



A study of selected Cycle Challenge cycle centres

Prepared for Driver Information and Traffic Management Division, Department of the Environment, Transport and the Regions

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CONTENTS

	Page
Executive Summary	1
1 Introduction	3
1.1 Background	3
1.2 Aims and objectives	3
2 Case studies	3
2.1 Selection of case studies	3
2.2 Leicester Bike Park	3
2.2.1 <i>Promotion and marketing</i>	4
2.2.2 <i>Daily occupancy</i>	4
2.3 Taunton Bike Park	4
2.3.1 <i>Promotion and marketing</i>	6
2.3.2 <i>Occupancy levels</i>	6
2.4 Kirklees cycle lockers	6
3 Attitude surveys	7
3.1 Leicester Bike Park	7
3.1.1 <i>Leicester group discussion and depth interviews</i>	7
3.1.2 <i>Quantitative survey of Leicester Bike Park users.</i>	9
3.2 Taunton Bike Park	10
3.2.1 <i>Taunton Non-Users</i>	11
3.3 Kirklees Cycle Lockers	11
4 Background issues	12
5 Discussion	13
6 Conclusions and recommendations	14
7 Acknowledgements	14
8 References	14
Abstract	16
Related publications	16

Executive Summary

The Transport Research Laboratory was commissioned by the Driver Information and Traffic Management Division of the Department of the Environment, Transport and the Regions to investigate the effectiveness of some of the cycle parking facilities established as a result of the 1995 Cycle Challenge initiative. The projects were examined using group discussions, depth interviews and questionnaire-based interviews.

Two of the projects were purpose-built cycle centres (known locally as Bike Parks), located in Leicester and Taunton. They provided cyclists with a number of different services in a single location, such as supervised cycle parking (indoors in Leicester, outdoors in Taunton), shower and changing facilities, clothes lockers, and a shop for bikes, components and repairs. The third project consisted of enclosed secure cycle lockers in the metropolitan borough of Kirklees, West Yorkshire. The locations varied greatly in terms of size and current cycle usage. Leicester is a large city with average UK levels of cycle use. Taunton is a medium sized town and has high levels of cycle use. Kirklees is a metropolitan district with a hilly topography, above average rainfall, and low levels of cycle use.

Despite the popularity of these facilities with their users, their usage rates varied considerably. Whereas the Leicester Bike Park was well used and reached operational capacity at peak times (up to 60 users per day), the Kirklees lockers rarely reached 50% occupancy and some hadn't been used at all, several months after installation. The Bike Park usage in Taunton was very low during weekdays, but higher on Saturdays. This may be due to a number of factors such as location, opening hours, alternative town centre cycle parking provision and a lower fear of theft.

It was concluded that the cycle centres studied in this report brought a wide range of benefits to cyclists. Primarily, they removed cyclists' fears that their parked bicycles would be stolen or vandalised. This meant that:

- Respondents who were already cycling to the area served by the cycle centres claimed that they now cycled in more frequently (50% of respondents).
- Respondents who claimed that they previously did not cycle to the area served by the cycle centres, now did so (25% of respondents).
- Respondents who continued to cycle as often as they did before, now had additional peace of mind and reassurance against theft and vandalism. This allowed them to enjoy using a higher quality bike.

Other principal findings were:

- There was a high demand for clearly signed, secure cycle parking in or very close to town/city centres (within a five minutes' walk) where fear of theft was high and alternative cycle parking provision was low.
- The greatest cycle parking demand was by shoppers and the most common cycle parking duration was between one and two hours.

- Cyclists preferred the cycle parking to be supervised.
- Cycle centres with showers and changing facilities were used by commuting cyclists, provided that the opening hours bracketed normal working hours with an adequate margin (at least 30 minutes).
- Cycle centres can create or strengthen a pro-cycling culture which could be more important than the practicality of the feature itself.

1 Introduction

This report examines the effectiveness of a number of cycle centres which have been established as a result of Cycle Challenge. Cycle Challenge is an initiative of the Department of the Environment, Transport and the Regions (DETR - formerly the Department of Transport). Launched in July 1995, Cycle Challenge invited commercial, voluntary and public sector organisations to produce innovative designs and partnerships which would help increase cycle use, particularly for local journeys in urban areas.

1.1 Background

In December 1995, the Department of Transport allocated almost £2 million among the 62 successful cycle challenge projects. The projects included schemes to encourage cycling to school and the workplace; the installation of secure cycle parking in town centres; the purchase of pool bicycles for offices; the conversion of existing rail stock to carry bicycles on trains; the provision of cycle trailers at a supermarket; cycle promotion campaigns; village initiatives and the implementation of town centre cycle centres. In Leicester, Taunton, Liverpool, Basingstoke, Colchester and Salisbury, schemes involved establishing cycle centres or bike parks. A cycle centre is defined as a self-contained facility for the safe parking of bicycles, usually indoors, and with staff on-hand to collect parking charges and to provide support services such as cycle maintenance and refreshments.

