

80a Shrub Lane  
Burwash  
TN197BU

17<sup>th</sup> June 2018

Dear Becky Shaw and Keith Glazier

Thank you for your reply to the 602 residents' letter dated 25<sup>th</sup> May 2018.

We are extremely concerned to note that neither your letter, nor Nick Skelton's email reply to Burwash Parish Council, conveys an understanding of, or respect for the acute problems of residents and pedestrians; or more importantly our perceptions of the dangers. We are particularly concerned to note that there are a number of areas that you have either misunderstood, or wrongly interpreted.

Residents who live along the Burwash village pinch point are in daily fear for their lives. Any pedestrians who do dare to walk on the south pavement at the pinch point are often visitors and oblivious of the dangers, and risk their lives in so doing. Vehicles repeatedly mount the pavement on a daily basis. Vehicles get stuck in 3 lane stand-offs about who has priority on a regular basis. Road rage incidents occur on a daily basis. Our recorded evidence of this is expanding daily. The appalling state of the road, with numerous pot holes, cracks and damage, is exacerbating the vibrations being measured, the noise, and ongoing damage to buildings, over 200 of which are listed.

No-where in these responses is there reference or adherence to East Sussex County Council's own Transport Policy in which it describes its duties to ensure the safety of communities. Furthermore:

- Both your response to residents, and Nick Skelton's email response to the Parish Council raise an issue about speed bumps. These are discussed at length, despite the fact that speed bumps have not been requested by any party.
- Your responses both point out that pelican crossings were considered "a number of years ago". The Parish Council's and our requests are made in the current context of the Parish Council's informed intention to develop a village wide parking strategy. A current refusal on the grounds that it was not pursued in the past is not relevant to the present day. Local businesses are in favour of revisiting these issues, due to the considerable increase in traffic volume and nature and associated dangers to their clients.
- Neither letter makes any suggestion about what East Sussex County Council could or can do. We are interested in the suggestions that we apply for match funding, although you do not specify, indicate or advise what measures this should or could be provided for. We would welcome a conversation in which we map out and agree the options together.
- We are dismayed by your repeated refusal to either understand or accept our case for the placement of protective bollards. We have been extremely clear that no-one, especially parents with push chairs or disabled people using wheelchairs, would currently dare to use the pavement concerned. We specify this as well as underscoring the plight of the desperate residents who are constantly forced to navigate this unprotected 3<sup>rd</sup> road lane /come pavement which serves as their only access to their homes.

- The current plan to insert double yellow lines as measures to calm the traffic at both ends of the most dangerous entry-points to the high street are of huge concern to us. The stated intention is to slow traffic, an acknowledgement by the County Council that traffic does need to travel at a reduced speed through the village. The planned placing of these lines is likely to have the opposite effect however, i.e. causing traffic to speed up to pass parked cars, as we observe daily. We wholeheartedly agree that traffic needs to be slowed, but are concerned by the possible placement of parked cars so close to pedestrians and homes. This is why we have suggested a raft of alternative and combined safety measures and continue to request a meeting with you on these.

Many of the arguments put forward for not doing anything in relation to reducing speed limits are based on East Sussex County Council policies, rather than actual reasons for inaction, which are quite different. Much of the County Council's policy with regard to Setting Speed Limits contravenes National Government Guidance issued by the Department for Transport in 2013, and requirements of the Equality Act 2010. We refer you to the critique of your transport policy sent to you on the 4<sup>th</sup> May 2018 by Rod King of the '20's Plenty for Us' Campaign. In addition the research quoted is no longer considered to be accurate.

We have received a report [appended] on the relationship between road speed and noise/vibration and the circumstances at the Pinch Point that make the buildings particularly at risk from vibration damage; and of the use (by opponents) of relatively small average speed reductions as an argument against introducing a 20mph zone. The data indicates that a very low-cost approach, involving minor changes to the road structure and speed, are likely to have a considerable impact. Furthermore, this provides us all with a unique and important opportunity to create a collaborative approach, using the A265 as a test case. In working with us, rather than against us, East Sussex County Council could simultaneously put themselves on the map for co-developing low-cost, high-value environmental and safety improvements.

We remain concerned at the ongoing failure to respond to requests for a meeting, or visit to the site, as requested by the Parish Council, and repeatedly requested by residents. Mr Skelton stated in an email to Mr Le Besque on 14<sup>th</sup> November 2017 [See below] that any meeting with Huw Merriman MP and residents would need to involve the Parish Council. Mr Merriman's office were ready to facilitate his attendance. [See below] Now that this is what is being requested, by all parties, we cannot understand why his offer to meet appears to have been rescinded. As the volume and frequency of our conversations grows, so too do our numbers. We are confident however, that as soon as County Council Officers join our conversations, we will quickly find our points of agreement and be able to move forward.

