

## How people interact on off-road routes: Phase II

**Two distinctive elements of the concept of conflict were defined and measured - actual conflict and perceived conflict.**

### Summary

For cyclists, pedestrians, horse riders and others, shared use routes are an increasingly important resource, providing sustainable transport links and car-free travel to and from the wider countryside.

That they are safe, and are perceived to be safe, is a key factor in their promotion, though there is a view that when different users (eg. cyclists and walkers) share routes, it leads to conflict. However, this research found that conflict is a rare occurrence. When it occurs, structural issues (eg. width and maintenance of the route) are important factors. Route owners/managers should be developing within user groups a 'culture of thoughtful and tolerant use'. A Code of Conduct should focus on the rights and responsibilities of all user groups in order to reduce ambiguities concerning issues such as right of way, passing etiquette, the meaning of bells, control of dogs, and the speeds that should be adopted for safety and courtesy. The policing of shared routes would ensure that users know they are actively managed. Shared use routes should have information panels at their access points detailing the Code of Conduct as well as the contact person in the responsible agency for maintaining the route and to whom comments, complaints and reports of conflict should be directed.

### Background

Previous studies of user interactions on non-motorised shared-use routes often failed to clearly define 'conflict', leading to both ambiguous and misleading findings. Furthermore, the tools for measuring conflict frequently assumed that the term was mutually understood by researchers and respondents. This research separated two components of conflict: actual and perceived, and used new methodologies to measure both, whilst avoiding any direct allusion to conflict. The research team comprised Professor David Uzzell, Rachel Leach, and Laura Hunt of Surrey University's Department of Psychology, along with Dr Neil Ravenscroft and Gill Rogers of Brighton University's Chelsea School.

The Phase I study of 'User interactions in non-motorised shared use environments' examined incidents of conflict on routes around the UK using video analysis, questionnaires and focus groups. The research was ground-breaking in three ways: measurable definitions of conflict were devised; actual behaviour in a shared use environment was compared with perceptions of the experience; and an innovative video-based methodology was employed to analyse user behaviour. Phase I found that, contrary to previous research evidence, actual conflict is extremely infrequent. Not only was it rare, but

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Very few respondents had any personal experience of accidents or other incidents.

Overall 3,175 observations of route users were made, recording 4,973 people, drawing on 168 hours of video recordings.

feelings of perceived conflict were minimal on the routes studied. It was concluded that previously reported conflict was as likely to have been a consequence of the methodologies employed to investigate it, as the existence of conflict in its own right.

The Phase II study focussed on 'hotspots' where conflict is allegedly a serious problem, and whether actual or perceived conflict discourages people from using shared use routes. This research therefore, considered users' and non-users' experiences of conflict; whether there is a threshold above which it appears; and what factors contribute to this threshold.

## Measuring conflict

Route interest groups and local authorities nationwide were surveyed, requesting potential research routes where conflict had been reported.

Nomination criteria were:

- (i) there was only legal shared use;
- (ii) no motorised use;
- (iii) a range of users and uses; and
- (iv) no major crimes associated with the route.

Of the 78 suggested routes, 87% were within a 100km radius of London.

The potential causes of conflict appeared to cluster around three issues:

- (i) legal and design;
- (ii) physical; and
- (iii) people.

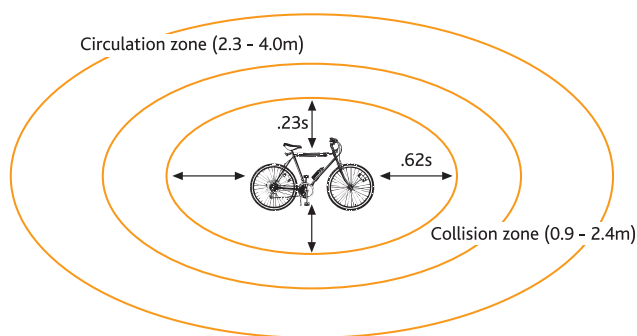
Six were selected, all of which addressed at least two of these issues:

Egerton Road to Southway, Guildford; Tamsin Trail, Richmond Park; The Camel Trail, Cornwall; Regents Canal Towpath, Islington; The Cuckoo Trail, East Sussex; The Grantchester Path, Cambridge.

