



Bristol to Bath Railway Path User Survey

Walking Route to Whitehall Primary School

Report of research conducted on behalf of Bristol City Council

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This report was prepared by Dr Geoff Andrews and Prof. Graham Parkhurst.

1. Executive Summary

Whitehall Primary School in Easton, Bristol has recently benefitted from improvements to its walking routes as part of the Sustrans Links to Schools Project. One particular aspect of these improvements and a focus of this report are a new informal zebra crossing and warning lights on the walking route where it crosses the Bristol to Bath Railway Path. This crossing has been identified as exhibiting conflict between different types of user, and in particular between school children crossing the path and commuter cyclists travelling towards Bristol city centre in the morning peak. This report presents findings from a survey of path users which sought their opinions and experiences of using the infrastructure in safety terms, and the perceived impact of the two additional measures on path safety.



The report finds the following:

- 78% of respondents reported some degree of annoyance at other path users' behaviours, and a third of respondents had had a near miss or a dispute.
- 70% of path users agreed that the speed of some cyclists was a concern to them. This was true for both those walking their children to school, but also other cyclists using the path.
- Only 49% of those crossing the path (most of whom were accessing the school) felt the Railway Path was safe to move across, yet 84% of respondents overall felt that the scheme had improved safety for school children. This suggests that whilst the area is perceived to be safer than before, there is still room for further improvement.
- Over half of respondents felt the scheme had made path users more aware of the presence of young children crossing the path.
- A tension emerges between the need to allocate clear priorities at the crossing, and to promote responsible and considerate self-regulated behaviour by all users.
- The scheme overall has been well received, with the majority of respondents believing it to be good value for money.
- It would be useful to measure actual cycling speeds, which would allow a more accurate and objective measurement of the scale and extent of cyclists' behaviours on the path.

2. Background

The Sustrans *Link to Schools Project* established in 2004 seeks to facilitate innovative but affordable ways of improving walking and cycling links to schools, with the support of local authorities. One of the schools benefitting from this project was Whitehall Primary School in Easton, Bristol. The school (as well as a nursery) adjoins the well-used Bristol to Bath Railway Path, with many school-users needing to cross the path from Bruce Road to Johnsons Road on foot or cycle in order to access the school. The location (OS Grid Reference ST614741) is identified in Figure 2. This section of the railway path has been identified as a potential source of user movement conflict, particularly during the AM peak, between on the one hand an estimated 30,000 cyclists per annum heading southwesterly towards Bristol city centre, and on the other hand children crossing the path on their way to school.

An important contributory factor to the user conflict is that the path has a moderate gradient northeast to southwest for a substantial distance either side of this crossing point, which means that cyclist speeds are on average notably higher southwest-bound: the dominant direction of AM peak flow. The path is straight, well surfaced, and with generally good sight lines. Cyclists using the path generally observe the 'keep left' highway code due to the relatively high flows. These factors create conditions in which the highway neighbourhood speed of 20mph¹ can be exceeded by some cyclists. This has led to a perceived safety problem along the path, although there is limited information on the actual number of incidents reported, and many may not get officially reported.



Figure 1: Location of walking route to Whitehall Primary School and the Railway Path.

¹ Whilst cyclists must not ride 'recklessly', they are not legally subject to motor vehicle speed limits, and the Railway Path is not a highway, and so is not subject to highway speed limits, but the 20mph neighbourhood standard perhaps provides a useful comparative indicator.