One of the issues identified in the National Cycling Strategy (DOT, 1996) that might increase the amount of cycling was the availability of secure cycle parking. It recommended that cycle parking facilities should be available at major destinations, including town centres and shopping developments. The Planning Policy Guidance note PPG13 (DOE and DOT, 1996) also recommended provision of secure cycle parking, 'in all major developments and in town centres'. Previous research on facilities at the trip end for cyclists (Gardner and Ryley 1997) established that, for a mixture of practical and administrative reasons, many town centre establishments would find it difficult to incorporate cycling facilities on their premises. However, there was some indication from a number of larger retailers that support might be forthcoming for centrally located parking facilities.

1.2 Aims and objectives

This research formed part of a wider project for the Department of the Environment, Transport and the Regions. The aim was to assess the effectiveness of innovative schemes, implemented under the cycle challenge initiative, in encouraging cycling as a viable means of personal travel.

The specific objectives of the study were:

- To monitor attitudes to cycling and changes to travel behaviour resulting from individual schemes.
- To assess the success of schemes in meeting other objectives.

- To establish how provision could be improved.
- To assess the potential for a more widespread application of the schemes.

The topics addressed within the monitoring included cycle promotion techniques, changes in cycle use, alterations to travel behaviour and travel patterns, attitudes to cycling generally and to the facilities provided by the scheme.

The following means of obtaining this information have been used:

- Questionnaire surveys of users and non-users of the facilities.
- Visits to the cycle centres.
- Discussion groups.
- Depth interviews.
- Interviews with professional staff.

2 Case studies

Three case study locations were studied to investigate changes in attitudes and opinions as a result of the introduction of new facilities.

2.1 Selection of case studies

The three case studies provided a range of design types:

- An indoor facility, centrally located and with full facilities—Leicester Bike Park.
- A centre with indoor changing but mixed open and covered outdoor parking—Taunton Bike Park.
- A series of outdoor covered lockers, unmanned and free of charge—Kirklees, West Yorkshire.

Surveys involved interviewing users of the cycle centres and members of the general public in the vicinity. In addition, in Taunton a 'before' survey was carried out where the general public and potential users were interviewed prior to the Bike Park's opening. (In Leicester and Kirklees, measurement of behaviour before implementation was based upon past recollection.)

In order to probe for attitudes and opinions deeper than those that could be obtained in a short questionnaire survey, qualitative research using discussion groups was carried out in Leicester, involving people who had used the Bike Park. In Taunton, in-depth interviews were conducted using a sample of users and non-users.

2.2 Leicester Bike Park

Leicester Bike Park (Plates 1 and 2) was opened on 20th March 1997. With a city-centre location in a corner basement of the Town Hall, it was within easy reach of the many shopping streets, malls and precincts, and a ten minute walk of the train station (Figure 1a). The Bike Park had the following facilities:

- Secure, indoor parking for 115 bikes.
- Female and male changing rooms with a shower in each one.



Plate 1 The Leicester Bike Park



Plate 2 Inside the Leicester Bike Park

- Thirty six lockers of different sizes.
- A shop selling new bikes and assorted components.
- A same day cycle repair service.

The cost of using the cycle parking was 50p for up to 4 hours and £1.00 for a full day (including use of changing/shower facilities). Season tickets were also available costing £4.00 for one week, £15 for one month, £40 for three months and £145 for a year. The opening hours were from 8am to 6.30pm, Monday to Saturday.

2.2.1 Promotion and marketing

The Bike Park's central location enabled it to be seen by a large number of passers by. It had received coverage in the local press, local radio and national television ('News at Ten'). The Bike Park produced a leaflet which listed the facilities on offer and their prices. The Bike Park was included as a principal destination on the comprehensive network of signposts provided by the City Council. The Bike Park's staff have also attached flyers to bicycles parked elsewhere in the city centre, offering their owners a free day's parking.

2.2.2 Daily occupancy

The Bike Park had experienced usage levels of around 250 bikes parked per (6 day) week, with peaks of over 300 (Figure 2). As the Bike Park included a repair facility and cycle shop, there were additional visitors who did not use the parking facility. The shower facilities were also occasionally used by those who went running, either at lunchtimes, or before work.

