Stevenage Cycle Campaigns – Cycleway Surface Audit – Spring 2025

Unequal Surfaces: 77% of Stevenage Cycle Paths Worse Than Adjacent Roads

Stevenage's distinctive cycle network is a valuable community asset, serving diverse users including cyclists of all ages, wheelchair users, running clubs, and those traveling by mobility scooters. To better understand how this infrastructure is functioning, Stevenage Cycling Campaigns conducted a structured assessment comparing cycle path surfaces with adjacent roads at random locations throughout the network.

Our audit revealed a concerning disparity: at 77% of the locations we examined, the adjacent road surface was smoother than the cycle path, while only 4.3% of cycle paths provided a superior surface to their accompanying roads. This significant imbalance needs addressing, as cycle paths should be maintained to at least the same standard as roads—not as secondary infrastructure.

While Hertfordshire County Council, responsible for maintaining both roads and cycle paths through their Defect Management Approach, faces budget constraints, the consistent pattern we observed indicates a clear need to revise maintenance priorities. The current situation undermines efforts to encourage active travel and conflicts with HCC's own transport hierarchy that prioritizes sustainable modes of transport.

We believe immediate and meaningful action is required to bring cycle path maintenance up to appropriate standards (see our positioning statement). This blog post presents our methodology, evidence, and specific recommendations for improvement. By elevating the quality of our cycling infrastructure, we can unlock the full potential of Stevenage's cycle network—transforming it from infrastructure people use out of necessity to paths they choose for their quality, comfort, and convenience.

Motivation

In the second half of 2024 Stevenage Cycling Campaigns conducted a survey among cycle path users in Stevenage. Our analysis showed that 66% of respondents are dissatisfied with cycle path maintenance, more than any other category. Stevenage Borough Council has also noted surface quality problems and noted in their cycling strategy that the quality of cycle path surfaces should be at least as good as those on adjacent roads. We understand these concerns. While much cycling in Stevenage is done on regular roads, the maintenance of cycle paths needs to be sufficient to be able to encourage modal shift.

A good cycle path (or network) is one that is used by people cycling because they want to, not because they are afraid to cycle on the road. Few would dispute that people feel strongly about potholes and bumpy surfaces. But for cycling, rough surfaces can mean that the area that is reachable by cycle using a set energy budget reduces by a factor of 2-4.[i] LTN 1/20 explains that poor surface quality makes collisions and falls more likely, discourages cycling, and risks that people choose to stop cycling altogether.

It is particularly a barrier to the adoption of cycling if those who choose to try cycling to a destination rather than drive there are faced with a road surface that is less comfortable to ride on than they are used to drive on. For those who have adopted cycling for some journeys, poor cycleway surfaces make cycling a less competitive option for each journey.

Cycling as a mode of transport is not a hobby and often not a choice. Beyond achieving modal shift and active travel targets, the matter of transport equity deserves special attention. Private car travel

is not an option for many people. In fact, car travel will not (have been) an option for everyone at some stage of their life; this can be due to age, health and disabilities, finances, and many other reasons. Being part of a vulnerable group also makes car ownership less likely. For Stevenage, the Census 2021 data shows that one fifth of households do not own a car. Bus services will not necessarily provide a satisfactory alternative, while cycling might. For these reasons, this audit also provides insight into policy outcomes and transport equity.

Method

We are not experts in road surfaces or maintenance, but we are experts in cycling. Our audit therefore compares, rather than trying to objectively evaluate the state of maintenance of cycle paths. This makes our audit user focused, rather than strictly focused on conditions, which is conveniently also recommended by the UK Roads Liaison Group whose guidance is referenced in LTN 1/20[ii]. Through our cycling expertise, we assessed whether the cycle path surface was smoother and preferable to ride on compared to the adjacent road. This approach also addresses the fact that some routes are more important than others and would therefore be treated differently in terms of maintenance.

Determining random locations

We employed stratified random sampling to select random locations on the cycle network. First, we exported all cycle routes as a GPX file using Overpass Turbo, which uses Open Street Maps as its source. We then edited the GPX file manually to include any new sections of cycle path that were not yet included on Open Street Maps. We then used a python script that extracted all locations from the GPX file and aggregated these in a sequential array so that it could be divided into equal-sized strata. This would ensure that all parts of the cycle network would have an equal chance to be represented.