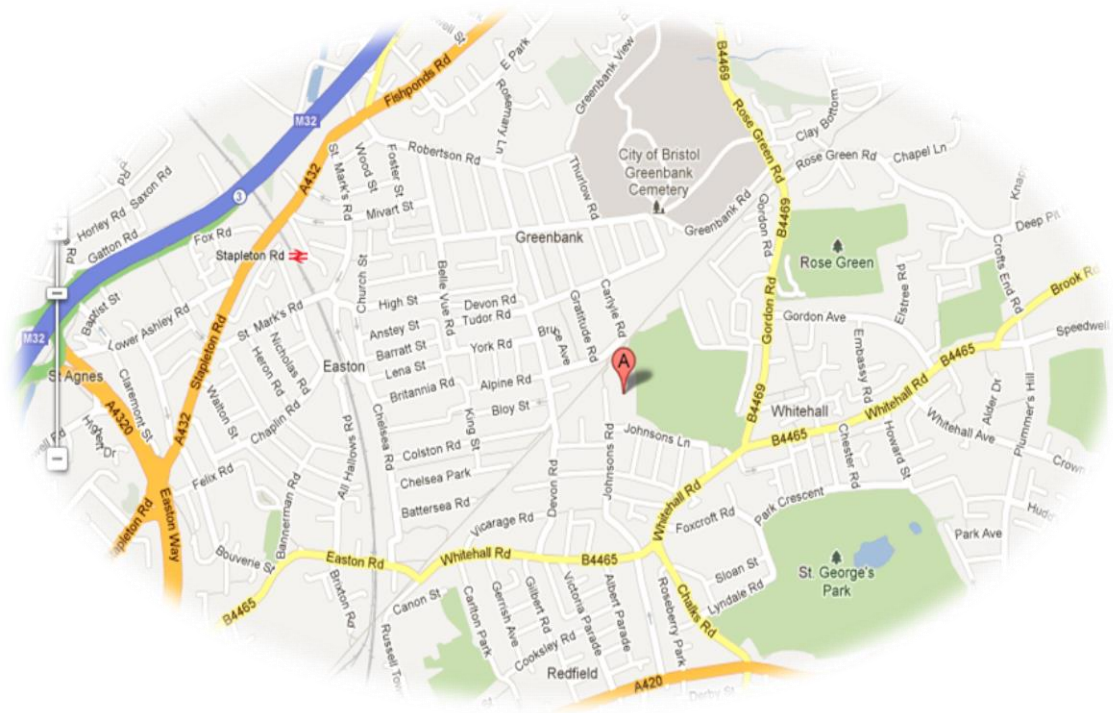


Figure 2: Location of site (Google Maps©)

In recent times a number of initiatives have sought to enhance road safety in the vicinity of the school. This resulting package includes the provision of informal crossings, formalising of ziz-zag school restrictions, the provision of seven dropped kerbs and road resurfacing works. However, this report is specifically concerned with evaluating recently completed works at the point where one of the key routes to the school crosses the Bristol to Bath Railway Path. The four elements of the improvements project include:

- Footprints designed by local school children to highlight and ‘officialise’ a demarcated walking path
- Two warning triangles on the surface of the railway path to alert users of the cycle path to the children’s crossing
- A cyclist-sensitive sign located 15m northeast of the crossing requesting cyclists travelling in the inbound, downhill direction to slow down²
- An informal crossing marked across the cycle path which ‘animates’ the zebra theme in a fun way aimed particularly at younger path users.

² The sign is activated by inductive loops located a further 30m to the northeast.

To understand path user's opinions and experiences of the new improvements (both those travelling along the path and those crossing it to reach the school), a survey was commissioned in May 2012 of adult³ path users. Using a mixture of qualitative and quantitative questions, the survey enquired as to whether different user groups perceived an improvement in the safety of school children crossing the path.

3. Survey Methodology

The survey was carried out by 5 trained staff from the University of the West of England (UWE) and Bristol City Council between 08:00 and 10:00 over a four-day period in May 2012. The AM peak was chosen as this has previously been established as the main time of path user conflict at the crossing, between commuters travelling towards the city centre, and school children crossing the path en route to the school. On each day, one staff member sought to slow down cyclists using the path to encourage them to take part on the survey. Cyclists heading away from town were also included. All staff wore high visibility jackets in order to ensure their safety. Whilst the aim was to capture as many responses as possible, surveyors were instructed not to put themselves in physical danger when attempting to elicit cyclists using the path to stop and respond.

Two surveyors focussed on surveying those travelling along the path, with the remaining two surveyors capturing those crossing the path (mostly those escorting their children to school). Surveyors were instructed to capture a balance of those cycling and walking, and towards the end of the survey, quota sampling was used to ensure a balance of those crossing the path and those travelling along the path. It should be noted that this may not be reflective of the actual proportions of users travelling in each direction, with there being proportionally greater number travelling along the path compared to crossing it. The surveyor read out a series of 15 questions that could be completed within 3 minutes, and contained a mixture of quantitative and qualitative responses. The interviewer did not prompt respondents with possible answers, but simply ticked that which best fitted with their response to each question. A full copy of the survey schedule can be found in Appendix One. A total of 113 usable surveys were collected. A particular issue that reduced the feasible survey sample size was the challenge of slowing cyclists down to take part in the survey, and by the fourth day it became harder to find travellers who had not completed the survey already on the previous days.

One limitation of the survey approach was the difficulty of stopping cyclists travelling at higher speeds for the survey, and hence they are to some extent under-represented. The weather was fine on all the days, and it could be conjectured that on rainy days there could be different users on the path, and somewhat different behaviours. The results are now presented.

³ Whilst it would have been interesting to understand the views of children, decisions about what constitutes a 'safe route to school' are ultimately made for primary school children by adults and resources for interviewing were constrained. Children are also generally accompanied, and it was appropriate to interview one person per travelling group for sampling reasons.

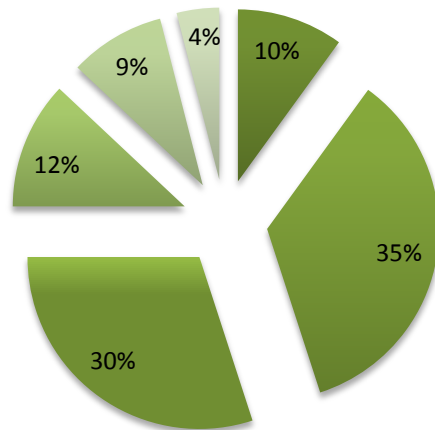
4 Survey Results

Sample Characteristics

- **Gender:** 49% male, 51% female
- **96% of respondents used the path at least once a week** and could be considered 'regular users'
- **38% were travelling along the path, 59% crossing the path and 3% joining the path**
- **Mode:** 45% were on foot, 55% on bicycle