We cannot emphasise enough the severity of the circumstances we face here in Burwash. We want you to understand that solutions are desperately needed, and that we would like the county council to work with us in achieving them. We believe that together we can create innovative and costed ways forward. Our solutions could represent a positive case study for collaborative relations and solution-finding between the council and residents across the county. Let us meet, and meet soon, in the spirit of collaboration and mutual advancement.

Yours sincerely *Lesley Moore*

Lesley Moore

CC Huw Merriman MP, Katy Bourne Sussex Police & Crime Commissioner,  
Councillor John Barnes, Councillor Carl Maynard, Councillor Darren Glover, Councillor Phil  
Scott, Councillor Betty McBride Chair Burwash Parish Council, Kate Mavor CE English  
Heritage

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On 14 Nov 2017, at 15:39, CET Correspondence  
<[CETCorrespondence@eastsussex.gov.uk](mailto:CETCorrespondence@eastsussex.gov.uk)> wrote:

Dear Mr Le Besque,

We do apologize the final response has been resent to you in regards to an error in the original version.

*Sent on behalf of Nick Skelton*

Dear Mr Le Besque,

Thank you for your email of 22 October 2017 signed by you and your neighbours, I apologise for not responding sooner.

As you are aware we believe that the car parking on this part of the High Street helps to reduce the speed of drivers as they drive through Burwash. If we were to remove parking from this part of the road it would increase the speed of traffic especially once they have got used to a situation where no vehicles are parked.

As I have indicated in the past the parking restrictions that are being proposed will limit the car parking to a shorter length of the road. This will help reduce the length of road where there is conflict reducing the likelihood of large vehicles mounting the kerb. If the parking is completely removed from this part of the road it will increase the risk of two larger vehicles of about 2.5m to 2.6m wide (without allowing for the mirrors) meeting at a higher speed on the narrowest part of the road which is only about 5.7m wide. This could increase the risk of pedestrians on the footway being hit by a large vehicle, or its overhanging mirror.

Although all of the objections to the parking proposals in Burwash were carefully considered by our Planning Committee at their meeting on 21 September 2016 we would happily meet with you and Huw Merriman MP on site to discuss the concerns listed in your email in more detail. However, I am sure that you can understand why it is important that we consider the views of the wider community, so any meeting would also need to include the Parish Council especially as they were consulted on the proposals.

If you would like to contact Huw Merriman MP and the Parish Council to suggest some convenient times and dates for a meeting we would be happy to attend. However, we would only be prepared to make any changes to the proposals if they were also agreed to by the elected Councillors on the Parish Council.

I hope this helps to clarify our position in respect to this matter and I look forward to hearing from you with some suggested times and dates.

Yours sincerely

**Nick Skelton**

Assistant Director Communities

Communities, Economy & Transport

**From:** "MERRIMAN, Huw" <huw.merriman.mp@parliament.uk>  
**Date:** Thursday, 26 October 2017 at 10:41  
**To:** CET Correspondence <CETCorrespondence@eastsussex.gov.uk>, "post@hilarystewart.tv" <post@hilarystewart.tv>  
**Cc:** Edward Le Besque <elebs2933@gmail.com>, George McAllister <gem@gardenafrika.org.uk>, "MERRIMAN, Huw" <huw.merriman.mp@parliament.uk>  
**Subject:** RE: CET17-0868 - Proposed Parking in Burwash High Street

Dear Ms Cordwell,

Thank you for copying Mr Merriman into this correspondence. I am writing to confirm that he would welcome a site meeting to discuss this with his constituents if this can be arranged.

Kind regards,

Frances

**Frances McKenna**

**Parliamentary and Constituency Manager to Huw Merriman MP**

**Member of Parliament for Bexhill and Battle**

29-31 Sea Road, Bexhill-on-Sea, East Sussex, TN40 1EE

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[www.huwmerriman.org.uk](http://www.huwmerriman.org.uk)

## Addendum: **Effect of Traffic Speed on Road Noise and Vibration**

### **Summary**

Published data show:

- A 24% reduction in road noise by reducing traffic speed from 30mph to 20mph
- A 10% reduction in road noise by reducing traffic speed from 30mph to 27mph
- A 5 times increase in vibration for houses at the “pinch point” compared to the standard 15m distance used in most claims that traffic vibration is not a serious problem
- Two orders of magnitude (100x) increase in vibration for houses sitting on clay and adjacent to the road, compared to those sitting on sand or gravel and at a 15m distance

Simple analysis shows:

- At 30mph, the pothole impact force is 2.25 times greater than at 20mph.
- At 40mph, the pothole impact force is 4 times greater than at 20mph

### **Analysis**

Noise from road vehicles is complex. It arises from numerous sources, with the most significant, road/vehicle interaction, increasing with speed. “The European Conference of Transport Ministers and the Organisation for Economic Co-operation and Development recommend taking noise into account along with the wider benefits of speed reduction, such as safety, when setting speed limits: *‘Appropriate speed limits should also take into consideration noise levels generated by traffic for people living in the surroundings.’*” (Speed and Road Traffic Noise, Paige Mitchell, UK Noise Association, 2009.)

