyforus.org.uk/BriefingSheets/20mphLimits_encourage_cycling_and_walking_Nov12.pdf

2)They can help traffic flow better at junctions since it is easier to pull out into a slower moving stream of traffic:

http://www.20splentyforus.org.uk/BriefingSheets/20mph_Improves_Traffic_Flow.pdf

Claim 5: “A 20mph limit will waste £350 000 of your money”

Worthing County Local Committee (Worthing CLC), which is in charge of the consultation, has made it clear that they would expect the implementation of the scheme to be paid for from Section 106 (S106) money. Minutes from the most recent CLC meeting state: “Clarity was required on whether section 106 money was available to implement the scheme should the consultation prove favourable” (see paragraph 99 here: <http://www2.westsussex.gov.uk/ds/clc/w/w050314ucmins.pdf>)

Section 106 money is funds obtained from property developers when planning permission is given. It is therefore inaccurate to suggest to the general public it is “your money”. These S106 funds can only be used for transport schemes as West Sussex County Council’s own policy makes clear:

West Sussex County Council (WSCC)’s ‘Transport contributions methodology – supplementary planning guidance’ is available on its website:

<http://www2.westsussex.gov.uk/cs/mis/041103ht2b.pdf>. This states that

‘Contributions will only be sought towards proposals which will influence travel patterns to / from the site involved either on their own or as part of a package of measures’.

20 mph limit schemes are extremely cost effective. Worthing suffers on average 1-2 deaths, over 30 serious injuries and over 220 slight injuries on its roads every year. The cost of these according to Department for Transport figures is over £15 million every year. The 20 mph limit scheme would only need to result in a 3% reduction in these figures to have paid for itself in one year.

Looking only at injuries on the roads where the scheme would be introduced, a 10% reduction would result in pay back within one year.

All subsequent years, injury cost savings would be “free” as the scheme would have already been paid for.

Department for Transport death and injury costs:

Fatality: £1,882,437 Serious injury: £215,683 Slight injury:
£22,758 http://www.dft.gov.uk/webtag/documents/expert/pdf/u3_4_1-accidents-120817.pdf