Age Breakdown of Respondents

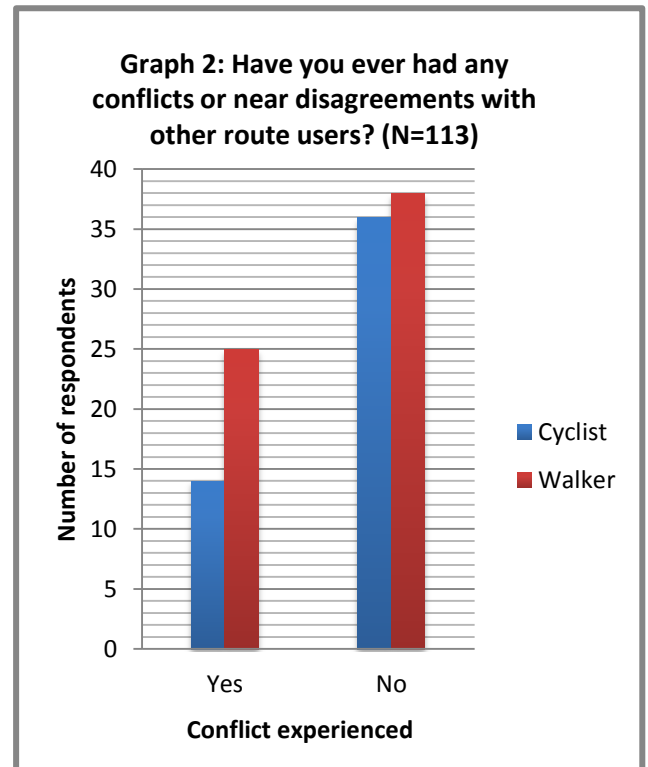
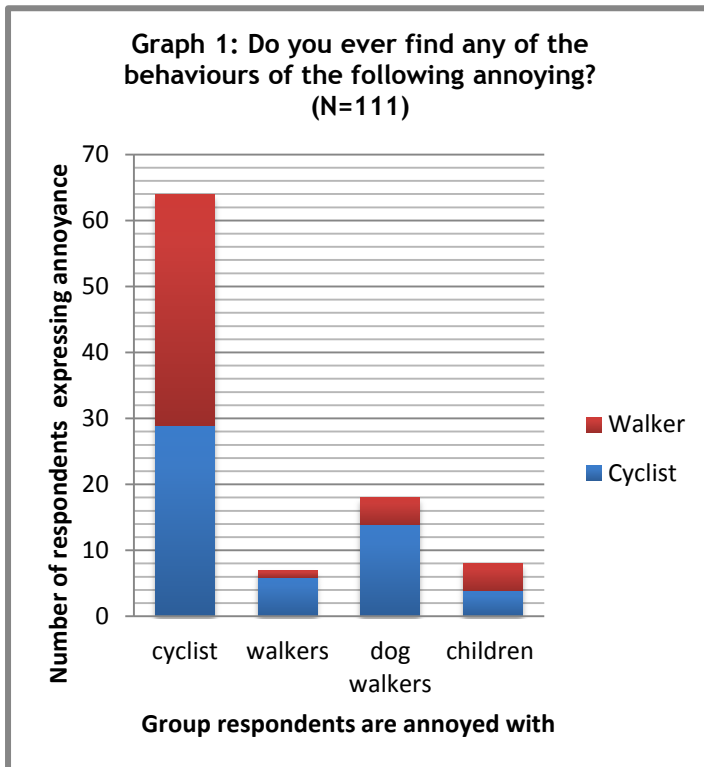
■ 18-29 ■ 30-39 ■ 40-49 ■ 50-59 ■ 60-69 ■ 70+



- **People over 60 were included at lower proportions than their share of the national population. However, the age distribution is thought to be fairly representative of the survey population of path users during the morning peak.**
- **80% of the respondents considered themselves white British, with the remaining 20% from other ethnic origins**

4.1. Attitude Towards Other Path Users at the Crossing point.

- 78% of those surveyed expressed annoyance towards at least one other group of users. In particular, annoyance was expressed by both walkers and cyclists towards others riding bicycles on the path. Cyclists also expressed some annoyance towards dog walkers and walkers.
- 37.7% of respondents reported actually experiencing a conflict with another path user. Cyclists in particular were most likely to have had conflict with other users.



- In particular, those crossing the path were concerned about the speed and attitude of some cyclists.

“Some cyclists think they have priority at this section of the path and treat it like a kind of road - a cycle super highway - especially young male commuters I find”

“They (the cyclists) speed along and pass too close to people walking down the path”

“Some cyclists get aggressive when we try and cross the path”

- Pedestrians were also called by some to act more responsibly and be more aware of cyclists on the path

“Walkers need to more aware of us at that point- not letting their children hurtle down the path. They should treat it like a road in that their children should stop look and listen before running across.”