A defined number of points were randomly selected from each stratum, 300 in total. The order of these points was non-random, but we randomized this programmatically. We then manually inspected the points on the map, starting at the top of the list, including the first 50 locations that were adjacent to a road. Locations that were not adjacent to a road were excluded from the list. We uploaded the list to the 'My Maps' service by Google.

Evaluation Protocol

We visited each of the 50 locations on the My Maps service. At each location we made a judgement: Focussing on the smoothness of the surface whilst ignoring all other conditions, including traffic, would I prefer cycling on the road or on the cycle track? For this we tried to look at the road that we would have used instead of the cycle path.

The protocol was that the cycling that would take place on the path or road would be done whilst passively paying attention to the surface. This means that an otherwise perfectly smooth road could be forgiven for having one local rough spot as this could be avoided, but a mostly rough path would be uncomfortable regardless.

We took photos at each location and logged what our preference using the protocol above would be. We presented the results on My Maps using different colours:

- Orange: the road would be preferable over the path
- Purple: neither would be preferable over the other
- Green: The path would be preferable to cycle on over the road

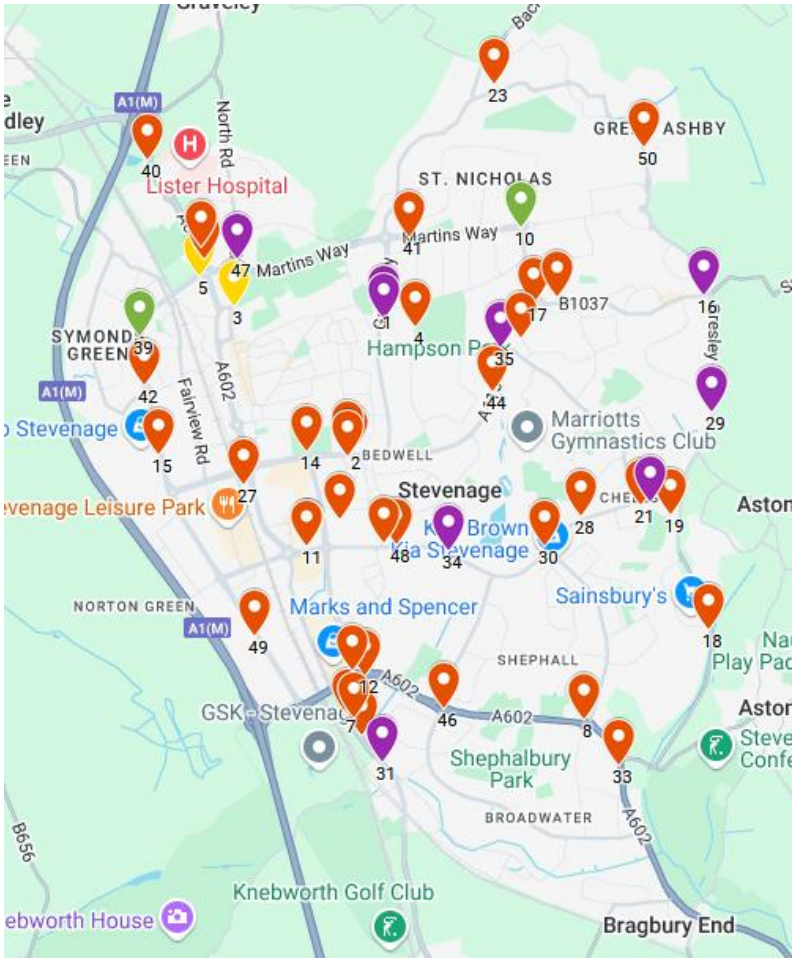
These categories applied regardless of whether the difference was only slight or significant.

Results

The results are presented in a table below:

Compared to the road:			
	Number	% (of 47 successful evaulations	Colour on map
The cycle path was *equally smooth*; neither was preferable	9	19.1%	Purple
The cycle path was *less smooth*; the road was preferable	36	**76.6%**	Orange
The cycle path *more smooth*; the cycle path was preferable	2	4.3%	Green
Location could not be evaluated (excluded)	3	-	Yellow

The map below can also be found at:
https://www.google.com/maps/d/u/0/edit?mid=1werTFJuCB13wVeHGSBFPdCOR6Q3BpA4&usp=sharing



Discussion

With an equal priority on maintenance on cycle paths we would have expected to see around 0% of locations receive the classification ‘less smooth’. Our audit tells a different story. Whether the difference was large or minor, we deemed the riding experience on roads to be systematically smoother and more comfortable than on the adjacent cycle tracks.