2.3 Taunton Bike Park

Taunton Bike Park was opened on 25th July 1997. It was located in St James' Street (Plate 3), which, although within a 5 minute walk of the town centre, was down a side street with few passers by. The 'catchment' area (within a five minute walk) included the Somerset County Cricket Ground, a large network of residential streets, and several car parks, (none of which attract regular cycle trips). The river also acted as a barrier to access (Figure 1b). The train station was a 10 minute walk from the Bike Park. The Bike Park had the following facilities:

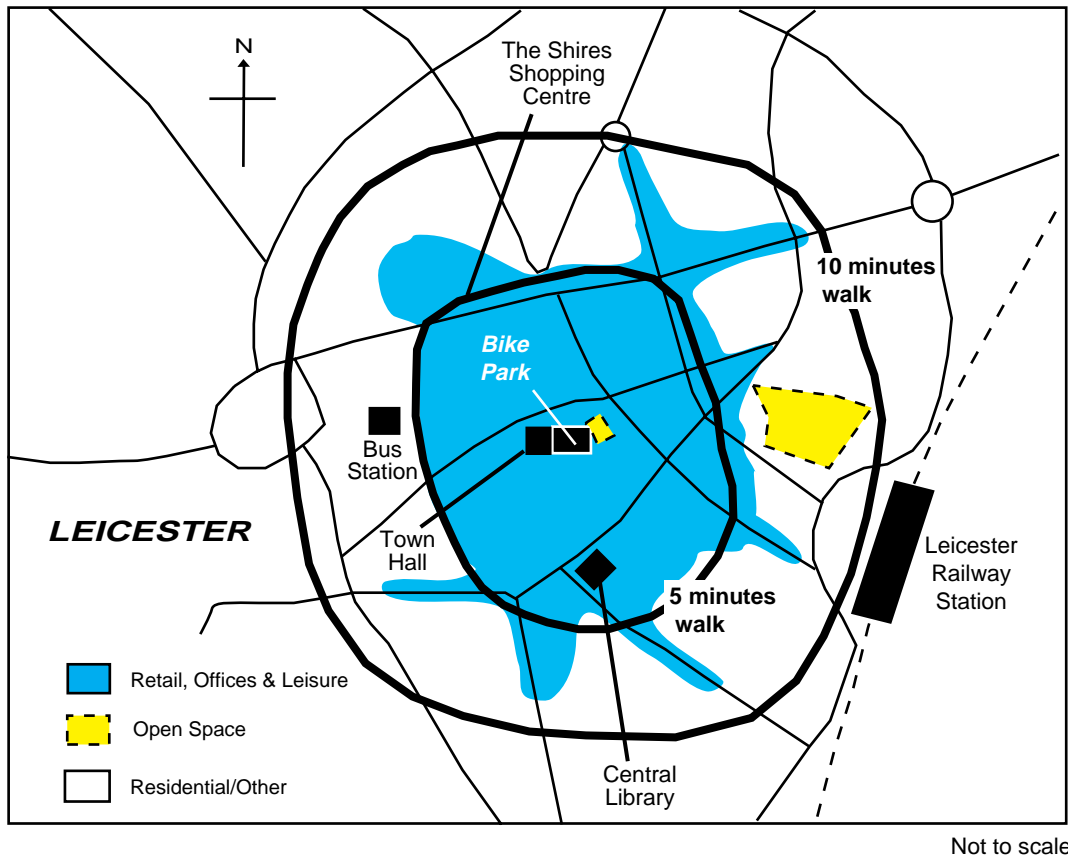
- Uncovered cycle parking for 34 bikes (a mixture of inverted U-shaped 'Sheffield' stands and self-locking 'Grippa' stands).
- Eight enclosed cycle lockers which can be accessed 24 hours a day.
- One male and one female shower.
- One disabled access toilet.
- Four small clothes lockers.
- Shop selling bikes and components.
- Repair workshop.
- Drinks machine.



