1. INTRODUCTION

1.1 Terms of reference

This report was commissioned by Devon County Council in September 2003 to complement the authority's response to the need for all Local Highway Authorities to prepare a Rights of Way Improvement Plan (ROWIP) by 2007. The aim of this research was to produce an objective review of multi-use routes[1] to enable policy for such routes within Devon:

- to be based upon the best information available;
- to be applied consistently throughout the county;
- to be a function of system and structure rather than personality; and
- to be transparent for those who wish to query the policy and the way in which it is implemented.

One of the main requirements for the research was to collate the information that might help to resolve differences of opinion between Devon County Council staff regarding the compatibility of walking, cycling, horse riding and wheelchair use on the same routes and tracks. There is one view held that permitting equestrian use on cycle tracks represents a danger to other user groups, notably cyclists and wheelchair users. A contrary view is that in principle all non-motorised use of multi-use routes is compatible subject to considerate behaviour by users and effective management control by owners and managers. In essence this research is concerned with actual and perceived conflict between users and whether this conflict, should it exist, be resolvable.

The aim was therefore operationalised in a commissioning meeting to encompass the following deliverables.

1. The identification of existing multi-use routes within Devon and for an agreed map of such routes to be compiled in a suitable software program such as Mapinfo. This part of the research is presented separately to the main report.

2. On site surveys with users on identified multi-use routes within Devon and image gathering of relevant evidence to support the research.

3. A survey of a representative sample of the adult population in Devon to measure their demand for countryside recreation activities and their attitudes towards multi-use of Rights of Way and cycle tracks.

4. A survey of managers of multi-use routes elsewhere in England to identify practice on similar resources to those found in Devon.

5. Consultation with user group representative bodies and other recognised bodies with a remit which involves multi-use such as Sustrans and Ride-UK.

[1] Multi-use routes in this context are defined as bridleways, Byways Open to All Traffic (BOATS), Road Used as Public Paths (RUPPs, of which there are none in Devon) and cycle tracks.

1.2 Context

The legal requirement for Local Highway Authorities to prepare and publish a Rights of Way Improvement Plan is embodied within sections 60-62 of the Countryside and Rights of Way Act 2000. ROWIPs should address the following factors:

- how local RoW meet present and likely future needs of the public;
- the opportunities provided by local RoW for recreation / leisure use; and
- accessibility of the local network for people with sight or mobility problems.

Not all Local Highway Authorities will have to produce a ROWIP in practice. The top 15% of authorities classified as 'excellent' under Comprehensive Performance Assessment regulations will be exempt from this obligation. In 2002 Devon was rated as one of 36% of authorities achieving the status of 'Good Local Authority' and therefore Devon County Council is required to produce a ROWIP by 2007.

Local Highway Authorities already have duties under the Wildlife and Countryside Act 1981 and Highways Act 1980 to maintain and keep the definitive map and statement of Rights of Way and to ensure that they are adequately signposted, maintained and free from obstruction. Preparing and producing a ROWIP is a new duty and is being funded additionally in recognition of this. There will be no extra central government funding for Local Highway Authorities to implement the recommended actions proposed by a ROWIP. Local Authorities are therefore encouraged by DEFRA to take an innovative approach to securing additional funding for ROWIPs via:

- grant applications to the National Lottery, regeneration budgets, European funding sources and so on;
- tapping into cross cutting government agendas such as physical and mental health by working in partnership with Primary Care Trusts to promote initiatives such as healthy walks and green gyms; and
- Section 106 Agreements under the Town and Country Planning Act (planning gain).

The facts that no additional government money will be available to deliver ROWIPs and that the ROWIPs themselves are not legally enforceable may at face value be seen as a disappointing level of government commitment (in practice) to improving the Rights of Way network. However, there are some positive aspects of the legal context which may affect the implementation of ROWIPs in a positive manner.

First, since the election of the Labour government in 1997 the shift from compulsory competitive tendering to Best Value requires local authorities to deliver 'continuous improvement' in their service delivery. So long as there is a mechanism in place for the maintenance of the Rights of Way network in any given Local Authority to be monitored and evaluated, it should be possible to identify the extent to which the Local Highway Authority has demonstrated 'continuous improvement' in its maintenance of the network. Continuous improvement does not necessarily mean the utilisation of more resources, as it is perfectly possible to make improvements via efficiency gains or innovative thinking.

As an example, research might indicate that there is an under supply of Rights of Way for cyclists and equestrians in a given area. It is unlikely that resources will be available to create new bridleways or cycle tracks, but it would be possible to upgrade suitable footpaths to bridleways and thereby solve a potential problem simply by altering the designation of an existing route.

Second, in October 2004 the latest sections of the Disability Discrimination Act (1996) become law requiring service providers to make 'reasonable adjustments' to their offerings so that disabled users can experience them to the same extent as their able bodied counterparts. In the context of Public Rights of Way, this may mean ensuring that potential barriers such as 'kissing gates' do not prevent disabled people from accessing the countryside. It may also mean the need for large scale improvements such as re-surfacing, drainage work and the provision of ancillary facilities such as accessible car parks and toilet facilities to enable disabled people to use given sections of a network.

However, what is clear is that the government has seen the Public Rights of Way network as an opportunity to meet parts of its cross cutting agenda, whether it be health benefits or reducing the number of journeys made by car. In part, this research examines the role that multi-use routes and trails can make to this agenda by looking at the compatibility of different users types making use of the same access resources.

Two important issues which affect the extent to which multi-use routes can contribute to the government's wider agenda for the Rights of Way network is safety and danger. There is a view that multi-use routes are dangerous because of the potential for collisions between users and that the differing values of user types can lead to verbal or physical aggression which in turn is a safety issue. The lack of empirical evidence in the public domain often results in people's support or lack of support for multi-use routes being based on their own values and prejudices rather than objective evidence. The applicability of this research is to provide a tool which will help Devon County Council staff with responsibility for multi-use routes to make effective management decisions on the basis of evidence rather than emotion.

1.3 Report structure

Following this introduction there follows two predominantly literature based chapters (Chapters 2 & 3). The first of these looks at issues relating to 'conflict' in terms of what conflict is and how it might be managed. The second literature chapter examines the demand for walking, cycling and horse riding to contextualise the broad patterns of usage of multi-use routes.

Chapter 4 is the methodology section which details the means by which data was collected and which also appraises the strengths and limitations of the findings. Chapter 5 presents the results of the various lines of inquiry and concludes with a summary of the key findings. Finally, in Chapter 6 we present the key recommendations for proposed action arising from the research.

2. CONFLICT IN CONTEXT

This section of the report draws heavily on research conducted for the Countryside Agency in 2000 by staff at the University of Surrey[2].

2.1 Meanings of conflict

The word 'conflict' is used often in common parlance without a full understanding of what it means. Furthermore, 'conflict' can mean different things to different people. The combination of these factors means that it is difficult, if not impossible, to measure conflict as a concept because it needs to be defined before it can be measured. One of the first tasks undertaken by the University of Surrey was to derive what might be meant by conflict so that experiments could be conducted to test for the presence of conflict. The key finding from the research into defining conflict was that there are two types of conflict: firstly, actual conflict; and, second perceived conflict.

> **Actual conflict** can be 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 cited in Countryside Agency 2000 *op. cit.*). Using this definition, actual conflict might occur as a result of users on a busy trail being unable or unwilling to give way to each other. Alternatively, the surface of a trail which was impassable because of poor maintenance might be an environmental cause of actual conflict. The important point of note is that actual conflict is an all or nothing concept, that is, a person's actions or intended actions must be blocked, or their collision zone must be violated for actual conflict to have occurred.
>
> **Perceived conflict** by contrast can be defined as 'a multi-causal, negative psychological state, reached through variable combinations of psychological, social and environmental factors' (Countryside agency 2000 *op. cit.*). Unlike actual conflict, which is all or nothing, the degree of perceived conflict experienced can vary between different users and within individuals at different times. As an example, a cyclist approaching a walker (or indeed a fellow cyclist) from behind might ring his or her bell with the intention of alerting people ahead. One person might interpret this act as a friendly gesture whilst another might interpret it as an act of aggression. Equally, the same person might interpret the ringing of a bell behind them on one occasion as a friendly warning and on another occasion as an act of aggression depending on their mood, the person giving the warning and the manner in which the warning is made.

Perceived conflict can be caused by any one or any number of the following factors:

> 'Competition for shared resources'. There may be times where there is a limited amount of space and there is in effect competition for that space by a number of users. If a person perceives that the volume of users or the nature

[2] The Countryside Agency, 2000, User interaction on non-motorised shared use routes, The Countryside Agency, Cheltenham.

of other people's use of the resource is incompatible with their own, then perceived conflict can occur. Shared resources need not only mean space, it can also refer to qualities such as peace and quiet.

'Escalating annoyance'. Perceived conflict is not all or nothing and can occur at various levels of intensity depending on factors such as mood and location. Therefore it is possible for perceived conflict to escalate not as a result of a single incident but as a result of repeated incidents of a similar nature. Constantly having to give way to other users on a path or trail whilst not having the courtesy returned is an obvious example of how escalating annoyance might arise in practice.

'Negative experience'. Users may have a negative experience of a path as a result of factors such as noise, crowding or feeling isolated and unsafe. These factors can create a negative experience, that is, perceived conflict.

'Goal interference'. If people are taking part in a recreation activity with a particular goal in mind, for example, to have some solitude, then anything which interferes with the achievement of that goal can cause perceived conflict. A utility cyclist wishing to get to work reasonably quickly might have his or her goal interfered with if the route he or she normally used is congested with tourists, resulting in the need to give way or 'weave' around people rather than making smooth linear progress without interruption.

'The minimisation of expected benefits'. Users choose to undertake a particular activity because it will provide them with satisfaction or 'utility'. Anything which reduces the amount of utility gained from an activity such as feeling crowded or intimidated will cause perceived conflict.

'Mutually exclusive use / goals / values / norms'. It is possible that certain activities are incompatible as a result of differing uses of a resource. Fishing and cycling along canal footpaths is often seen as being incompatible, as is fishing and boating. Part of the primary research seeks the views of users and the general public regarding their views on the compatibility of walking, cycling, horse riding and wheelchair use of multi use routes.

'Manner / purpose of use'. Users utilise routes for different purposes. The utility cyclist has different motivations for using a trail compared with a family including young children who are on holiday.

'Attributions of blame to others / external factors'. A major source of perceived conflict occurs when users attribute blame to either other users or the environment for causing interference to their own goal attainment. Cyclists or walkers might attribute the blame for a waterlogged or churned up route to horse riders. In reality the cause of a route being impassable (goal interference) might actually be attributable to heavy rainfall or poor maintenance. This attribution of blame can lead to the users whose goals have been interfered with having a negative attitude towards, for example, horse riders as a whole. Thus it would be possible for a walker to perceive conflict

from all horse riders despite the fact that the initial cause of the conflict had nothing to do with horse riders.

'Perceived control over desired outcome'. The extent to which users consider that they have control regarding the outcome they wish to achieve from using a path affects perceived conflict levels. In essence, the higher the degree of perceived control the lower the degree of perceived conflict and vice versa. If a user wishes to exercise his or her dog 'off the lead' and the conditions of use of a trail are that dogs must be kept on a lead, then the user has reduced control over the goal being sought which in turn might lead to heightened perceived conflict.

'Prior knowledge and experience'. Individual biases and prior experiences (positive or negative) will have an effect on perceived conflict levels. If people are scared of horses for whatever reason, then passing a horse on a trail may lead to feelings of fear and hence perceived conflict regardless of the behaviour of the horse and its rider. Thus an occurrence which might be perfectly routine and stressless for one user, may result in perceived conflict for another user simply as a result of prior experience and personal values.

The principal causes of perceived conflict are the extent to which an individual's goals are prevented from being achieved and how the user whose goals have been frustrated attributes the blame. Perceived conflict can be caused by a combination of environmental factors and social factors; environmental factors in isolation; and social factors in isolation. However, perceived conflict caused by any combination of these factors is more a function of users' social biases rather than the physical properties of trails or the concept of multi-use. In other words, people are the main causes of conflict, not the environment. The various causes of perceived conflict confirm that perceived conflict is a multi-dimensional concept and in recognition of this, the University of Surrey research team devised a continuum of four factors to represent what is meant by perceived conflict. An adapted version of the components of the definition is outlined below.

Peaceful ---------- Hostile

[insulting, provocation, violence and fighting]

Unintrusive ---------- Intrusive

[crowding, delay, gesturing, speeding]

Co-operative ---------- Competitive

[disagreement, collision, argument, inconsiderate]

Agreeable ---------- Disagreeable

[anger, animosity, inconsistency, encounter]

Having defined 'conflict' and 'perceived conflict' we now assess the evidence for both types of conflict being present on multi use routes.

2.2 Evidence of conflict / interaction

2.2.1 Evidence of actual conflict

The University of Surrey research for the Countryside Agency filmed 1,500 users of five different multi-use trails in England as they travelled a distance of 250m. The vast majority of users were walkers and cyclists (96%) with the remaining 4% comprised of runners, horse riders, rollerbladers, others, and one wheelchair user. From the sample of 1,500, 324 people were interviewed on site and then took part in a postal survey some 2-3 weeks later. The key finding across all five sites was that meeting others on the trails was a relatively rare occurrence. This finding may be somewhat surprising but can perhaps be understood by looking at the behaviour patterns of cyclists and walkers.

Cyclists tend to travel at around 3.9 m/s (14 km/hr) and walkers tend to travel at around 1.14 m/s (4 km/hr). As there is little variation in the speed of cyclists and walkers generally, it follows that walkers will be unlikely to overtake other walkers and cyclists will be unlikely to overtake other cyclists. The most likely occurrence is for users to pass each other when travelling in opposite directions.

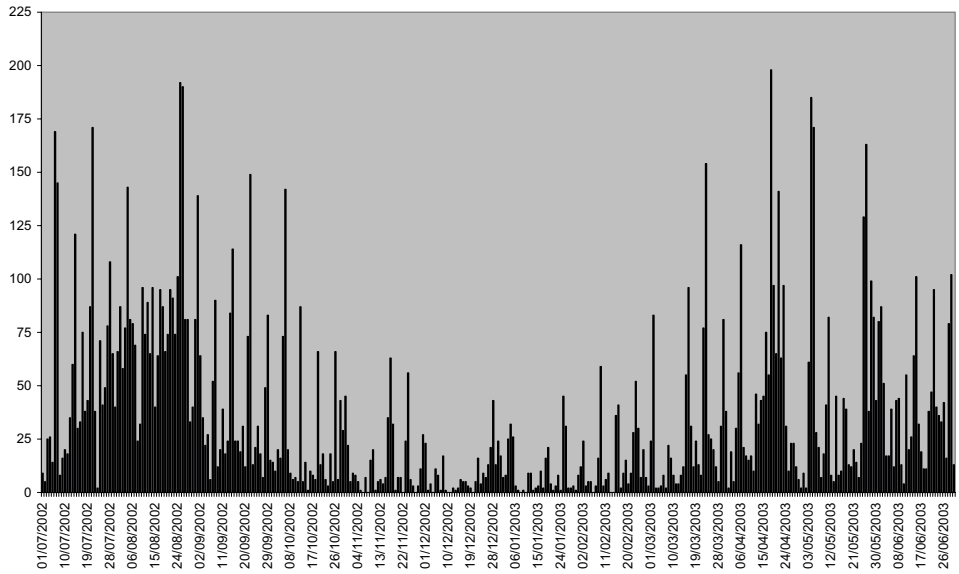
Under these circumstances the observed response of cyclists is to slow down and attempt where possible to keep to the left of a path. This response is noticed whether the cyclist is approaching a pedestrian or a fellow cyclist. In the case of walkers the observed response is for them to straighten their line, thereby walking less erratically and therefore more quickly. Even meeting people travelling in the opposite direction is comparatively rare event with the time between meetings for users travelling in opposite directions being on average 5 minutes to 28 minutes.

If meetings with other people are relatively rare, then it follows that experiencing conflict when encountering others must be even rarer. This therefore suggests that actual conflict caused by other people on multi-use routes is probably less than might be imagined when working with anecdotal evidence and loose definitions of what conflict actually means. From a different perspective, person to person actual conflict requires higher levels of interaction than is found on typical multi-use routes. Thus an objective way of looking at the likely incidence of actual conflict can be gauged by assessing usage statistics of key sites.

We were provided with the raw data from counters on various sections of the Tarka Trail and the Granite Way by staff within Devon County Council. These counters automatically register a 'count' when they are passed by a trail user and are usually placed at strategic points along any given trail. The vast majority of users (80% according to Sustrans) are taking part in a circular walk or ride and thus they will register two counts on their journey, that is, one count on their outward journey and one on their return. Thus raw counts tend to overstate the number of different users by 80% (if the Sustrans figure is accurate). To illustrate the basic point about the level of 'traffic' passing given points we have plotted the raw number of counts against time to derive a feel for the level of activity along certain multi-use trails. Graph 2.1

shows the data for the counter on Meldon Viaduct from 1st July 2002 to 30th June 2003.

Graph 2.1: Meldon Viaduct 'counts' 01/07/2002 - 31/06/2003



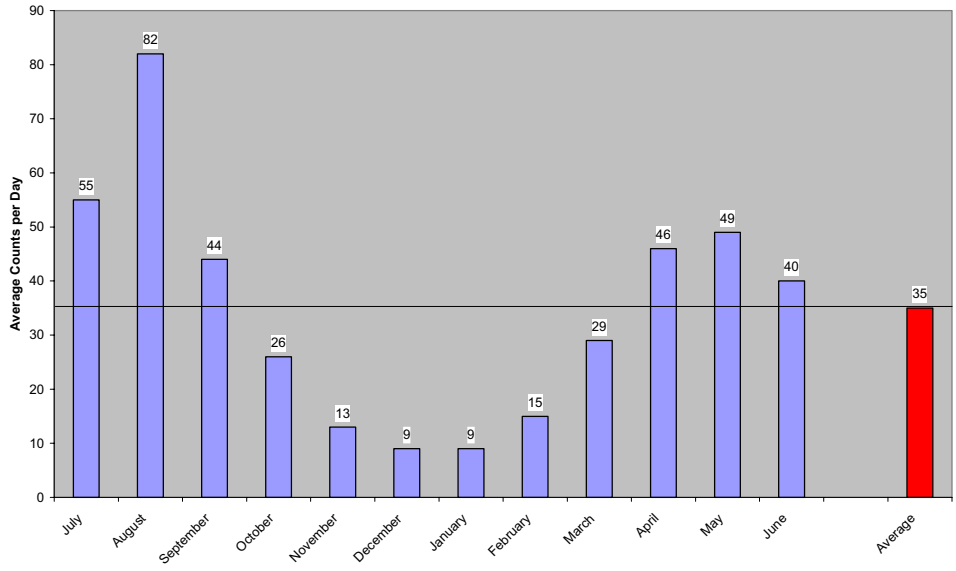
There are two key points arising from the data in Graph 2.1.

1. The number of counts recorded at the site is clearly seasonal with peak periods being July, August, September, April (Easter) and May (2 Bank Holidays).

2. There are peak times and off peak times during every week regardless of the overall volume of traffic at any give time of the year. There are 'spikes' on weekends and troughs (in relative terms) during the week.

What is perhaps a surprising finding is that when taken over a year the average number of counts per day is 35. Again this figure is subject to seasonality and the peak and off peak variations. To illustrate the average number of counts per day on a seasonal basis Graph 2.2 shows the Granite Way data in Graph 2.1 expressed as average counts per day per month and also shows the annual average of 35.

Graph 2.2: Granite Way average counts per day per month



The maximum average daily count is 82 in the month of August. By taking the Sustrans figure of 80% of users being on circular journeys and therefore registering two counts, the estimated number of daily users in August 2002 was 49. The user base is spread throughout the day with peak times being around 11am to 4pm. Thus even in the busiest periods of the Summer season the opportunity for actual conflict caused by person on person would appear to be relatively low. Data counts for other sites in Devon are shown in Table 2.1.

Table 2.1: Counts at other sites in Devon

Location	**Daily Count (Average)**
Civic Centre	136
Sticklepath	145
East the Water	79
Bideford Old Bridge (west bound)	120
Weare Gifford	66
East Yarde	11
Petrockstowe	5
Jacobstowe	2
Holsworthy Derriton	7
Shaugh Tunnel	21

Caveat

The data presented in Table 2.1 was provided by Devon County Council. There are instances where the data relates to periods of more than one year and less than one year. There are also instances where there are unexplained gaps in the data when perhaps counters were not working or otherwise not in use. Consequently, there is no way of comparing the counts on a like for like basis. The data in Table 2.1 is therefore based on the maximum data available for each site and gaps in the data are ignored rather than counted as zero.

The data in Table 2.1 shows considerable variation by site with relatively high levels of usage in urban / urban fringe areas such as Barnstaple Civic Centre and Sticklepath (near Okehampton) and low levels of usage in more rural locations. Even in the case of the most used route (Sticklepath) an average of 145 counts per day spread out over a day could not be considered to be high volume usage of a resource.

The seemingly low usage figures for the Granite Way can be supported by our own research findings in October 2003. On October 28th 2003 a researcher was placed on the Granite Way on Meldon Viaduct. Every user who passed was intercepted and interviewed (there were negligible refusal rates) and a total of 23 interviews was conducted - this is highly consistent with the October 2002 average of 26 users recorded by the logging device on Meldon Viaduct.

On Sunday 4th January 2004, two researchers worked on the entire Granite Way. One worked in the area between Okehampton Station and Meldon Viaduct and the other rode a bicycle from Meldon Viaduct to Lydford and return interviewing all users encountered. A total of 49 interviews was completed by our researchers between 10am and 5pm along the entire Granite Way on a peak day (Sunday). The findings from the number of interviews in various locations reinforce the notion that the volume of traffic on multi-use trails is limited and that therefore the likelihood of person to person conflict is low.

Research from the North York Moors National Park[3] found that 1% of walkers and 4% of cyclists had experienced 'conflict' on the day on which they were surveyed. When asking if these users groups had ever experienced conflict, the totals rose to 6% for walkers and 18% for cyclists. The definition of 'conflict' used in this survey was not as objective as that used in the Countryside Agency (2000) research but nonetheless the findings make the point that when even a self defined interpretation of 'conflict' is used, its incidence is low. Furthermore, the incidence of person to person conflict ever being encountered in an entire lifetime of walking and cycling also appears to be low with a maximum score of 18% for cyclists.

There is only limited evidence in the literature concerning the existence of actual conflict caused by environmental factors. That is there is little evidence that people's goals have been obstructed as a result of path condition or maintenance. Paths tend to be rated highly by users and although people may make adverse comments about path maintenance, encroaching vegetation, puddles or rutted surfaces, there is no body of evidence that indicates that these problems prevent people from achieving their goals.

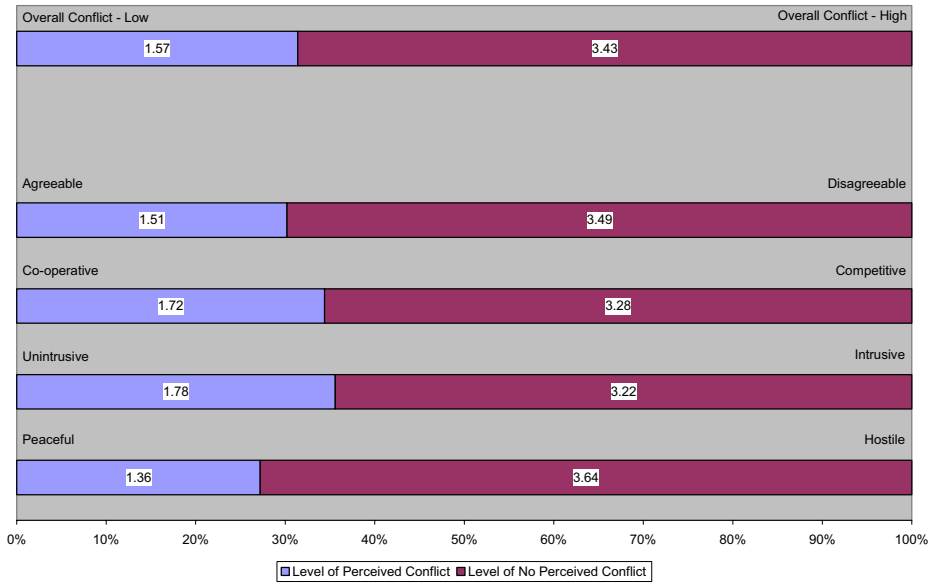
Most comments about environmental aspects of routes should be reviewed under perceived conflict as they tend to be indirect prevention of goal attainment caused by a fear (perception) rather than actual events. For example, women might not use secluded paths or trails on their own for fear of attack. This does not mean that the path in question is inherently unsafe, rather that there are certain environmental factors that might lead certain users to feel unsafe. We now consider the case of perceived conflict in greater detail.

[3] North York Moors National Park Education Survey, (1995) The Cleveland Way User Survey, NYMNPES, Yorkshire.

2.2.2 Evidence of perceived conflict

In the Countryside Agency (2000) research on site interviews with 324 trail users sought views on the various dimensions of perceived conflict defined above in 2.1. The key finding across the sample as a whole and the five individual sites was that the vast majority of people's experience of paths and their encounters with other users is peaceful, unintrusive, cooperative and agreeable. The scores for each dimension of perceived conflict are shown in Graph 2.3.

Graph 2.3: Mean scores for perceived conflict dimensions



The results shown in Graph 2.3 were replicated closely at all five sites which led the researchers to conclude that the levels of perceived conflict recorded could be generalised more widely to other multi-use routes. That is, there are relatively low levels of perceived conflict on multi-use routes in general.

Subsequent research using postal surveys with those who had been interviewed previously on the multi-use trails found relatively high levels of perceived conflict to various hypothetical scenarios compared with the levels of perceived conflict found on the basis of actual experience of using a trail. The cause of the heightened perceived conflict was attributable to what respondents considered to be 'inconsiderate' behaviour rather than factors such as the width or maintenance of paths. Thus even when the width of a path might not be ideal for users or groups of users to pass without modifying their direction or speed, this need not be a cause of perceived conflict. So long as people are considerate to each other and make gestures such as giving way, changing from walking / riding two abreast to single file, or acknowledging a courtesy, then passing on multi-use paths should not be a cause of perceived conflict regardless of surface width.

As perceived conflict increases, then factors which have a potentially controlling influence such as path width and speed control can have an influence in reducing perceived conflict. Where people feel a degree of uncertainty it is often caused by not

knowing the appropriate etiquette for a given set of circumstances. Thus if there is a hierarchy of priorities to focus on in order to reduce conflict it is behaviour first and environmental considerations such as path width and user speed second. Furthermore, given that there is relatively little perceived conflict when users are interviewed on site compared with the answers given in hypothetical circumstances, it is likely that in real life the behaviour of others, the type of people on paths and environmental factors are less important to perceived conflict than when people are asked to comment on paths when the comments made are dissociated from a specific instance.

It follows therefore, that any research which is not based upon the opinions of actual users making reference to a specific occasion when they used a multi-use route is likely to be unreliable. This point should be used to qualify the primary research, with the citizens' panel, which is presented later in the report. A total of 264 interviews was conducted with actual users whilst actually using a route and a further 1,194 interviews were conducted with a sample of the adult population of Devon using a postal questionnaire. In the case of the latter survey, particular caution will need to be exercised when looking at the responses to the questions which deal with conflict.

2.3 The effects of conflict on users

Users tend to have three standard responses to conflict: emotional responses; behavioural modification; and active avoidance. Emotional responses to encounters with others on a trail can be both positive and negative. For example if somebody gives way, smiles or says 'hello', the recipient of these courtesies is likely to experience positive feelings, whereas lack of consideration, for example not warning of an approach from behind, can cause negative feelings. The principal causes of anxiety seem to be fear of people approaching from behind and not knowing the etiquette for passing, that is who should give way to who and on what side of the path? In the context of conflict, emotional responses are negative and can lead to feelings of anger, frustration, intrusion and hostility – which in turn could be construed as goal interference.

Behavioural modifications can be relatively minor such as walkers tending to give way or people having heightened awareness about their actions and therefore keeping a more watchful eye on the behaviour of their children or dog. At an intermediate level of perceived conflict, women might modify their behaviour to avoid being on their own and to ensure that they use a well used path where there is a high likelihood of other users being in the vicinity. Some leisure users perceive the commuter cyclist to be a cause of conflict because of the speed at which they travel and because of the single minded and unyielding way in which some commuter cyclists use off-road routes. Conflict between walkers / recreational cyclists and commuter cyclists can be manifest by unwillingness by the former to get out of the way of the latter. Although generally walkers will get out of the way of cyclists, not least of all as they are the ones most likely to get hurt in a collision, on some routes where walkers have priority, they may exercise these rights more forthrightly than usual simply because they are negatively disposed towards commuter cyclists.

Active avoidance, that is, consciously deciding to use another part of a trail, using a trail at a different time, or completely avoiding a trail altogether is a common response to perceived conflict. In Cornwall the Camel Trail has recently been opened

up to equestrians on the same basis that it is open to walkers and cyclists. The limited evidence available to date indicates usage by equestrians in the early mornings and late afternoons and an avoidance of peak times especially during the Summer. In some respects this is an example of trail use being self regulating. Where it is not possible to get the benefits sought from using a trail, for example, regulations such as the need for dogs to be kept on leads at all times prevent dogs being exercised off the lead, then users may make the ultimate avoidance by discontinuing their usage of a trail completely.

2.4 Management attempts to control conflict

Recent American literature[4] suggests that in a recreational context conflict is inevitable and is not necessarily negative. The reasons why conflict is inevitable are largely recognition of the fact that conflict can be caused by emotional or environmental stressors that are specific to a given person at a given point in time. Many factors influence feelings of conflict and the UK literature suggests that the principal cause of conflict is the behaviour and values of others rather than environmental factors. No management action can control the behaviour and values of others and therefore there is certainly a logic to the suggestion that conflict is not entirely manageable if not inevitable.

When looking at conflict from a positive perspective, Hammit and Schneider (2000 *op. cit.*) suggest three benefits of conflict:

- conflict reveals when something within a system is not working properly and thus the conflict can act as a catalyst to test the system's management practices;

- by involving a wide range of stakeholders in the addressing of conflict it is possible to achieve higher quality solutions as a result of the wider range of views and stakeholders involved; and

- conflict keeps managers and organisations on a higher state of alert than normal which may help to prevent complacency and managerial stagnation.

Historically there have been four different management approaches to trying to deal with recreation conflict. These are reviewed in turn below.

Segregation

Early logic suggested that if differing user groups were coming into conflict with each other, then separating users groups from each other would reduce this conflict. The development and promotion of separate trails for walkers, cyclists and equestrians is an obvious example of trying to manage conflict via segregation. The public rights of way network in the UK with its hierarchy of users on footpaths, bridleways and byways is in effect a form of user segregation. Subsequent research revealed that recreation conflict was more than simply a problem of use and space incompatibility because even when user groups were segregated they were still in conflict. Consequently conflict

[4] W.E. Hammitt and I.E. Schneider in W.C. Gartner and D.W. Lime (eds) (2000) Trends in outdoor recreation, leisure and tourism, CAB International.

was deemed to have a psychological rather than environmental cause and research focused on why this might be the case.

Perception / cause

The finding that walkers could be in conflict with horse riders despite the fact that they were using different trails suggested that psychological perceptions, individual differences and the random quirks of human behaviour were evident in recreation conflict. The causes of conflict were not seen as being limitations of the environment, rather differences in people's values and expectations. Therefore, this acknowledged that users and user groups are not homogenous. That is, an intervention or management action could not satisfy all members of a particular user group. Techniques to address conflict ranged from devising the Recreation Opportunity Spectrum (a device which recognised the segmented nature of user groups and which aimed to provide a variety of opportunities for identified user 'market' segments) and user education programmes. The central tenet of these interventions was to try and minimise the potential for conflict by bringing about changes in user behaviour.