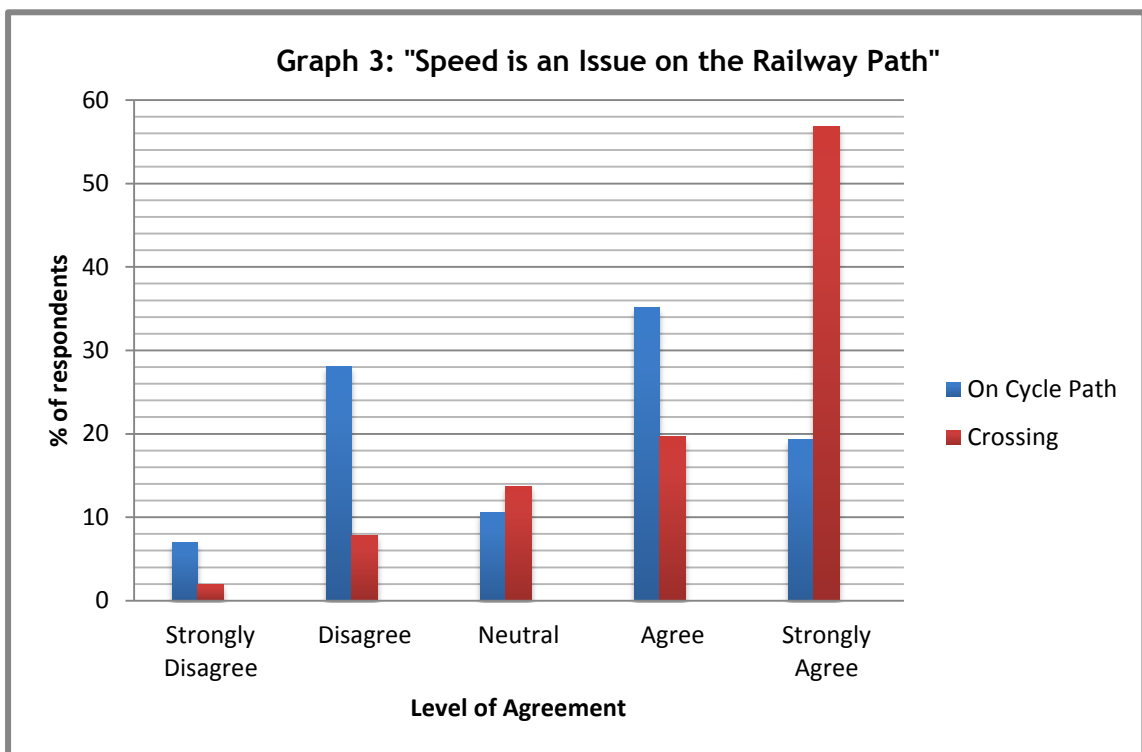
- For some path users it was less about blaming a particular group of users, and more about encouraging people to share the space and be considerate for each other's needs

"We just all don't look out for each other - people need to be aware of those using the path and not be intolerant"

"We need to learn to share this area - I am trying to stop my children running down the hill and scaring the cyclists, but they need to be more aware of the kids and slow down, even give way sometimes."

"You could just say put the bridge back in place- but that would avoid the issue - we need to learn share".

- Over 70% of those surveyed agreed to some extent that speed was an issue on the Railway Path. Although this agreement was stronger amongst those crossing the path, a substantial number of those along the path also agreed with this statement (see Graph 3).



- However, there was a sense that it was a minority of cyclists causing the conflict.

"If we change the attitudes and speeds of the handful of people who speed this will have massive benefits for the majority of users"

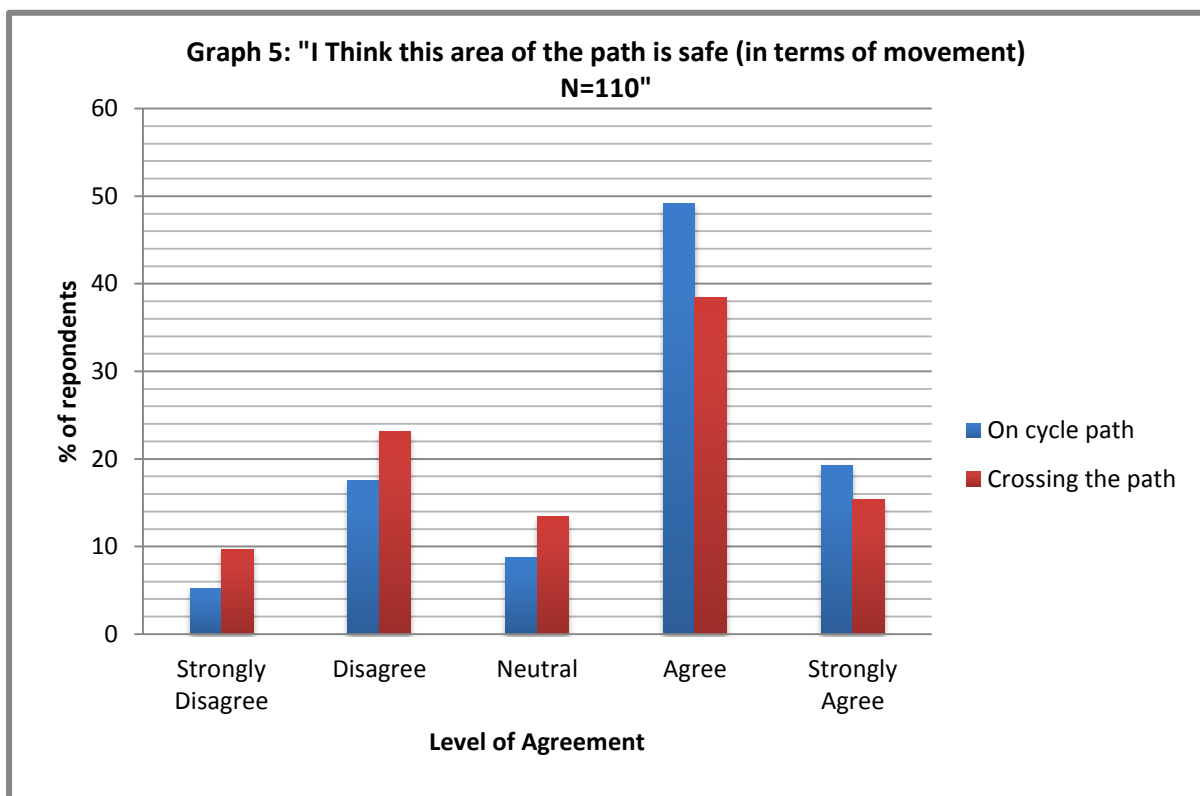
"On the whole people are considerate when cycling down the path, but the few speedy ones give cyclists a bad name"