Plate 3 The Taunton Bike Park

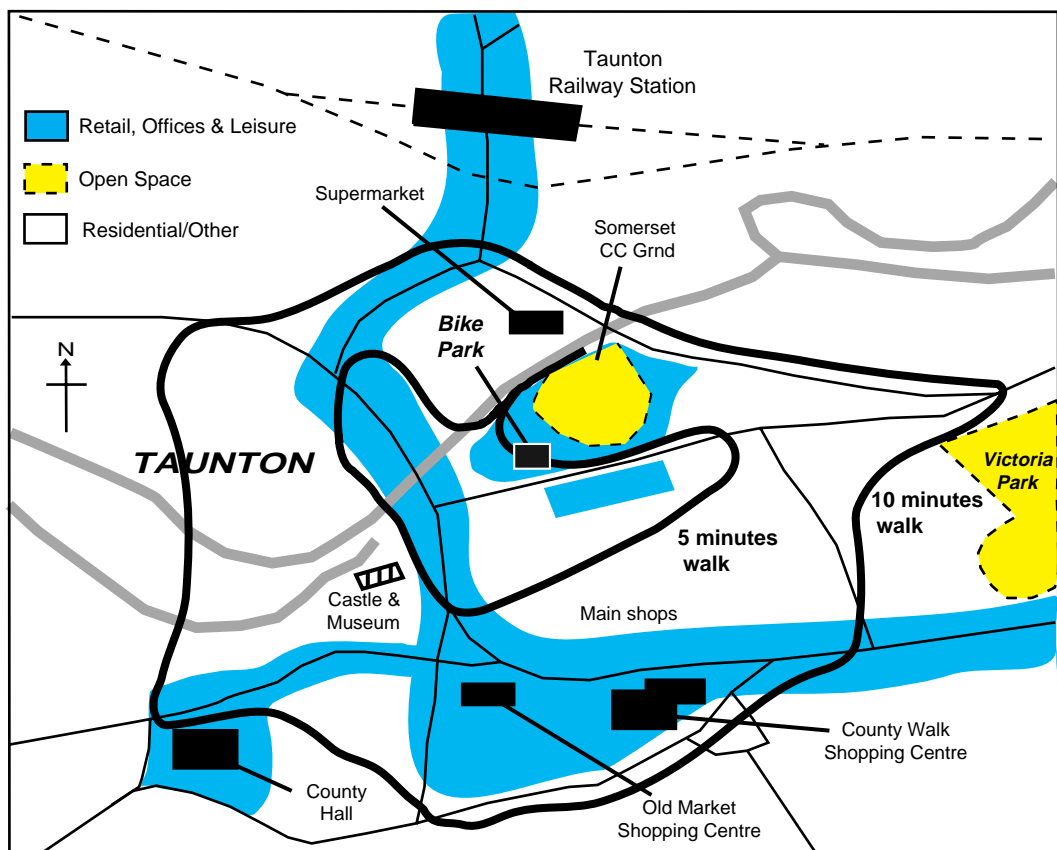
Users of the Sheffield stands and Grippa stands were charged 20p for any length of time up to one day. The Grippa stands also required a £1 returnable deposit. The enclosed cycle lockers require a flat fee of £1. Opening hours of the Bike Park were from 9am until 6pm.

One feature of Taunton town centre was that there were clusters of new attractive stainless steel Sheffield stands



Not to scale

Figure 1a Map to show areas of Leicester that are within a five and ten minute walk of the Bike Park. Dark shading represents land use areas which are most likely to generate demand for cycle parking



Not to scale

Figure 1b Map to show areas of Taunton that are within a five and ten minute walk of the Bike Park

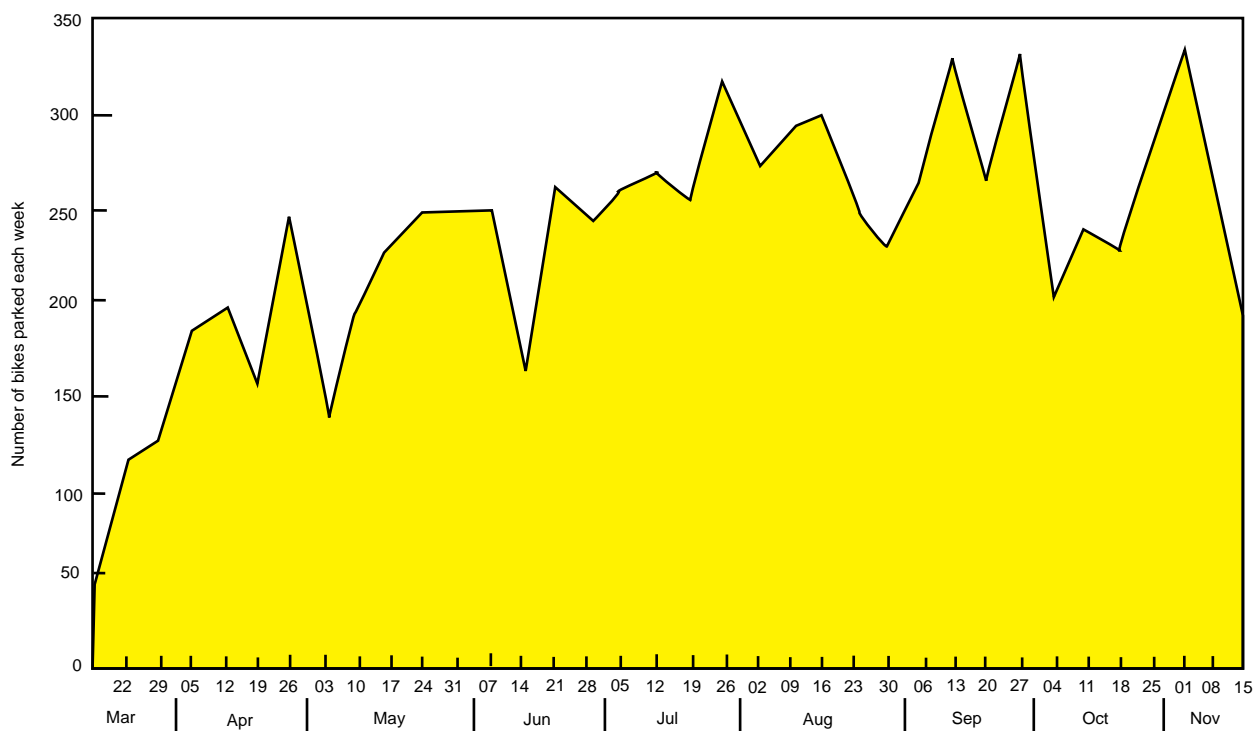


Figure 2 Graph to show the number of bikes parked each week at Leicester Bike Park