Institutional / public involvement

As a result of the users' perceptions being recognised as an important component of conflict management, the process was formalised to include public consultation and involvement in recreation decision making. Public consultation in the UK is best epitomised by Best Value and the need for local authorities to implement the '4Cs' of 'Challenge, Consult, Compare and Compete'. According to Hammit and Schneider (2000 *op. cit.*) public involvement is a 'key component' of conflict resolution and Knopp and Calbeck (1990 cited in Hammit and Schneider 2000) go a step further by stating that 'the process [of public involvement] is at least as important as the result.'

Coping / resolution

As a consequence of people have differing values and norms, recreation conflict is regarded as being inevitable. The increasing segmentation of the public into various user types means that conflict is likely to increase as the values within and between user types are different. Research is currently focusing on how people cope with conflict and managers are realising that as conflict is not fully controllable there are some basic points that need to be grasped. First, many conflicts have little to do with recreation itself, rather the root causes are differences in values and there is little to be gained by trying to control the uncontrollable. Second, conflict cannot be controlled fully, the best that managers can hope for is to minimise the worst effects of conflict. Third, many recreation conflicts can be resolved satisfactorily by individual and group coping strategies without the need to management intervention (e.g. behavioural modifications or avoidance strategies).

If conflict between individuals is not dealt with effectively, it can escalate in to a group (or 'class') conflict such as dog walkers versus cyclists. Current thinking proposes the following model as being best practice in group conflict resolution.

1. Analysis of the issue
The history of conflict is examined and group positions on the key points are established. This identification of the issues phase provides the basis for the next phase 'confrontation'.

2. Conflict confrontation
The confrontation phase involves bringing the parties in conflict together to deal with the most pressing points. The main sources of conflict are defined, options are generated and potential solutions are evolved by negotiation.

3. Conflict resolution
Once conflicts have been confronted, there exists the potential for them to be resolved. Resolution should at least stop further escalation and may even help to develop 'self supporting, self-correcting and sustainable relationships' (Hammitt and Schneider 2000 *op. cit.*).

An example of the multi-faceted nature of potential conflict, and in particular the role of values and attributions, can be seen in work carried out for Scottish Cycling, the governing body for cycling in Scotland. In principle Scottish Cycling is in favour of multi-use routes for cyclists, walkers and equestrians. However its research[5] identified a range of potential conflicts and solutions specific to each user type as shown in Table 2.2.

Table 2.2: Problems and solutions for user groups using multi-use routes

	Walkers	**Cyclists**	**Equestrians**
Problems	1. Ability to instil guilt into other users 2. Main recipients of funding (jealousy) 3. Dogs (barking, biting, fouling)	1. Passing at speed 2. Passing in groups 3. Aggressive 4. Bright clothing 5 Tyre marks / ruts 6. Surprise element	1. Hoof prints in poorly drained soil 2. Heavy use by riding centres 3. Aloofness / deafness 4. Frisky horses
Solutions	Closer working between user groups	Mainly attitudinal conflicts addressable via education of off-road cyclists	Proper drainage, temporary diversions, segregation in selected areas, rider education

[Source: Scottish Cycling 2003]

Table 2.2 confirms that many of the problems or conflicts are functions of user groups' perceptions of other user groups, values, attributions and prior experiences and are therefore not directly controllable by management action. Implicit in the solutions to the problems caused by horse riders in Table 2.2 is the notion of 'local solutions to local problems' (temporary diversions and segregation in selected areas) rather than a 'one size fits all' approach. On the basis of the evidence available, it is

[5] http://scottishcycling.org/db/reports/routes_des.html

our view that there is no universal approach that can be applied which will minimise conflict.

2.5 Key points

- There are two types of conflict, namely 'actual conflict' and 'perceived conflict' both of which have precise definitions and meanings.

- There is very little evidence from actual users of multi-use routes of the existence of actual and perceived conflict on such routes. There are two main explanations for this assertion. First, multi-use routes are used less than is imagined, thereby limiting the opportunities for conflict. Second, the vast majority of users on multi-use routes are considerate towards others.

- Inconsiderate behaviour seems to be the principal cause of conflict rather then environmental factors such as path width and surface condition. Research has shown that conflict has a psychological dimension that is a function of people's values, attributions and prior experiences. It is possible for one user group to be in conflict with another even though they are using segregated paths, that is, in these instances psychological factors are more significant than environmental factors.

- Users deal with conflict in any combination of three ways: emotional responses such as a feeling of anger or annoyance; behavioural modifications such as being more alert or avoiding secluded areas; and avoidance such as rescheduling usage to off-peak times or avoiding a route altogether.

- Managers use a variety of techniques to try and control conflict such as segregation, influencing and modifying user behaviour, public consultation, and conflict resolution procedures.

- Managers cannot eliminate conflict although there are some interventions which may help to reduce conflict. Some conflicts do not need management intervention and can be dealt with via users' own coping mechanisms.

- There is no universally applicable formula that can be applied to the management of multi-use routes which will eliminate conflict. Public consultation and involvement plus the use of local solutions to local problems appear to be the most appropriate techniques to minimise conflict from both a process and an outcome perspective.

3. DEMAND

3.1 Literature sources and definitions of demand

There is currently only limited information in the public domain that might help Local Highway Authorities to appreciate the nature of walking, cycling and horse riding within the context of Rights of Way Improvement Plans and countryside access. It is therefore necessary to analyse studies which contain generic countryside activity data and to use this data to inform an assessment of activity levels and the formulation of policy regarding multi-use routes.

In essence, there are three types of studies to consider: first, large studies such as the General Household Survey[6] and the Countryside Agency Rights of Way Use and Demand Survey[7] which interviewed representative samples of the population (c. 16,000 and 1,500 respectively; second, surveys which have been carried out specifically on given user groups; and third, hybrid surveys which interview the general public to identify an activity related sub-sample which is subsequently subjected to further more in depth research such as The National Equestrian Survey[8].

Most surveys tend to focus on adults only because of difficulties obtaining parental consent to interview minors. This therefore means that the views and characteristics of young people can often be ignored in research of this type. Since 1994, MORI[9] have conducted surveys into young people's participation in sport. Sample sizes in the MORI surveys have been around 3,000 to 3,500.

The surveys identified above have been reviewed and where appropriate re-analysed to provide the optimum amount of information to help understand the issues relating to multi-use routes from a demand perspective.

For the purpose of Rights of Way Improvement Plans and bearing in mind the DEFRA guidance relating to such plans, there are two types of demand. First 'expressed demand' which refers to demand that is currently being met and which can be measured, for example, the number of users of a trail over a given period (see Graph 2.2 and Table 2.1. Second, 'latent demand' which refers to demand that is currently unrealised but which might materialise if a constraint or series of constraints were overcome.

Demand can be measured in four ways.

- The percentage of the population who take part in a given activity, for example, 44.5% of adults claim to go walking at least once every four weeks. This statistic can then be applied to the adult population as a whole so if there

[6] Sport England / UK Sport (1999) The General Household Survey: Participation in sport in Great Britain in 1996, Sport England, London
[7] Countryside Agency (2001) Rights of Way Use and Demand Study, Countryside Agency, Cheltenham
[8] British Equestrian Trade Association (1999) National Equestrian Survey 1999, Wetherby, West Yorkshire
[9] MORI (1994) (1999) and (2002) Young people and sport in England, Sport England, London.

are 58.8m[10] people in the United Kingdom and 47m are adults, then the total number of walkers in the UK is 20.9 million i.e. 47m x 44.5%. Computing the number of people who participate in a given activity is a useful start, but it needs to be linked to the frequency with which they participate in order to calculate the number of participation occasions or 'activity days'.

- Gross demand takes the number of people who participate in a given activity and multiplies it by the number of occasions on which they take part. We know that there are 20.9 million adult walkers, so the number of walking occasions taken is the number of walkers multiplied by the frequency with which they take part. The General Household Survey states that walkers who participate at least once every four weeks do so on 8 occasions per 28 days, that is, twice per week. Therefore gross demand is 20.9 million walkers x 8 walking occasions = 167.3m walking days per 28 days. This figure can be annualised by multiplying by 13 (i.e. 13x28 day cycles in a year) or more realistically 12 to allow for holidays, then gross demand for walking is approximately 2 billion walking days per year.

- Demand can also be expressed as a cash value in terms of the value of the market. However, walking tends not to involve any direct expenditure (e.g. entrance fees) and the involved expense also tends to be very varied (e.g. footwear, travel, food and drink etc.). Therefore it would be very difficult, if not impossible to accurately assess the value of the walking market. No further analysis of market value is considered in the report.

- Finally, demand can be expressed as a function of time spent on an activity. 20.9m people going walking for say an hour each 8 times per 28 days throughout the year indicates a demand for 2 billion hours of walking. The significance of time is that often the major constraint to participation or more participation in an activity is not money but time. This is particularly important in the context of Rights of Way and countryside access where the direct cost of participation is nil or negligible but the indirect costs such as time may be considerable.

Having defined a working definition of demand and how it might be applied to the context of Rights of Way, we now examine the data in the public domain concerning the demand for walking, cycling and horse riding.

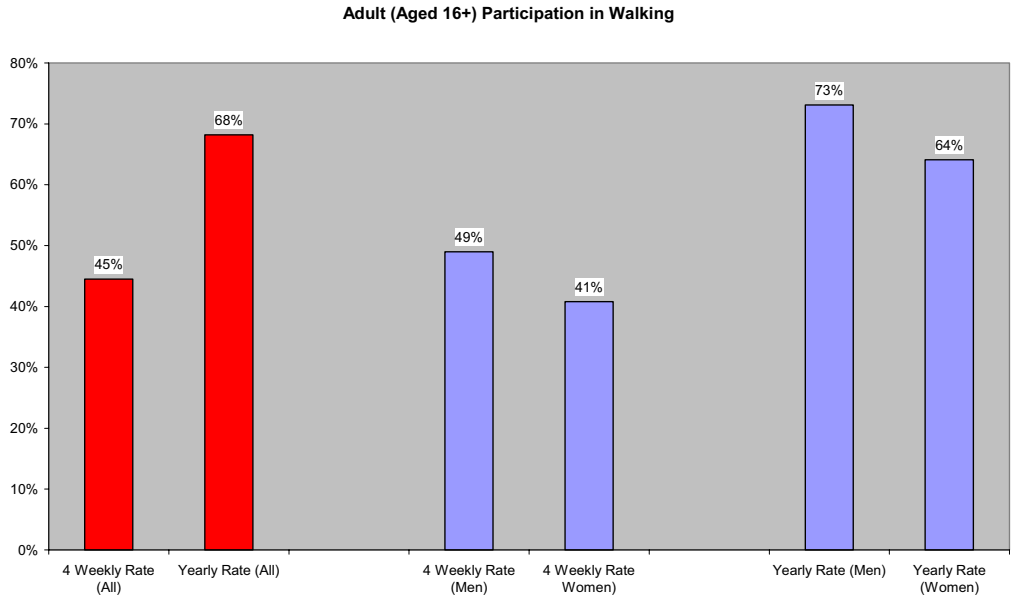
[10] Office for National Statistics, (2003) Census 2001, Office for National Statistics, London

3.2 The demand for walking

3.2.1 Adult participation rates and participant characteristics

The headline figures for adult participation in walking from the General Household Survey (1996) are shown in Graph 3.1. The definition of 'walking' used in the GHS is 'taking a walk or hike of two miles or more for pleasure'.

Graph 3.1: Adult participation in walking 1996

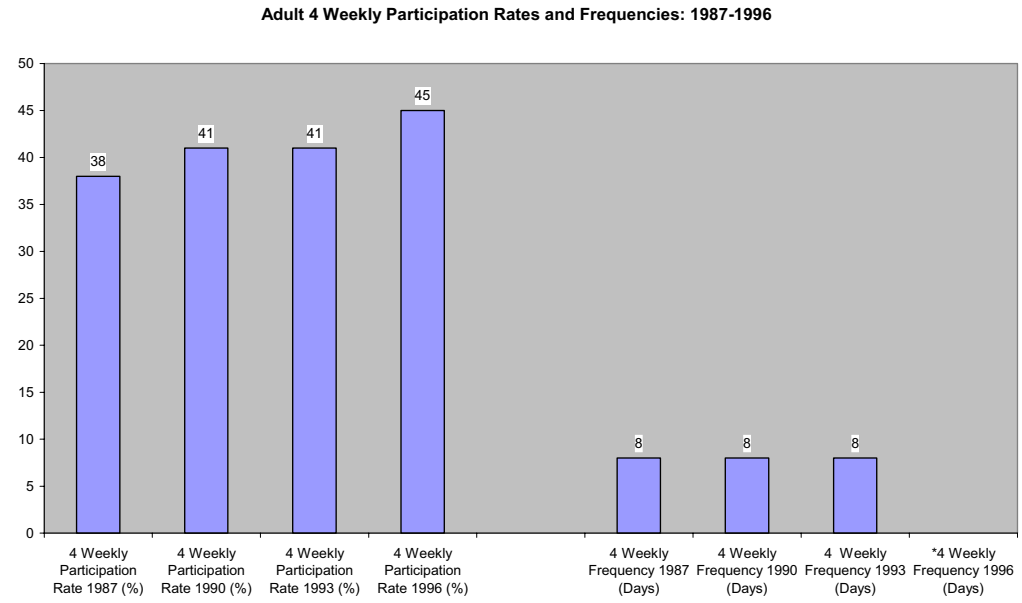


Graph 3.1 shows that 44.5% of adults in the UK take a walk or hike of two miles or more at least once every four weeks and that 68% go walking at least once per year. There is a statistically significant gender imbalance with men more likely to be walkers than women. Applying the sample statistics in Graph 3.1 to the population as a whole suggests that there are 20.9 million adults who go walking at least once every 4 weeks and 32 million adults go walking at least once per year.

To put the data in Graph 3.1 into a wider context, walking is by far the most participated in sport and recreational activity in the UK. The second most popular sport in the UK is swimming with a four weekly participation rate of 14.8% and an annual participation rate of 39.6% (mainly as a result of people swimming whilst on holiday). In terms of the average amount of participation per adult per year there are 40.8 activity days per year for walking and the next highest scores are recorded in cycling (11.6) and keep fit / yoga (10.8).

Participation rates in sport and recreation in the UK have been stubbornly static between 1987 and 1996 despite the efforts of bodies such as Sport England and new funding via the National Lottery. Two recreation activities have bucked this broad trend, namely walking and cycling. Time series trends from the last four General Household Surveys in the four weekly participation rate and the frequency of participation are shown in Graph 3.2.

Graph 3.2 Trends in walking participation and frequency of participation



*Frequency data were not collected for walking in 1996.

In 1996 the 4 weekly participation rate for adult walking was 44.5% and the average frequency of participation was 8 times per 28 days (frequency of participation data were not collected in 1996, but previous data suggest this figure was unlikely to have changed). The frequency of participation for walking is stated as 8 times per 28 days but in reality this could be anywhere between 7.50 and 8.49 times per 28 days. Allowing for holidays and time away from home, a prudent estimate for the gross demand for walking by adults would be 20.9 million adults x 7.5 days on which they went for a walk x 12 months = 1.88 billion walking days in 1996. The frequency with which adults walk has not changed since 1987, however the number of people participating in walking has increased from 38% to 45% between 1987 and 1996. As the population has grown slightly in this period, then it can be concluded that demand for walking increased between 1987 and 1996.

The GHS also reveals that there is on average 40.8 walking days for each adult in the United Kingdom. As the UK has 47m adults, this suggests that 1.9 billion walking days are generated per year (the figures used for this calculation were taken from the 1993 GHS, as frequency of participation questions were not included in the 1996 GHS for walking). These figures enable some very important calculations to be made that indicate the nature of walking in the UK.

Table 3.1: Analysis of adult walking statistics in the UK

	Total (All Walking)	**Regular Walking (4 Weekly Rate)**	**Infrequent (All - 4 Weekly Rate)**
Participation rate	68.2%	44.5%	23.7%
Number of adults	32,054,000[1]	20,915,000	11,139,000
Number of days	1.92b	1.88b	40m (i.e. 1.92b-1.88b)

[1]32,054,000 adult walkers = 47m adults x 68.2% of whom who walk at least once a year

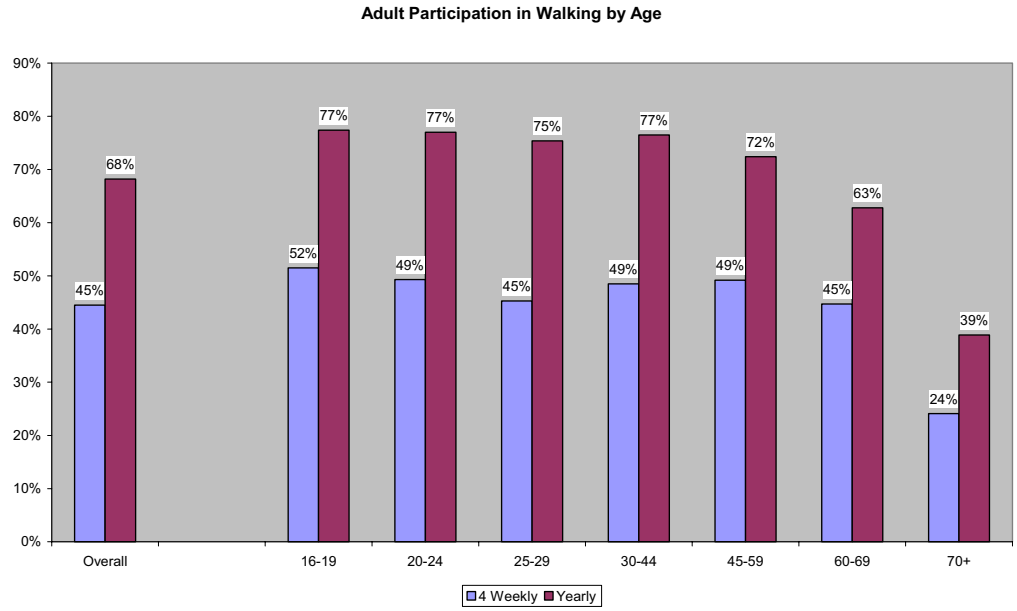
The key point of note from Table 3.1 is that the 20.9m adults who walk at least once every four weeks account for 1.88b out of 1.92b walking days (98%). Therefore it can be seen that there is a very significant minority of walkers who account for the vast majority of activity days. The 11.1m people who walk at least once a year do so on a very infrequent basis relative to the walkers who participate at least once every 4 weeks. Assuming a population of 705,000 people in Devon (2001 Census) of whom 577,000 (82%) are adults, it would be reasonable to expect the breakdown of adult walkers' activity days shown in Table 3.2.

Table 3.2: Analysis of adult walking statistics in Devon

	Total (All Walking)	**Regular Walking (4 Weekly Rate)**	**Infrequent (All - 4 Weekly Rate)**
Participation rate	68.2%	44.5%	23.7%
Number of adults	393,514	256,765	136,749
Number of days	23.54m	23.11m	00.43m

The GHS also contains some demographic profile data of participants and the results of the cross tabulations by age and socio-economic group are shown in Graphs 3.3 and 3.4. respectively.

Graph 3.3: Age profile of adult walkers.

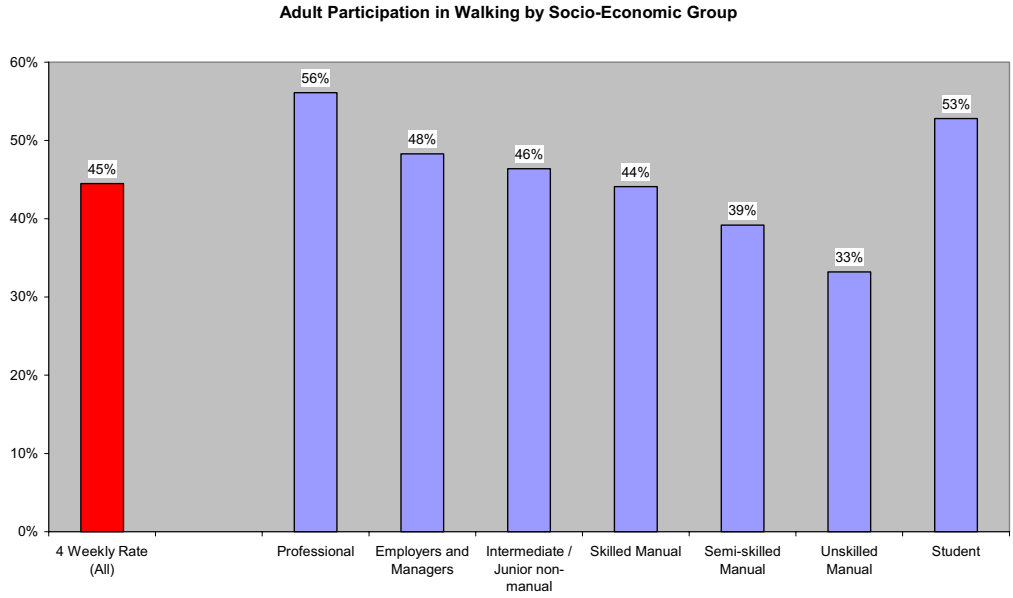


Amongst regular adult walkers, participation rates remain relatively constant throughout the age groups, tailing off into the 70+ age group. However, the key point is that a significant level of intensive walking is found across all age groups.

For occasional adult walkers, participation rates are average or above from ages 16-69. Because the intensity of participation, and by implication commitment, is not so high for occasional walkers, there is evidence of walking being a relatively ageless

activity for adults compared with more physically intensive activities such as team sports.

Graph 3.4: Socio-economic profile of adult walkers.



Walking appears to be relatively popular across all socio-economic groups compared with participation rates in other activities, although there is a steady decline from higher to lower socio-economic groups.. There is evidence of over representation amongst the higher socio-economic groups, particularly those classed as professionals where the 4 weekly rate is 56% compared to the average of 45%. Adults classed as students also have a high participation rate of 53%.

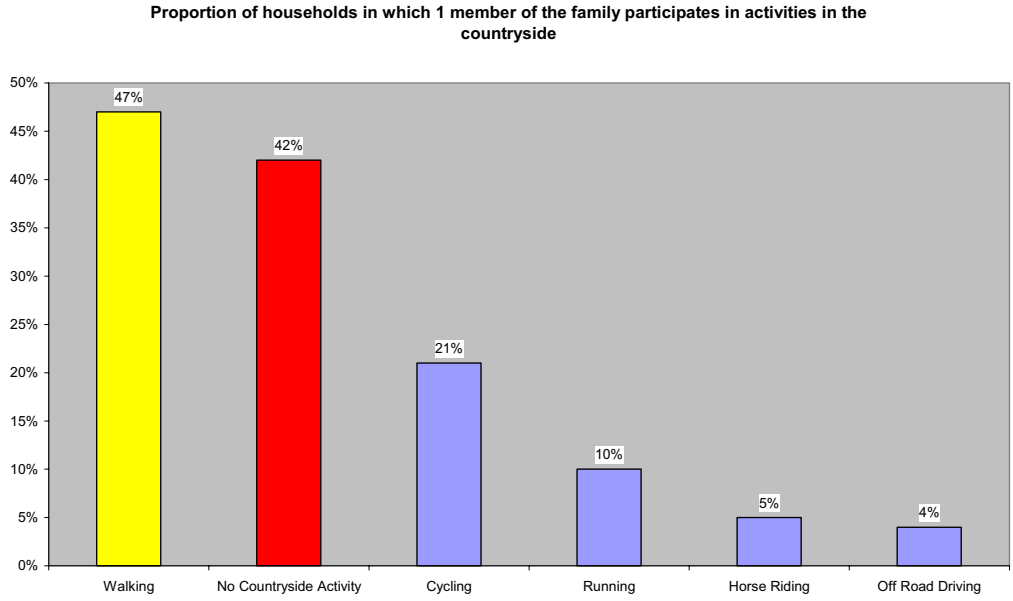
In summary the GHS reveals that walking is a popular activity across all ages and socio-economic groups, with an adult participation rate of 45% for regular walkers and 68% for occasional walkers. The minority of regular walkers account for the vast majority of walking occasions. Participation in walking is higher for men whose 4 weekly participation rate is 45% compared to 41% of women. The GHS does not reveal the nature of the access resource used by walkers and for this data we turn to the Countryside Agency's 2001 study.

3.2.2 Adult participation rates and access resources used

The quantitative side of this research gathered responses from 1,540 adults (aged 15+ (in the GHS adults are classed as 16+)) and asked whether or not any member of the household, that is including children, had participated in a list of countryside recreation activities in the last year. Furthermore, respondents were asked if the reported participation took place in the countryside, and if so, on what type of route. From the 1,540 household interviews, the walking sub-sample of 47% meant that 724 households with walkers were included in the sample. A sub sample of 724 is subject to a sampling error of +/- 3.6% and therefore the findings from this sub sample are

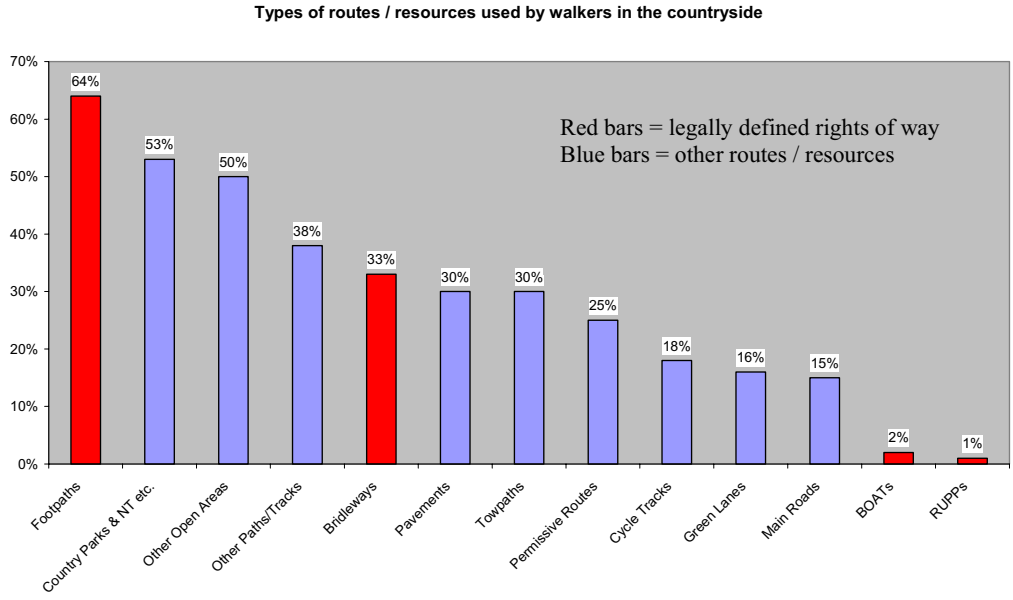
subject to relatively small sampling errors. Graph 3.5 shows the headline findings from the CA 2001 research.

Graph 3.5: CA 2001 participation rates



Walking was the most popular activity and was participated in by 47% of households. Graph 3.6 shows the type of routes used by each user group.

Graph 3.6: Walkers in the CA 2001 survey



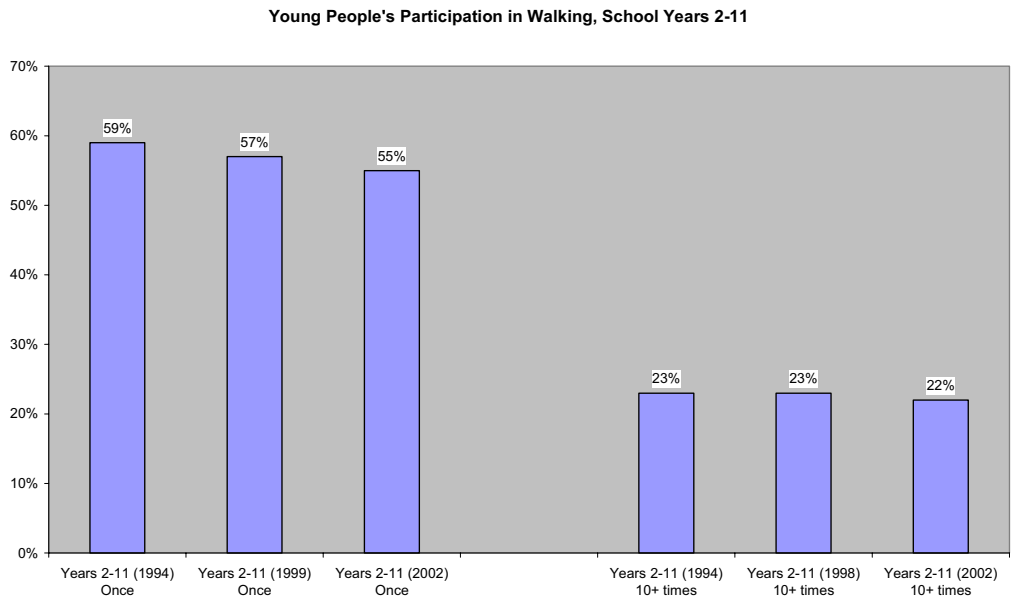
Perhaps unsurprisingly the most commonly cited access resource used by walkers was footpaths (64%). Owing to the limitations of people's understanding of the

technicality of Rights of Way, 'footpath' cannot be assumed to mean footpaths as defined by Rights of Way legislation, but may also include pavements. However, significant use was also made of other resources such as Country Parks and other visitor attractions in the countryside (53%) as well as undefined open areas (50%). Compared with the use made of footpaths, walkers' usage of multi-use resources such as bridleways (33%), towpaths (30%) and cycle tracks (18%) was relatively low. This finding is consistent with the Countryside Agency (2000) research conducted by the University of Surrey which found that on multi-use tracks 96% of users were walkers and cyclists. The balance of use was heavily skewed in favour of cyclists (64% of all users) compared with walkers (32% of all users).

3.2.3 Young people's participation in walking (MORI 1994 - 2002)

Walking in the countryside is not an activity normally undertaken as part of the school curriculum and therefore it should be noted that walking by young people is an out of school activity. Two participation rates are computed namely an 'at least once in the last year' rate (directly comparable with GHS, CA 2001 and NES 1999) and a frequent participator rate of 'at least 10 times in the last year', which is not directly comparable with any other surveys. Trends in young people's participation in walking using both participation rates is shown in Graph 3.7.

Graph 3.7: Young people's participation in walking (MORI 1994-2002)



Graph 3.7 shows an 'at least once in the last year' participation rate of 59% in 1994 declining to 55% in 2002. For more frequent participation (10 times in the last year) the rate has consistently been 22% or 23% (22% in the most recent survey 2002). These statistics replicate the findings in the adult surveys that a minority of walkers account for the majority of walking occasions. Although the yearly trend in walking appears to be downwards, the differences in participation rates are not large enough, or over a long enough period to prove that participation in walking amongst young

people is declining. That is, it is quite possible that any variation in participation rates is a function of sampling error rather than being a 'real' difference.

In the same way that the sample statistics from the GHS surveys can be used to estimate the number of adult walkers in the population as a whole, so too it is possible to make estimates about the number of young people who take part in various activities using Sport England's data on young people in sport. The population in the UK is 58.8m of whom 47.0m (80%) are aged 16 and over and who are classed as adults. This means that there are 11.8m (20%) people in the UK aged 15 and under and who are classed as children.