The same report says, *“In urban areas with speeds of between 30 and 60 kph per hour, reducing speeds by 10 kph per hour would cut noise levels by up to 40%.”* We have reviewed other papers, which show measurements ranging from 24% for truck noise on an American highway to this figure of 40%.

A particular problem in Burwash arises from heavy vehicles crashing over potholes and sunken drain covers, etc. The noise output from any one event again depends on many different factors connected to the vehicle design, condition and loading, and the state of the road surface. We have been unable to find any definitive study on this but observation of the pothole-strewn roads of E Sussex suggests:

- a) That at very low speed, noise and vibration is minimal
- b) Noise and vibration initially increase with speed
- c) For a series of closely-spaced, small road defects, noise and vibration can actually decrease at higher speed as the wheel does not have time to drop into the hole
- d) Peak noise for local potholes is around 40mph

Whilst the modelling of suspension systems is very complex, the effect of speed is easily understood: Take a very simplistic model of a car travelling at velocity  $v$  and hitting the end of a pothole of height  $h$  and effective length of the exit ramp (allowing for the size of wheel, etc.,)  $w$ :

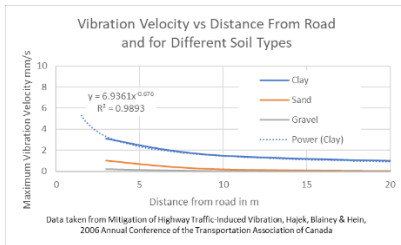
The time it takes the wheel to travel from the bottom to the top of the pothole,  $t = w/v$

The vertical speed of the wheel, which we'll call  $s$ , is distance/time so  $s = h/t$

The acceleration, assuming it's constant, is equal to the velocity/time =  $s/t = h/t^2 = v^2 h/w$

So, the force transmitted to the road by a vehicle hitting a pothole or similar bump goes up by the square of the speed. This means that the damage to the road surface and vibration effect on our homes goes up by the square of the speed. At 30mph, the pothole impact is 2.25 times greater than at 20mph. At 40mph, the effect is 4 times greater.

The above referenced report makes the point that noise and perceived vibration are closely connected, especially as noise can cause resonance in features such as windows. Most studies, including the Canadian one referenced in the graph below, suggest that vibration damage from road traffic is unlikely to cause damage to houses, but closer examination of the assumed conditions shows that these do not apply in Burwash:



Transmitted vibration is critically affected by soil type and distance from the road. Note that Burwash sits on best Sussex clay and that the houses at the “pinch point” are as close as 1.5m from the damaged area of road and even closer when trucks go along the pavement. Studies of vibration caused by road traffic, which typically suggest that it is “not a problem”, use a standard distance of 15m, which means that our residents experience at least 5 times the accepted values and potentially (if other studies were not done on clay) two or three orders of magnitude greater.

**Table 1. Effects of Vibration on People and Buildings according to TRRL**

| PPV <sup>a</sup> (mm/s) | Human Reaction                                                 | Effect on Buildings <sup>c</sup>                                                         |
|-------------------------|----------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 0 – 0.15                | Imperceptible                                                  | Unlikely to cause damage of any type                                                     |
| 0.15 – 0.3 <sup>b</sup> | Threshold of perception                                        | Unlikely to cause damage of any type                                                     |
| 2.0                     | Vibrations perceptible                                         | Recommended upper level to which ruins and ancient monuments should be subjected         |
| 2.5                     | Continuous exposure to vibrations begins to annoy <sup>d</sup> | Virtually no risk of “architectural” damage to normal buildings                          |
| 5                       | Vibrations annoying to people in buildings                     | Threshold for risk of “architectural” damage in houses with plastered walls and ceilings |
| 10 - 15                 | Continuous vibrations unpleasant and unacceptable              | Would cause “architectural” and possibly minor structural damage.                        |

The table, left, is taken from the same Canadian paper as the data used to construct the above graph. It shows that the proximity of the houses in Burwash to the described vibration is on the “threshold for risk of architectural damage” to our homes.