within 50 metres walk of many of the main destinations for cyclists (Plate 4). These were located outside busy premises such as shops and restaurants which gave them a high degree of security.



Plate 4 Secure cycle parking in Taunton town centre

2.3.1 Promotion and marketing

The Bike Park received widespread coverage in the local press, and on local television and radio when it opened. At the time of writing there were no leaflets detailing the facilities on offer, and there were no signposts from other parts of the town directing passers-by towards the Bike Park.

Taunton is on the section of the National Cycle Network from Bath to Padstow which opened in the Spring of 1997. The Bike Park was designated a 'stamping centre' where users of the trail could receive one in a set of route

confirmation stamps which, when completed, could be exchanged for a commemorative T-shirt.

2.3.2 Occupancy levels

The numbers of people using the Bike Park rose to 15 per day in the height of the first Summer of use. Subsequently however, usage levels fell to less than five people per day, except on Saturdays, when levels tended to be higher. This decrease was associated with the end of the school holidays and a prolonged period of renovation works which partially obscured the entrance to the Bike Park in early/mid September. It was hoped that usage would increase once the centre had been in place for one full summer season.

2.4 Kirklees cycle lockers

During the 1980s and early 1990s, the Kirklees area received very little provision for cyclists, and the borough had no dedicated cycling officer. The principal towns of Huddersfield and Dewsbury had very few cycle lanes, and cycle parking provision was limited. Classified counts showed that cycle flow was less than one percent of traffic on the majority of roads.

Bicycle racing was popular in the area, however, and there was a cycling 'forum' for enthusiasts. It was they who had asked the council for secure lockers outside the two main sports centres in the district. This led to the bid for cycle challenge money. The main contribution of cycle challenge had been the introduction of covered secure cycle-lockers (Plate 5) in the centre of Huddersfield and at Dewsbury station. A further 32 lockers were installed at regional rail stations on the Penistone Line from Huddersfield to Sheffield, which passed through areas of outstanding natural beauty.



Plate 5 Huddersfield city centre cycle lockers



Plate 6 Penistone railway line cycle lockers

One of the greatest difficulties faced by other cycle challenge projects that included a railways component was satisfying the long-standing regulations at a time of great change within the rail industry. In Kirklees, this was less of a problem than elsewhere, possibly because, at officer level, there was agreement about the desirability of promoting cycling schemes. Within a relatively short time an agreement was drawn up between Regional Railways North East (RRNE) and Kirklees council. Basically this specified that:

- The lockers were Kirklees' property.
- RRNE had a licence to install them on their stations. This was to be done by RRNE staff as they were the only ones approved for work near live rails etc.
- RRNE were responsible for daily maintenance, graffiti removal, removal of illegal locks etc.
- Kirklees would replace the lockers if they were damaged beyond reasonable repair.

At the time of writing, this agreement was in place, and was operating without any difficulties.

One design modification suggested by the railway security authorities was to increase the amount of mesh panels on the lockers, in order to aid inspection for suspicious items. The lockers for use on stations (on the Penistone line) were also designed to store cycles vertically, thus saving some space. The final design was attractive, though some additional rust-proofing was necessary for the harsh environment of the rural stations, and some doubts remained as to locker impenetrability if attacked by determined thieves (Plate 6). Installation on-site consisted simply of fastening five bolts onto an existing surface where this was suitable. If the existing surface was not suitable, then a concrete plinth was provided. This was also necessary where there was a slope that could lead to the spring-loaded doors blowing open in blustery conditions.

The lockers were free of charge, so there was no opportunity to use income as a monitoring device. Geographically, the lockers at station sites were too dispersed to be monitored by one person. The monitoring proposed by the council included asking existing council

or railways' staff to collect information on usage. At the town centre sites, this should have been done several times per day. At the distant unmanned stations, it could only be done two times per week, during routine maintenance.

Use of the lockers in Huddersfield town centre decreased from 50% occupancy in the summer months to 25% in the winter, but the lockers at Huddersfield railway station maintained nearly 100% occupancy. However, for the outlying lockers on the Penistone line, usage was very low and it was thought that some of the lockers had yet to be used.