In the interests of prudent accounting we have discounted children in the age bands 0-4 (3.5m) from the demand estimates because although they may be able to walk, it is unlikely that they will be able to walk or hike for 2 miles, cycle or ride a horse. Thus the number of children eligible to be included in demand estimates is 8.3m (i.e. 11.8 - 3.5).

What is not possible with the data from the young people's surveys is to make an informed estimate of the frequency of participation by young people. The regular participation rate is defined as '10 or more times per year' which could be taken literally as 10 activity days. However, in the case of regularly participating adults the GHS indicates that the average regular adult walker participates 8 times per 28 days which equates to between 96 and 104 activity days per year.

It is known that children participate in a much greater number of sport and recreation activities than adults and thus it would be unwise to assign adult participation frequencies to children. Using the participation rates from the young people's survey it is possible to calculate the number of young people who take part in a given activity, but it is not possible to estimate frequency of participation and hence gross demand with any degree of accuracy. The demand for walking amongst young people aged 5-15 in the UK and Devon can be computed as shown in Tables 3.3 and 3.4.

Table 3.3 Analysis of walking statistics in the UK for people aged 5-15

	Total (All Walking)	**Regular Walking (10 times or more)**	**Infrequent (At least once)**
Participation rate	55%	22%	33%
Number of children aged 5-15	4.57m	1.83m	2.74m

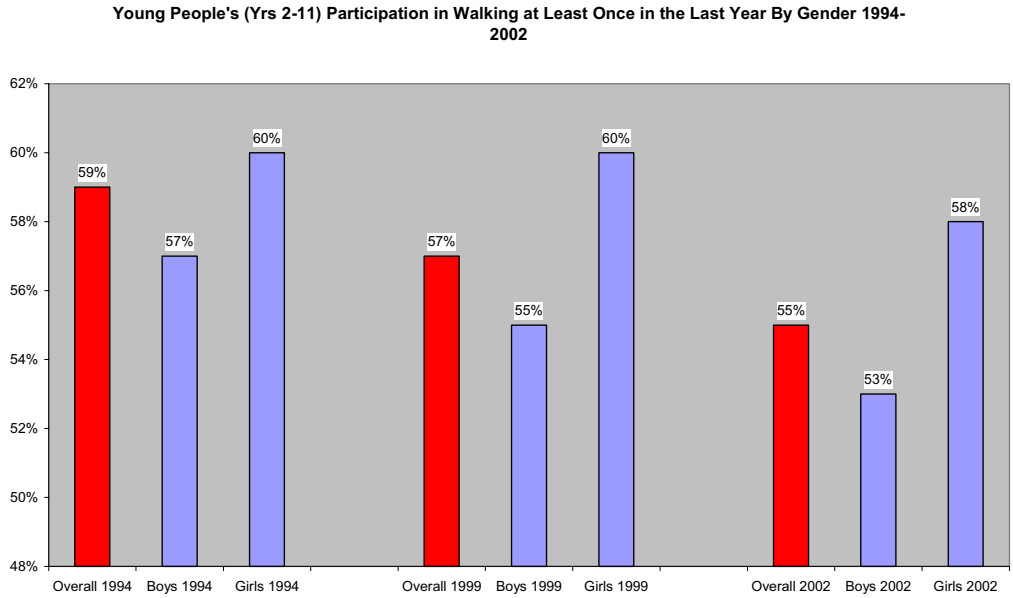
Assuming a population of 705,000 in Devon of whom 92,565 (13%) are aged 5-15, the demand for walking can be computed as shown in Table 3.4.

Table 3.4 Analysis of walking statistics in Devon for people aged 5-15

	Total (All Walking)	**Regular Walking (10 times or more)**	**Infrequent (At least once)**
Participation rate	55%	22%	33%
Number of children aged 5-15	50,910	20,384	30,526

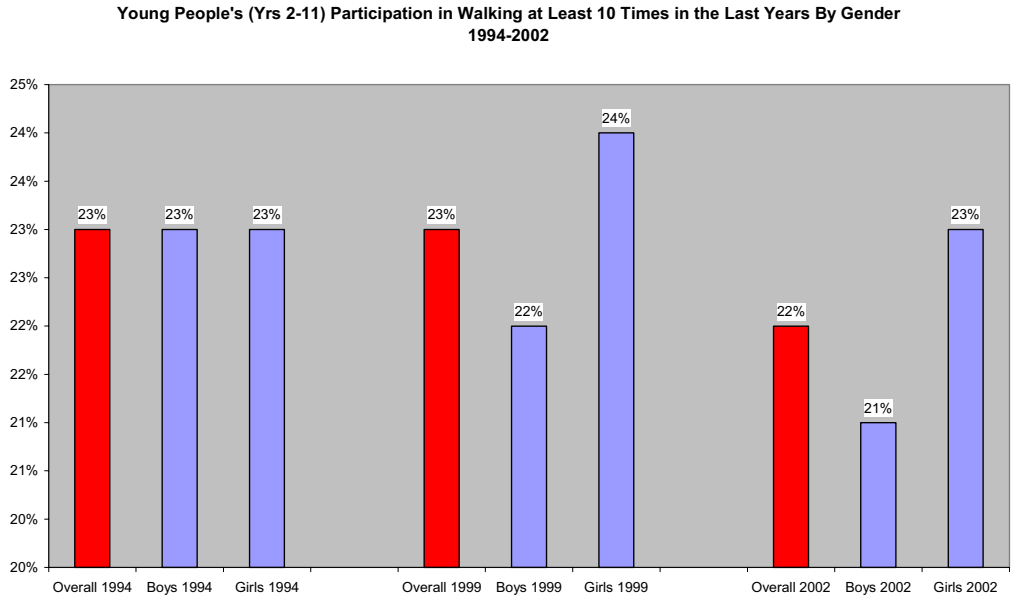
When cross tabulating participation at least once per year by gender, it can be seen that girls have a consistently higher participation rate (5 percentage points in 1999 and 2002) in walking than boys, as shown in Graph 3.8.

Graph 3.8: Once a year participation in walking by gender



When taking frequent participation (10 times or more per year) into account, there is no material difference (2 percentage points) between the participation rates of boys and girls (Graph 3.9).

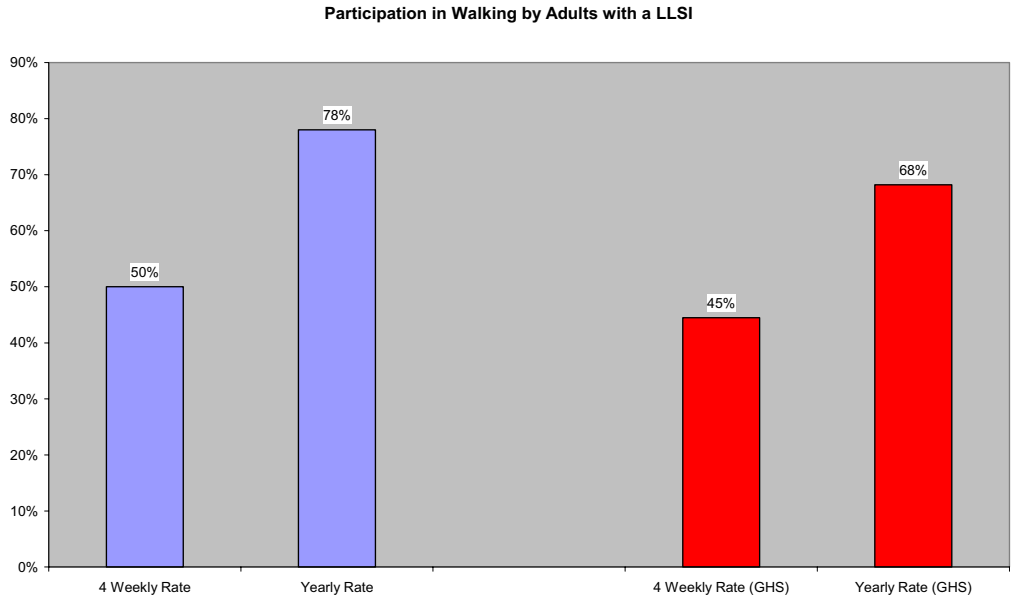
Graph 3.9: Cross tabulation of at least 10 times per year by gender



3.2.4 Participation in walking by adults with a disability

In 2000/2001 Sport England[11] commissioned research into sports participation amongst adults aged 16 - 59 in England who have a disability. For the purposes of the Sport England research, disability was defined as a Limiting Long-Standing Illness (LLSI). This in turn is defined as a health problem or disability which is expected to last for a period of time, specified as a year in the survey. Graph 3.10 shows the extent of participation in walking amongst adults with a Limiting Long-Standing Illness in England.

Graph 3.10: Participation in walking by adults with a LLSI



It can be seen from Graph 3.10 above, that participation amongst disabled adults in walking is actually slightly higher than the rest of the adult population as a whole according to GHS figures (1996). This is perhaps a slightly surprising finding in the sense that it might be expected that people with an LLSI would have lower participation rates than the population as a whole. Nonetheless it indicates that walking is an effective means by which people who have an LLSI can take part in recreation activities.

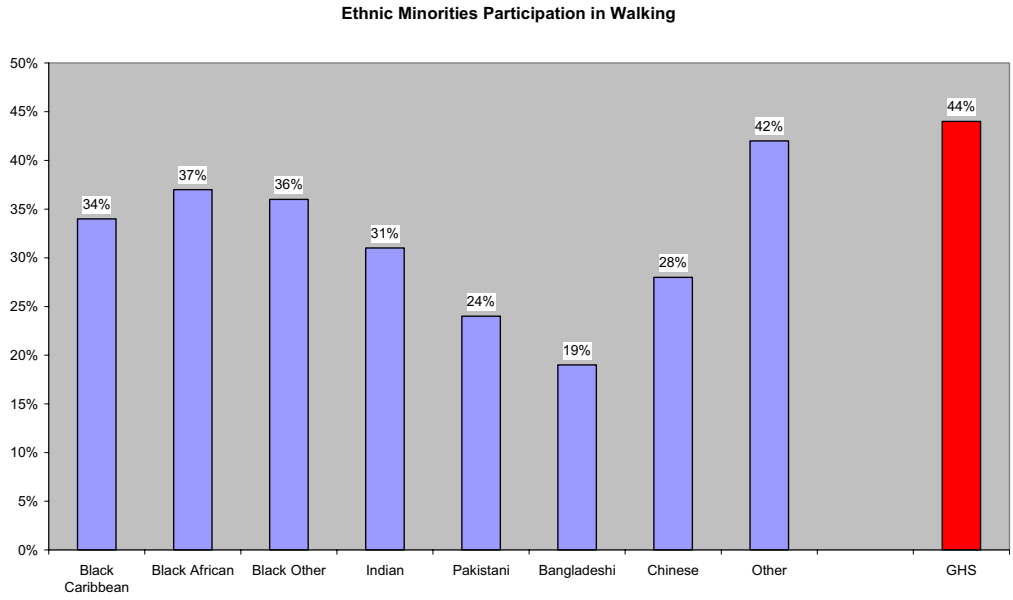
Similar research by Sport England[12] with young disabled people (aged 6-16) revealed significantly lower participation rates for walking compared with young people of the same age without a disability. However, it should be noted that the definitions of 'LLSI' in the adult survey and 'disability' in the young people's survey were not the same and it is not possible to make meaningful comparisons across the two surveys.

[11] Sport England (2002) Adults with a disability and sport national survey 2000/2001, Sport England, London.
[12] Sport England (2001) Disability survey 2000: Young people with a disability & sport, Sport England, London.

3.2.5 Participation in walking by people from ethnic minorities

Further research by Sport England[13] in its equity series provides statistics on the levels of participation in sport and recreation by ethnic minorities in England. Graph 3.11 below shows the participation rates in the 4 weeks prior to interview for ethnic minorities taking part in walking.

Graph 3.11: Participation in walking by people from ethnic minorities



Graph 3.11 shows that participation in walking is below the national average across all ethnic minority groups. It also highlights that below average participation is even more pronounced within the Indian, Pakistani, Bangladeshi and Chinese communities.

3.2.6 Key points

- Walking is by far the most popular sporting / recreational activity in the UK with a four weekly participation rate of 44.5% and an annual participation rate of 68.2%.
- Walking is one of only a few activities which has shown any sign of growth in participation between 1987 and 1996.
- The vast majority of walking occasions are made by the near 45% of adults who take a walk or hike of 2 miles or more at least once every four weeks.
- Compared with other more physically intensive sports, walking is relatively ageless People from higher socio-economic groups are more likely to take part in walking than people from lower socio-economic groups.
- Walkers use a variety of access resources but make greatest use of footpaths.

[13] Sport England (2000) Sports participation and ethnicity in England: National survey 1999/2000, Sport England, London.

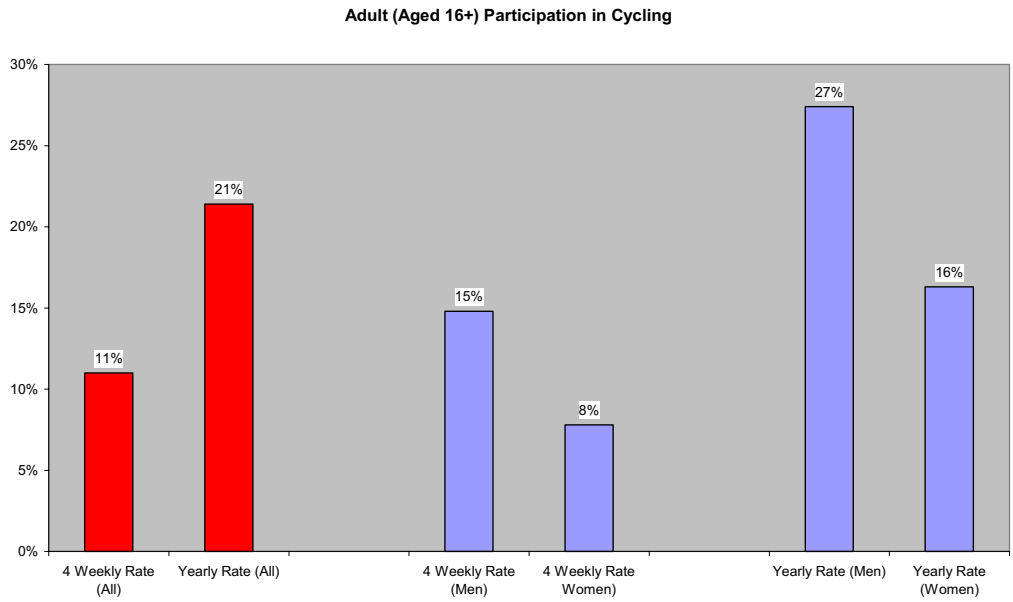
- Walking is popular amongst young people (aged 5-15) with an annual participation rate of 55%, furthermore 22% of young people go walking on at least 10 occasions per year.
- Adults with a Limiting Long-Standing Illness (LLSI) have marginally higher participation rates in walking than the population as a whole.
- Adults from all ethnic minority groups have lower participation rates in walking than the population as a whole.

3.3 Cycling

3.3.1 Adult participation rates and participant characteristics

The headline figures for adult participation in cycling from the General Household Survey (1996) are shown in Graph 3.12. There is no definition of what is meant by 'cycling' in the GHS and it should be taken to mean an inclusive definition of all cycling whether it be of short or long duration, utility or recreational, or on-road or off-road.

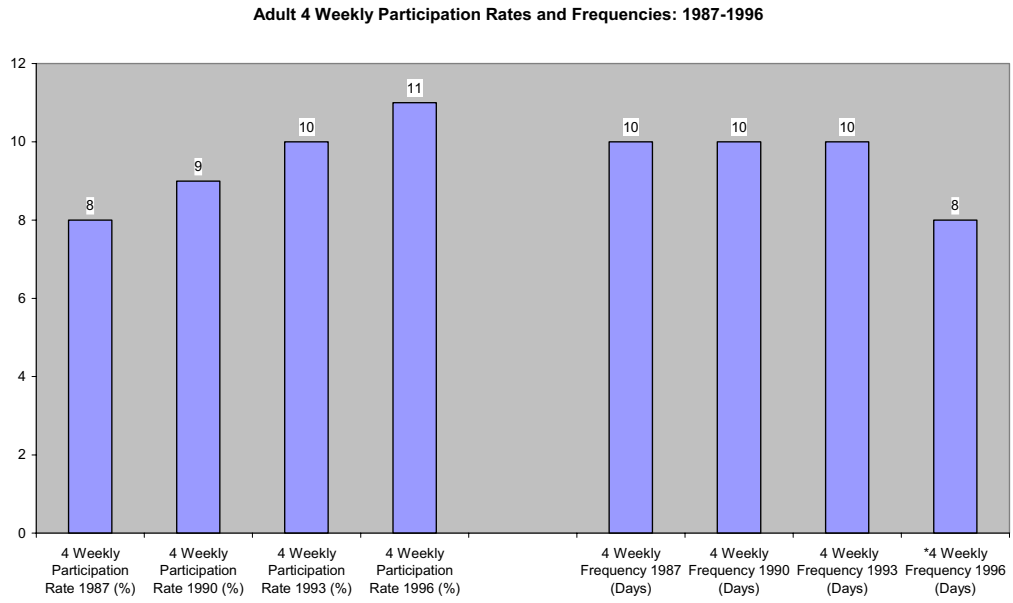
Graph 3.12: Adult participation in Cycling 1996



Graph 3.12 shows that 11% of adults go cycling every four weeks and 21% cycle at least once per year There is a statistically significant gender imbalance in favour of men, with nearly twice as many men participating in cycling than women. Applying the percentage in Graph 3.12 suggests that there are 5.2 million adults who cycle every four weeks and 9.9 million adults who cycle at least once per year.

Putting cycling into a wider context, it is the fifth most popular adult sport in the UK behind walking (44.5% four weekly rate), swimming (14.8%), keep fit / yoga (12.3%) and snooker / billiards / pool (11.3%). Trends in the four weekly participation rate and the frequency of participation are shown in Graph 3.13.

Graph 3.13: Trends in cycling participation and frequency of participation



In 1996 the 4 weekly adult participation rate for cycling was 11% and the average frequency of participation was 8 times per 28 days. A prudent estimate of the demand for cycling is 47m adults x 11.6 activity days per year which gives 545m cycling days. The number of days on which adults cycle has reduced since 1987 from 10 to 8, however the number of people participating has increased by 3 percentage points from 8% to 11%. Assuming a static to slightly increasing population, the number of cyclists has increased and there has been a reduction in the frequency of participation. The net effect of these two factors is that gross demand for cycling increased between 1987 and 1996 because the growth in participants (+27%) has more than offset the reduction in average frequency of participation (-20%).

As stated above, the GHS reveals that there is 11.6 cycling days for each adult in the United Kingdom and the UK has 47m adults, suggesting that 545 million cycling days are generated per year. These figures enable some basic gross demand statistics to be computed as shown in Table 3.5.

Table 3.5: Analysis of adult cycling statistics in the UK

	Total (All Cycling)	**Regular Cycling (4 Weekly Rate)**	**Infrequent (All - 4 Weekly Rate)**
Participation rate	21.4%	11.0%	21.4%
Number of adults	10,058,000	5,170,000	4,888,000
Number of days	545m	496m	49m (i.e. 545m-496m)

The key point of note from Table 3.5 is that the 5.2m adults who cycle at least once every four weeks account for 496m out of 545.m cycling days (91%). Therefore it can be seen that there is a very significant minority of cyclists who account for the vast majority of activity days. The 4.9m people who cycle at least once a year do so

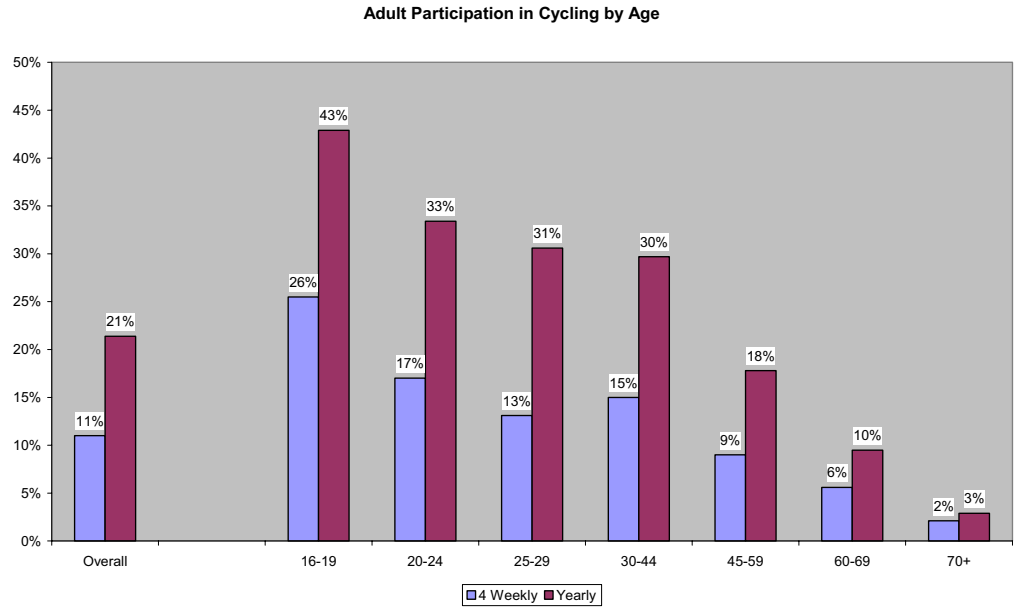
on a very infrequent basis compared to the more regular cyclists. Assuming a population of 705,000 people in Devon (2001 Census) of whom 577,000 are adults, it would be reasonable to expect the breakdown of cyclists' activity days shown in Table 3.6.

Table 3.6: Analysis of adult cycling statistics in Devon

	Total (All Cycling)	**Regular Cycling (4 Weekly Rate)**	**Infrequent (All - 4 Weekly Rate)**
Participation rate	21.4%	11.0%	21.4%
Number of adults	123,478	63,470	60,008
Number of days	6.69m	6.09m	0.60m

To complete the profile of adult cyclists, an analysis of participation rates by age and socio-economic group are shown in Graphs 3.14 and 3.15 respectively.

Graph 3.14: Age profile of adult cyclists

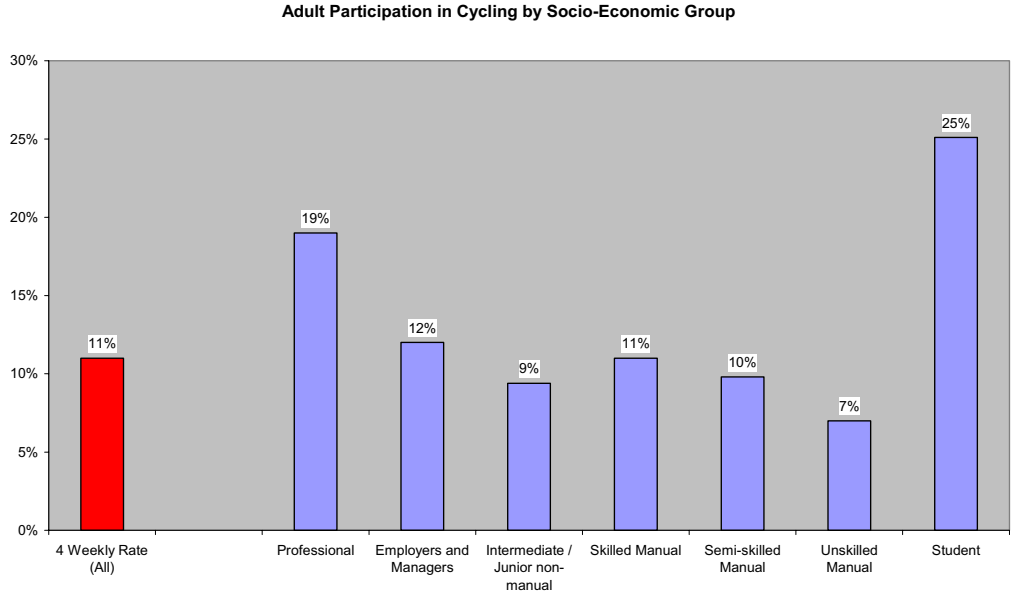


Amongst regular adult cyclists, participation rate peaks in the 16-19 category and remains significantly above average until the age of 44. From age 45 onwards the four weekly participation rate is below average and gradually tails off to 2% for those aged 70+. For occasional adult riders participation rates are above average from 16-44 with the peak again being in the 16-19 category. Occasional participation declines markedly from the age of 45 down to 3% in the 70+ category.

One of the reasons why adult participation in cycling does not reduce significantly in the 25-29 and 30-44 age brackets is because these are the most likely ages at which adults will start families. Wider analysis of all General Household Surveys between 1987 and 1996 reveals that having dependent children is likely to have a positive impact on adult participation. This may well because parents will take a renewed

interest in cycling as a result of teaching their children to ride a bicycle and because cycling is an activity in which families can participate together. A similar phenomenon is found in swimming.

Graph 3.14: Socio-economic profile of adult cyclists

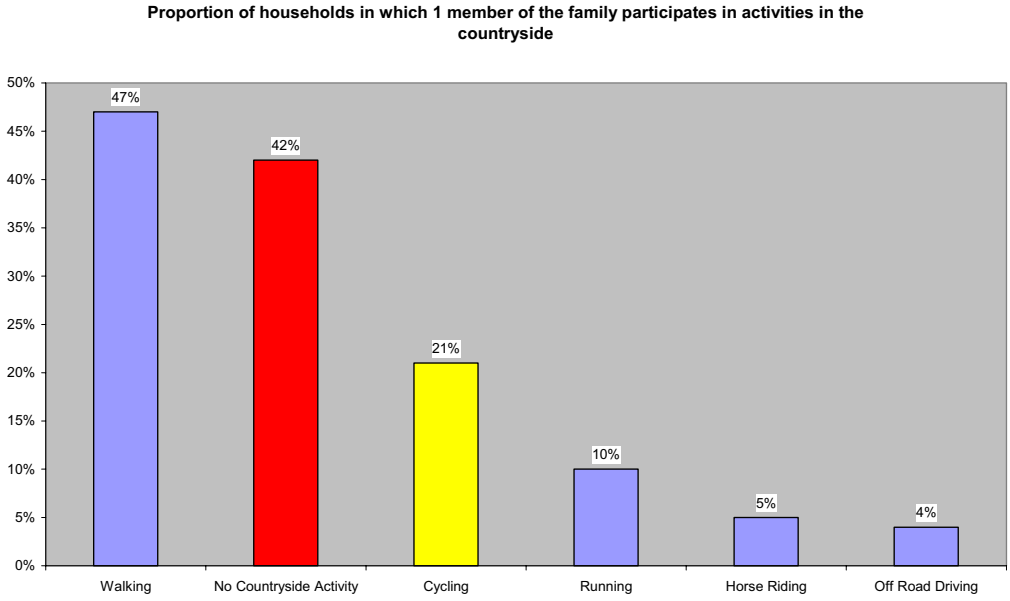


Cycling appears to be relatively popular across all socio-economic groups, but with a noticeable decline from professional / managerial classes to semi-skilled / unskilled manual workers. Adults classed as students have the highest participation rate of 25%, which is more than twice the national average. This finding is consistent with the age profile shown in Graph 3.14 which indicates high participation rates in the 16-24 categories – the most common age bands for people categorised as students. The GHS does not reveal the nature of the access resource used by cyclists and for this data we turn to the Countryside Agency's 2001 study.

3.3.2 Adult participation rates and access resources used

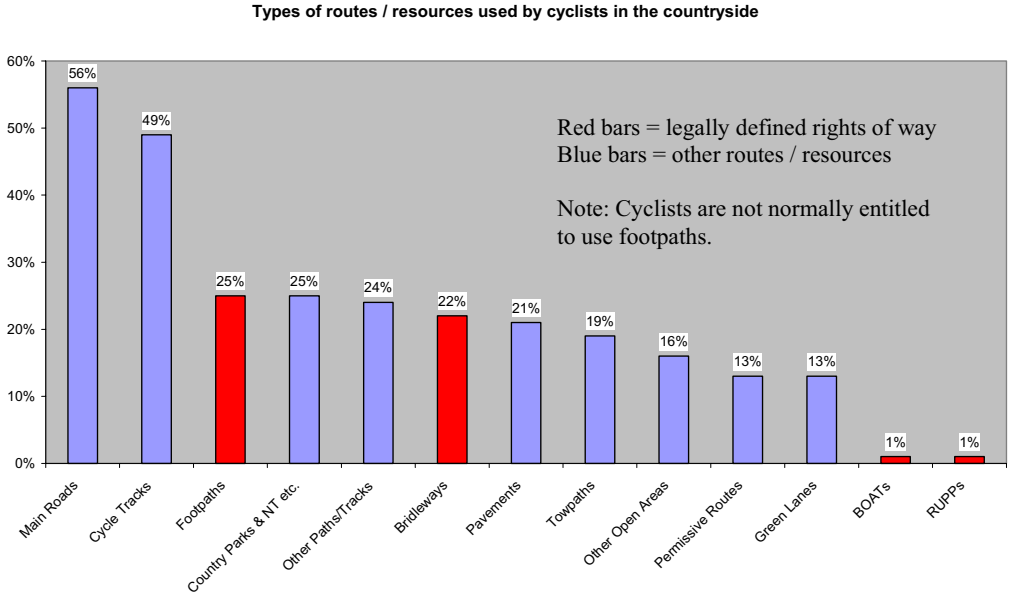
The CA (2001) research conducted 1,540 household interviews and found that 21% of respondents had cycled in the last year, a finding that was identical to the General Household Survey of 1996. Graph 3.15 shows the headline findings from the CA 2001 research.

Graph 3.15: CA 2001 participation rates



Cycling was the second most popular countryside recreation activity (21% of households) in the Entec survey. The types of routes used by cyclists are shown in Graph 3.16.

Graph 3.16: Cyclists in the CA 2001 survey



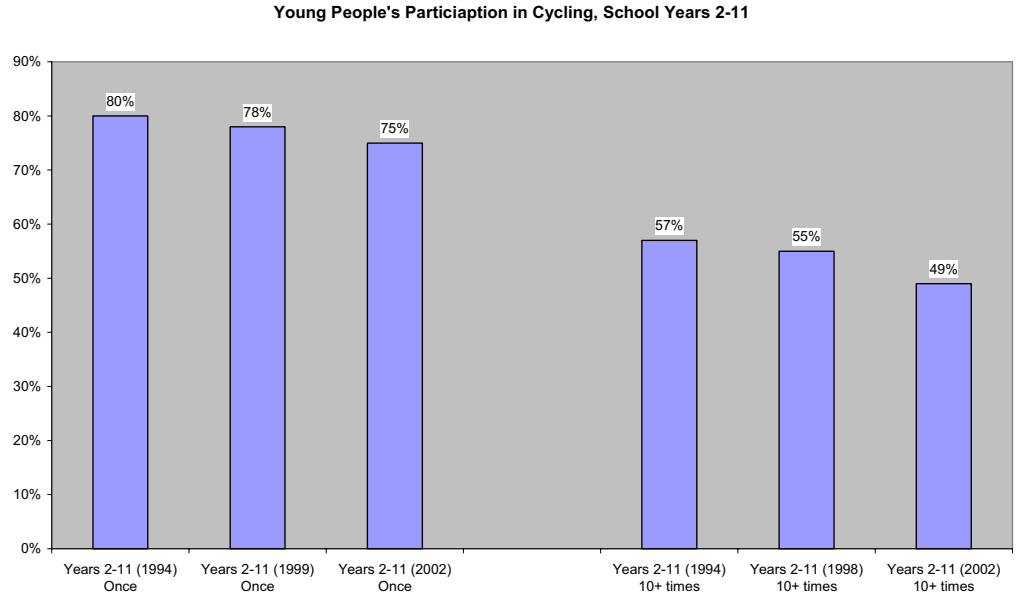
The most commonly cited routes for cycling were main roads (56%), with cycle tracks second (49%). Whether this result is a function of supply or demand is not known. Of the cycling that took place on Public Rights of Way, the most popular routes were footpaths (25%), despite cyclists having no legal right to use them. Some

38% of cyclists freely admitted to the Entec researchers that they exceeded their rights by knowingly cycling on footpaths. Bridleways were the second most used Right of Way (22%). Although the distance cycled on each type of route is unknown, it is likely that more cycling takes place off Public Rights of Way than on them.