“Cycling should be encouraged- it is good that people are using their bikes not the car - we want that. So we don’t want to discourage cycling - just to target the few people who are risking children’s lives”

This also reflects the previous finding that some cyclists found other cyclists’ behaviours annoying (Graph Two).

4.2. Perceptions of Path Safety & Awareness of Children

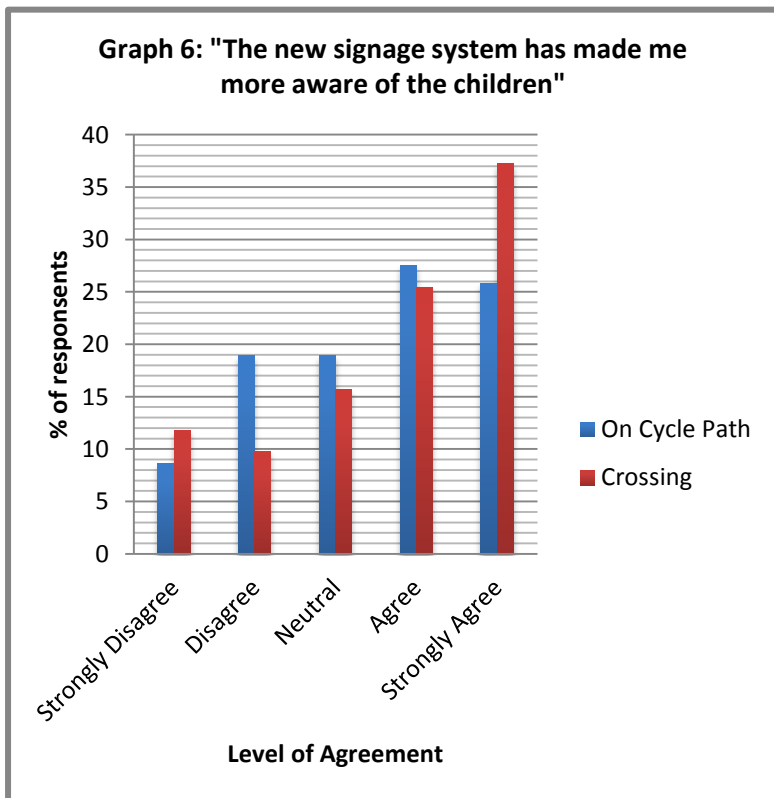
- Graph Five (below) shows that overall there is a relatively positive perception of path safety at this point amongst those travelling along the path, and more path-crossers thought it was safe (49%) than thought it was unsafe (33%), although this group had overall less positive perceptions. It is also notable that few respondents provided extreme views, which perhaps supports a general view that the area is reasonably safe, but you need to be aware of other users. This finding was statistically significant ($P < 0.05$).



- However, many respondents, particularly those crossing the path (62%) felt that the signage and zebra crossings had made it safer than it was before their implementation. This suggests that whilst the scheme has improved the perceptions of safety at the crossing, there is room for further improvement.
- Some of those that strongly disagreed commented that the informal nature of the crossing led to greater confusion and actually accentuated the danger at the crossing.

“People are confused by the zebra, Is it a proper zebra?”

- Over half of all those on the cycle path at the time of the survey felt the new signage and crossing point had increased their awareness of the children's presence (Graph 6). This suggests a significant benefit of the scheme is to give greater prominence to children, which could act as a mechanism to slow path users down as they become more conscious.