We know that this difference is due to policies and their implementation, it is unknown and irrelevant whether this is intentional as priorities shift over time. Updating maintenance policies and their implementation will be key to eliminating this large difference.

During our audit we covered many miles on the cycle network, which was helpful in accurately evaluating each location. Each surface that we rode on, even if it was not included in the audit, provided useful information about the riding experience and gave us additional confidence.

When interpreting the results, it is important to note that the three-dimensional texture of a surface cannot easily be gauged by looking at the attached photos. One might assume that surfaces that look new are also smooth, but this is frequently not the case for cycle paths. The texture of new main road surfaces looked smooth in all instances where we saw them, but the surface of new cycle paths tends to not be flat. It varies per location how noticeable this is, but the new cycle path along Martin Way is an example of a section where the old path is smoother.

The graph above was generated by logging accelerometer data from a smartphone mounted on a bicycle. It shows how the new section of cycle path generates a lot more motion on the bicycle than the older section of path preceding and following that section.

Similar data was recorded for cycling on cycle paths that received micro resurfacing treatment, which appears to be a thin layer of material that seals the cycle path and helps with preserving its current state. It can be useful as it helps prevent paths from deteriorating quickly, but a poor surface to ride on will still be uncomfortable after this micro resurfacing treatment. While this treatment also smooths out finely grained roughness, it does not fix rough sections or deeper uneven spots. It is especially the larger type that can be problematic beyond discomfort. There are instances where micro resurfacing obscures dangerous uneven spots that can lead to injuries when encountered at speed, for example when going downhill.

Surfaces that are older are not necessarily problematic for cycling. Cracks make a surface look deteriorated but might barely be felt when riding over them. In our evaluations we did not discriminate based on how new the surface looked. As we were there in person, we could see how even or uneven the two surfaces were and evaluate what cycling on them would be like. Occasionally we would even try if this was safe. It is possible that some of the photos that are included on the results map do not convey the true texture of the surface in all instances.

One might try to look at the attached photos and make conclusions about the state of the cycle paths. This would be a mistake as these photos were not taken at the more problematic locations that one would normally use to convey the urgency for improvements. For the avoidance of any misunderstandings regarding this matter, Appendix I includes some examples of the less well-maintained sections of cycle path in Stevenage.

Conclusion and recommendations

Most cycle paths in Stevenage are significantly less smooth to ride on than the adjacent road. Only in 4.3% of cases was the cycle path classed as preferable to ride on, whereas in 77% of cases the road was preferable. While legal, in practice people will choose to cycle on the cycle paths where these are present due to high-speed traffic on the road. But they make this choice due to fear for their safety, not because of the appeal of Stevenage's cycle network. This conflicts with the notion that a good cycle network is one that people want to use.

The results of the audit reveal that surface conditions on cycle paths in Stevenage are unhelpful in encouraging people to cycle. This audit does not answer the question to which degree, but policy makers should consider that the impact of other active travel related investments might be diminished due to poor cycle path surface quality. Conversely, bringing the quality of surfaces that cyclists use on par with those of adjacent roads has the potential to activate the effects of previous investments into active travel whose potential was held back by this issue.

Policies that govern the maintenance of roads and cycle paths should be reviewed and updated so that their outcomes reflect the strategic transport policies of HCC where active travel is prioritised. This audit focussed on surfaces of paths and roads, but there are many more areas where highway assets for cars are prioritized over their cycle infrastructure counterparts. User surveys and the involvement of cycle user groups should be a key source of data in assessing how the maintenance regime (Defect Management Approach) can address the priorities of people cycling.[ii]

Much of the value of Stevenage's cycle network is locked away as untapped potential and Hertfordshire County Council holds the key to unlock this. Stevenage Borough Council, everyday cycle path users, and we at Cycling UK Stevenage are waiting. There is some catching up to do.

Appendix I

Hampson Park

Busiest cycling junction of Stevenage inside train station roundabout (Fairlands Way)

Martins Way cycle path

Fairlands Way

Fairlands Way

[i] https://cyclehighways.eu/design-and-build/design-principles/surface-quality.html

[ii] UK Roads Liaison Group, Footways and Cycletrack Management Group: Footways and Cycle Route Research Task 3 Cycle Service Levels and Condition Assessment, https://ukrlg.ciht.org.uk/media/11788/task-3-cycle-service-levels-report-v13-final.pdf