3.3.3 Young people's participation in cycling (MORI 1994 - 2002)

Cycling in the countryside is not an activity normally undertaken as part of the school curriculum and therefore it should be noted that cycling by young people is an out of school activity. Two participation rates are computed namely an 'at least once in the last year' rate (directly comparable with GHS, CA 2001 and NES) and a frequent participator rate of 'at least 10 times in the last year', which is not directly comparable with any other surveys. Trends in young people's participation in cycling using both participation rates is shown in Graph 3.17.

Graph 3.17: Young people's participation in cycling (MORI 1994 - 2002)



Graph 3.17 shows an 'at least once in the last year' participation rate of 80% declining to 75% in 2002. For more frequent participation, that is 10 times in the last year, the rate has also shown a decline from 57% in 1994 to 49% in the 2002 survey. These statistics indicate that the finding in the adult surveys that a minority of riders account for the majority of riding is replicated in the young people's survey. The apparent decline in regular cycling from 57% to 49% between 1994 and 2002 is of such a magnitude (7 percentage points) that it is likely to be a real reduction in participation rather than sampling error which would account for a maximum of 2 percentage points of the variance. The same argument is equally applicable to the reduction in the 'at least once per year' participation rate. Therefore it can be concluded that between 1994 and 2002 demand for cycling amongst young people aged 5-15 declined. Using the same assumptions as for young people's demand for walking (Tables 3.3 and 3.4 above) it is possible to compute similar estimates for young people's demand for cycling as shown in Tables 3.7 and 3.8 below.

Table 3.7 Analysis of cycling statistics in the UK for people aged 5-15

	Total (All Cycling)	Regular Cycling (10 times or more)	Infrequent (At least once)
Participation rate	75%	49%	26%
Number of children aged 5-15	6.23m	4.07m	2.94m

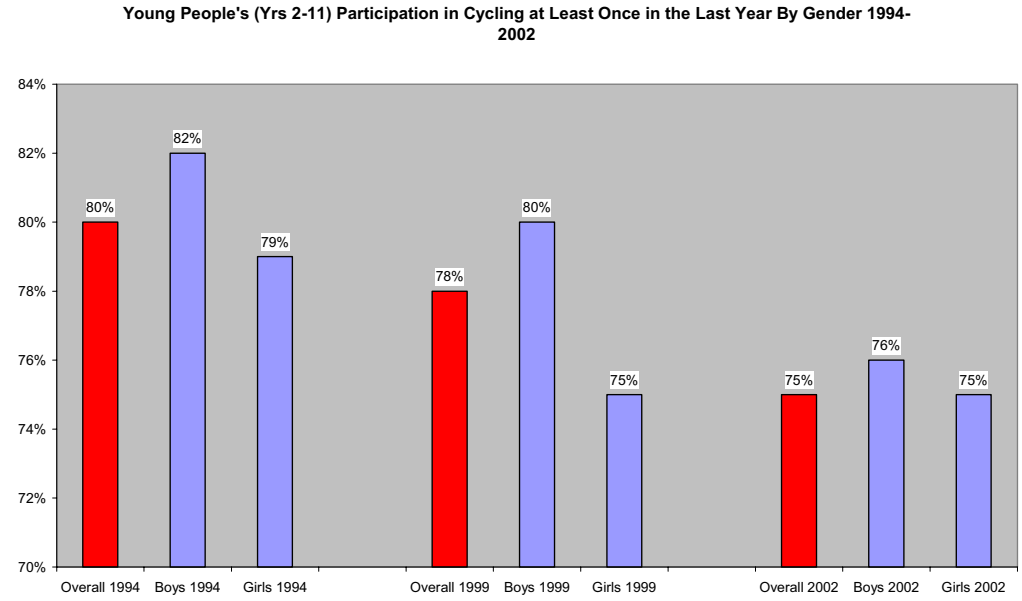
Cycling is considerably more popular amongst young people than adults, a finding which is reinforced by the reduction in participation by age shown in Graph 3.14. Assuming a population of 705,000 in Devon of whom 92,565 (13%) are aged 5-15, the demand for cycling can be computed as shown in Table 3.8.

Table 3.8 Analysis of cycling statistics in Devon for people aged 5-15

	Total (All Cycling)	Regular Cycling (10 times or more)	Infrequent (At least once)
Participation rate	75%	49%	26%
Number of children aged 5-15	69,423	45,356	24,067

When cross tabulating participation at least once per year by gender, it can be seen that boys have a marginally but consistently higher cycling participation rate than girls, as shown in Graph 3.18.

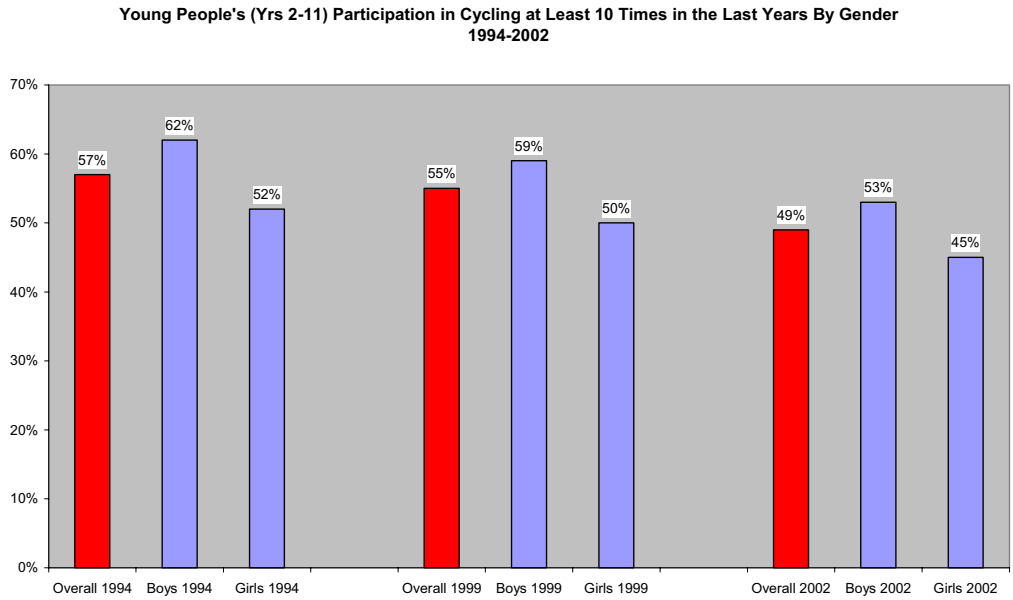
Graph 3.18: Cross tabulation of once a year participation by gender



When taking frequent participation (10 times or more per year) into account, there is a significant difference between the participation rates of boys and girls, with a difference of 10 percentage points in 1994, 9 in 1999 and 8 in 2002, as shown in Graph 3.19. These findings suggest that the gap in cycling participation between boys

and girls reduced between 1994 and 2002. Boys participate more in cycling than girls, although the gap between the two is decreasing.

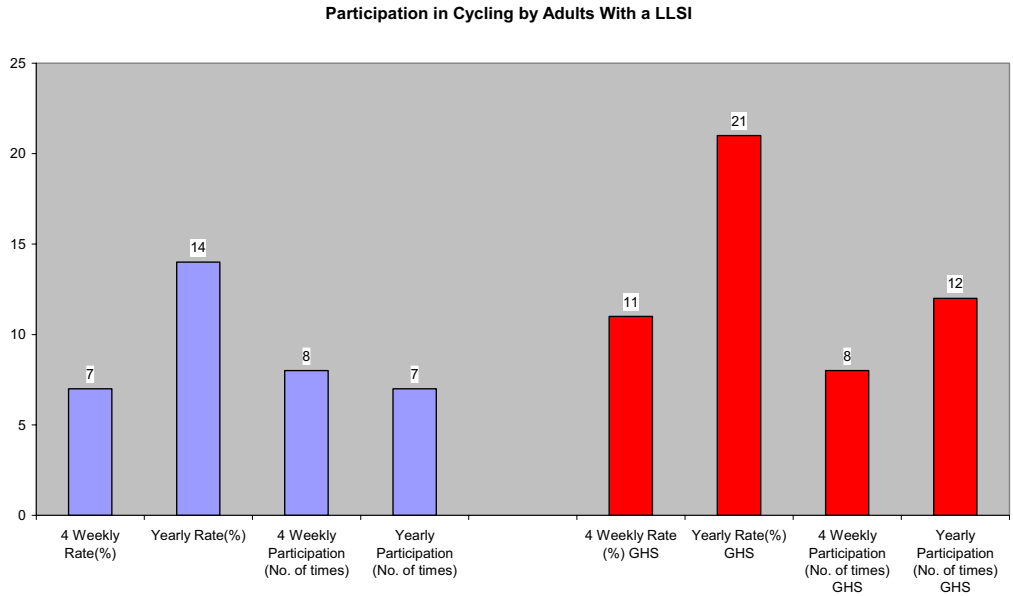
Graph 3.19: Cross tabulation of at least 10 times per year by gender



3.3.4 Participation in cycling by adults with a disability

Sport England's headline findings for participation in cycling by adults with a Limiting Long-Standing Illness are shown in Graph 3.20.

Graph 3.20: Participation in cycling by adults with an LLSI and young people with a disability



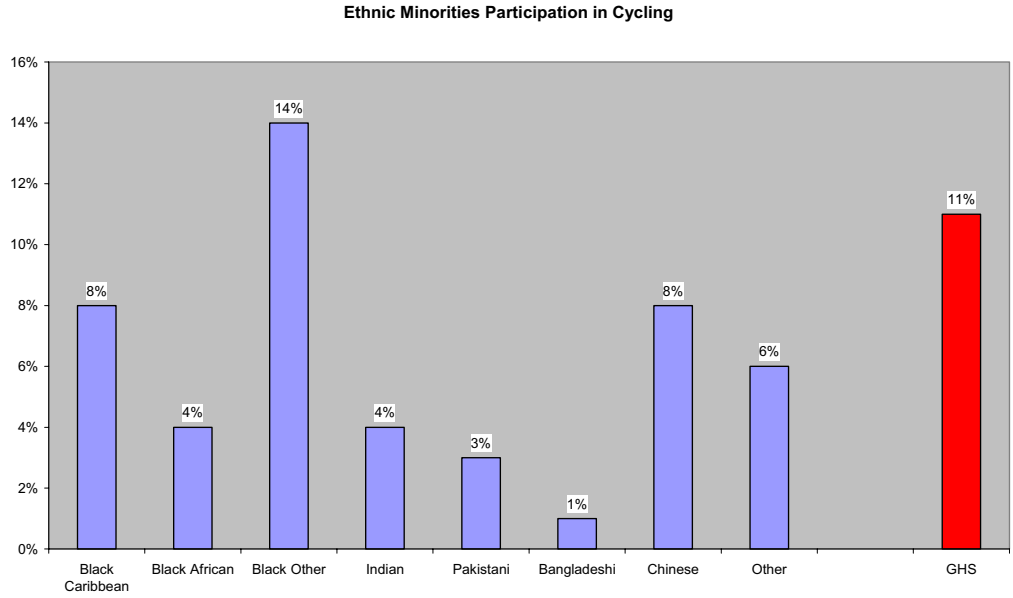
Graph 3.20 indicates that participation amongst disabled adults in cycling is significantly lower than the rest of the adult population as a whole. In the case of regular participants (4 weekly rate) the LLSI participation rate is 64% of the GHS rate (7% v 11%) and for occasional participants (annual rate) the LLSI participation rate shows a similar reduction at 67% (14% v 21%). Thus it appears that having an LLSI has a negative effect on cycling participation.

In Sport England's research into young people with a disability it was found that young disabled people had much lower participation rates in cycling than the population of young people as a whole. Only 29% of disabled young people had been cycling once in the last year compared with 75% in the MORI sample. For the more frequent participants, 5% of disabled young people had been cycling 10 times or more in the last year compared with 49% in the MORI sample of young people.

3.3.5 Participation in cycling by people from ethnic minorities

Graph 3.21 below shows the participation rates in the 4 weeks prior to interview of ethnic minorities in cycling.

Graph 3.21: Participation in cycling by members of ethnic minority groups



Graph 3.21 shows that participation in cycling is below the national average across all ethnic minority groups, except the group classified as 'Black Other' (14% v GHS average of 11%). It also highlights that as per walking, non-participation in cycling is particularly pronounced within the Bangladeshi, Pakistani, Indian and Black African communities.

3.3.6 Key points

- Cycling is the fifth most popular sporting / recreational activity in the UK with a four weekly participation rate of 11.0% and an annual participation rate of 21.4%.

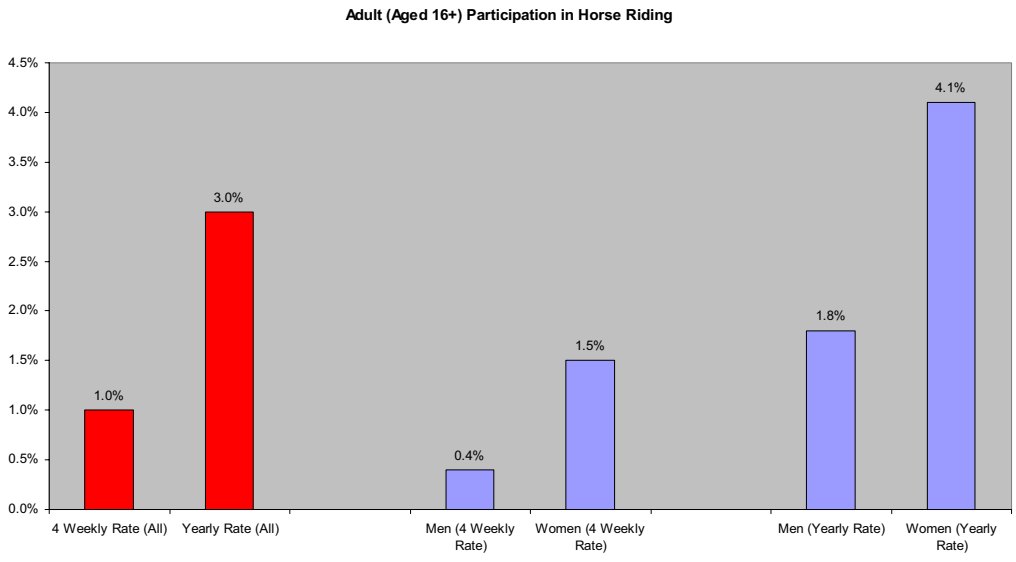
- The number of adults taking part in cycling increased between 1987 and 1996 (8% to 11%) but the frequency of participation has fallen (10 times per 4 weeks to 8).
- More than 90% of cycling occasions are made by the 11% of adults who cycle at least once every 4 weeks.
- Participation in cycling is skewed towards men compared with women; young people and young families compared with people aged 45+; and higher socio-economic groups compared with lower socio-economic groups.
- For the average cyclist, main roads appear to be the access resource of choice (56%) followed by cycle tracks (49%). A significant number of cyclists (38%) admit to exceeding their rights by cycling on footpaths.
- Cycling is more popular amongst young people aged 6-16 than walking, both in the annual (75% v 55%) and the frequent participation rates (49% v 22%).
- Adults with a Limiting Long-Standing Illness (LLSI) and young people with a disability have significantly lower participation rates in cycling than the population as a whole.
- Adults from all ethnic minority groups (except Black 'Other') have lower participation rates in cycling than the population as a whole.

3.4 Horse Riding

3.4.1 Adult participation rates and participant characteristics

The headline figures for adult participation in horse riding from the General Household Survey (1996) are shown in Graph 3.22. There is no definition of what is meant by 'horse riding' in the GHS and it should be taken to mean an inclusive definition of all horse riding whether it be informal activity such as 'hacking' (the vast majority of all horse riding) or formal activity such as the competitive disciplines of show jumping, eventing and dressage.

Graph 3.22: Adult participation in horse riding 1996



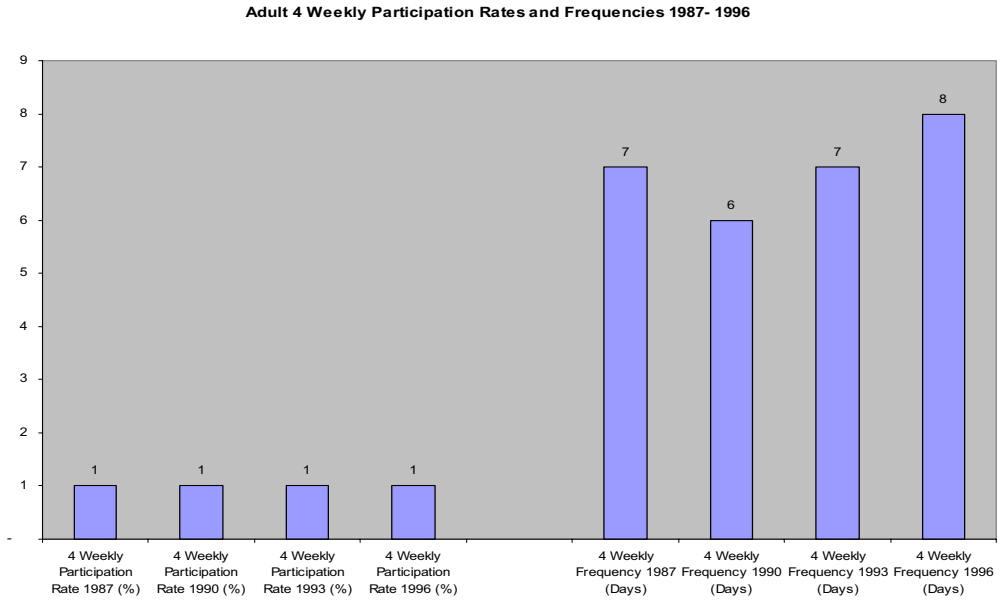
Graph 3.22 shows that 1.0% of adults in the UK take part in horse riding at least once every four weeks and that 3.0% take part at least once per year. Women out number men by 3.75 to 1 in the 4 weekly rate and by 2.27 to 1 in the yearly rate. Horse riding is one of a few sports and recreational activities in which participation by women is greater than that of men. The only other sports in the top 41 sports monitored by the GHS where this finding is replicated is swimming (16.5% women v 12.7% men in the 4 weekly rate), keep fit / yoga (16.9% women v 6.8% men) and netball (0.8% women v 0.1% men).

Applying the participation rates in Graph 3.22 to the population as a whole in suggests that there are 470,000 adults who take part in horse riding at least once every 4 weeks of whom 371,300 (79%) are women and 98,700 (21%) are men. Furthermore there are 1.41 million adults who take part in horse riding at least once per year of whom 972,900 (69%) are women and 437,100 (31%) are men. Statistics from the British Horse Society show that the society has some 57,000 members through Great Britain and approximately 90% of these are women.

Compared with walking (44.5% 4 weekly participation rate) and cycling (11%) horse riding is a minority sport with its 1% regular participation rate. Unlike walking and cycling which are male dominated, horse riding is one of four sports in the General Household Survey in which participation is greater by women than men. Furthermore, of the four sports in which this phenomenon is found, horse riding is second only to netball in the concentration of women participants relative to male participants (netball 89% women, horse riding 79% women).

Trends in the four weekly participation rate and the frequency of participation are shown in Graph 3.23.

Graph 3.23 Trends in horse riding participation and frequency of participation



In 1996 the 4 weekly participation rate for adults was 1% and the average frequency of participation was 8 times per 28 days. Allowing for holidays and time away from home, a prudent estimate of the gross demand for horse riding by adults would be 470,000 adults x 8 days on which they rode a horse x 12 months = 45m activity days in 1996. The number of people participating has not changed since 1987 but the number of days on which adults ride has increased from 7 to 8. This in turn suggests that any increase in demand has been driven by an increased frequency of participation rather than an increased number of adults participating.

The GHS also reveals that there is on average 1 horse riding day for each adult in the United Kingdom. As the UK has 47m adults, then this suggests that 47m horse riding days are generated per year. These figures enable some gross demand calculations to be made that indicate the nature of adult demand for horse riding in the UK.

Table 3.9: Analysis of adult horse riding statistics in the UK

	Total (All Horse Riding)	**Regular Horse Riding (4 Weekly Rate)**	**Infrequent (All - 4 Weekly Rate)**
Participation rate	3.0%	1.0%	2.0%
Number of adults	1,410,000	470,000	940,000
Number of days	47m	45m	2m (i.e. 47m-45m)

The key point of note from Table 3.9 is that the 470,000 adults who ride at least once every four weeks account for 45m out of 47m riding days (96%) and therefore there is a very significant minority of horse riders who account for the vast majority of riding occasions. The 940,000 adults who ride at least once a year do so on a very infrequent basis relative to the more regular riders.

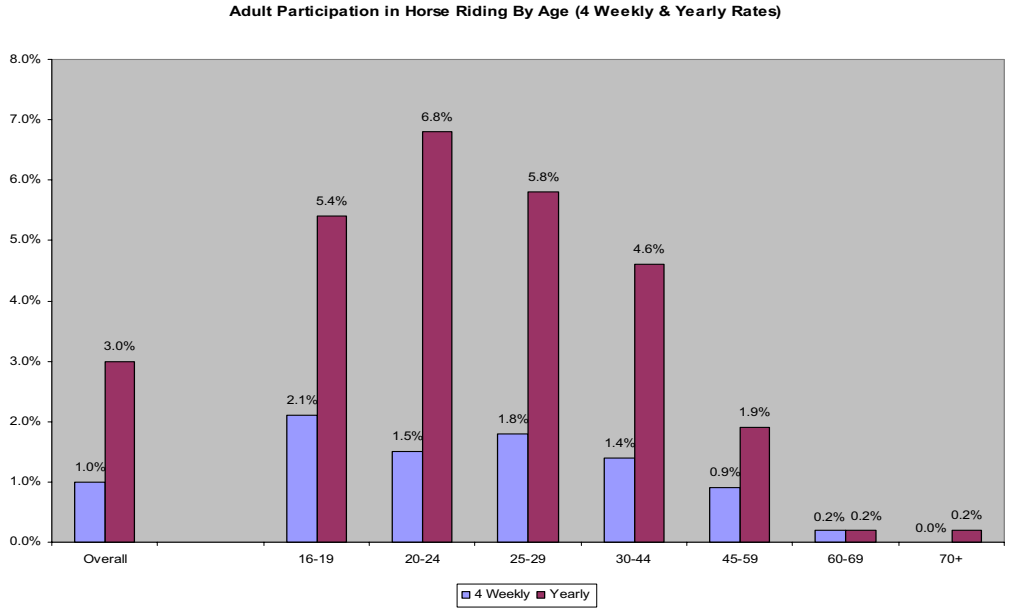
Assuming a population of 705,000 people in Devon (2001 Census) of whom 577,000 are adults, it would be reasonable to expect the breakdown of riders and riding days shown in Table 3.10.

Table 3.10: Analysis of adult horse riding statistics in Devon

	Total (All Horse Riding)	**Regular Horse Riding (4 Weekly Rate)**	**Infrequent (All - 4 Weekly Rate)**
Participation rate	3.0%	1.0%	2.0%
Number of adults	17,310	5,770	11,540
Number of days	577,000	553,920	23,080

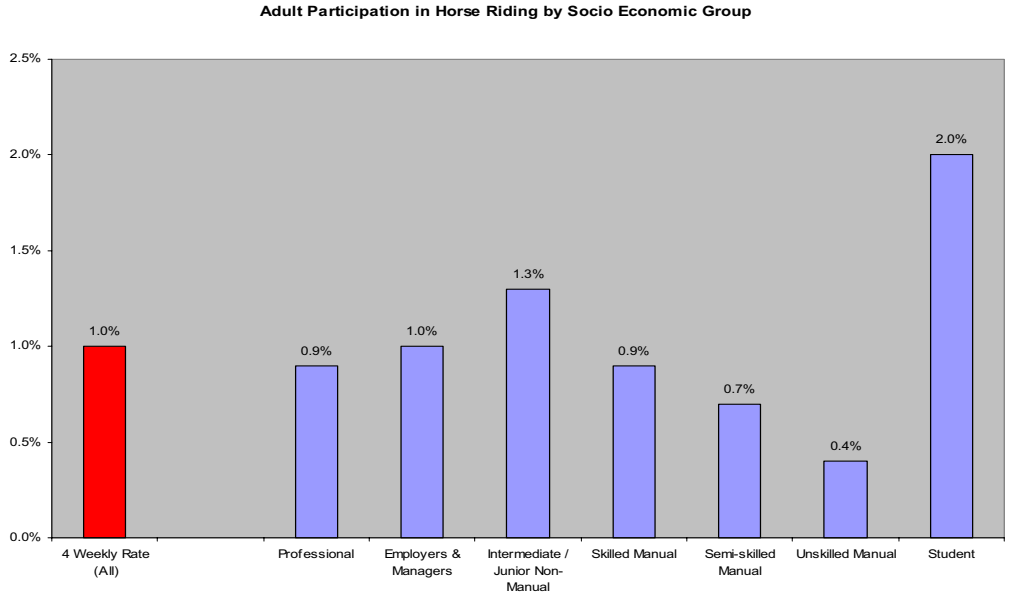
The GHS also contains some demographic profile data of adult participants and the results of the cross tabulations by age and socio-economic group are shown in Graphs 3.24 and 3.25 respectively.

Graph 3.24: Age profile of adult horse riders



Amongst regular adult horse riders the participation rate peaks in the 16-19 category and remains significantly above average until the age of 44. From age 45 onwards the four weekly participation rate is marginally below average and rapidly tails off to 0.2% for those aged 60-69 and 0% for those aged 70+. However the point of note is that adults aged 16-19 have the highest rate of regular participation (2.1%) compared with the adult average of 1%.

Graph 3.25: Socio-economic profile of adult horse riders



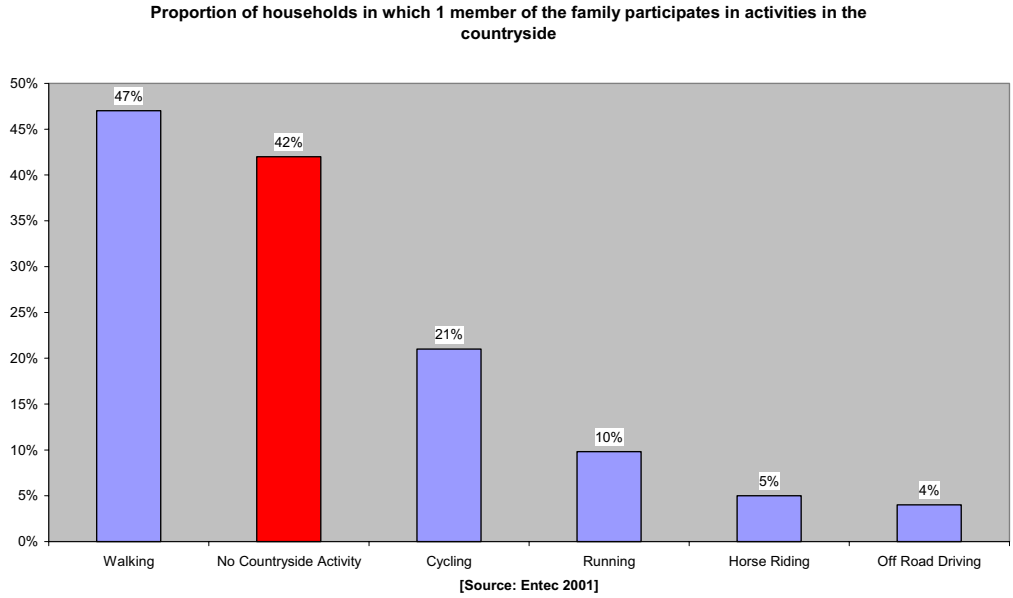
Horse riding appears to be popular across all socio economic groups with perhaps the exception of unskilled manual workers where the participation rate is less than half the UK average. There is certainly no evidence of over representation of participation in horse riding amongst the higher socio-economic groups - a common prejudice amongst those not familiar with the evidence.

Adults classed as students have the highest participation rate of 2% which is twice the national average. This finding is consistent with the age profile shown in Graph 3.24 which indicates high participation rates in the 16-24 categories – the most common age bands for people categorised as students. The GHS does not reveal the nature of the access resource used by horse riders and for this data we turn to the Countryside Agency's 2001 study.

3.4.2 Adult participation rates and access resources used

The headline findings from the Countryside Agency's study in 2001 indicates a participation rate of 5% of households having at least one person who had taken part in horse riding in the last year as shown in Graph 3.26.

Graph 3.26: CA 2001 participation rates

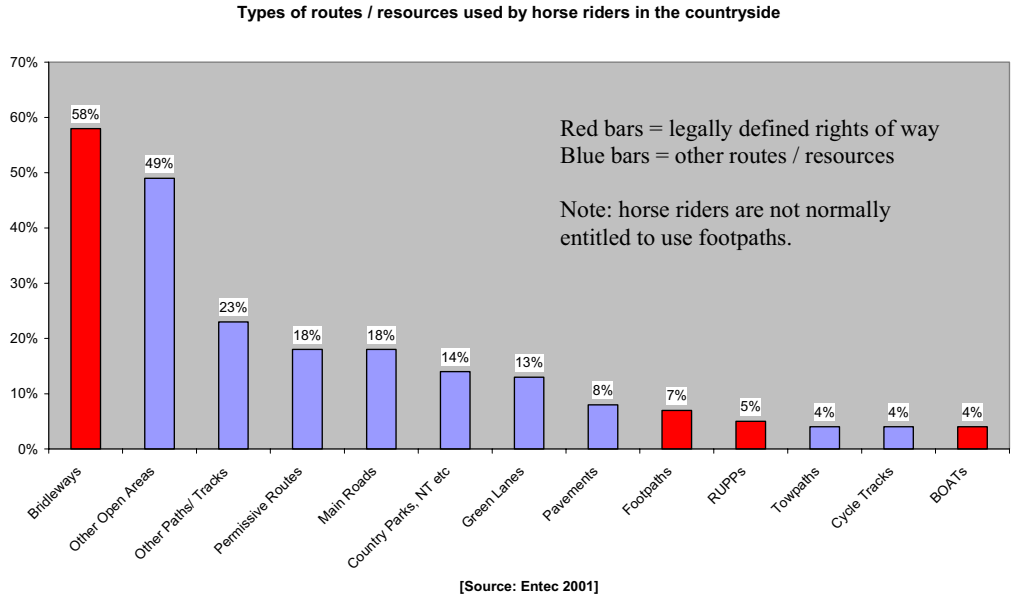


The 5% participation rate in horse riding is higher than the 3% found in the GHS and occurs as a result of differences in the methodology. The GHS is concerned with the expressed demand of the individual person being interviewed. By contrast, the Countryside Agency study (2001) asked an adult (defined as aged 15+) about participation in countryside recreation activities of all the people in the household.

Thus it was quite possible for a parent of a child to have been interviewed whereby the parent had not ridden a horse in the last year but a child had. In the Countryside Agency (2001) survey this scenario would count as a 'participating' household in horse riding, whereas in the GHS it would be an irrelevance.