## Actual conflict

Actual conflict was defined as 'The physical interruption of, or interference with, a person's actions or intended actions, by other users or by characteristics of the environment, which either blocks a person's behaviour, or violates their collision zone' (Navin, 1994: See Box 1). Actual conflict does not mean that there has been a collision, but rather that a person will take evasive action to avoid contact.

### Box 1: Navin's Three Zones of Interactions



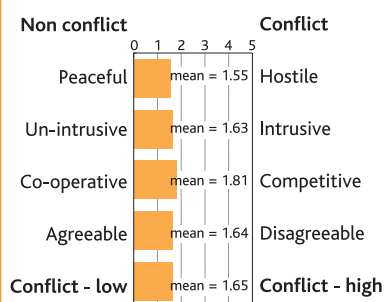
### Box 2:

#### Minimum width requirements.

When the width is less than 2m on a shared use route, there is insufficient room for cyclists travelling at 12km/hour (7.5mph) to pass each other without entering the collision zone (this assumes that each cyclist takes 0.7m of the route). Therefore, for a shared use route to function without actual conflict occurring, the minimum width needs to be 2m.

Filming was carried out at each site over one weekday and one weekend day between May and July 2002. Only 5% of the 157 interactions analysed provided examples of actual conflict, and in no case was any contact recorded. In the case of the Grantchester Path route, its width (less than 1m) seems to have been the most influential factor, suggesting that actual conflict is mostly caused by the restricted space forcing route users into each others collision zones (see Box 2), rather than by the density of users.

**Box 3:**  
Perceived conflict reported during interviews.



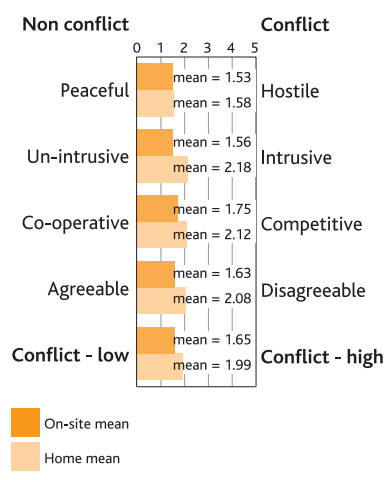
### Perceived conflict

Perceived conflict was defined as: ‘a multi-causal, negative psychological state, reached through variable combinations of psychological, social and environmental factors.’

During filming, 956 route users were interviewed. Cyclists were more accepting of sharing routes with walkers than walkers were of sharing with cyclists, although the level of acceptance was not associated with increases in the levels of perceived conflict. Visibility was a significant predictor in terms of how acceptable it was for both cyclists and walkers to share routes with each other. The better the visibility was rated, the more it became acceptable to share the space with cyclists. Also, as the route was rated as a useful link and of a good width, so the acceptability of sharing with cyclists increased. The level of perceived conflict measured at each site was recorded as very low; (see Box 3).

Physical environment factors (eg. visibility, maintenance, lighting and usefulness) were the most significant predictors of conflict on all routes. As ratings of these characteristics decreased, so the perception of conflict increased. Person factors also affected the level of perceived conflict. Using routes for commuting, being a younger user, and being familiar with the route, increased the level of conflict perceived by the respondent.

**Box 4:**  
Perceived conflict reported on-site and at home.



### Perceived conflict - remembering the experience

After the interviews, respondents were invited to participate further by completing another questionnaire at home. The conflict levels for all route users at all sites were still found to be low. Similar to the Phase 1 results, perceived conflict measured on site was significantly lower than when respondents recalled their experience away from the route environment (see Box 4).

This finding may be associated with memories of events, as the most significant memory is often of a negative event which can then become associated with a particular place. This may account for the increase in perceived conflict when respondents recall a place, even if their use of that route is conflict-free at most times.

Route users’ concerns about interacting with others and the physical environment of the route were low, but when their expectations (of others or the environment) were not met, concern was evident. Scenarios presented in the questionnaire indicated that respondents will generally be concerned not about conflict between users, but about routes with blind corners and concealed places, as these were associated with the possibility of people hiding along the route.

Few respondents had experienced safety issues on routes, (less than 10% knew of a crime and less than 3% had experienced an accident) including threats to personal safety and threats from accidents (see Box 5). Those who had experienced a crime or accident rated their experience of conflict at a higher level than others.

Respondents suggested that in shared route design, their preferred option was two separate paths, one for walkers and one for cyclists. A less favoured alternative was for a solid white line down the centre of the route, with separate sides for each user group.