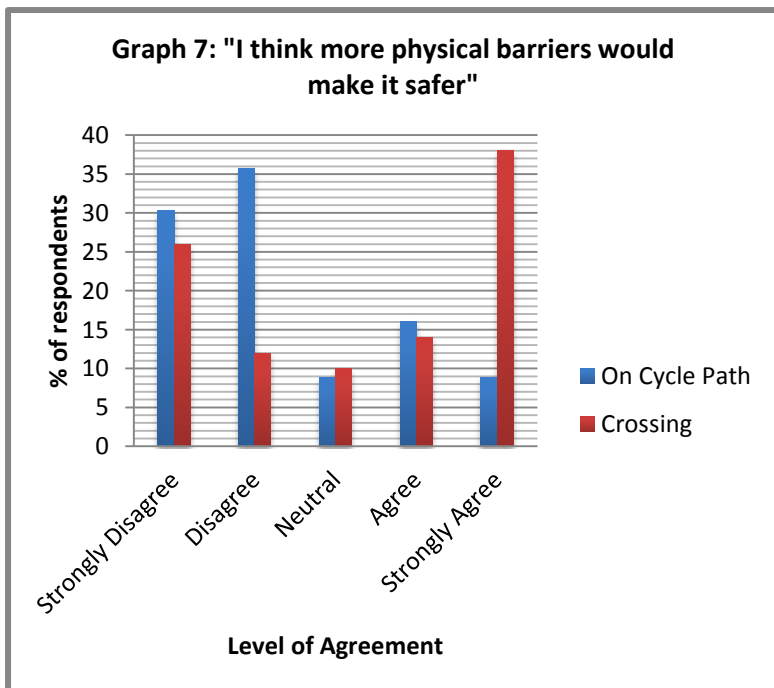


"The Zebra crossing is good as it makes it more noticeable..."

"It's great- I wish there were more like this"

"I have slowed down since seeing that crossing- like you would on a zebra crossing"

"I don't think it's made much difference- some people will never consider the children's safety"



- Just under half of those crossing agreed to some extent that more physical barriers would make it safer. Only a fifth of those using the path agreed with this statement.

- A considerable number of respondents felt that physical barriers would make little difference, in part due to lack of desire to 'punish all cyclists for the behaviours of a few'.

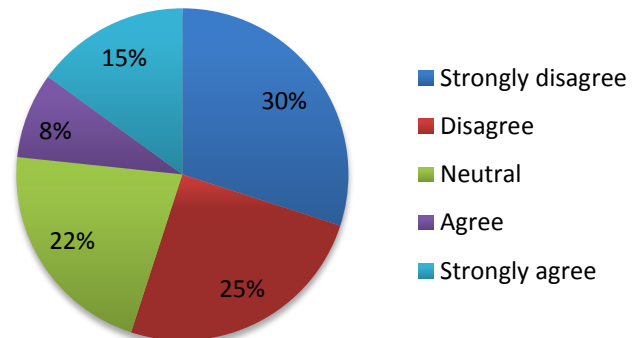
Interestingly, whilst 83% of those crossing the path felt that school children should get priority at the junction, only 23% of those travelling on the path felt that cyclists should get the priority. This suggests that it is a small minority of cyclists that are not prepared to share the path.

Furthermore, it could be inferred that those crossing the path (most of whom were dropping children off at school) were less willing to share the path with other users.

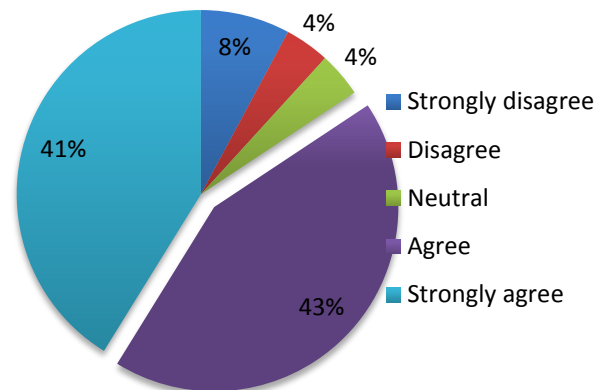
Yet, a desire was expressed by many to 'Clarify the priority at the crossing' and 'Give clear guidance on how users should behave'.

In contrast, as previously mentioned, the informal nature of the zebra crossing is designed to encourage consideration of others and sharing and establishment of users' mutually negotiated rules.

Graph 8: "I would say cyclists should get priority" (those on path only)



Graph 9: "I would say school children should get priority" (those crossing only)