The CA 2001 research sought to establish the type of routes utilised by each type of user group and the data for horse riders are shown in Graph 3.27.

Graph 3.27: Routes used by horse riders in the CA 2001 survey



Overall, 58% of equestrians interviewed made use of bridleways with nearly half (49%) making use of other open land. Although we do not know the average distance travelled by equestrians on Public Rights of Way and other routes and resources, the data in Graph 3.27 suggest that more horse riding takes place off Public Rights of Way than on them. A recent survey[14] of over 1,000 equestrians in Hampshire confirmed this to be the case throughout Hampshire and it is probably possible to generalise this finding nationally.

3.4.3 Equestrian-specific research

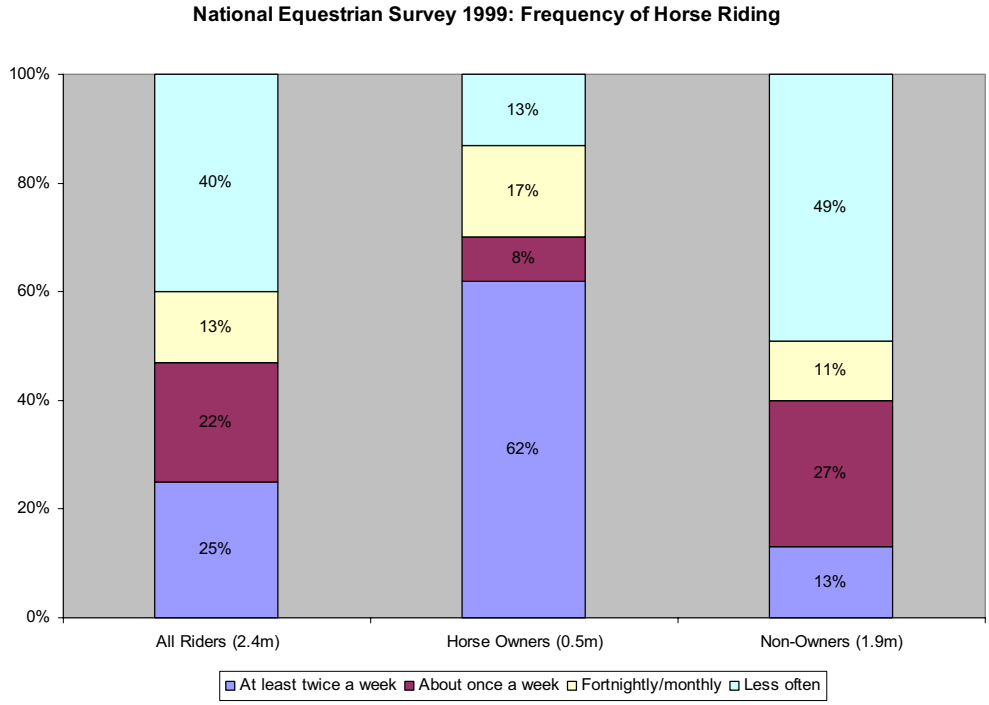
The National Equestrian Survey (1999) contacted 3,500 households by telephone and generated a sub sample of 158 households with at least one horse rider. A further 242 horse riding households were added to the sample to make a total sample size of 400 and in depth telephone interviews were conducted with them. The net result of this research was that an estimated 4.5% of people aged 5 or over in Great Britain had ridden a horse or pony in the last year. This finding is highly comparable with the Countryside Agency's data (2001) where a 5% household participation rate was found.

The NES data indicates that there are 2.5m people in the UK aged 5 and over who ride a horse at least once per year. Female horse riders were found to out number their male counterparts by three to one and 50% of all horse riders were under the age of 25. There did not appear to be any regional variation in horse riding, which implies

[14] Leisure Industries Research Centre (2003) Equestrian usage and demand survey in the Forest of Bere (Hampshire), Sheffield Hallam University.

that the national statistics concerning participation rates from surveys like the GHS, CA 2001 and NES can be generalised at regional level. The frequency with which people take part in horse riding is strongly correlated with horse ownership as shown in Graph 3.28.

Graph 3.28: NES 1999 Horse riding frequency



Horse owners participate in horse riding far more frequently than non-owners. This is not surprising given that once a decision has been made to own a horse it will need to be exercised on a regular basis and this responsibility will typically fall upon the owner. However, what is perhaps surprising is the scale of the imbalance in activity days between owners and non-owners. The 0.5 million owners account for approximately 21% of riders and 60% of all riding occasions whereas the 1.9 million non-owner riders make up 79% of riders and 40% of all riding occasions.

Nearly half (49%) of non-owners ride less than once per month. These findings confirm the interpretation of the GHS data that a minority of riders account for the majority of activity days. The NES survey indicates that there are approximately 900,000 horses in private ownership with a further 65,000 owned commercially in Great Britain. This in turn suggests that on average, private owners own 1.8 horses (that is 900,000 horses / 500,000 owners). Applying the NES findings to Devon it would be reasonable to expect 30,141 horse riders aged 5 and over of whom 6,280 (21%) were horse owners and 23,861 were non-owner riders.

The NES data focuses on the population aged 5 and over and therefore it is not directly comparable with adult only surveys such as the GHS and CA 2001. In order

to isolate young people's participation in horse riding, the MORI research for Sport England is reviewed in the next section.

3.4.4 Young people's participation in horse riding (MORI 1994 - 2002)

Horse riding is not an activity normally available within schools and thus the first point of note is that horse riding by young people is an out of school activity. Two participation rates are computed, namely an 'at least once in the last year' rate (directly comparable with GHS, CA 2001 and NES) and a frequent participator rate of 'at least 10 times in the last year', which is not directly comparable with any other surveys. Trends in young people's participation in horse riding using both participation rates is shown in Graph 3.29.

Graph 3.29: Young people's participation in horse riding (MORI 1994-2002)

Graph 3.29 shows an 'at least once in the last year' participation rate of 19% levelling off to 18% in 1999 and 2002. For more frequent participation (10 times in the last year) the rate has consistently been 7% or 8% (7% in the most recent survey 2002).

These statistics indicate that the finding in the adult surveys that a minority of riders account for the majority of riding is also replicated in the young people's survey. Furthermore, given that any fluctuations in participation rates can most probably be explained by sampling error, it would be reasonable to conclude that amongst young people participation in horse riding has been static between 1994 and 2002. Using the same assumptions as before to derive demand for people aged 5-15 it is possible to compute estimates for young people's demand for horse riding as shown in Tables 3.11 and 3.12 below.

Table 3.11 Analysis of horse riding statistics in the UK for people aged 5-15

	Total (All Riding)	Regular Riding (10 times or more)	Infrequent (At least once)
Participation rate	18%	7%	11%
Number of children aged 5-15	2.03m	0.58m	1.45m

Horse riding is considerably more popular amongst young people than adults as demonstrated by an adult annual participation rate of 1% compared with 18% for children aged 5-15. Amongst regular horse riders this imbalance is even more pronounced with a 1% participation rate for adults compared with 7% for those aged 5-15.

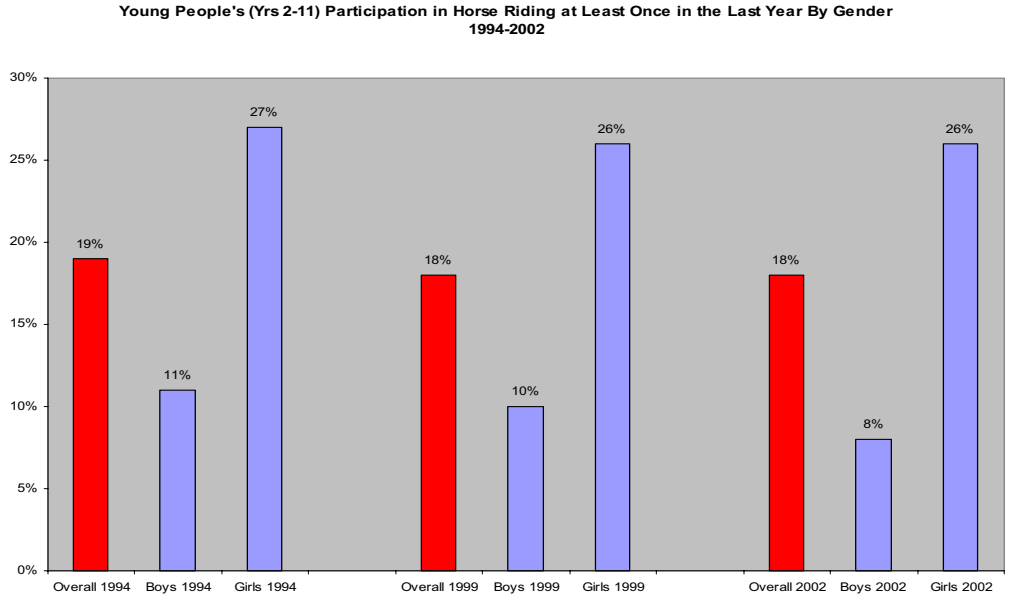
Assuming a population of 705,000 in Devon of whom 92,565 (13%) are aged 5-15, the demand for horse riding can be computed as shown in Table 3.12.

Table 3.12 Analysis of horse riding statistics in Devon for people aged 5-15

	Total (All Riding)	Regular Riding (10 times or more)	Infrequent (At least once)
Participation rate	18%	7%	11%
Number of children aged 5-15	16,661	6,480	10,181

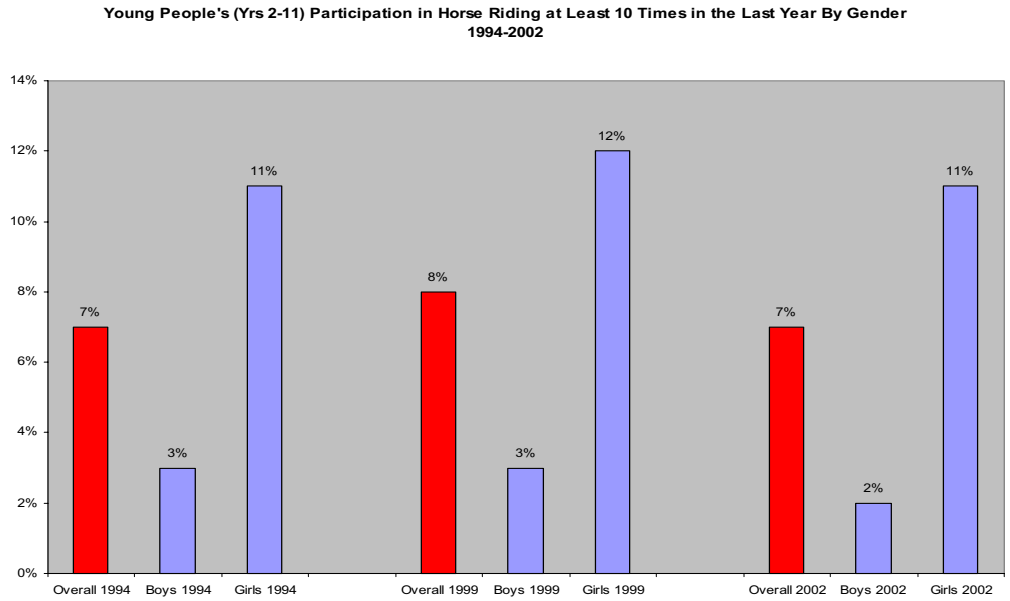
When cross tabulating participation at least once per year by gender, it can be seen that girls taking part in horse riding out number boys by almost 4 to 1, as shown in Graph 3.30. Secondary research with the Pony Club of Great Britain membership database revealed that there are over 31,000 girl members and just over 5,000 boy members i.e. girls outnumber boys by 6 to 1. Thus the female dominance of horse riding found in the adult surveys is perhaps not surprisingly replicated amongst young people.

Graph 3.30: Once a year participation in horse riding by gender



When taking frequent participation (10 times or more per year) into account girls outnumber boys by around 6 to 1 as shown in Graph 3.31.

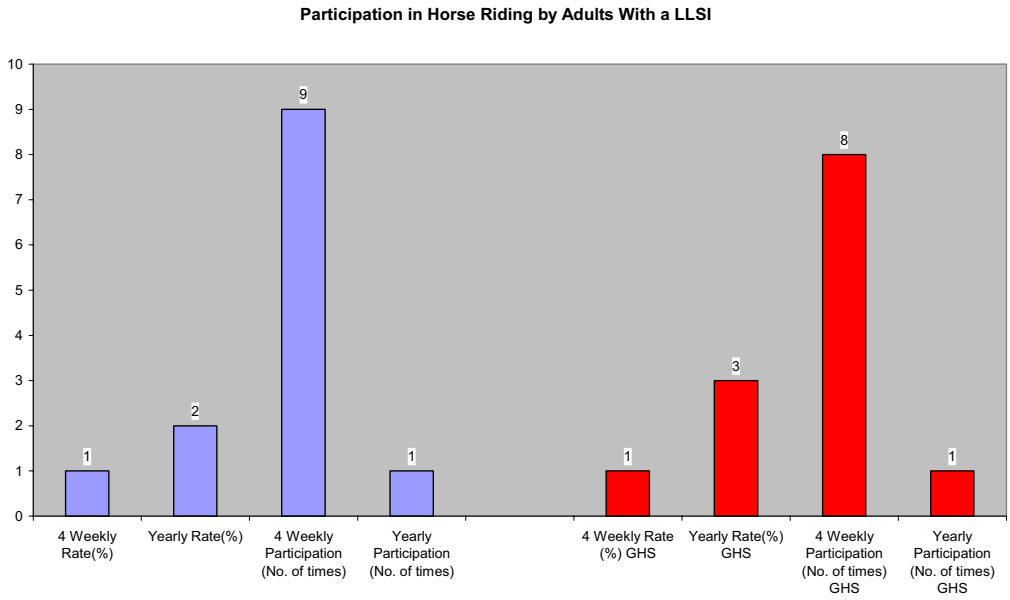
Graph 3.31: Horse riding at least 10 times per year by gender



3.4.5 Participation in horse riding by adults with a disability

Sport England's headline findings for participation in horse riding by adults with a Limiting Long-Standing Illness is shown in Graph 3.32.

Graph 3.32 Participation in horse riding by adults with a LLSI



It can be seen from Graph 3.32 above that regular (4 weekly rate) participation amongst disabled adults in horse riding is the same as the rest of the adult population when compared with GHS figures. The frequency of participation for disabled adults is marginally higher than the population as a whole (9 times per 28 days compared with 8). Thus there is a significant core of disabled adults who take part in regular horse riding just as much as the adult population as a whole. In the case of irregular participation, disabled adults participate less (2%) than the population as a whole 3%.

The Sport England, 'Young People With a Disability & Sport' survey found that 15% of young people (aged 5-15) with a disability had been horse riding at least once in the last year within school and 14% outside school. Of the more frequent participants, 12% had been riding 10 or more times in school and 4% had been riding 10 or more times outside of school. All of the out of school participation rates for disabled young people are lower than those found for the random sample of young people in the MORI surveys conducted for Sport England in 1994 - 2002.

3.4.6 Participation in horse riding by people from ethnic minorities

The Sport England survey into sports participation and ethnicity does not provide any figures for participation for horse riding which implies a participation rate of less than 1% and therefore a rate which is lower than the population as a whole. Limited data is provided on the aspirations of ethnic minorities to go horse riding. The ethnic minority groups who stated that they would like to participate in horse riding were 'Black Other' (males 3%, females 13%) and the category classified as 'Other' (males 2%, females 8%). It can be deduced from these findings that both expressed demand and latent demand for horse riding amongst ethnic minorities is relatively small and is significantly higher amongst women than men.

3.4.7 Key points

- Horse riding is a minority sport with an adult participation rate of 1% for regular riders and 3% for occasional riders (GHS). Other surveys employing alternative methodologies provide estimates of 5% of households having at least one person who has taken part in horse riding in the last year and 4.5% of the population aged 5 and over having taken part in horse riding in the last year.
- The demand statistics for horse riding are much lower than those for walking (45% and 68%) and cycling (11% and 21%) and confirm that in relative terms horse riding is a minority sport.
- The minority of regular riders account for the vast majority of riding occasions. Furthermore, the 21% of horse riders who own a horse account for a disproportionately high level of riding days.
- Participation in horse riding is dominated by women whose 4 weekly participation rate is nearly 4 times that of men. This finding is replicated when comparing girls with boys.
- Horse riding is relatively ageless and classless.
- Horse owners are a minority of the horse riding population but account for a disproportionately high number of riding occasions.
- There is a core of disabled people whose participation rate and frequency of participation is equal to that of the population as a whole.
- People from ethnic minority groups participate in horse riding less than the population as a whole and there is very limited evidence to support the case for latent demand amongst such groups.

3.5 Walking, cycling and horse riding summary tables

A summary of the key data relating to participation in walking, cycling and horse riding is shown in Table 3.13 and comparable data for Devon is shown in Table 3.14.

Table 3.13: Summary of UK Participation data

	Walking	Cycling	Horse Riding
Adult (All)	68.2%	21.4%	3.0%
Number of adults	32,054,000	10,058,000	1,410,000
Activity Days	1,920,000,000	545,000,000	47,000,000
Adult (Regular)	44.5%	11.0%	1.0%
Number of adults	20,915,000	5,170,000	470,000
Activity Days	1,880,000,000	496,000,000	45,000,000
Adult (Irregular)	23.7%	10.4%	2.0%
Number of adults	11,319,000	4,888,000	940,000
Activity Days	40,000,000	49,000,000	2,000,000
Gender (All)	M 54%, F 46%	M 65%, F 35%	M 31%, F 69%
Gender (Regular)	M 53%, F 47%	M 63%, F 37%	M 21%, F 79%
Age	Average or above 16-69	Average or above 16-44	Average or above 16-44
SEG	AB High, C1C2 Average, DE Low	AB High, C1C2 Low, DE Low	AB Average, C1C2 High, DE Low
Young people at least once / year	55%	75%	18%
Number	4,570,000	6,230,000	2,030,000
Young people at least 10 times / year	22%	49%	7%
Number	1,830,000	4,070,000	580,000
Gender (All)	M 48%, F 52%	M 50%, F 50%	M 24%, F76%
Gender (Regular)	M 48%, F 52%	M 54%, F 46%	M 15%, F85%
Disabled adults	Above average	Below average	Average
Disabled children	Below average	Below average	Below average
Ethnic minorities	Below average	Below average	Below average
Total participants (all)	36.62m	16.30m	3.43m
Adults v Children	Adults 88%, Children 12%	Adults 62%, Children 38%	Adults 41% Children 59%
Total participants (regular)	22.75m	9.24m	1.05m
Participation balance Adults v Children	Adults 92%, Children 8%	Adults 56%, Children 44%	Adults 45% Children 55%
			No. Horses 900,000
			No. Horse Owners 500,000

Table 3.14: Summary of Devon Participation data

	Walking	Cycling	Horse Riding
Adult (All)	68.2%	21.4%	3.0%
Number of adults	393,514	123,478	17,310
Activity Days	23,540,000	6,690,000	577,000
Adult (Regular)	44.5%	11.0%	1.0%
Number of adults	256,765	63,470	5,770
Activity Days	23,110,000	6,090,000	553,920
Adult (Irregular)	23.7%	10.4%	2.0%
Number of adults	136,749	60,008	11,540
Activity Days	430,000	600,000	23,080
Gender (All)	M 54%, F 46%	M 65%, F 35%	M 31%, F 69%
Gender (Regular)	M 53%, F 47%	M 63%, F 37%	M 21%, F 79%
Age	Average or above 16-69	Average or above 16-44	Average or above 16-44
Socio-economic Groups	AB High, C1C2 Average, DE Low	AB High, C1C2 Low, DE Low	AB Average, C1C2 High, DE Low
Young people at least once / year	55%	75%	18%
Number	50,910	69,423	16,661
Young people at least 10 times / year	22%	49%	7%
Number	20,384	45,356	6,480
Gender (All)	M 48%, F 52%	M 50%, F 50%	M 24%, F76%
Gender (Regular)	M 48%, F 52%	M 54%, F 46%	M 15%, F85%
Disabled adults	Above average	Below average	Average
Disabled children	Below average	Below average	Below average
Ethnic minorities	Below average	Below average	Below average
Total participants (all)	444,424	192,901	33,971
Adults v Children	Adults 88%, Children 12%	Adults 62%, Children 38%	Adults 41% Children 59%
Total participants (regular)	277,149	108,826	12,250
Participation balance Adults v Children	Adults 92%, Children 8%	Adults 56%, Children 44%	Adults 45% Children 55%
			No. Horses 12,841
			No. Horse Owners 7,134

Tables 3.13 and 3.14 confirm the relative popularity of walking and cycling and also indicate that horse riding is a minority pursuit. Perhaps the most interesting findings are the balance of male to female participation across the three activities and the

balance of participation by adults to children. Horse riding is confirmed as an activity where participation is dominated by women and children.

The demand data above for walking, cycling and horse riding is the demand by Devon residents only. In reality, total demand in Devon is likely to be higher than that of Devon residents only and can be expressed as:

	Demand by Devon residents as computed using national data sets
less	Demand expressed by Devon residents elsewhere
plus	Demand by visitors to Devon expressed in Devon
equals	Total demand expressed in Devon

3.6 Homogeneous or heterogeneous groups?

When examining the nature of people who take part in sport and recreation there is a danger of assigning the same characteristics to all of the participants of a particular activity. The reality is that within each user group their are segments whose characteristics are different from the characteristics of the group as a whole and also from the characteristics of other segments within the group. To illustrate the point further, some indicative examples of the segments within walking, cycling and horse riding are outlined below.

Walking

- Long distance walkers who aim to complete all or sections of National Trails, for example members of the Long Distance Walkers Association (membership 7,000).
- Dog owners taking dogs for a walk.
- People using urban parks and 'linear parks' for casual walking / strolling.
- Young families taking walks with children in pushchairs and or bicycles / pedal toys.
- People taking part in organised walking groups such as the Ramblers' Association (membership 140,000).
- People who go on walking holidays and attend walking festivals.

Cycling

- Touring cyclists such as members of the Cyclists' Touring Club (CTC, membership c. 70,000).
- Utility and commuter cyclists, that is cycling for a purpose such as going to work or the local shops.
- Sport cyclists such as members of the various bodies within the National Governing Body for cycling, British Cycling, for example track cyclists, time trialists, cyclo-cross cyclists and mountain bikers.
- Off road cyclists and on-road cyclists.
- Family cyclists.
- Holiday cyclists.

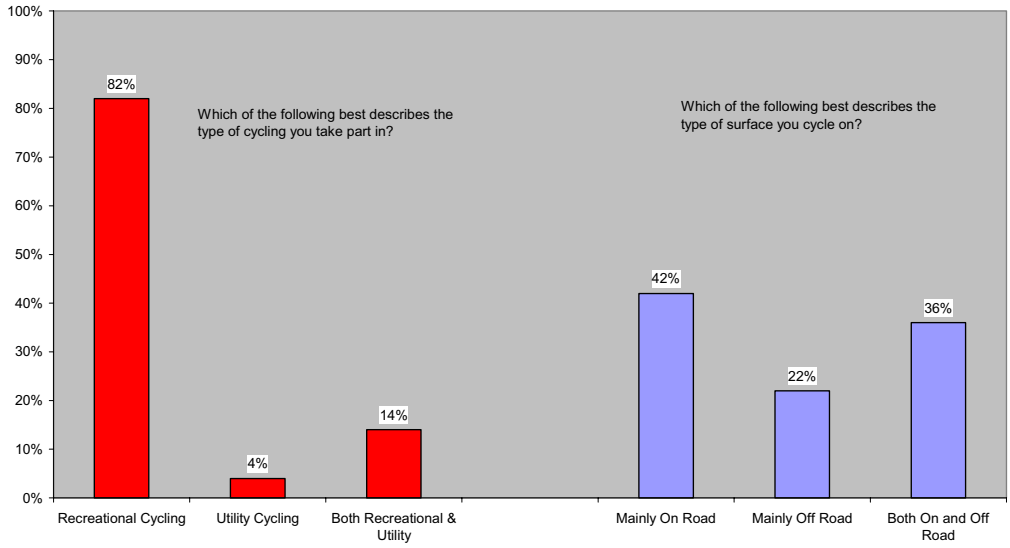
Horse riding

- Members of organisations such as the British Horse Society (membership c. 57,000 and mainly horse owners).

- 'Hackers' and equestrians who take part in formal disciplines such as show jumping, dressage and eventing.
- Owners and non-owners.
- Riding for the disabled.
- Equestrians who ride solely on private land / open country compared with those who use the road and Public Rights of Way networks.
- Equestrians who receive lessons and coaching.
- Equestrian tourists.

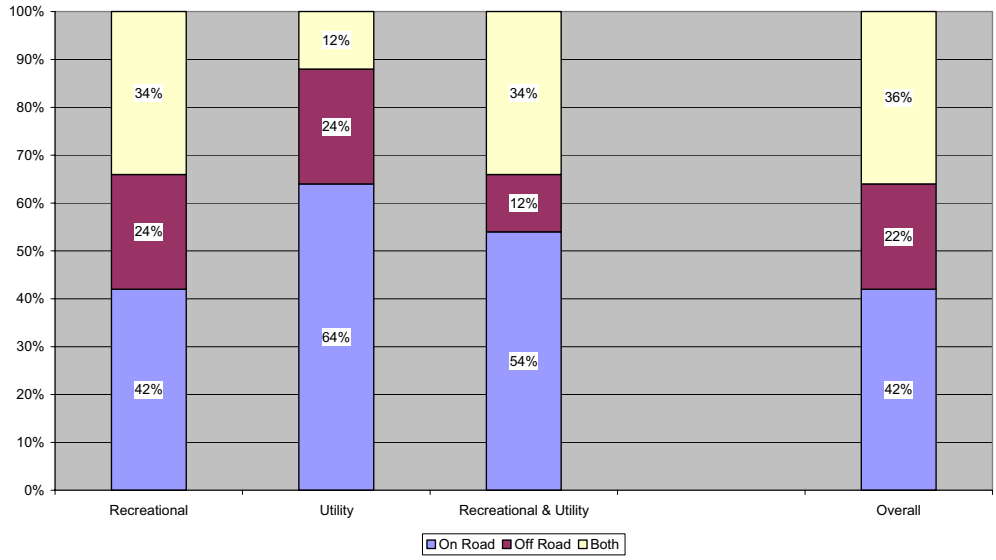
The significance of realising the segmented nature of participants in recreation activities is that managers need to be aware of and provide for the differing needs of priority segments. Recent research for Hampshire County Council[15] found that the access resource used by cyclists varied considerably by the broad nature of cyclists as shown in Graphs 3.33 and 3.34.

Graph 3.33: Market segments in cycling



[15] Leisure Industries Research Centre (2004) Forest of Eversley usage and demand survey, Sheffield Hallam University, Sheffield.

3.34: Surfaces used by cyclist type.



Graphs 3.33 and 3.34 illustrate that most cycling is for recreational rather than utility purposes and that use of on-road and off-road access resources varies considerably by broad market segment. We have previously stated earlier in the report that it is impossible to develop a generic solution that will minimise actual and perceived conflict across different user groups, that is for example between walkers and cyclists.

What we are also suggesting with the knowledge of segmentation within user groups is that it would also be impossible to devise solutions that would meet the needs of all users within a given user group. The key reason for this view is that even within a participant group such as cycling, the needs of the differing groups are likely to be so diverse as to be incompatible. For example, terrain suitable for mountain bikers to meet their goals is likely to be different to that required for a young family hiring bicycles for the day whilst on holiday.

The same argument is applicable to the minority of disabled people who use wheelchairs. Wheelchairs come in at least three different guises. For example there are motorised wheelchairs which have power packs and enable a disabled person to propel themselves by using controls such as a joystick and or other steering device. The capabilities of these wheelchairs are a function of: the battery power available; the tyres and wheels of the chair; the weight of the disabled person; and the skills and confidence of the user.

There are also wheelchairs in which a disabled person can propel themselves using their arms to drive large back wheels with a protruding rim. These wheelchairs can also be pushed by a helper. The capabilities of this type of wheelchair are a function of: the strength of the user; the type of terrain being negotiated; the availability, strength and help of someone to push; the weight of the user; and the wheels / tyres being used, for example solid tyres compared with pneumatic tyres.

Finally, there are wheelchairs in which the user is unable to propel themselves and relies totally on a helper to push them. The capabilities of this type of wheelchair are a function of: the physical capability of the helper (or indeed helpers); the type of terrain the chair is being pushed on; and the tyres / wheels.

It is common practice when designing ramps for wheelchairs for planning authorities to require ramps or slopes with a maximum gradient of 1 unit of ascent for every 12 units of horizontal distance. Clearly, given the differing natures of wheelchairs and the determinants of their capabilities, 1 in 12 is but an arbitrary and subjective measure. Some wheelchair users will be able to negotiate a 1 in 12 gradient with greater ability than some walkers. Similarly a 1 in 20 gradient might be too much for wheelchair users who are unable to propel themselves and who rely on relatively frail helpers to push them (for example, elderly couples).

In essence, the key point arising from this section is that user groups are segmented and have differing needs. Some of these needs might be met via certain solutions which in turn are mutually incompatible with the needs of people in other users groups and with the needs of alternative segments in the same user group. This same argument applies to disabled people generally and the small sub set of disabled people who use wheelchairs specifically. There is no such thing as universally 'wheelchair friendly' standards and solutions because what is wheelchair friendly for one disabled person may be impossible for another.

3.7 Activity overlap

In addition to user groups being segmented, there is also strong evidence that participation in one form of activity does not preclude participation in another. There is no reason for example why horse riders should not also be cyclists and why cyclists should not be walkers. Research by the authors (2004 *op. cit.*) on a sample of over 1,000 residents in Hampshire revealed overlap between activity types as shown below in Table 3.15.

Table 3.15: Participation overlap statistics

	Overall Sample	Walking	Cycling	Horse Riding	Carriage Driving	Off-Road Driving	Pleasure Drive	Off-Road M'cycling
Walking	**83%**		38%	6%	1%	3%	53%	2%
Cycling	**35%**	92%		8%	1%	3%	48%	4%
Horse Riding	**6%**	87%	46%		9%	19%	59%	10%
Carriage Driving	**1%**	100%	33%	60%		33%	75%	0%
Off-Road Driving	**3%**	83%	35%	27%	5%		89%	27%
Pleasure Drive	**52%**	85%	31%	6%	1%	6%		2%
Off-road M'cycling	**2%**	93%	73%	27%	0%	55%	75%	

How to use Table 3.15

We know that 83% of the overall sample had been for a walk of two miles or more in the last year, but to what extent to walkers engage in other activities? Reading across the top of the table we can see that 38% of walkers have also been cycling in the last year which is higher than the sample overall (35%). Instances where participation in a given activity is higher than the sample as a whole are shown in red ink (hot) and instances where participation is below the sample overall are shown in blue ink (cold). The small minority of people who have been horse riding in the last year (6%), exhibit higher levels of participation in all other activities than the sample as a whole.

The point emerging from Table 3.15 is that for the first time in a large scale survey it can be seen that there is considerable overlap between the participants of countryside recreation activities. For example, in the case of horse riders it is quite possible that an equestrian might cycle or walk to the stables where their horse is kept. It is therefore too simplistic to pigeon hole participants as 'walkers', 'cyclists' or 'equestrians' when the available evidence indicates considerable overlap between the various types of recreation activities that take place in the countryside. This point is fundamental for officers charged with implementing Rights of Way Improvement Plans as it challenges many of the assumptions upon which previous policy decisions have been based.