3 Attitude surveys

As all of the cycle parking facilities were relatively new (at the time of the interviews), and as the usage varied greatly, according to events such as the weather and school holidays, the main focus of the surveys was to understand the issues, rather than to seek statistical reliability. There was particular emphasis, therefore, on the use of open-ended questions and group discussion work.

3.1 Leicester Bike Park

Two main types of survey took place in Leicester; quantitative face to face interviews during the working day, and two sessions of qualitative group work held in the Bike Park itself one evening. The qualitative work provided a particularly useful insight into the position that the Bike Park holds amongst Leicester cyclists.

3.1.1 Leicester group discussion and depth interviews

The respondents represented at least three of the cycling types described by Davies et al (1997) 'practical cyclists', 'lifestyle cyclists' and 'idealist cyclists'. Knowledge of social and environmental issues relating to cycling was generally high. For at least half the respondents, the bicycle was seen as a part of their life and not just a means of getting from A to B. The main practical advantage of the Bike Park was the security element. Almost everyone had a story to tell about the problems of bicycle (and component) theft in the area.

'The main priority for me when I come in on my bike is the security aspect definitely. I wouldn't dream of coming into town on my bike if I had to leave it chained up somewhere. Apparently these people just come by in transit vans and just get out and slit the chains throw them into the back and they are off....I didn't cycle into town because I need about four different things to get chained up, it is a pain. My husband he lost first a saddle then the back wheel and all sorts of bits and pieces go.....but now it's fine.'

Before the Bike Park opened, and when it was closed, different approaches applied, from using an inferior bicycle, to not using one at all:

'I used to take mine to work and leave it outside chained to a fire escape, where upon it got wet and rusty and people kept parking their cars in the wayI kept the old one for going up the local shops....If you come into town on a bike at night (when the bike park is closed) there is nowhere, so you tend not to want to come in the bike park makes the difference between cycling in or not cycling in. ... I would definitely not bike into town if it wasn't for somewhere to leave it secure.'

Introduction of the mountain bike has given cycling a more modern image (in 1997 around 60% of new bicycles sold in the UK were of that type), 'it's seen as quite a cool thing to do to have an expensive mountain bike.' One person had been directly encouraged to upgrade their bicycle because of the Bike Park:

'Up until a couple of weeks ago I had a sit up and beg shopper bike which used to get laughed at but now I have a supersonic mountain bike and that's the bees knees...I find I am safer on my mountain bike. I am in a nice high position. I can see traffic and feel that my mountain bike is sturdier than my other bikes.'

Most respondents had a good appreciation of bicycle types (although this respondent did admit to being 'a cycle snob'):

'we have got 12 bikes between us: Basically it's like having a different pair of shoes for every occasion: You have running shoes, walking shoes and so on, so you have the same with bikes: we've got mountain bikes, training bikes, bikes to ride to work, and for road racing'

Many respondents had at least two bikes. The ability to choose a suitable bike for the particular trip was appreciated as this made cycling easier and more enjoyable. This could influence the amount of cycling by existing users, and make it more attractive to potential new users. However, with the increase in money spent on a bicycle comes the increased risk of mountain bike theft

and use of the Bike Park had greatly eased this:

'The only one time I locked a mountain bike up outside the theatre it got stolen in about 2 seconds so after that one bad experience I never used the bike to come into town to shop - until the bike park opened.'

Respondents were asked to describe the underlying cycling culture. Cycling conditions in the centre of Leicester were described as 'diabolical'. Respondents were aware of the efforts of the City Council to provide facilities such as cycle lanes and cycle paths, but these were felt to be inadequate and often unusable due to illegal car parking, broken glass or other problems.

'I don't think anyone would cycle just for convenience these days would they? You have got to have some pleasure from just being outside. I don't enjoy riding to work to be honest because of the traffic, it's just hassle; I have to get changed when I get here whereas if I came by car it would be a lot easier, but I don't want to be another one adding to the traffic. I want to be adding towards making the environment in this part a bit better for everybody.'

The designation of Leicester as 'Environment City' may have had some influence. One person said 'I think the Bike Park gives Leicester more of a trendy feel.' The difficulty for the authorities in Leicester was seen from the finding that, despite a considerable investment in cycle and bus lanes and other green initiatives, there was general agreement that:

'the council are trying to do something. The Bike Park is a good idea but I think because of lack of funds their efforts on cycle lanes and things like that are just inadequate really. This is like a drop in the ocean.'

According to the respondents, the public still viewed cyclists as an eccentric, unfashionable minority. On the other hand, cyclists felt positive about themselves, with pride in their individuality and pioneer spirit.