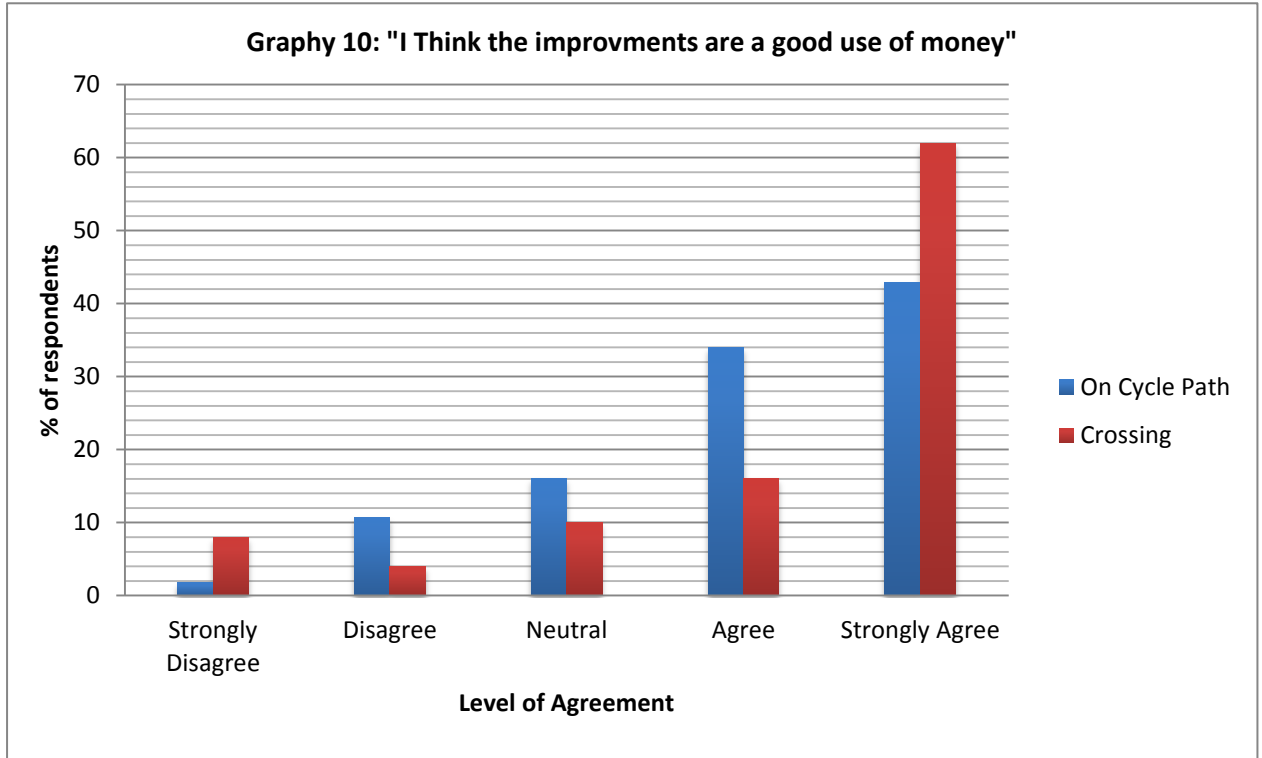


4.3. Overall success of the scheme

- Over two-thirds of both those crossing the path and travelling along the path agreed to some extent that the improvements were a good use of money (Graph 10). A minority from each group disagreed with this statement.
- However, a number of respondents reported difficulty in judging the value for money.

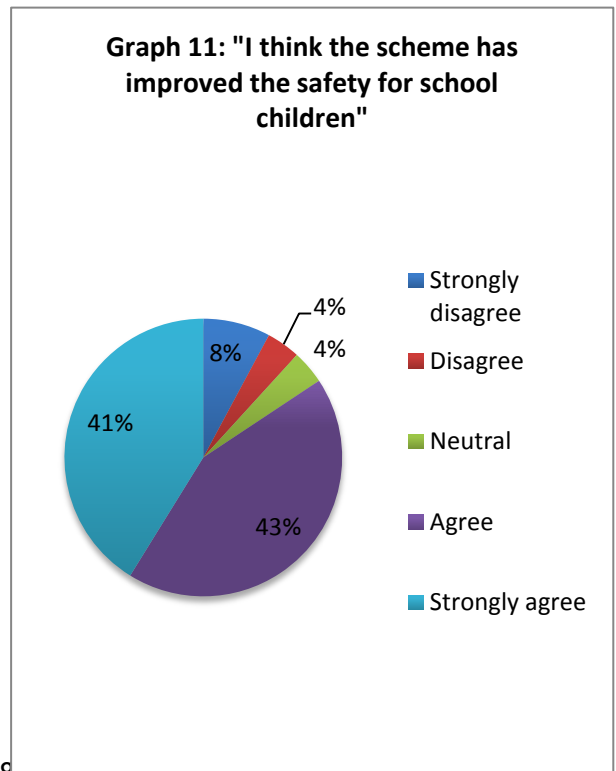
"We don't know how much it costs so can't say"

“What would it have been spent on if not this?”



- An overwhelming majority of respondents felt that the scheme had improved the safety for school children (84%). This suggests that the scheme has, at least in terms of perception made an improvement to the area.

- Respondents recommended ways in which the scheme could be developed, including
 - Replacing the bridge across to the school
 - Replacing the white line segregation
 - A lollipop lady to monitor the crossing
 - Campaigns to encourage users to share