A further interpretation of Table 3.15 might help to explain why evidence of actual conflict is rare and patchy. If there is a reasonable degree of activity overlap (92% of cyclists walk and 8% of cyclists ride horses) then a significant number of the people included as participants in walking, cycling and horse riding are one and the same. It would be very difficult to construct an argument that some people were in conflict with themselves. Furthermore, where there is activity overlap, there is also a presumption that those who participate in a variety of countryside recreation activities have a greater understanding of the needs of say cyclists and walkers than those who participate in just one activity.

4. METHODOLOGY

4.1 Methodology outline

A variety of research techniques were used to conduct this research. The basic aim of the approach was to arrive at a series of conclusions based on the findings from a number of lines of enquiry rather than reliance on just one method. To this end, the broad outline of the research programme was as follows:

- Desk research on literature currently available in the public domain;
- On-site surveys with a sample of actual users on the Granite Way and Tarka Trail;
- Case study research on a range of multi-use trails and Local Highway Authority policy towards such routes throughout Great Britain;
- A citizens' panel survey using a sample of the adult population in Devon;
- Consultation in person and by telephone with a variety of people and organisations who might have an expert opinion on the subject.

More details on each of the strands of the research methodology are given below.

4.2 Desk research

A comprehensive collection and review of the literature relating to conflict, demand, and multi-use trails was conducted both in conventional libraries and on-line. The literature review in Sections 2 and 3 makes extensive use of conflict and demand literature. The desk research is also used to inform the results where findings from other studies complement or contradict the findings from the primary research specific to this project.

Desk research (secondary analysis of existing data) was also conducted on the user data provided from the various sites monitored by Devon County Council. Output was provided to us in the form of Excel spreadsheets and these formed the basis of producing trail usage plots and estimated daily traffic per month calculations.

4.3 On-site surveys

The on-site surveys with actual trail users were conducted in late October 2003 during the half term break in schools and in early January 2004 on the weekend immediately after New Year, that is 3rd and 4th January. It is acknowledged that these times of year fall outside peak usage of the trails, which are known to be the Summer months. Nonetheless, analysis of Devon County Council's logging data indicated that the two periods chosen were likely to be the busiest during the research programme.

A team of three staff worked for 11 full days conducting interviews with users at a range of popular spots along the trails. The surveys were administered by the research team to ensure consistent quality in the data collection. Completed surveys were input to SPSS (the Statistical Package for the Social Sciences) from which subsequent analysis was made. This data set exists as a resource should further analysis be required.

4.4 Case study research

Current practice and policy regarding multi-use routes in Devon was contextualised by examining case studies of practice and policy elsewhere in Great Britain. A variety of multi-use routes ranging from National Trails through to local trails were identified and investigated. Initial contact was made by telephone to secure the co-operation of trail managers and then a questionnaire pro-forma was e-mailed to people who were willing to take part. Responses were received via a combination of on-line returns and follow up telephone interviews.

4.5 Citizens' panel research

The on-site surveys gathered the views of actual trail users who are not necessarily representative of the population as a whole. In consultation with Devon County Council we negotiated access to the February 2004 postal survey of some 1,500 citizens' panel members which is taken to be broadly representative of the county's electorate.

This survey is concerned with a variety of the local authority's activities and it was possible to include some highly specific and focussed questions to help inform the overall picture being built up via other aspects of the research. The relevant data was collected and collated by Devon County Council and supplied to the authors in an SPSS file. This file was subsequently analysed at Sheffield Hallam University and has been written up in the results' section. The use of citizens' panel interviews is a cost effective way for a service such as Rights of Way to obtain research data without having to incur the disproportionately high costs of commissioning bespoke research.

4.6 Consultation

The consultation to complement the other research methods took a variety of forms. In the case of South West Riders, an equestrian organisation affiliated to the British Horse Society, a group discussion was held with five members of the organisation at the home of one of the officials.

Other consultation involved cycling the Granite Way in the company of one of the DCC Cycling Officers to see at first hand the issues involved. During periods of prolonged rain when interviewing on the trails, researchers visited local businesses along the routes such as cycle hire shops to seek the views of local entrepreneurs. More mainstream consultation involved meetings, telephone interviews and correspondence via e-mail.

4.7 Concluding comments

The strength of the research programme is that it is based on a range of influences and is not wholly dependent on one source for its findings. However, the major limitation is that the on-site surveying was carried out during the off-peak season resulting in a relatively small sample size (n = 264) and probably an under-representation of visitors to Devon and an over-representation of local residents. Further research is required during peak periods to establish whether the higher volume of usage increases the low levels of conflict identified in the off-peak research.

5. RESULTS

5.1 Survey of users on the Granite Way and Tarka Trail

5.1.1 The nature of the sample

A total of 264 interviews was conducted with users of the Granite Way and Tarka Trail between 28th-30th October 2003, and 3rd-4th January 2004. Most of the interviews (169 or 64%) were conducted on the Tarka Trail and the balance (95 or 36%) were conducted on the Granite Way. The first two days of interviewing in October and the first day of interviewing in January were characterised by rain and cold which may well have reduced the number of people willing to venture out and hence the sample size.

All users of the trail encountered by the researchers were invited to take part in the survey. Refusal rates were negligible with less than 10 refusals over 11 interviewing days. In the rare event of researchers being passed by other users when conducting and interview, the researchers would complete the current interview and then attempt to catch the person or persons who had passed them. Whilst this strategy worked well for interviewing walkers it was less successful for cyclists. However, as suggested by the literature review and borne out in practice, occasions of this nature were comparatively rare. When encountering more than one person, the researchers interviewed the adult (person aged 16 or over) in the group who had the next birthday as a simple device to ensure randomness.

All interviewing days took place during school holidays, an approach considered the most appropriate for conducting the greatest number of interviews during the off-peak season. 127 (48%) interviews were conducted on weekend days and 137 (52%) were conducted on weekdays.

Although interviews were conducted at a range of sites along the length of the Granite Way the most productive locations for interviews were Okehampton Station and Meldon Viaduct where 70 of the 95 (74%) of the interviews were conducted. Similarly on the Tarka Trail interviews were conducted in various locations between Barnstaple Civic Centre and East Yarde with the most productive locations being Fremington (87 interviews), Barnstaple (23 interviews) and Bideford (13 interviews).

The 264 respondents were comprised of 130 (50%) people making use of the trails on their own and 134 (50%) people who were part of a group. The interviews with the 134 people who were in a group recorded total group membership of 436, that is, 3.35 people per group. Thus the interviews were conducted with 130 sole respondents and 134 respondents who were members of groups totalling 436 different people, giving a total of 566 people encountered on the trails over the 11 days of interviewing. The survey of group composition found that 69% of all groups were made up of 2 people (33%), 3 people (11%) or 4 people (25%). The remaining 31% of groups had 5 or more members – mainly extended families out for a walk, some with young children on bicycles or pedal toys.

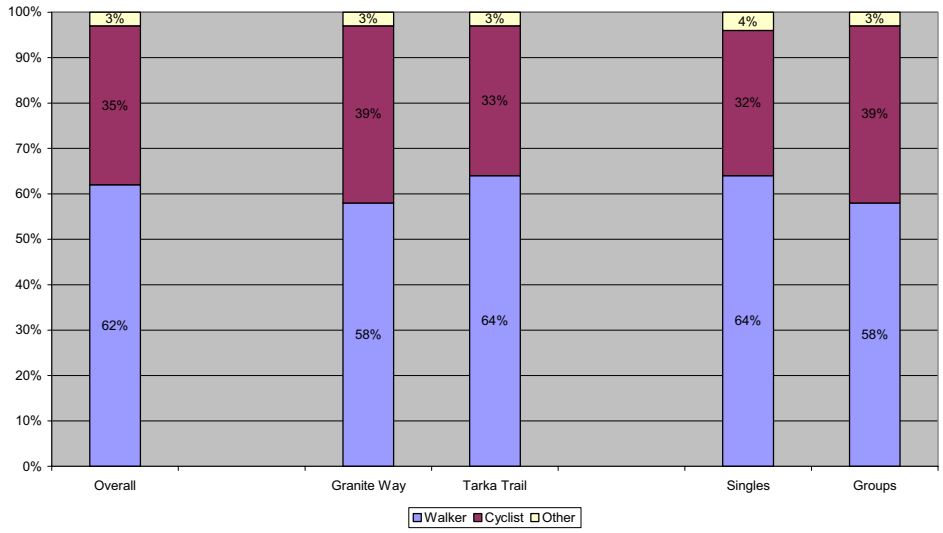
85% of respondents stated that they were taking part in a circular journey and 15% stated that they were on a linear journey. These findings are consistent with the

advice given by Sustrans on calibrating counts at monitoring points along trails. All journeys were of a day trip or day visit nature and we did not interview anybody taking part on a longer trip such as a cyclist following a National Cycle Network route over a number of days.

The gender balance of the people encountered was 54% male and 46% female, reflecting participation in walking and cycling, as revealed by national surveys. Some 80% of the sample stated that they were from Devon and 20% stated that they were visitors to Devon. There was a statistically significant difference in the balance of users on the two trails. Users of the Tarka Trail were predominantly from Devon (86%) with only a minority (14%) being visitors. By contrast the Granite Way sub sample was made up of 69% Devon residents and 31% by people from outside the county. An analysis of the responses from the non-Devon residents is considered later in the context of economic impact.

The broad nature of the respondents in terms of what they were doing when interviewed and cross tabulated by trail and singles / groups is shown in Graph 5.1.

Graph 5.1: User types



Across the sample as a whole 62% of interviewees were walkers, 35% cyclists and 3% were 'others'. The category 'others' included one equestrian, one wheelchair user, one rollerblader, and five runners. There was a higher percentage of cyclists on the Granite Way compared with the Tarka Trail. 'Singles', that is people interviewed on their own, were more likely to be walkers and less likely to be cyclists than people interviewed as part of a group. For the sample as a whole, there were 162 walkers of whom 78 (48%) were dog walkers and 84 (52%) were walkers without dogs.

The trails were found to have different catchment areas for locals and non-locals. In the case of the Tarka Trail visitors came from an average distance of 10 miles to use the trail, whereas for locals the distance travelled to reach the trail was 1 mile. On the Granite Way, visitors came from 10 miles away and local people from an average of 6

miles away. In the case of visitors the 10 miles travelled to reach the trails refers to 10 miles from where they are staying in Devon, not 10 miles away from where they live. The average distances travelled by user type and the estimated average duration of trips is shown in Table 5.1.

Table 5.1: Distances travelled by user type

	Total distance of journey	Amount of total covered on trail	Trail %	Estimated Time[1]
Walkers	4.0 miles	3.5 miles	88%	91 minutes
Cyclists	11.2 miles	10.2 miles	91%	77 minutes

[1]Estimated time calculated on the basis of average speed of walkers (1.18m/s) and cyclists (3.88m/s)

The average distance covered by walkers was 4 miles of which 88% was covered on the trails and for cyclists the average distance covered was 11.2 miles of which 91% was covered on the trails. Local people tend to walk or cycle from their houses to reach the trails whereas visitors tend to park on or near the trails and therefore travel an even higher percentage of their total journey on the trails than locals. For walkers making an average journey of 4 miles, the estimated trip duration is 91 minutes and for cyclists travelling the sample average of 11.2 miles, the estimated trip duration is 77 minutes. These trip duration estimates are based on the average speed findings from the University of Surrey research discussed earlier in Section 2.2.1.

Users were asked to indicate the broad purpose or purposes (if any) of their journey in order to give an insight into their motivation for being on the trails. The headline findings for the sample overall and cross-tabulated by user type are shown in Table 5.2.

Table 5.2: Purpose of journey

	Overall[1]	Walkers (All)	Dog Walkers	Walkers (No Dogs)[2]	Cyclists[2]
Going to work	3%	3%	0%	6%	3%
Going to the shops	4%	5%	4%	6%	3%
Visiting friends	3%	3%	3%	2%	3%
Going to the pub	3%	3%	1%	4%	3%
Dog walking	32%	48%	100%	0%	8%
Exercise	46%	44%	36%	51%	50%
Other	16%	19%	10%	27%	10%

[1]Total exceeds 100% because respondents could give more than one answer
[2]Total are less than 100% because answers such as 'going for a walk' or 'going for a cycle ride' which would obviously be 100% have been omitted.

There are four key points arising from the data in Table 5.1 which require further explanation.

- Utility use of the trails is low, that is, the number of people using them for purposes such as going to work, going to the shops, visiting friends or going to the pub is low (3%-4%). Furthermore, there is no significant variation in these scores across user groups.

- Walkers without dogs and Dog Walkers appear to be using the trails for different purposes. Dog walkers have lower levels of 'utility' motivations and lower levels of personal exercise motivations than walkers without dogs. This finding would appear to confirm the conclusion in Section 3.6 that user groups are likely to be segmented into identifiable sub-groups rather than being homogenous.

- There is a minority of cyclists who accompany their dog or dogs on a 'walk' whilst cycling. The qualitative research with users identified this group as being a particular cause for complaint as illustrated by the following quotes:

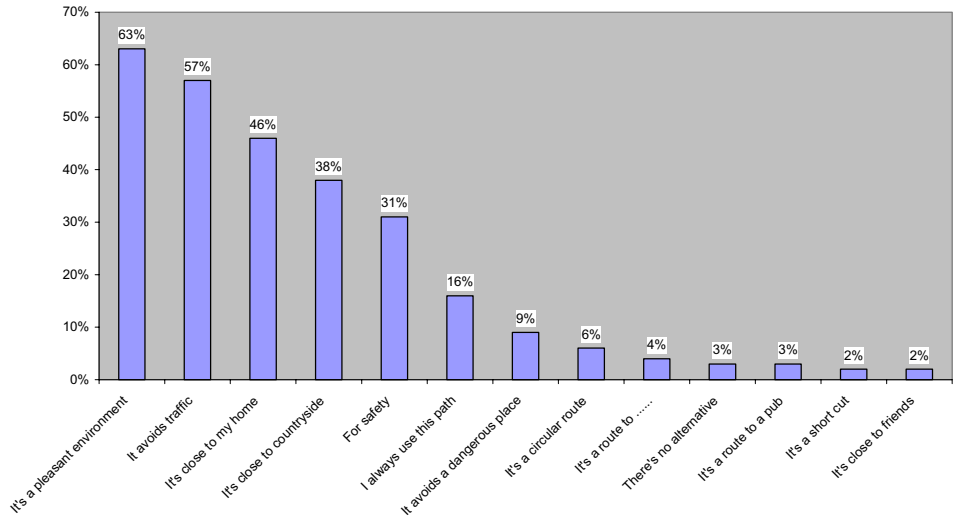
  "There's no way that somebody on a bike can be properly in charge of a dog."

  "Cyclists taking dogs for a walk - who's exercising who?"

- In addition to the obvious reasons for being on trail there is a significant minority of people who have other reasons for being out on them. These include reasons such as bird watching, fishing, bait digging, photography, train rides (Okehampton) and admiring the scenery / sightseeing.

Finally, respondents were asked about the underlying reasons why they were using the route on the day of the interview. The key findings are shown in Graph 5.2.

Graph 5.2: Reasons why people were using the routes



The most commonly cited reason why people were using the trails was because 'it's a pleasant environment' (63%). The fact that the pleasant environment is also 'close to the countryside' (38%) helps to underpin what respondents value about the trails. These findings confirm the leisure / recreational use of the trails rather than utility use. The avoidance of traffic is the second most important reason for using the trails (57%) and this statistic applies equally to all user groups. The importance of avoiding traffic and the perceived benefits of so doing are reflected in the finding that 31% cite

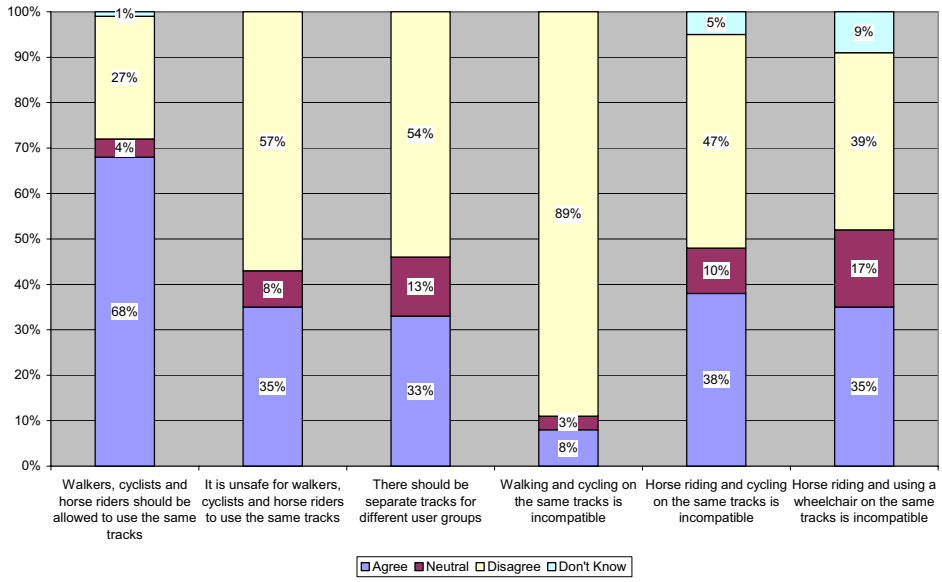
safety reasons for using the routes. The only other significant factor is convenience in the sense that the trails are close to people's homes. Not surprisingly, this finding is significantly higher for Devon residents (53%) than visitors (17%).

Having outlined the nature of the sample, we now examine respondents' attitudes towards multi-use of trails.

5.1.2 Respondents' attitudes towards multi-use of trails.

Respondents were asked a series of questions concerned with the extent to which they agreed or disagreed with six statements about issues relating to multi-use routes. The actual questions and the responses for the whole sample are shown in Graph 5.3.

Graph 5.3: Attitudes towards multi-use of trails



The key points arising from Graph 5.3 are detailed below.

- The majority of respondents (68%) agree that walkers, cyclists and horse riders should be allowed to use the same tracks. When allowing for the 27% of respondents who disagree with the statement, there is a net agreement of +41%. (Net agreement = 68% agree - 27% disagree = +41%). There was no significant variation in the responses to this statement by user types, that is walkers and cyclists.

- The majority of respondents (57%) disagree that it is unsafe for walkers, cyclists and horse riders to use the same tracks. A significant minority (35%) agree with the statement and the level of net disagreement is -22%. There was no variation in the responses to this statement by user type.

- The majority of respondents (54%) disagree with the statement that there should be separate tracks for different user groups. A significant minority

(33%) agree with the statement and the level of net disagreement is -21%. Some respondents made qualitative comments about this question such as: 'in an ideal world maybe, but it's not realistic is it?' and 'you might have a point for the Summer when it's [Granite Way] like a motorway, but the rest of the time there's hardly ever anybody on it.' There was no variation in the responses to this statement by user type.

- The vast majority (89%) of respondents disagree with the statement that walking and cycling on the same tracks is incompatible. Only 8% of respondents agree with the statement giving a net disagreement level of -81%. There was no variation in the responses to this statement by user type.

- There is mixed opinion regarding the compatibility of horse riding and cycling on the same tracks in the sense that unlike the responses to other statements, there is no majority view. Some 47% of respondents disagree with the statement and 35% agree with it. The level of net disagreement is -12% which indicates more respondents disagree with the statement than agree with it. There was no variation in the responses to this statement by user type. That is, the balance of opinion is that more people disagree than agree that horse riding and cycling on the same tracks is incompatible.

- There is also mixed opinion regarding the compatibility of horse riding and using a wheelchair on the same tracks. 39% of respondents disagree with the statement and 35% agree with it. The level of net disagreement is -4%. It is worth noting that 17% of respondents gave a neutral answer and 9% said 'don't know' to this question, which suggests that a minority of respondents did not feel qualified to give an answer to the statement as they were neither horse riders nor wheelchair users. There was no variation in the responses to this statement by user type.

The overall picture emerging from Graph 5.3 is one of pragmatism, tolerance and relatively low concerns about the safety of mixing walkers, cyclists and horse riders. In a way this finding is not surprising as it is precisely the combination of users found on bridleways which have permitted walkers, horse riders and cyclists to use the same designated access resources since 1968. In the intervening 36 years there has been no reported evidence of increased injuries on bridleways as a result of interactions between different user types. This finding is largely explained by the relatively low volume of 'traffic' found on bridleways and low levels of encounters with other users.

Whilst the Public Rights of Way network was not designed for anything in particular and simply evolved as a result to enable people (both on foot and on horseback) to make efficient linear journeys, the same is not true for more contemporary resources such as cycle tracks and cycle routes. Central government is currently committed to reducing the number of journeys made by car and tripling the number of journeys made on bicycles by 2010. This therefore implies that cycle tracks and cycle routes are being designed for a purpose and that the volume of 'traffic' using them will be both high and increasing. However, the findings of the user surveys on the Granite

Way and Tarka Trail indicate relatively low levels of overall usage, of which utility usage is a very small proportion (3%).

It is quite likely that if the statements shown in Graph 5.3 were asked at different times of the year, for example peak season, and in different locations, for example off-road commuter routes in urban areas, then the results obtained would also be different. This suggestion is consistent with our earlier assertion that there is no 'one size fits all' approach to the design and management of off-road routes. To test this view, the results in Graph 5.3 were cross tabulated by trail so that the answers of people using the Tarka Trail could be contrasted with those using the Granite Way. The results are shown in Table 5.3.

Table 5.3: Net agreement / disagreement levels by trail

	Overall Net Agree/ Disagree	**Tarka Trail**	**Granite Way**	**Significance**
Walkers, cyclists and horse riders should be allowed to use the same tracks	**41%**	45%	31%	p<0.03*
It is unsafe for walkers, cyclists and horse riders to use the same tracks	**-22%**	-19%	-27%	p<0.01*
There should be separate tracks for different user groups	**-21%**	-19%	-26%	p<0.19
Walking and cycling on the same tracks is incompatible	**-81%**	-78%	-86%	p<0.30
Horse riding and cycling on the same tracks is incompatible	**-9%**	-1%	-24%	p<0.03*
Horse riding and using a wheelchair on the same tracks is incompatible	**-4%**	-1%	-11%	p<0.00*

If p<0.05 then the difference between sub-samples is said to be statistically significant

In Table 5.3 there are statistically significant differences between users of the Tarka Trail and the Granite Way on four of the six statements listed. These are discussed briefly below.

- Users of the Tarka Trail have a significantly higher level (45%) of net agreement than Granite Way users (31%) to the statement that walkers, cyclists and horse riders should be allowed to use the same tracks.
- Users of the Granite Way have a significantly higher level (-27%) of net disagreement than users of the Tarka Trail (-19%) to the statement that it is unsafe for walkers, cyclists and horse riders to use the same tracks.
- Users of the Granite Way have a significantly higher level (-24%) of net disagreement than Tarka Trail users (-1%) to the statement that horse riding and cycling on the same tracks is incompatible.
- Users of the Granite Way have a significantly lower level of net disagreement (-11%) than Tarka Trail users (-1%) to the statement that horse riding and using a wheelchair on the same tracks is incompatible.

It is not known why there is a difference in the strength of opinion towards multi-use by respondents on two different trails. Possible explanations include trail location, surface condition, user types and usage levels and history.

These findings confirm yet again the assertion that it is inappropriate to apply standards and text book solutions to the design and management of multi-use routes. The emerging message appears to be that each route or trail should be considered on its merits within a framework of 'local solutions to local problems'.

5.1.3 Evidence of hostility and aggression

The final question on the survey asked respondents to state whether or not they had ever encountered hostility or aggression when using the route they were on. Overall 13% of respondents stated that they had encountered hostility or aggression and 87% said that they had not. This finding confirms the view taken in the Countryside Agency (2001) research and the North Yorkshire Moors National Park research that in overall terms actual conflict on multi-use routes is low. However there are some very significant differences in the experience of conflict by selected variables.

When using the time frame 'ever', it would be reasonable to expect that those who have been using the trails for the longest would be the people most likely to have experienced hostility or aggression. Devon residents are likely to have used the routes for longer and with greater frequency than visitors. It is therefore no surprise that a higher proportion (15%) of local people report ever having encountered hostility or aggression on the route on which they were interviewed compared with visitors (6%).

Similarly, there are variations in having ever experienced hostility or aggression by user type as indicated in Table 5.4.

Table 5.4: Experience of encountering hostility or aggression by user type

User Type	Sample Size	Yes	No	Total
Overall Sample	264	13%	87%	100%
Devon Residents	210	15%	85%	100%
Visitors	54	6%	94%	100%
Cyclists	95	5%	95%	100%
All Walkers	162	16%	84%	100%
Dog Walkers	78	21%	79%	100%
Walkers Without Dogs	84	12%	88%	100%
Horse Rider[1]	1	100%	0%	100%
Wheelchair User[1]	1	100%	0%	100%
Others (Runners etc)[1]	5	20%	80%	100%

[1]The smaller sub-samples are shown for interest only.

Cyclists are the user group least likely to have ever experienced hostility or aggression (5%), whilst walkers, the only significant other group in the sample, report higher than average levels at 16%. Within the walking sub-sample, dog walkers report higher levels (21%) of ever encountering hostility and aggression than walkers without dogs (12%). To acquire a feel for what people meant when they said that they had encountered hostility or aggression, interviewers were instructed to probe for

further details. The following quotes cover the range of comments made by respondents.

Cyclists (5% report having encountered hostility or aggression)

Dog owners should keep dogs under close control, otherwise they run out in front of bikes.

Walkers believe route (Tarka Trail) is just for walking and take up all of the track. 'Anti cyclist' attitude may be due to speed of cyclists.

Dog owners not clearing up after their animals, I'm forever riding through dog mess and getting it all over my bike and clothes.

Walkers (16% report having encountered hostility or aggression)

Cyclists going hell for leather.

Cyclist shouted at me 'keep your bloody dog on a lead'.

Bikes need bells, it's especially difficult for dog walkers who can't hear them approaching.

Apparently I was walking on the 'wrong' side of the track and I had a 'run in' with a cyclist.

Cyclists go too fast and abuse walkers with dogs.

Cyclists thinking that this (Tarka Trail) is a dedicated cycle route. Cycle hire shops should reinforce the point that this is a footpath and give out courtesy / safety guidelines.

Cyclists not using bells. I've been rammed by a cyclist who accused me of being on the wrong side of the track.

The types of hostility and aggression encountered by both cyclists and walkers tend to arise as a result of behavioural rather than environmental traits. It would appear that simple measures such as appropriate control of dogs (including mess removal), cyclists giving advance warning of their presence via bells, and all users having a better understanding of route etiquette would probably eliminate most of the limited hostility and aggression which was reported. Dog walkers seem to be the group most likely to have encountered hostility and aggression from other users and this appears to be as a result of animal behaviour (fouling and perception of not being under control) rather than any active behavioural trait of the owner. If there is a genuine desire to reduce hostility and aggression on multi-use routes featured in this research, then effort needs to be focused on ensuring that the minority of walkers affected have their well being catered for. There is no evidence of systematic incompatibility between walkers and cyclists.

5.1.4 Views about horses being permitted to use the trails

During the interviewing conducted in early January 2004, trail users were asked about their feeling towards Devon County Council permitting horses to use the trails. The questions were asked qualitatively and the broad range of positive, negative and neutral comments is shown in Table 5.5.

Table 5.5: The range of comments expressed about horses using trails

Comment Nature	Positive	Neutral	Negative
Environmental	They're part of rural life	Can't see a problem	Paths are a bit narrow in parts They'll churn up surfaces
Behavioural	Might stop bikes from speeding		Manure on path Horse riders are arrogant Dogs might chase them
Other	I like to see them	It's different in Summer to Winter	

The qualitative comments shown in table 5.5 reflect the tolerant attitude indicated in the quantitative results.

5.1.5 Comments on the economic impact of the trails

The research was conducted during holiday periods but out of peak season which resulted in a modest sample size (264) of which only 20% (53 respondents) were visitors to Devon. A practical definition of 'economic impact' in the context of multi-use trails is 'the net change in the local economy directly attributable to visitors who have travelled to Devon specifically to use the trails concerned'. If visitors have not travelled to Devon specifically to use certain trails, then the economic impact generated by such visitors cannot be wholly attributed to the trails. Other likely explanations for visitors' trips might include visiting friends and relatives, being on holiday or the scenery. In the sample of 53 visitors we found 7 respondents (13%) who said that they were in Devon specifically to use a trail and 46 (87%) who said that their use of the trail on the day of interview was incidental to their visit to Devon. Of the 7 respondents visiting Devon specifically to use a trail, 6 were day visitors making a visit to the county to use the Granite Way. There are two possible conclusions that can be drawn from these findings that need to be investigated in greater depth.

First, the 'drawing power' of multi-use routes might be less than anticipated. There may be a minority of users whose purpose for being in Devon is specifically to use a trail such as those on long distance walks or cycle rides. Our limited evidence from Devon shows this to be a small minority of visitors. However, we have also conducted two years of monitoring the usage of the Trans Pennine Trail (TPT) during all four seasons. In essence, usage of the TPT is limited mainly to local people and the incidence of people taking part in long distance journeys is almost negligible. It is more probable that visitors to Devon have a variety of motivations for visiting the county and that their economic impact is attributable to more than one motivation. Thus it would an overstatement of the evidence to claim the economic impact of such visitors was directly attributable to one specific element of a multitude of different motivations.

Second, the results of 11 days interviewing during off peak periods may be sufficient to find out about visitors' attitudes towards multi-use routes but insufficient to generate a reliable sub sample from which to draw conclusions about the economic impact of trails. Further research conducted on a continuous basis will need to be conducted to address this issue more fully. Our evidence from the TPT indicates that specific use and therefore directly attributable economic impact varies by season. There are marginally higher levels of long distance journeys made in late Spring, Summer and early Autumn than the rest of the year. However, even at these 'peak' times the proportion of journeys which are being made specifically to use the TPT is never more than between 1% and 3%.

In short, the results of the economic impact are inconclusive but nonetheless point to economic impact directly attributable to people using specific routes being relatively low. A more likely scenario is that visitors use the trails as part of a wider set of motivations for visiting Devon.

5.1.6 Key points

- Use of the Tarka Trail and the Granite Way is predominantly for recreational use rather than utility use. A maximum of 4% of journeys had a utility element to them.
- The users of the trail confirm earlier assertions that within individual user groups there are different user segments. In the case of this research we found recreational cyclists, utility cyclists and cyclists who 'walk' dogs. Amongst walkers there are dog walkers, walkers without dogs and mixed groups such as adults who are walking whilst accompanying children on bicycles or pedal toys.
- The balance of opinion concerning multi-use is that there is a net agreement of +41% to the statement that walkers, cyclists and horse riders should be allowed to use the same tracks. Furthermore, there is a net disagreement of -22% to the statement that it is unsafe for walkers, cyclists and horse riders to use the same tracks.
- In the case of walking and cycling there is -81% net disagreement to the statement that walking and cycling on the same tracks is incompatible. In the case of cycling and horse riding there is -21% net disagreement to the statement that cycling and horse riding on the same tracks is incompatible.
- The balance of opinion concerning horse riding and wheelchair use on the same tracks shows a net disagreement of -4% to the statement that horse riding and using a wheelchair on the same tracks is incompatible.
- Tarka Trail users and Granite Way users show some statistically significant differences in the strength (but not direction) of their attitudes towards multi-use. There is no obvious explanation for this unexpected finding but factors such as location, condition, width, levels of usage and history are possible factors.
- Levels of experiencing hostility and aggression are low with only 13% of respondents stating that they had ever experienced hostility and aggression whilst using the trail on which they were interviewed. Visitors to Devon report lower levels of experiencing hostility or aggression (6%) than local residents (15%). This difference can be explained by the fact that local residents have been using the trails for longer than visitors.