It is accepted that the Canadian study was not conducted in Burwash High Street and that it is pure coincidence that the PPV level on the

graph for Burwash and the table coincide, but this value translated to the Mercalli scale gives similar effects to those reported by residents. What this does illustrate is that the close proximity of the houses to the road at the “pinch point” increases the risk of damage compared to that expected in most studies quoted by opponents of the 20mph limit.

### The Irrelevance of Average Speed

It is often suggested that introduction of 20mph speed limits, in the absence of any other measures, does not significantly reduce average speeds. However, this is irrelevant:

Average speeds do not kill people, excessive speeds do. The following data is taken from a US study into actual accidents, *Impact speed and a pedestrian's risk of severe injury or death*, [Brian C. Tefft](#), *Accident Analysis & Prevention Volume 50, January 2013, Pages 871-878, pub Elsevier*

- Risk of death in a collision at 24mph is 10%
- Risk of death in a collision at 32mph is 25%
- Risk of death in a collision at 40mph is 50%
- Risk of death in a collision at 48mph is 75%
- Risk of death in a collision at 54mph is 90%

Average speeds are not affected much by the behaviour of the average driver. Recent Speedwatch actions in Burwash have shown the majority of drivers travelling at under 35mph, with occasional idiots. We hope to conduct a definitive statistical analysis of actual speeds in the village but let's imagine a scenario in which these are the speeds noted for 10 cars:

20, 20, 20, 20, 30, 30, 30, 30, 40, 60 – the average speed is 30mph

If ALL these cars hit a pedestrian and a probability miracle causes the exact %s to apply, we will have killed 3 local children.

We now introduce a 20mph limit. The 20 and 30mph drivers continue to drive at 20/30mph but the two fast drivers do slow down to 30mph and 40mph respectively. This is based on the experience of Graz in Austria, where 20mph zones were introduced without the plethora of engineering such as road humps proposed by DfT. They found, “*There was only a small reduction in average speeds before and after the limit was introduced, however, there was a reduction in extreme speeds. The number of drivers exceeding 50 km/h (31 mph) dropped from 7.3% the year before the limits were introduced, to 3% afterwards.*” (ROSPA interpretation in, “*20mph zones and speed limits factsheet Feb 2017*”, which also has references to the original research.)

So, I assume the speeds now are:

20, 20, 20, 20, 30, 30, 30, 30, 30, 40 – the average speed is 27mph BUT

If ALL these cars hit a pedestrian and a probability miracle causes the exact %s to apply, we will have killed only 2 local children.

What this data does not show is the collision incidence rates against speed. A paper, *Vehicle Travel Speeds And The Incidence Of Fatal Pedestrian Crashes*, Anderson et al, Federal Office of Road Safety Department of Transport, Canberra found that a 16% reduction of speed reduced the incidence of impacts by 25%. There is not enough data for extrapolation but simple logic would suggest that the incidence rate at very low speeds would be minimal compared to those at high speed and the actual reduction in risk would be greater than the 30% suggested by the collision fatality figures.

An argument often used against the reduction of speed limits is traffic flow. But observation of the A265 shows multiple queuing points at all times of the working day – in both directions at Cross-in-Hand, Heathfield and Etchingham, and Eastwards at Hurst Green. What Highways England have finally realised, 30 years after Tesco rediscovered it, is that slowing down traffic increases throughput. I made a nice living from slowing down processes in many different industries and producing large increases in productivity and equally large reductions in lead time and inventory (queues). It arises from the formula for queue length, which is proportional to the combined variation in arrival time and processing time. By imposing reduced speeds, the variation in arrival time is reduced and the processing time, because there is less stop/start, is also reduced. The reduction in queuing will also reduce pollution. There is simply no scientific justification for the high speeds permitted/encouraged along the A265 between Etchingham and Burwash, and from Burwash to Heathfield, and numerous potential benefits from having a fixed 40mph limit along the out-of-village sections.

The above analysis has not looked at the statistics on the effects of introducing 20mph zones, proper analysis of which is not possible because of multiple confounding factors. The probability of a serious incident arising from a single journey is so low that the location and circumstances of actual incidents will be subject to a very large variation within the probability arising from common causes. Clusters will also appear at random, again because of simple probability, and these will confuse journalists and politicians – one swallow does not make a summer and neither does a whole flock of them. What is irrefutable is that basic logic and basic science says that speed limits in our villages are too high.

Given that the Graz experience suggests that a very low-cost approach, without major changes to the road structure, might work, there is an opportunity for ESCC to put themselves on the map for low-cost, high-value environmental improvement by using the A265 as a test case.

Report compiled by Graham Lewis, formerly Chief Development Engineer, Lucas Varsity (now Delphi) Diesel Systems and retired Managing Director of 1PF Ltd, a business and engineering consultancy.