- Chicanes and bends to slow cyclists down

5. Conclusions

- The research demonstrates that the wider issue of users sharing the **Bristol to Bath Railway Path** is a real and contentious issue, with 78% of respondents reporting some degree of annoyance at other path users' behaviours, and a third reporting actually having had some kind of dispute with other path users. Policies in both the transport and health sectors are seeking to increase walking and cycling, and monitoring indicates considerable growth in cycling in Bristol in recent years. To the extent that conflicts arise from intensity of use of the Railway Path, growth indicates potential for this situation to deteriorate. However, measures to improve this situation have the potential to considerably improve the experience and safety of all path users.
- Forty-nine percent of those crossing the path (most of whom were accessing the school) felt the path was safe to move across, whereas 33% felt it was not.
- Over half of respondents felt the scheme had made path users more aware of the presence of young children crossing the path.
- Those crossing the path to get to the school were more likely to state that children should get priority at this junction, compared to fewer cyclists who cyclists should get priority.
- The quantitative survey indicated that both cyclists and pedestrians, and path users and path crossers, shared to some extent a concern with the speed of cycling. The qualitative evidence suggested that the problem may be due to a minority of high-speed cyclists, with the speed of most cyclists therefore being acceptable, and that it was the behaviour of the minority that was a major barrier to the effectiveness of the crossing point. Observations by the survey team whilst indicating the survey supported the view that, when cyclists travelled at lower speeds it was easier for users to negotiate priority at the crossing point, as witnessed through cyclists stopping to let school children across.
- However, without more information about cyclists actual speeds on the path, the perception that the problem arises principally from the choices of a minority of high-speed cyclists cannot be confirmed, and therefore it cannot yet be concluded that the logical policy response should be to target a 'speedy minority'. It may be that there is less objective variation in speed than users perceive, or that actually a large share of cyclists exceed the safe speed at the junction. It is therefore recommended that a speed survey is conducted to understand the speed profile at this location. Without this information it cannot be concluded from the research that slowing the speed of - say - the fastest 10% would necessarily result in significant improvements in perceived safety, as the next fastest 10% may be seen as nearly as problematic, and targeting the



fastest 10% would simply double the numbers in what is currently the ninth decile.

- **A tension emerges between those who would like greater clarity on the priority at the crossing point, and those who call for all users to have an attitude of understanding and sharing to make the informal crossing work.** Thus the suggestions for improvements either focus on enforcement such as lollipop ladies and white lines, or promotion of the path as a shared space. It should be noted that the nature of the informal crossing would make it challenging to set and indeed enforce any rules about priority. If the problem is essentially due to a small number of young, male sport-oriented cyclists travelling at excessive speed, then it is important to observe that this group is likely to be keenly aware of actual speeds, through the widespread use of handlebar trip computers. Therefore information about a maximum acceptable speed in the vicinity of the junction - even if only advisory in legal terms - would have objective relevance for them, and in subjective terms would counter the view that there is no speed limit, and therefore any speed is acceptable. Such an advisory speed limit might initially be established through a similar procedure to that used to set highway speeds, such as adopting the 85 percentile, to be established through the speed survey recommended above.

Appendix 1: Survey Form

Bristol to Bath Railway Path Survey

"Good morning/afternoon. We are undertaking a brief survey of path users today, on behalf of Bristol City Council. All information will be confidential. Please may I ask you a few questions about your use of this cycling and walking route?"

1. Gender of interviewee: Female Male
2. Journey involves Crossing the cycle path along the path Joining the path
3. Respondent on Foot Cycle Other
(specify _____)
4. What is the purpose of your trip today?
Travel to work Travel to school Going for a walk/run/cycle

Other Please specify:

5. Do you make this trip regularly (at least once a week)? YES NO
6. Have you noticed any changes to this particular area in the last 2 months?
YES NO Please specify _____

7. Do you ever find the behaviour of any other route users annoying?
No (Go to Q10) Yes
(Interviewer: tick all that apply, do not show to respondent)
Dog walkers Walkers (no dog) Cyclists
Runners Children/YP Drinking/Drugs/ASB
Other Please specify:

8. (If information not already given) What is it about their behaviour that you find irritating:

9. Have you ever had any near conflicts or disagreements with any other route users?
No (Go to Q11) Yes
Please tell us about this:

11 **(those on cycle path only) Please rank the following statements 1 (strongly disagree to 5 strongly agree)**

	Strongly Disagree						Strongly agree
11a. I think this area of the cycle path is safe (movement)	1	2	3	4	5		
11b. I think speed is an issue on the cycle path	1	2	3	4	5		
11c. The new signage system has made me more aware of the children	1	2	3	4	5		
11d. I think more physical barriers such as humps would make it safer	1	2	3	4	5		
11e. I think the improvements are a good use of money	1	2	3	4	5		
11f. I would say cyclists should have priority	1	2	3	4	5		

12 **(those crossing cycle Path only) Please rank the following statements 1 (strongly disagree to 5 strongly agree)**

12a. I think this area of the cycle path is safe (movement)	1	2	3	4	5
12b. I think speed is an issue on the cycle path	1	2	3	4	5
12 c I don't have a problem with sharing the path with small children	1	2	3	4	5
12d. The new signage system has made people more aware of the children	1	2	3	4	5
12e I think more physical barriers such as humps would make it safer	1	2	3	4	5
12f. I think the improvements are a good use of money	1	2	3	4	5
12g. I think the scheme has improved the safety for school children	1	2	3	4	5
12h. I would say school children should get priority on the path	1	2	3	4	5

13 **Are there any improvements you would like to see made to the path? (fill overleaf if needed)**

14 **Please could you tell me which age bracket you fall into?**

18 - 29 30 – 39 40 – 49
 50 - 59 60 – 69 70+

15 **And how would describe your ethnic origin?**

16 **What is your postcode?**
 (We wish to know how far people have travelled to use the route, no information will be sent to you in the post)

Thank you very much for your time today. Have a good morning/afternoon.