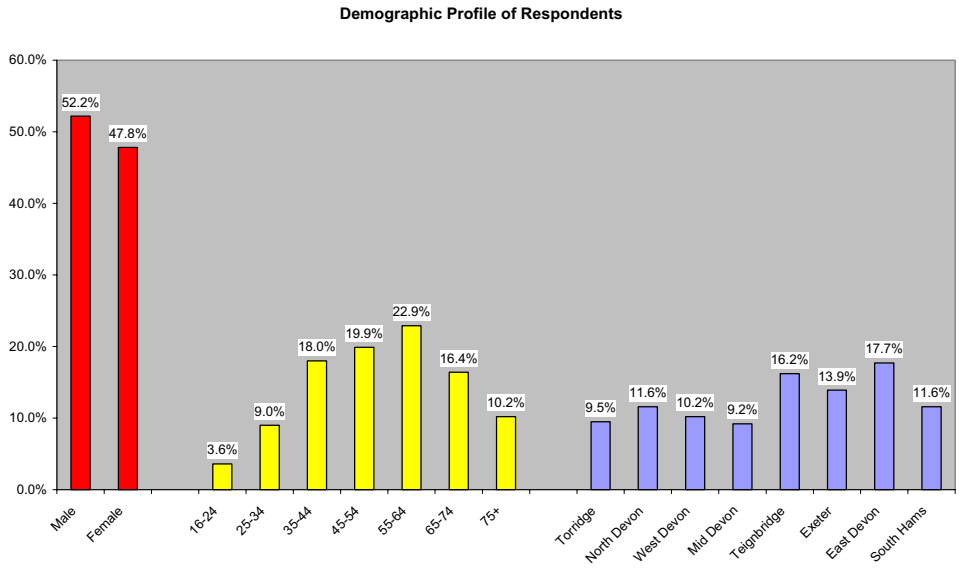
- The incidence of experiencing hostility or aggression on the trails varies significantly by user group. Cyclists (5%) are the least likely to have experienced hostility or aggression and walkers (16%) are the most likely.. Within walkers dog walkers (21%) are more likely to have experienced hostility and aggression than walkers without dogs (12%).
- Qualitative comments received about the possibility of horses being allowed to use either of the trails reflects the broad tolerance revealed by the quantitative questions concerning multi-use.
- The composition of the users interviewed was 80% Devon residents and 20% visitors. In the visitor sample (53 respondents), 7 groups stated that the main purpose of their visit was to use a particular trail. It is likely that for most visitors to Devon their use of a trail is one of a series of motivations for a visit to the county. It would therefore be an over statement of the evidence to attribute the expenditure of visitors solely to the trails on which they were interviewed.

5.2 Citizens' panel survey

5.2.1 The nature of the sample

Graph 5.4 illustrates the demographic profile of the 1,194 respondents included in the results.

Graph 5.4: Demographic profile of the respondents



The Citizens' panel survey was sent out to a predetermined group of 1500 people. Although only limited demographic information is available from the citizens' panel survey, the results suggest that the respondents to the survey were not a representative sample of the population as a whole. In Graph 5.4 it can be seen that more males answered the Right of Way questions than females. There are two key reasons for this. Firstly, men are more likely to be cited as being the householder at an address. Secondly, all of the evidence indicates that men are more likely to take part in walking and cycling than women. Therefore they are more likely to have a greater interest in the survey than women and as a result would probably have been more inclined to have completed a questionnaire.

Young adults (16-29) are under represented in the sample compared with their elder peers (30+). Again there are two likely causes for this finding. First, young adults are less likely to be householders than older adults. Second, older adults are more likely to be interested in countryside recreation than young adults. Walking participation rates nationally are higher amongst adults aged 30 or over than those aged less than 30. Older adults are more likely to have dependent children and activities such as walking and cycling in the countryside can be done as a family.

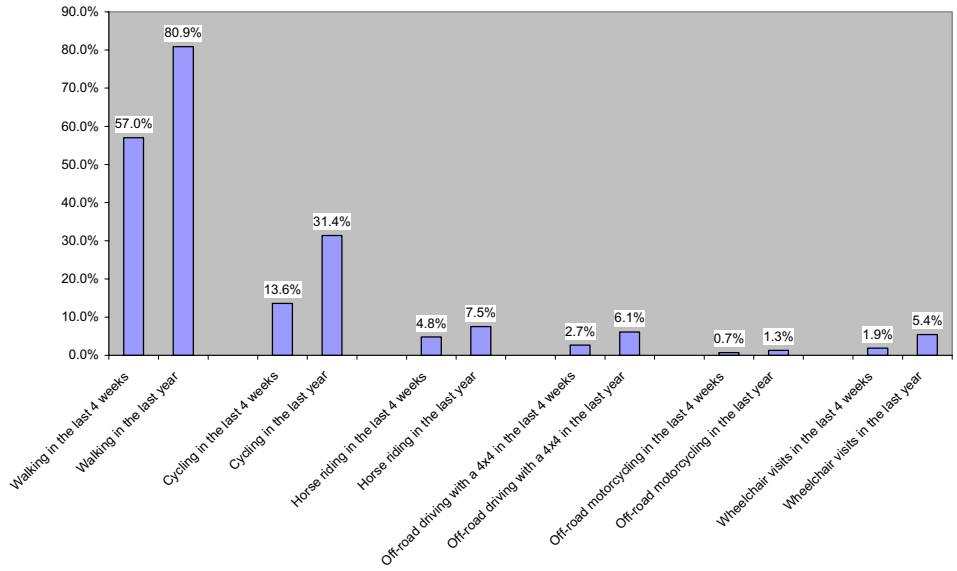
No information on socio-economic group was asked in this survey, therefore it is not known how representative the sample is on this variable.

There is a fairly even spread of responses from across the county, with slightly higher response rates from Teignbridge and East Devon. It is not know why this should be the case, but it is unlikely to greatly affect the reliability of the results.
The limitation of the sample is that it is not representative of the population it has been drawn from in terms of gender and age, two of the principal determinants of demand for countryside recreation. However, this should not be a surprise and nor should it necessarily be seen as a weakness. Participation in countryside recreation is not representative of the population as a whole. The literature review consistently indicated that men, older adults and people from higher socio-economic groups are consistently over-represented in demand statistics relating to participation in countryside recreation.

5.2.2. Participation rates in selected outdoor activities.

A breakdown of respondents' participation rates in various activities on both a four weekly and an annual basis is shown in Graph 5.5.

Graph 5.5: Participation rates in various activities



There are a several key points emerging from Graph 5.5:

- In descending order the rank of activities participated in is walking, cycling and horse riding – this rank order is exactly the same as national data sets such as the GHS 1996 and the Entec Survey 2001.
- There are higher participation rates in walking, cycling and horse riding within the sample than found in the population as a whole.
- Large scale surveys of the public such as this do not yield meaningful sub-samples of participants in minority sports such as off-road vehicle use and wheelchair visits. To reach larger samples of these groups requires surveys of governing body membership lists at local level.

The breakdown of the sample into its demographic and participation characteristics provides two useful sets of variables by which to cross tabulate the headline findings from various parts of the survey. Cross tabulations are used selectively throughout the results to add value to the basic points being made.

In previous demand surveys such as the General Household Survey no additional analysis has been conducted to test for 'overlap' between participants. In this context 'overlap' means people who take part in a given activity AND who also take part in another activity. Table 5.6 below illustrates the annual participation rate for each activity covered in the research and also shows the degree of overlap between activities.

Table 5.6: Participation overlap statistics

	Overall Sample	Walking	Cycling	Horse Riding	Off-Road Driving	Off-Road M'cycling	Visits with wheelchair
Walking	**81%**		37%	9%	3%	2%	5%
Cycling	**31%**	96%		13%	8%	3%	6%
Horse Riding	**8%**	96%	56%		20%	3%	10%
Off-Road Driving	**6%**	89%	43%	25%		10%	3%
Off-road M'cycling	**1%**	100%	63%	19%	44%		13%
Visits with wheelchair	**5%**	77%	32%	14%	3%	3%	

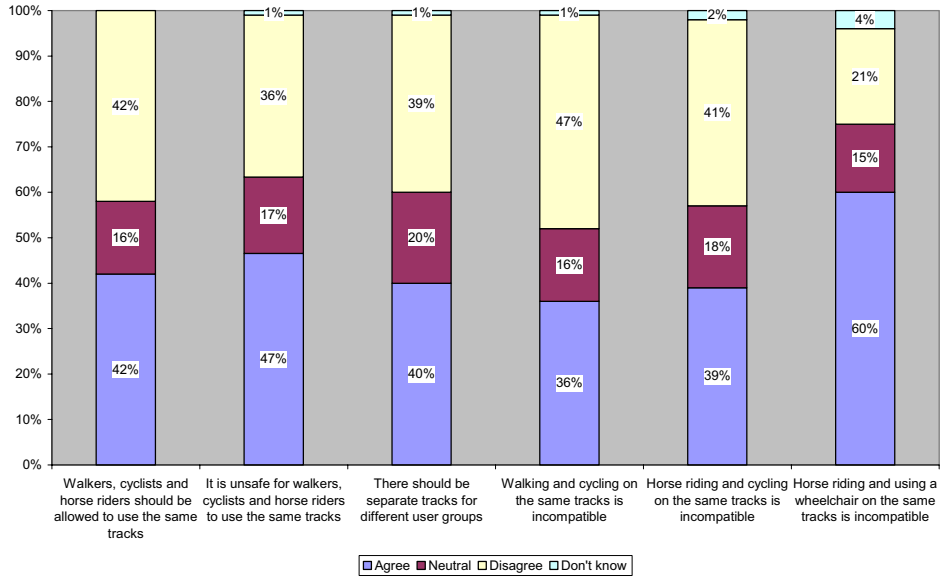
How to use Table 5.6
We know that 81% of the overall sample have been for a walk of two miles or more in the last year, but to what extent to walkers engage in other activities? Reading across the top of the table we can see that 37% of walkers have also been cycling in the last year which is higher than the sample overall (31%). Instances where participation in a given activity is higher than the sample as a whole are shown in red ink (hot) and instances where participation is below the sample overall are shown in blue ink (cold).

It can clearly be seen that the results emerging from Table 5.6 are highly comparable with the results from table 3.14, in that it is clear that there is considerable overlap between the participants of countryside recreation activities. Thus it is too simplistic to pigeon hole participants as 'walkers', 'cyclists' or 'equestrians' when the available evidence indicates considerable overlap between the various types of recreation activities that take place in the countryside. This is something which should be borne in mind by those charged with the management of outdoor activity resources. However, for the purposes of this report the user group sub samples are used as discrete sets, although in practise this is not necessarily the case.

5.2.3. Respondents' attitudes towards multi-use of trails.

Respondents were asked a series of questions concerned with the extent to which they agreed or disagreed with six statements about issues relating to multi-use routes. These are the same questions that were asked of users of the Tarka Trail and Granite Way, as reviewed in section 5.1. The actual questions and the responses for the whole sample are shown in Graph 5.6.

Graph 5.6: Attitudes towards multi-use of trails

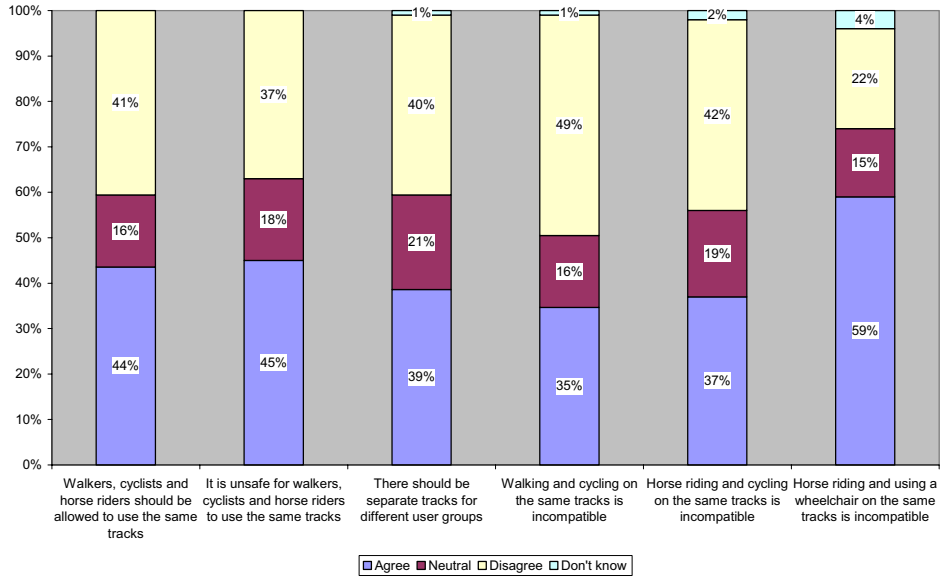


Graph 5.6 shows that there are no particularly strong feelings regarding multi-use routes amongst the sample as a whole. If you subtract the percentage of disagreement from the percentage of agreement for each question, it can be seen that in most cases the net agreement or disagreement is quite small except for shared use by horse riders and wheelchair users. In this case there is a 39% net agreement that horse riding and using a wheelchair on the same route is incompatible.

The only other point raised by graph 5.6 was that there was an 11% net agreement that it is unsafe for walkers, cyclists and horse riders to use the same tracks. However, this is offset by an 11% net disagreement that walking and cycling on the same tracks is incompatible. This suggests that the perception exists that it is unsafe to have horses using multi-use trails, but that it is acceptable to have cyclists and walkers using the same trails.

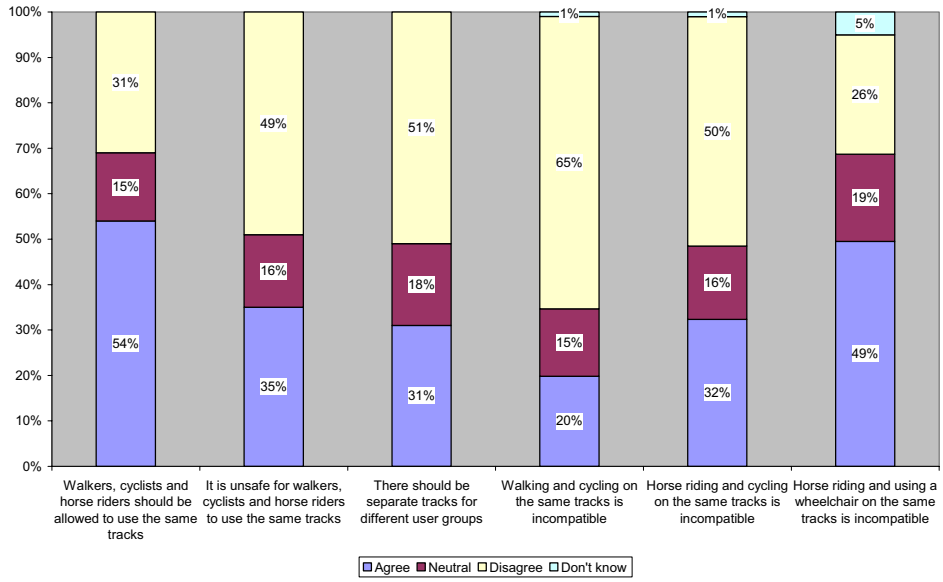
If the answers to the same attitudinal questions are cross-tabulated by user type, then a differing picture begins to emerge form group to group. Graphs 5.7 to 5.9 show the responses to each question by each user type.

Graph 5.7: Walkers' attitudes towards multi-use of trails



The responses from the walking subset show a highly comparable set of results to that of the overall sample. This is not surprising as the walking sub sample comprises 81% of the overall sample.

Graph 5.8: Cyclists' attitudes towards multi-use of trails



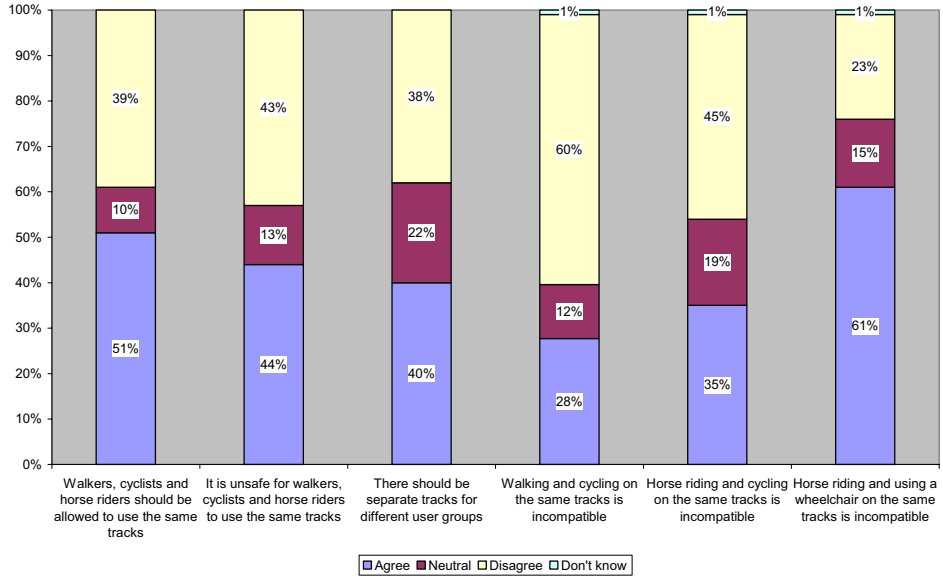
Firstly, it should be noted that the cycling sub sample (n=370) is significantly smaller than the walking sub sample (n=957) and is therefore liable to a greater degree of sampling error. However, Graph 5.8 shows that there are noticeably different attitudes amongst the cycling sub sample.

Cyclists show a 23% net agreement that walkers, cyclists and horse riders should be allowed to use the same tracks. This is allied to a 14% net disagreement that it is unsafe for walkers, cyclists and horse riders to use the same tracks and a 20% net disagreement that there should be separate tracks for different user groups.

There was a very strong opinion that walking and cycling on the same tracks are not incompatible (45% net disagreement). There was a similar, but not as strong feeling that horse riding and cycling on the same tracks is not incompatible either (18% net disagreement).

As with the overall sample and walking sub sample, there was a significant strength of opinion (23% net agreement) that wheelchair use and horse riding on the same tracks is incompatible.

Graph 5.9: Horse riders' attitudes towards multi-use of trails



As with the cycling sub sample, the horse riding sub sample is smaller still (n=88) and is therefore subject to an even greater level of sampling error and thus should be treated with caution.

The main points from the horse riding sub sample are that there is a strong feeling amongst horse riders that walking and cycling on the same tracks is not incompatible (32% net disagreement). Also there was a 10% net disagreement that horse riding and cycling on the same tracks is incompatible. Interestingly, there was a 38% net agreement that horse riding and wheelchair use on the same tracks is incompatible. This reinforces the findings from the overall sample and the walking and cycling sub samples.

The sub samples for off-road driving, off-road motorcycling have not been subjected to any further analysis. This is because the sub samples for these activities are too small for any meaningful results to be gained.

Table 5.7 summarises and compares the levels of net agreement / disagreement by overall sample and individual user group.

Table 5.7: Net agreement / disagreement levels by user group

	Overall Net Agree/ Disagree	Walkers	Cyclists	Horse riders	Wheelchair users
Walkers, cyclists and horse riders should be allowed to use the same tracks	**0%**	3%	23%	12%	1%
It is unsafe for walkers, cyclists and horse riders to use the same tracks	**11%**	8%	-14%	1%	16%
There should be separate tracks for different user groups	**1%**	-1%	-20%	2%	12%
Walking and cycling on the same tracks is incompatible	**-11%**	-14%	-45%	-32%	-23%
Horse riding and cycling on the same tracks is incompatible	**-2%**	-5%	-18%	-10%	-13%
Horse riding and using a wheelchair on the same tracks is incompatible	**39%**	37%	23%	38%	43%

Note: a negative value denotes net disagreement.

In Table 5.7 there are noticeable differences between user groups on five of the six statements listed. These are discussed briefly below.

- Cyclists have by far the highest net agreement (23%) to the statement that walkers, cyclists and horse riders should be allowed to use the same tracks, with walkers having the lowest (3%) net agreement and the overall sample being neutral.
- Cyclists have a lower level (-14%) of net disagreement than other users to the statement that it is unsafe for walkers, cyclists and horse riders to use the same tracks. However, wheelchair users have a relatively high level (16%) of net agreement with this statement.
- Cyclists have a noticeably higher level of net disagreement to the statement that there should be different tracks for different user groups.
- Cyclists have a noticeably higher level (-45%) of net disagreement than other users to the statement that walking and cycling on the same tracks is incompatible.
- Again, cyclists have a higher level of net disagreement (-18%) than other users to the statement that horse riding and cycling on the same tracks is incompatible.
- Interestingly, the highest level of net agreement (43%) to the statement that horse riding and wheelchair use on the same tracks are incompatible, comes from wheelchair users themselves.

All of the points above suggest that the cyclists within the sample are more tolerant of other user groups and are more willing to share resources with other users.

Table 5.8 below shows a comparison between the attitudes of the overall sample from the citizens' panel survey and the user surveys from the Tarka and Granite Trails.

Table 5.8 Comparison of attitudes of Citizens' panel and trail users

	Citizens' panel Net Agree/ Disagree	User survey	Variance % Points	Direction
Walkers, cyclists and horse riders should be allowed to use the same tracks	**0%**	**41%**	**- 41**	**Opposite**
It is unsafe for walkers, cyclists and horse riders to use the same tracks	**11%**	**-22%**	**+ 33**	**Opposite**
There should be separate tracks for different user groups	**1%**	**-21%**	**+22**	**Opposite**
Walking and cycling on the same tracks is incompatible	**-11%**	**-81%**	**+ 70**	**Same**
Horse riding and cycling on the same tracks is incompatible	**-2%**	**-9%**	**+ 7**	**Same**
Horse riding and using a wheelchair on the same tracks is incompatible	**39%**	**-4%**	**+ 43**	**Opposite**

Table 5.8 indicates a marked difference in the attitudes of the general public when compared to actual users of multi-use trails. Comparing the figures above suggests that there is a considerably more tolerant attitude towards other user groups amongst actual trail users then there is amongst the general public. To put this into context, those interviewed on the trail are likely to be drawing on their immediate experiences of the trail they are on (multi-use trail), whereas the respondents from the citizens' panel survey may be more inclined to think about routes such as footpaths and bridleways or even the road network, not necessarily trails specifically designed for multi-use. This may well explain the apparent difference in attitudes.

5.2.4. Evidence of hostility and aggression

The final section of the citizens' panel survey asked respondents to state whether or not they had ever encountered hostility or aggression when using the route they were on. Overall 20% of respondents stated that they had encountered hostility or aggression and 79% said that they had not. This finding confirms the view taken in the Countryside Agency (2001) research and the North Yorkshire Moors National Park research that in overall terms actual conflict on multi-use routes is low.

However, there is some variation in having ever experienced hostility or aggression by user type as indicated in Table 5.9.

Table 5.9: Experience of encountering hostility or aggression by user type

User Type	Sample Size	Yes	No	Don't know	Total
Overall Sample	1194	20%	79%	1%	100%
Walkers	962	21%	78%	1%	100%
Cyclists	371	23%	76%	1%	100%
Horse Riders	89	36%	63%	1%	100%
Off-road drivers[1]	73	23%	75%	2%	100%
Off-road motorcyclists[1]	16	19%	75%	6%	100%
Wheelchair users[1]	65	32%	65%	3%	100%

[1]The smaller sub-samples are shown for interest only.

Walkers are the user group least likely to have ever experienced hostility or aggression (21%), whilst horse riders report much higher than average levels at 36%.

5.2.5. Key points

- The Citizens' Panel survey of 1,194 adults in Devon is not wholly representative of the population of the county. It is over representative of men and under representative of women. The age profile is under representative of young adults (16-34) and over representative of older adults (35+). It would not be prudent to generalise these findings to the adult population of Devon as a whole.
- Participation rates in walking, cycling and horse riding within the sample are significantly higher than for the population as a whole. It would be dangerous to generalise the sample findings to the adult population of Devon. However, it would be prudent to conclude that participation rates in Devon are at least equal to national averages.
- There is a considerable participation overlap between different activities. For example, 81% of the sample have been for a walk or hike of 2 miles or more in the last year and of these 37% have also been cycling in the last year.
- The opinions of the general public are significantly different to those of the people interviewed on the Tarka Trail and Granite Way. For most questions the net agreement and disagreement scores are low compared with those found amongst actual users. The only exception to this point is views on the compatibility of horse riding and wheelchair use on the same tracks. Actual users tend to disagree (-1% net agreement) that horse riding and wheelchair use on the same tracks is incompatible, whereas the general public agree with the statement (+39% net agreement).
- There are significant differences in attitude toward multi-use amongst the general public when looking at the responses by user type. Cyclists appear to be noticeably more tolerant towards the sharing of tracks than other user groups.

- The incidence of ever experiencing conflict, hostility or aggression when using off-road tracks is confirmed as being low with only 20% of the sample having had such an experience. The incidence of experiencing conflict, hostility or aggression varies significantly by user group with horse riders (36%) and wheelchair users (32%) being the most affected groups.

5.3 Case studies from throughout England

5.3.1 The research

The aim of this part of the study was to look at policy and management on a variety of multi-use routes throughout England. One of the subtexts to this research was to discover whether there was a problem of conflict between user groups on the different trails, and if so, whether any conclusions could be drawn about the scale of the problems. Furthermore we were also interested in any actions taken by trail managers to resolve or contain such problems.

Several trails were chosen, the main criterion for which was that all or part of the trail should be available for use by walkers, cyclists and horse-riders. The website of the National Trail office http://www.nationaltrail.co.uk was referred to, together with details of well-established trails. In addition, the Camel Trail was known to be undertaking an 18 month trial of extending use of the Trail to horse riders, so this trail was prioritised for inclusion in the list of routes considered.

Some of the trails also had specific provision for encouraging use by people with disabilities, notably wheelchair users, but these are still relatively few. Study of any conflict for this group of people is considered to be more appropriate when facilities are more widely available and more widely used.

To contextualise how difficult it is to reach a sample of trail users who utilise wheelchairs, the Countryside Agency (2000) research found 1 wheelchair user in 1,500 different users and our primary research on the Granite Way and Tarka Trail found 1 wheelchair user in 264 different users.

A questionnaire comprising nine key questions was sent by email after initial telephone contact with relevant trail managers or other appropriate staff and responses were received from: -

- The Camel Trail in North Cornwall,
- The Cuckoo Trail in East Sussex,
- The Meon Valley Way in Hampshire,
- The Peddars Way in Norfolk,
- The Pennine Bridleway on the Yorkshire - Lancashire border (at present) and
- The South Downs Way through East and West Sussex and Hampshire.

Where it is was felt necessary, further follow up research via telephone interviews was conducted with selected respondents to seek clarification and expansion on their initial answers. No satisfactory response was received from two other trails chosen but six trail or countryside officers or managers did respond in respect of those listed above. The findings from the sample were supplemented by further findings from our own work in respect of the monitoring of the Trans Pennine Trail (throughout its length) as discussed earlier.

The questions contained on the survey were as follows: -

MIXED USE OF LEISURE TRAILS - CONFLICT AND COMPATIBILITY.

1. What is Trail/Council/Agency policy in respect of mixed use routes?

2. Are there conflicts between user groups, that is:

   walkers - cyclists;
   walkers - equestrians;
   cyclists - equestrians;
   other?

3. If so, what are they?

4. What is the scale of the problem?

5. How have you sought to resolve conflict or potential conflict?

6. Have such problems been anticipated in the design of the route?

7. If so, have relevant design features worked?

8. Could you provide user figures, please?

9. How do you arrive at the user figures?

5.3.2 Overview of results

The most common mixed use trails are for walkers and cyclists. Equestrian use is less well catered for although horse riders are permitted 'where appropriate' (Hampshire) or where physically possible (path width being an issue) on most of the trails considered. Some trails were specifically created for use by horse riders, walkers and cyclists along the full length of the trail, not just in certain sections (Pennine Bridleway).

The South Downs Way is atypical in that it is entirely made up of previously existing public rights of way. It includes Byways Open to All Traffic (BOATs), Roads Used as Public Paths (RUPPs), Public Bridleways and Public Footpaths. This means that there are several sections where use by motor vehicles is legal, which in turn brings a different set of problems to those trails where motorised use is not permitted. No further consideration is given to the issue of motorised vehicular use of multi-use trails in this report.

The general view of those responsible for management of the trails is that although there are instances of conflict, they are relatively few. Trail managers report that problems are 'more perceived than actual' which is consistent with the Countryside Agency (2000) research. Although this is perhaps something of a cliché, it encapsulates the professionals' experience that, in fact, many problems are actually complaints about conditions created by others' use, such as encountering dog or horse

excreta, or surfaces rutted by wheels or hooves, rather than complaints about actual confrontations between people. This assertion is corroborated by evidence from our survey of over 1,800 users of the TransPennine Trail over the last two years. What TPT users are more likely to complain about the most is the evidence of unacceptable behaviour, rather than actual encounters with people or animals behaving unacceptably, or physical / verbal confrontations with other users. The logic to this finding is supported by the findings from other research (Countryside Agency 2001) which suggests that interactions with other users are comparatively rare. It also follows that if the majority of people do not experience conflict, hostility or aggression, then the likelihood of encountering unacceptable behaviour is but a small sub set of encountering other users. Consequently, the key way in which users might be aware of unacceptable behaviour is the evidence of it: for example, dog and horse excreta, vandalism and rutted surfaces. Blame for 'evidence' tends to be attributed according to individual perceptions and prejudices. A rutted trail could have been caused by farm machinery, off-road vehicles, bicycles, horses or any combination thereof. In the absence of incontrovertible evidence, it is quite likely that blame would be attributed differently according to different user types and personal values.

According to trail managers, conflict in the form of confrontations arises between people rather than as a result of the physical aspects of the trail, so again, this is a matter of complaint rather than conflict. Damage to surface is something which should be expected from use and, therefore, could be expected to be planned for in terms of initial construction, provision of maintenance or both. Revenue funding may well be an issue, which begs the question why provide a facility, with known future funding requirements if management of those requirements is not going to be adequately resourced?

The kinds of behaviour which created the rare situations of conflict or complaint reported by trail managers were:-

- Cyclists and horse riders do not like poorly controlled dogs;
- Walkers and dog walkers do not like cyclists approaching quietly from behind;
- Recreational cyclists do not like utility cyclists because of the speed and unwillingness to give way of the latter;
- Walkers and horse riders do not like the speed of some cyclists;
- Horses are perceived to be intimidating animals, especially if cantering or galloping;
- All of these user groups appear to agree that motorcycles and 4x4 users are a problem, even where they have a legal right to be on a trail.

No trail managers had any evidence to quantify the degree of conflict or complaint experienced by users other than a unanimous view that such incidences are rare. Whilst all of the potential sources of complaint listed above might be consistent with the views of those involved in the promotion and management of multi-use routes, control and management of the problems is not straightforward. Each complaint has a degree of subjectivity.

- What exactly is meant by a 'poorly controlled' dog?
- What speed of cyclists would be acceptable to walkers and horse riders?

- Why would people find horses intimidating if they are rarely seen on multi-use trails?

There are no right or wrong answers to the above questions and the problems highlighted by one user group against another user group are not uniformly applicable. Not all walkers and horse riders consider poorly controlled dogs to be a source of conflict and not all non-equestrians find horses intimidating. One way of attempting to control conflict is by certain user groups being prevented from using given resources.