'Non cyclists view cyclists as pests and an inconvenience. They think we are odd; anoraks. nuisances, cranks and lowest of the low poverty stricken people who can't afford cars.....I know we cyclists are still the minority but I get an air of superiority when driving right into the rush hour, thinking of the traffic, you lot are morons sat there you are not moving. They are like sheep - all the same ... I think we are looked at askance. When I was a kid years ago anyone who ate yoghurt were called yoghurt-eater weirdos, but now we all eat yoghurt..... well that's what cyclists are now, they are the modern yoghurt eaters. They are slightly embarrassing but they are not harmful.'

There was a sense of appreciation at being in at the start of a new venture such as the Bike Park. Most respondents in Leicester had been using it since the opening, having seen the publicity in the local press. In some cases the desire to be a supporter was a motivating factor. 'I partly use it because I want to support it. There is a moral element in my use of it'. The feeling of being part of a social group was seen as an advantage to some, and was helped by the owner's personality and local fame (an ex-England cycling team member):

'It's quite a sociable place, you get quite a lot of people hanging around. You might meet quite a few people, it's nice... they should install a cappuccino machine... I got to know the owner through using the bike park. I knew of him anyway because he cycles...'

Most people had heard about the Bike Park via the local newspaper. There was still felt to be a need to increase the informational publicity and to clarify exactly what was inside the Bike Park. The quality of the facilities provided was better than most users had expected:

'You see the sign for cycle repairs and accessories but no sign of 'we can store your bike for the day' or whatever ... When I first heard about it I thought it would be a communal park where you went in and put your bike there with no security so anybody could walk in. When I got there I realised there was actually an attendant that took your bike to its position. It's much better than I thought it would be.'

Although most agreed with the statement that the real benefit was 'It's safe, it's as simple as that', others appreciated some of the additional features of the Bike Park:

'The thing I like is that you can drop your bike and have it serviced while you are off doing something else in town.... I use it most days, I buy things from there..... I bought my bike from there and they service it... I use the storage everyday, I use the showers everyday. I have a locker and can leave most things there so don't have to be so organised getting everything ready the night before. You can then get yourself sort of tidied up for work'

Although only a minority of participants used the showers, they were much appreciated by those who did, particularly females and those with office-based jobs. One respondent referred to the particular advantage of not needing to carry heavy locks, having paid extra for a lightweight bike. Another appreciated being able to wear special cycle shoes with cleats and leave them with the bike. It was not just cyclists who were benefitting, 'runners come in and use the showers: people run into town and get washed and changed and go to work.' However, this provided one of the few criticisms of the Leicester Bike Park, that it is '50 to 80% full already'. One person said,

'please don't make it more popular otherwise we won't be able to get in... if too many people come in and you have to wait it would defeat the object'. Several people referred to the need for more showers.

Others thought that the city might soon be able to support more Bike Parks, for example near the London Road rail station. A clue as to how far people would be willing to walk to use the centre came from one person who normally uses the centre, but:

'I think it's confession time for me. I attend this class at the Wellington Street adult education centre but, because it's 200 yards from the Bike Park, I leave my bike in their quadrangle and I do that because I won't walk the extra 200 yards. I have had a bit of a tussle with my conscience about it because I want to support the Bike Park but on the other hand I generally do not have too much time'

Most users felt that the cost of the service was about right. Most people justified the expenditure by making comparisons to other modes: 'I save about £2.50 per week on bus fares, with about an hour travelling time', and, 'the Bike Park costs £4 per week, there is hardly anywhere in town where you can park a car all day for £4'. Others, having calculated that the annual parking charge, £145, exceeded the cost of replacing a stolen bicycle, did not feel this parking expenditure could be justified solely on a theft prevention basis. There was a feeling that people with low value bicycles would not be prepared to pay the charges.

3.1.2 Quantitative survey of Leicester Bike Park users.

A total of 50 people were interviewed as they arrived at, or departed from the Bike Park. The most common journey purposes amongst Bike Park users were shopping which accounted for 40% of the interviewees, and commuting which accounted for 22%. 50% cycled 3-5 days per week, 44% cycled 6 or 7 days per week and 6% cycled 1 or 2 days per week.

The length of time that respondents left their bikes in the Bike Park is shown in Table 1. The largest number for any time category was 32% for parking durations of between 1.01-2 hours. This ties in with the finding that most respondents were using the Bike Park for shopping trips. The distance that respondents expected to walk to their principal destination revealed that the main catchment area was within a 5 minute walk. Some indication of the type of cyclist using the facility came from the finding that 90% of respondents cycled for leisure, 66% cycled for shopping and 56% cycled

Table 1 Length of stay in Leicester Bike Park

<i>Length of Stay</i>	<i>percentage</i>	<i>cumulative total</i>
0-15 minutes	6%	6%
16-30 minutes	14%	20%
31-1 hour	12%	32%
1.01-2.00	35%	67%
2.01-4.00	8%	75%
4.01-6.00	4%	79%
6.01 +	21%	100%

to work. 82% of Bike Park users owned a mountain bike; the desire to own a high quality bike was demonstrated by the fact that 40% of all bikes in the Bike Park were worth more than £300. Of these, 64% were insured.