**Box 5:**  
Safety concerns of route users.

Safety concerns were separated into two distinct categories; ‘structural route characteristics that afford crime’ and ‘signs of degradation and lack of ownership’. Route managers could make positive steps towards reducing structural safety concerns by clearing litter on a more regular basis, regularly cutting back vegetation and installing mirrors to enable sight around sharp corners.

### Barriers to use

Residents living up to three miles from each of the routes surveyed were sent a postal questionnaire. People’s concerns included rights of way issues, restricted movement, and the route’s facility, convenience, and over-congestion. In general, the older respondents were more concerned if their right of way was violated, or if the route as a facility was restricted or over-congested. They were also concerned about cyclists not warning of their

## Box 6:

### Personal safety as a barrier to use.

Respondents' beliefs of how likely they were to experience threats to personal safety, were predictors of increased perceptions of hostility, intrusiveness and competitiveness. Hence, a fear for personal safety leads to an increase in the perception of conflict experienced when using shared use routes. Women and older route users are more likely to have increased concern for their personal safety.

**The existence of actual and perceived conflict was almost non-existent whilst on the research routes, but 'talked up' away from the specific environment.**

## Further reading

Countryside Agency. 2001. *How people interact on off-road routes* (CRN 32).

Sustrans, 1999. *Shared-use routes*, Information Sheet FF04. Bristol: Sustrans.

Ramblers' Association. 1997. *Shared-use cycle routes*, Circular 97/25. London: Ramblers' Association.

Land Use Consultants. 1997. *Greenways: consensus building and conflict resolution*, Report to the Countryside Commission, Bristol: Land Use Consultants.

Institution of Highways and Transportation, Cyclists Touring Club, Department of Transport and Bicycle Association. 1996. *Cycle friendly infrastructure: guidelines for planning and development*, Godalming: Cyclists Touring Club.

Department of Transport and Welsh Office. 1989. *Making way for cyclists*, Local Transport Note 1/89. London: HMSO.

approach or not passing them on the right hand side, horses not passing them on the right, and other users being different types of users than themselves.

Very few respondents had any personal experience of accidents or other incidents (4% of respondents had any direct experience of collisions, whilst a further 7% knew of other people who had experienced collisions - see Box 6). Not all of these accidents related to shared use (eg. "fell off cycle, caused by black ice"). Only 3% of these collisions were reported to have occurred on the research routes and related to shared use directly. Almost 12% of respondents had experience of crimes and incivilities (most typically cases of verbal abuse and threatening behaviour), either directly (6%) or knew of other people who had experienced crimes (6%). Few of the crimes reported had occurred on the research routes (3%). It is noteworthy that whether or not people had experience of collisions had no effect on the level of conflict they perceived on shared use routes.

Those who had used the research route at least once over the previous 12 months were asked to recall their last visit to the research route and describe their experience of conflict. Respondents rated higher experiences of conflict than those interviewed on the route. Once again this suggests that a more negative experience is recalled than is actually experienced when using shared use routes.

The principal barriers for non-users are related to personal factors such as how useful the route (15% of respondents) was and how far the route is from their home (10% of respondents). More women than men reported that they did not use the route in question owing to safety factors.

## Discussing conflict escalates conflict

Focus group discussions found walkers felt overwhelmingly that shared use involves compromise. The chief constraint to sharing routes was the perceived danger of accidents with, and abuse from, fast 'macho' cyclists. Few cyclists seem to have the same level of animosity towards walkers. Cyclists claim that walkers often seem to obstruct them for no apparent reason. Equally, most cyclists claim that they have had more 'near-misses' with other cyclists than they have had with walkers.

In seeking to address this issue, most of the focus groups suggested user Codes of Conduct as these have the advantage of setting down official guidance for all users. There was general agreement that better physical care and maintenance of the routes would lead to a reduction in perceived conflict, especially if the full width of the route is made available.

## Conclusion

The results of the behavioural observation demonstrate that actual conflict is a rare occurrence. The questionnaire survey supported this and found that perceived conflict too was extremely low. Even when people recalled their route experience later, it was not seen as conflictual, although perceived conflict was recalled as higher than when in the route environment. It is only when people talk about conflict that the incidence, or assumed incidence of conflict escalates and appears to be more serious. Therefore, in the scenarios and focus groups, conflict emerged as a serious issue, although it was not considered a serious problem. We conclude, therefore, that the discussion and focussing of attention on conflict serves to escalate its perceived existence.

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