A policy of restricting usage creates a new form of conflict in having to deal with people aggrieved being excluded from using particular resource. This in turn reinforces the point made earlier about the process of public consultation being equally important as the product. It is likely that the usage of any route by horse riders, for example, is likely to be low by virtue of the fact that the incidence of horse riding amongst the population as a whole is low. However, in the event of horse riders and their representatives finding out that they have been banned from using a particular resource without being involved in consultation, their subsequent reaction is likely to be one of indignation.

In the case of dog walkers, recent research indicates that 60% of dog walkers do not clear up after their animals (Local Government Chronicle, 2004). This is a general problem with British dog owners that occurs in both urban and rural situations. It is not a special feature of public footpaths, bridleways or multi-user trails and is equally, if not more, common on pavements and in public parks. Addressing the issue is a matter of education, provision of suitable facilities for disposal, and enforcement (including resources) rather than a reason to exclude particular dog walkers from trails. Banning all dog walkers from using multi-use trails because a majority do not clear up after their animals might be a logical step in reducing complaint / conflict, but it would also be politically unacceptable and impossible to enforce.

The reality is that the scale of conflict reported by trail managers outside Devon is unquantified but uniformly agreed to be low level. Managers do not perceive conflict in its various forms to be a major problem with their day to day management of the trails. Most users are described as being 'sensible' or 'reasonable about giving way'.

5.3.3 Potential solutions

Segregation

Where user suggestions such as segregated sections, line marked divisions and tarmac surface, have been tried, by and large they have not really worked because most conflict occurs at busy times. At busy times, people tend not to adhere closely to prescribed lanes and notices advising of local protocols tend to be obscured. Perhaps user suggestions which create segregation in the first place tend to be based on perception and opinion rather than empirical evidence. The evidence from the Countryside Agency (2000) research is that cyclists attempt to keep to the left and that walkers tend to have a random pattern of walking until they encounter another user, at which point they straighten up. However, when walkers straighten their line, it might be on the left, right or middle of a path and thus cyclists, despite their natural inclination to keep left, will ‘weave’ past walkers to find the least cluttered route.

Design

Although potentially conflicting interests have been considered, designing features preferred by one user group appears to create problems for, or conflicts with the preferences of another. For example, family cyclists might prefer a tarmac surface but mountain bikers and walkers would not. In addition tarmac would be a problem for horses, especially on steep sections. The critical design issue appears to be one of available width. The wider the path, the easier it is to cater for the passage of different user groups and to ascribe 'appropriateness' to use of the trail by horse riders. The British Horse Society (BHS) stipulates that new bridleways should be at least 3m wide (because horses need a 2.9m turning circle) and ideally should be 5m wide. Many existing bridleways are not 3m wide and have been used by equestrians for centuries without problems. Nonetheless, the BHS recommended good practice of 3m and 5m widths creates conditions whereby equestrians can be excluded from using certain routes seemingly by their own 'rules' and because the resource implications for 3m routes are too great. The role of the BHS and its 'representativeness' will be discussed later.

5.3.4 Specifics relating to the case study trails

The Camel Trail

The Camel Trail experiment of allowing horse riders to use the whole of the Trail for a trial period of 18 months from June 2003, initially appears (according to managers) to have resulted in a low uptake by equestrians. Only 5% of monitored users are horse riders. This should not be seen as disappointment or a surprise. Equestrians are relatively rare amongst the population (circa 5%). The creation of new routes for equestrians will not lead to more people taking up horse riding because an increase in supply will not fundamentally alter people's tastes and preferences – the principal determinant of the demand for recreational activities. Therefore, the same amount of horse riding will be distributed across a larger access resource, resulting in the incidence of interactions with horses to be even less than they were previously.

The Camel Trail equestrian initiative is not yet halfway into the experiment and there appears to be a feeling among horse riders that the best time to use the trail is at the beginning and end of the day when there are fewer cyclists around. This suggests an expectation of difficulty or potential conflict, best avoided by using the trail when cyclists are not around, or simply a realisation that the trail is busy. Regardless of the actual explanations, it is an example of 'self regulation' in the sense that equestrians realise that their recreational goals will not be met when the trail is busy during the day so they choose to use off-peak times when their goals can be met.

One of the principal arguments used to oppose equestrian use of the Camel Trail was the perception that horse manure left on the trail would be a menace for cyclists and walkers. In reality there is no evidence of manure being left on the trail for two key reasons. First, the incidence of horse riders in total is low and only a minority of horses are likely to foul the path. Second, equestrians had been involved in the consultation process and had had the issue of manure raised with them. Eager to prove themselves as responsible users, local equestrians tend to dismount and collect their horse manure or to scrape it off the trail into hedges or borders.

The majority of the cyclists are visitors to Cornwall but horse riders tend to be local because the Camel Trail is not promoted explicitly as being an equestrian access resource and because as the local manager Charlie David says 'visitors tend not to bring their horses with them'. There is a pony trekking business next to the Trail which uses a 1 km stretch of the Trail all day under licence but the majority of equestrian use of the Trail appears to be as a link between nearby Forestry Commission woods, where horse riding is more fully catered for.

The Pennine Bridleway

The Pennine Bridleway, by contrast, is being constructed with horse riders firmly in mind but is inclusive of walkers and cyclists. Even so, cyclists currently form 50% of users and allowing for walkers it can be seen that equestrians are minority of the total users. The bridleway is on Public Rights of Way and the Countryside Agency's Pennine Bridleway Team is therefore unable to control usage of the trail. An annual mountain biking event is held on one day in the year, which the Agency cannot manage and which is a popular and busy event. None the less, horse riders have said that because of the event and the route's popularity with off-road cyclists, they are now wary of using it at weekends. This is a further example of perceptions being distortions of reality.

The Countryside Agency has established an interactive events webpage, aimed at ensuring that all interested parties can be aware of what may be happening in particular parts of the route. There is also a Users' Forum, which meets irregularly but there is a clear policy of trying to foster good relations between different user groups. This includes the promotion of conduct guidelines for users. The success of the Pennine Bridleway and, presumably the Team's management policies and attempts to inform all user groups, is that horse riders have increased from 20% of users to 35% in a year, despite the distorted perceptions issue and despite the fact that cyclists form the majority of users.

Clearly a well-managed, information-driven trail appears to reduce problems between cyclists and horse riders, even if the fact that the trail is composed entirely of public rights of way restricts the imposition and enforcement of what would otherwise be 'desirable' conditions of use. The Pennine Bridleway example suggests that more could be done about information and involvement in trails across the country. If the Internet is a factor in keeping user groups informed, it is suggested that features like Touch Screens with Internet access, for users who are not part of more formal groups and the forum process, may well further assist trail management, reduce conflict and change distorted perceptions.

The Taf Trail

A different experience of design, segregation and use issues is suggested by the Brecon Beacon National Park website (http://www.brecon-beacons.com/taf-trail-long-distance-footpath.htm) in respect of the Taf Trail, from which the following is a quote:

> The Taf Trail is an interesting concept in that there is more than one trail. It provides an opportunity not just for walkers but also for cyclists (a fairly rough surface for the most part). On some sections cyclists and walkers coexist not entirely successfully and one would ask cyclists to be mindful that walkers particularly elderly walkers may not hear them. IF ONLY CYCLISTS WOULD FIT A GOOD OLD FASHIONED BELL! Often the main arterial route

> is complemented by a second route designed principally for walkers. One of the most innovative design features of the Taf Trail is that there are many circular walks that link in to the main arterial route. This approach serves a dual purpose. It encourages local people who live along the route to use the trail for informal recreation. Secondly it is intended to enrich the opportunities to visitors to explore the countryside and communities through which the Trail's central route passes. The walking approach this design is intended to encourage is to move away from seeing a long distance footpath as a purely head down physical challenge and to encourage an approach based less on counting mileage and more on exploration and understanding. Most of the route follows gentle gradients with an occasional steep climb and is mostly suitable for all ages and abilities though anyone with a particular medical condition should enquire further before venturing forth.

Clearly, despite firm objectives, positive design and segregation in several places, some trail users - in this instance, cyclists - still appear to be a cause of actual or perceived conflict. It should be noted that the Taf Trail excludes equestrians. The Campaign for Courtesy may find trail use to be a microcosm of its view of social interaction in England today. As with many aspects of today's society, however, the professional managers seem to agree that users' perceptions of problems can be rather different from observed reality.

Most multi-use trails appear to work well enough to meet most users' goals. Some may do so better than others and some may have more responsive management regimes than others but people generally make them work. Despite the added dangers of illegal and legal use of trails by motorised users, the source of greatest complaint is dog fouling and dog owners' reluctance to clear up after their animals.

5.3.5 Key points

- Most complaints are about conditions created or left by some users, rather than as a result of direct confrontation with other users.

- Conflict in the form of confrontations arises as result of tensions between people (for example refusing to give way) rather than as a result of physical aspects of a trail.

- Trail managers report that problems are 'more perceived than actual'.

- The scale of conflict is small and is not seen to be a major problem for trail managers.

- Most users are 'sensible' or are 'reasonable about giving way'.

- The critical design issue appears to be one of available width. The wider the path, the easier it is to cater for the passage of different user groups and to ascribe 'appropriateness' to use of the trail by horse riders.

- A well-managed, information-driven trail appears to reduce problems between cyclists and horse riders.

These findings are highly consistent with findings elsewhere that conflict on trails is low and the most common form of conflict is perceived rather than actual conflict.

5.4 Additional information

In the final section of the results, the findings from consultation with various bodies are presented to try and establish whether there is any further information which might help to inform the multi-use debate and Devon County Council's position within that debate.

5.4.1 Central Government policy

Central Government does not have an explicit policy towards multi-use routes but there are implied policies contained within documentation disseminated by the Department for Environment, Food and Rural Affairs (DEFRA) in 2002[16] and 2003[17]. In its statutory guidance to local authorities concerning the new duty for Local Highway Authorities to produce Rights of Way Improvement Plans (2002), the terms of reference include cycle tracks as well as Public Rights of Way. The benefits of Rights of Way and cycle tracks are listed by DEFRA (2002) as follows:

- enable people to get away from roads used by motor vehicles;
- enjoyment of beauty and tranquillity of countryside;
- important resource for walkers, cyclists and equestrians as roads become busier;
- tourism resource;
- convenient method for taking short journeys;
- important role to play in active healthy lifestyles.

Whilst not advocating multi-use as such, the DEFRA guidance certainly advocates an inclusive approach to be taken with walkers, cyclists and equestrians as off road routes have the potential to be an 'important resource' for such users 'as roads become busier'.

More explicit guidance regarding the government's position on horse riding was given by DEFRA in 2003 when The Rt Hon. Alun Michael MP wrote to all parish and town council clerks on the subject of equine issues. The following quotes give an insight into the government's most recent stated position.

> DEFRA's role is to work for the good of horses; for people who ride, own, or work with them; and for the sustainable benefits which horses bring to economies and communities. We aim to promote these interests and help the horse industry to thrive.
>
> I [the Minister for Rural Affairs and Local Environmental Quality] am keen to improve off-road access for equestrians by enhancing the existing network and creating new bridleways. The Countryside and Rights of Way Act 2000 requires highway authorities to prepare Rights of Way Improvement Plans. This encourages them to take a strategic view of their networks, and provide better for users' needs.

In summary, central government's position is pro horse, and all other things being equal, it would be reasonable to expect local authorities to mirror central government thinking in their local policies. It is against this backdrop of national policy that the case of Devon County Council is now reviewed.

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[16] DEFRA, (2002) Rights of way improvement plans: Statutory guidance to local authorities in England, DERFA, London.

[17] Minister for Rural Affairs and Local Environment Quality, Letter to all parish and town council clerks, Re: Equine Issues, DEFRA, 5th December 2003

5.4.2 Local government policy, the case of Devon County Council

Devon County Council has written policies towards walking[18] and cycling[19] which were incorporated in the Devon Local Transport Plan[20] final document. There is no written policy concerning horse riding other than four paragraphs within the walking strategy stating that:

> Alongside walking and cycling, the needs of equestrians are addressed in the Devon Local Transport Plan. Devon County Council intends to provide more safe, 'joined up' routes suitable for horse riders and carriage drivers.

It should be noted at this point that the Devon Local Transport Plan (LTP) predates the outbreak of Foot and Mouth Disease in 2001 and subsequent government guidance of 2002 and 2003. In the Devon LTP, the size of the horse riding 'market' in Devon is estimated at some 16,000 riders according to a British Horse Society survey in 1997/8. This survey used a flawed methodology of conducting a 'census' at parish level whereby those in charge of the census asked a sample of people in each parish if they were aware of any horse riders. The parish to parish survey was very good at identifying horse owners, but less good at identifying people who rode horses and were not horse owners. The National Equestrian Survey (1999) reveals that only 21% of horse riders are horse owners. Therefore, it is not surprising that the BHS census under estimated the total number of horse riders in Devon.

Our analysis of national data using published sources estimates the number of horse riders in Devon to be near 34,000 and the results of the citizens' panel survey indicate an adult participation rate significantly above the national average. Although horse riding is a minority sport, demand for horse riding in Devon is at least double the BHS estimate of 1997/8. It may be for this reason that equestrian interests did not feature more prominently in the Devon LTP and its supporting documentation. The only significant mention of horse riding in the Devon LTP is the quote below:

> The County Council will also take account of the needs of horse riders on rural routes. (p48)

In the Cycling Strategy there is a paragraph regarding shared use which states:

> The County Council shall respond to the new DETR guidance on shared use. Currently, we are adhering to the existing joint IHT/CTC/DETR guidelines (January 1996) but are mindful of the need to assess more carefully our decision making process on shared cycle / pedestrian use with a view to looking at alternatives such as more cycle space on the road. (p12)

The shared use being referred to in the quote above is for cyclists and walkers in urban areas for which the joint IHT/CTC/DETR guidelines state:

> Local authorities should only consider the shared use of space with pedestrians as a last resort, and only when all other solutions have been dismissed. Unsegregated shared use should be avoided, particularly in well-used urban areas.

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[18] Devon County Council (undated) Topic Paper 3.3 Devon Local Transport Plan Walking Strategy, DCC.
[19] Devon County Council (undated) Topic Paper 3.4 Devon Local Transport Plan Cycling Strategy, DCC.
[20] Devon County Council (2000) Devon Local Transport Plan 2001-2006, DCC.

Whilst shared use in urban areas may need managing, shared use of routes in the countryside nationally does not seem to be a significant issue as bridleways have been used in a relatively unmanaged manner by walkers, equestrians and cyclists without any problems since 1968.
What then is Devon County Council's policy towards multi-use of off-road trails and routes? In the absence of explicit policies towards multi-use, the only realistic way of gaining a feel for policy is by analysis of what is said, written or done. The clearest indication can be gleaned from a letter sent on behalf of the County Environment Director which states:

> This issue [of allowing horses at walking pace to make limited use of the Upper Tamar Trail] has been considered carefully but it is the policy of the Directorate that horses should not mix with other users on the same surface. This is because of the potential conflict with other path users.

In a telephone conversation with a Devon County Council Accident Investigation Officer charged with 'signing off' routes before they are opened to the public, the answers given to a question seeking to establish authority policy towards multi-use were:

> I'm not sure if we have one [a policy]. There are no criteria and no in house guidelines [concerning multi-use]. It tends to be on an ad hoc basis and there are no tablets of stone.
>
> It relies on the opinions of the people involved

The conclusions that can be drawn from the limited information about Devon County Council's position regarding multi-use are as follows:

- Current thinking is based on documentation that pre dates the government's most recent pronouncements of 2002 and 2003 and there has been no revision of Devon policies in the interim.

- There is no written policy within Devon County Council that deals explicitly with the issue of multi-use routes.

- Rightly or wrongly, policy is perceived to be ad hoc and a function of personality rather than systems and structure.

5.4.3 Representative groups and their policies

Representative groups such as the Ramblers' Association (RA), the Cyclists' Touring Club (CTC) and British Horse Society (BHS) are the bodies normally consulted when public bodies deal with access issues concerning walkers, cyclists and horse riders. These bodies are representatives <u>for</u> their respective users groups but are not necessarily representative <u>of</u> them. This point can be appreciated by comparing the membership of each body with the participant base of each activity.

RA	140,000 members	36.6m participants	261 participants / member
CTC	70,000 members	16.3m participants	232 participants / member
BHS	57,000 members	2.5m participants	44 participants / member

The Ramblers' Association is not representative of all walkers and tends to be dominated by 'serious' walkers and hikers. The CTC is primarily concerned with cycling on the road network and has only recently turned a limited part of its effort towards dealing with off-road issues. The British Horse Society is predominantly a body for horse owners rather than horse riders. The average age of BHS members is 42, which is much higher than the average age of adult horse riders, 28. 90% of BHS members are women and therefore male horse riders are under represented by the BHS.

Although representative groups exist for various user groups, their policies and the way in which they have been derived cannot be said to be wholly applicable to all participants of a given sport. In addition, the policies pursued by such bodies can only be said to have been drawn up and influenced by a minority of the participants in a given activity. Crucially, each representative body is a 'single cause' body and there is very little overlap or collaboration between such bodies.

The Ramblers' Association pursues the interests of walkers, a group which has complete access to the Rights of Way network and much of the road network. The basic premise of the RA is that it supports initiatives that favour walkers and is opposed to initiatives which it perceives will be detrimental to the interests of walkers. Where there is a situation whereby an initiative such as upgrading a footpath to bridleway is good for other users and neutral to walkers the RA will consider each initiative on its merits normally at local level. The RA is largely concerned with Rights of Way and open access land and does not have formal policies towards newly created multi-use trails. However, the RA would have a view on multi-use trails if existing Rights of Way for walkers were in any way affected. In short, the RA's attitude to multi-use is best described as being a 'contingency' approach, that is, any response will be dependent upon the material facts of the case and how walkers might subsequently be affected.

The Cyclists' Touring Club was established to champion the cause of touring cyclists, that is, cyclists making relatively long distance journeys on the road network. Off-road cycling is a relatively new phenomenon. In an interview with a CTC representative, the organisation's work was described as being '90% on road and we're only just turning our attention, about 10%, to the issue of off-road cycling.' Cycling is not an homogenous activity. As discussed earlier there is utility cycling and recreational cycling, on-road cycling and off-road cycling, as well as hybrids of these seemingly separate genres of the activity. Whilst the CTC has been involved in working with the DETR in drawing up policy guidelines for cycling on the road network, it does not have as yet any formal policies towards off-road multi-use routes.

The British Horse Society has had various policy documents towards access standards for some years, notably the requirement that bridleways should be at least 3m wide and ideally 5m wide. However, its most significant work concerning multi-use routes is via the Ride-UK National Bridleroute Network (NBN). The National Bridleroute Network will initially consist of existing strategic national routes such as the Ridgeway and the Pennine Bridleway, regional routes such as Swan's Way, and promoted circular routes at local level. It is intended that over time the NBN will build up into a comprehensive network of community circuits linked together by linear routes – similar to the routes on the Taf Way discussed earlier. The key point

about the NBN is that the BHS is explicitly promoting it for walkers, cyclists and equestrians. This is therefore an explicit assumption by the BHS that bridleways can be shared effectively between walkers, cyclists and equestrians. Managers of the Pennine Bridleway report usage is 50% cyclists, 35% equestrians and 15% walkers and that there is minimal conflict between users. However, whilst the Pennine Bridleway caters admirably for off-road cyclists it does not necessarily cater admirably for all cyclists. This point highlights the segmented nature of participants in any given activity and helps to support the notion that there is no global solution to meeting the needs of all segments of one user group. Furthermore, there is even less chance of meeting the needs of different users groups, each with their own segments, with a standardised approach.

5.4.4 Sustrans

Sustrans is the lead body for the National Cycle Network (NCN) which when complete will be a UK-wide network of some 8,000 miles of routes for cyclists which will also be usable by walkers. Approximately half of the NCN will be on quiet country roads, which in turn, means that they will be available to horse riders although the routes will be shared by motorised vehicles. Only 2% (160 miles) of the entire NCN is planned to be on bridleways. At first glance the policy of Sustrans towards multi-use appears ambivalent. Horses are welcome to use the on road NCN but are excluded from much of the off-road sections. In an attempt to achieve some clarity on Sustrans' position towards equestrians, researchers on a related project contacted the Director of Sustrans and received the reply detailed below.

> We have quite a lot of experience of providing for horses on some of our railway paths. As a result our policy is:
>
> 1. To put effort into accommodating horses where one bridlepath can be linked to another via our railway path.
>
> 2. Then to create a parallel but separate route.
>
> 3. We do not think that it is wise for horses to share the same path where your objective is to encourage high levels of popular walking and cycling.
>
> 4. You certainly must not have horses adjacent to an operational railway line, e.g. Okehampton to Meldon.

There are two points of note arising from the Sustrans correspondence. First, Sustrans' policy is to make provision for horses where the primary motive of building a track for cyclists and walkers enables previously fragmented bridleways to be connected. Any such provision should be on a segregated basis.

Second, there is some ambiguity as to what is meant by 'high levels of popular walking and cycling'. We contacted the Chief Executive of Sustrans to seek clarification of the term 'high levels' and were told that it was a 'fairly descriptive' term. We were subsequently referred to the Research Manager who confirmed that there was no operational definition of 'high levels' such as 200 users per day. Furthermore, we were advised that the term 'high levels' would probably vary according to path width but that it was impossible at this stage to assign values against volumes and widths.

The key conclusion to be drawn from the Sustrans correspondence and follow up research is that there is currently no clear guidance that can be offered to local authorities concerning the carrying capacities of routes and the cut off points at which use by walkers, cyclists and equestrians is no longer considered to be safe.

5.4.5 Key points

- Central government policy towards the equine industry and equestrians is positive. This is driven by a number of factors including a realisation of the value of the equine industry in the aftermath of the 2001 Foot and Mouth Disease outbreak. Central government has also made recent pronouncements on its desire to see improved access for equestrians.
- Devon County Council's policy towards equestrians was formulated in 2000 and predates FMD (2000/2001) and the government pronouncements of 2002 and 2003. DCC has been opposed to equestrians sharing tracks with other users on the grounds of 'potential conflict'. There is a lack of clarity within the authority regarding policy towards multi-use, perhaps best illustrated by staff within the same directorate having differing views on the subject.
- Representative groups such as the Ramblers' Association, Cyclists' Touring Club and the British Horse Society are representatives for their particular user groups, but are not representative of them. The views and policies of these bodies are not necessarily those of all walkers, cyclists and equestrians. In all cases representative bodies represent only a tiny minority of all participants.
- Two national initiatives, the National Cycle Network and the National Bridleroute Network have conflicting views on multi-use. The NCN is accommodating towards horses subject to certain criteria such as providing a link to currently unconnected bridleways, whereas the NBN is explicitly inclusive of walkers, cyclists and horse riders.

5.5 Concluding comments on the results

The research followed four lines of enquiry, namely:

- a survey of 264 users of the Tarka Trail and the Granite Way who were interviewed whilst actually using the trails;
- a survey of 1,194 adults in Devon using a self completion questionnaire send out by conventional mail;
- a survey of seven multi-use routes throughout Britain; and
- a programme of other data collection involving site visits, consultation of various types and observation.

There are four important points to be highlighted which have been used to inform and underpin the recommendations.

First, as suggested at the start of the research there is no single solution or set of standards that can be applied which will meet the demands of all interested parties. There are differences in the experiences, attitudes and expectations of differing 'market' segments within given user groups, for example dog walkers and walkers without dogs. Furthermore, there are also differences between different user groups,

for example walkers and cyclists. Complicating the issue further is that there is a significant degree of participation overlap between user groups, for example, horse riders also exhibit above average participation levels in walking and cycling. Therefore, rather than recommending technical specifications and design features, it is more logical to recommend principles that emerge logically from the existing knowledge base and the primary research conducted for this project.

Second, the views of actual users and the general public are significantly different. Actual users exhibit relatively lower levels of ever having experienced hostility or aggression than the general public. Furthermore, actual users are significantly more tolerant of various aspects of multi-use than the general public. In the responses to five of the six attitudinal questions about multi-use, the views of actual users are diametrically opposed to those of the general public. The public who walk and cycle do not necessarily make use of Rights of Way or other multi-use tracks. Therefore, compared with actual users their answers will be based on a degree of perception rather than actual experience. There is a perception by the general public that certain aspects of multi-use are less compatible than thought to be the case by actual users. It may be that different strategies are needed to meet the needs and allay the fears of existing users (market penetration) than those employed to meet the needs of potential new users (market development).

Third, the incidence of conflict, hostility and aggression is low amongst trail users and the general public. These findings from Devon are replicated in the survey of trail managers elsewhere in England and confirm the existing literature on the subject of conflict. The evidence available suggests that people and their behaviour are the causes of conflict rather than environmental factors. Policy should not be based on personal concerns about perceived conflict where there is no evidence of conflict existing.

Fourth, Devon County Council appears to be operating in a policy vacuum regarding both equestrianism and multi-use.

6. RECOMMENDATIONS

As a consequence of the findings from both the literature review and the primary research we recommend that Devon County Council consider the following recommendations to inform its policy towards horse riding and multi-use of off-road routes.

1. Devon County Council should take the opportunity to formulate a clear and evidence based policy towards horse riding and equestrian use of multi-use routes. There has been no update of the authority's position towards horse riding since the outbreak of Foot and Mouth Disease in 2001 and the authority has not yet responded to the central government pronouncements of 2002 and 2003 concerning ROWIPs and improved access for equestrians. Furthermore, there is the possibility that Devon County Council's existing equestrian policies were based on flawed data collected by the BHS in 1997/8. Using the literature available in the public domain and the results of this research, the scale of horse riding in Devon is at least twice that suggested by the British Horse Society in 1997/8.

An example policy or position statement from Falkirk is reproduced below to illustrate the approach of a pragmatic but essentially pro horse authority.

> Falkirk Council recognises the lack of provision for safe, off-road local horse riding opportunities and the perceived conflict with other path users. The co-operation and establishment of a local riding group will be encouraged to assist in the assessment of existing riding routes and the identification of missing strategic links. Priority will be given to developing existing tracks and quiet rural roads. New paths created will be shared use whenever possible within financial and physical restrictions. Therefore, where these restrictions apply, use by foot or cycle will be a priority, In certain situations, particularly in more rural locations or close to centres of demand i.e. livery yards, specific horse riding facilities may be feasible.
>
> [Falkirk Council Countryside Access Strategy p15]

2. Devon County Council should acknowledge that there is a very important equity dimension to horse riding which is often overlooked. Unlike walking and cycling which are both dominated by male adults, horse riding is unique in that the majority of its participants are women and children. The views of this significant minority of the population are often not heard because the main equestrian representative group, the British Horse Society, is not truly representative of all horse riders.

3. As a consequence of the first two recommendations, Devon County Council should consider establishing and supporting a horse riding forum which is more representative of the equestrian community than the BHS in isolation. The BHS and indeed the British Driving Society (BDS) should be positively encouraged to be part of this forum. The purpose of the forum will be to help formulate an authoritative assessment of riding routes in the county and to identify the needs and concerns of local equestrians. A model of how an equestrian forum might operate can be found in Hampshire where a strategy for Safe Riding Routes in South East Hampshire has led to the creation of a riding forum. The members of the forum have shown considerable willingness to get involved in self help and to motivate others to get involved in improving access. The success of the scheme was recognised by the BHS who

awarded the Hampshire County Council officer behind the initiative a BHS 'Good Guys' award for her work with horse riders and carriage drivers.

4. The process of consultation should be valued as highly as the product of consultation. The consultation process should be integral to the development and management of multi-use routes within the county. This is particularly important in the context of being clear about who the routes are being developed for and why they are being developed. For example, are routes primarily tourist facilities, facilities for local people or a combination of the two? Are the routes being developed to meet the needs of local people or to attract / re-circulate tourist spending? Groups who feel (rightly or wrongly) that they are being excluded, or that their concerns are being ignored will become disenfranchised. This in turn may lead to a loss of goodwill and a resistance to co-operate with the authority in the future. Where applicable, contemporary conflict resolution techniques should be used as described in the literature review.

5. The overlap between participants which has been demonstrated in surveys in Devon and Hampshire has some important implications for staff recruitment and training. In terms of recruitment, posts such as walking, cycling and horse riding officers should recognise the overlap between users groups. Single user 'officers' might more properly be titled 'access officers' and have a wider portfolio of access related responsibilities. In terms of training and career development for existing staff, it would be advisable to ensure that staff are brought up to date with the issues relating to participation overlap and equity. The notion that walkers, cyclists and horse riders are hermetically sealed groups with no overlap is flawed and should not be an assumption upon which policy is driven.

6. There is a considerable information deficiency concerning the users and usage of multi-use routes. This deficiency exists at both national level and local level. At national level there needs to be clearer guidelines about the carrying capacities of routes so that more transparent and less subjective decisions are made about the user groups permitted to use given routes. At local level, research needs to be integral to the monitoring and evaluation of routes and the objectives they have been designed to achieve. Research should not be a knee jerk reaction to solving a problem or a bolted on after thought. Systematic evidence is required about variables such as users, usage, peak and off peak flows, seasonality trends and so forth. It is a requirement of ROWIPs that local authorities are required to conduct usage and demand surveys and thus now is a good time to take a strategic approach towards trail monitoring. Considerable research effort is required to help understand the economic impact of multi-use trails - one of the key reasons why Devon has invested so heavily in cycle tracks.

7. There is very little evidence of actual conflict on multi-use routes in Devon or indeed nationally. Most conflict which does occur is caused as a result of the behaviour (or 'evidence' of behaviour) of users rather than environmental factors such as path width and surface condition. Most of the conflict resulting from behaviour has the potential to be resolved by providing relevant information to users. This information should take two forms. First, a provision of on site information at the starting points and 'honey pot' areas of trails to include the following non-exhaustive list of points:

- permitted users of the route and in particular at places where there are changes in the mix of permitted use;
- advisory notes on responsible behaviour when on the trail;
- guidance on the availability of dog litter waste disposal facilities, for example red bins every half mile;
- any local byelaws of conditions such as certain sections of a path being a permissive route at the discretion of the landowner;
- emergency procedures in the event of an incident / accident;
- key telephone numbers;
- contact details for the authority in charge of the route.

Second, the development of a multi-use code which will give people (especially visitors and new users) the confidence to know that they are following the correct protocols for use of a given route. This guide should emphasise the 'soft' aspects of responsible behaviour such as keeping to the left when trails are busy, fixing and using a bell on bicycles, clearing up after users' and being considerate to fellow users. A revised Country Code is currently being prepared and it may make sense for the development of a parallel multi-use code to be developed at national level so that there is some degree of consistency across the country. Where there are facilities such as cycle hire shops on routes, the proprietors should be encouraged to distribute copies of relevant codes to hirers.

8. There are differences in perception about conflict and attitudes towards multi-use when interviewing current users of trails and the general public as a whole. Actual trail users report lower levels of conflict and are significantly more tolerant of multi-use than the general public. The creation of multi-use trails in isolation will not influence non-users to suddenly take up walking, cycling and horse riding. Therefore, a more sophisticated approach is recommended. For existing users a fairly light touch is required as it is clear that this group use trails without any difficulties. For potential new users, steps need to be taken to overcome perceptual barriers which might be preventing them from using trails. Initiatives to help overcome perceptual barriers include outreach work, 'taster' sessions, ranger led walks and rides, greater publicising of the benefits of trails, and greater publicising of the fact that the incidence of conflict and crime on trails is much more perceived than actual.

9. Finally, it is recommended that Devon County Council does not attempt to adopt a standardised approach towards multi-use routes. The countryside is an ever changing and complicated resource which does not suit hegemonic solutions imposed by 'professionals'. An appropriate way forward is to use a contingency approach whereby each potential development is considered on its merits and that the people who will be affected by a development have had a full and fair involvement in the decision making process.

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