The importance of the features provided was addressed. The answers to the question ‘how important are the following facilities to you’ were calibrated on a scale where ‘very important’ was given a score of 10, ‘quite important’ a score of 5, ‘not very important’, 2.5, ‘not at all important’, 0, and ‘unimportant’, -5. The scale relating to the question ‘how well are the facilities provided for you’ which had answers ‘very well’, quite well’ etc. were scored according to the same pattern. Using this to give a composite score produced the results shown in Table 2.

Table 2 The need for, and the satisfaction with, facilities at Leicester Bike Park

<i>Facility</i>	<i>Need (score out of 10)</i>	<i>Satisfaction (score out of 10)</i>	<i>Composite (out of 100)</i>
Distance from parked bike	5.2	9.3	48
Protection from theft	9.7	9.8	95
Protection from weather	5.6	9.8	55
Having a place to store clothes	5.0	9.3	43
Having use of a shower	4.4	9	40
Having a place to get changed	4.8	9	43

Protection from theft had the highest need and the greatest satisfaction rating. Almost all the respondents thought protection from theft was very important and they were very satisfied with the facilities provided: consequently the composite score on this item, 95, was close to the maximum. The need for the other items was, on average, rated quite important (mean scores ranging from 4.4 to 5.6). Consequently, although the users were, on average, very satisfied with these other facilities, the composite scores were lower than for protection from theft.

The need for short distance to onward destination was not rated very highly, but this could be because the centre was already well-located. The shower and changing facilities scored the lowest. This could be partly a reflection of the lack of capacity mentioned in the group interviews. However, this might not represent the full picture, as, among those who do use the shower, the need might be not just important but very important.

Use of the Bike Park’s facilities varied, but, in all cases, it was predicted to rise. 22% of respondents had used the showers, 18%, the lockers, 20%, the changing facilities, 30%, the bike repair service and 50%, the bike shop. Future predicted usage was 32% of respondents using the showers, 46%, the lockers, 34%, the changing facilities, 74%, the bike repair service and 86%, the bike shop.

Most users found out about the Bike Park by either word of mouth or from the local newspaper (30% each). A few chanced upon it when passing by (16%), others found out about it through other bike shops (12%) and from leaflets (2%). The majority of people (54%) said that the current price was fine, others suggested that an hourly rate would be fairer than the flat rate, especially for short stays. (Unfortunately this is not viable, as the labour costs are

mainly per transaction, rather than time-based).

When asked what they disliked about the Bike Park, 88% couldn’t think of anything. The following suggestions were made by one person each:

- Not open long enough.
- Misleading signposting.
- Not open early enough.
- Short visits penalised.
- Messing about with change.
- Not enough hot water.

When asked about possible improvements to the Bike Park, 50% said that it could either not be improved or that they didn’t know how it could be improved. The most popular suggestions were:

- Longer opening hours (14%).
- More showers (4%).
- Cheaper short stays (4%).

Other suggestions made by one person each were:

- More hot water.
- Bigger lockers.
- More signposting.
- More advertising.
- Publicity about theft rates.
- The availability of a charge card (similar to a phone card).

The Bike Park in Leicester had had an influence on the number and type of trips made. Before the Bike Park opened, 28% of users interviewed did not cycle in, 12% left bikes at work and the remainder locked their bikes to railings or stands close to their destination. 58% said that the Bike Park had led to them making more trips by bike, and 42% said that it had made no difference. Most users (70%) said that the Bike Park had not changed the type of trip which they were making. However, the different trip types which the Bike Park had facilitated included:

- Now cycle in the rain and get changed (6%).
- Now cycle to town (6%).
- Now cycle to work (4%).
- Now make smaller shopping journeys (4%).
- Now cycle on business trips (2%).

Most users were males (80%) and under 40 (70%) reflecting typical cycling profiles for urban areas. 56% were in full time work, 14% part-time, 14% were studying and 12% were retired. Chief wage earner occupations were; 43% middle/junior management, 22% higher professional, 22% skilled manual, 6% partly skilled manual and 2% unskilled manual.

3.2 Taunton Bike Park

Usage of the Taunton Bike Park reached 10 to 15 people per day during the Summer holiday season of 1997. Surveys were arranged for just after the summer in order to obtain the views of those commuting to work. In the event, usage during this period was very low: three days of a full-

time interviewer obtained only 4 responses. It was not considered cost-effective to extend the survey period beyond this. However, a short questionnaire survey was carried out to ask town centre cyclists why they were not using the Bike Park.

Additionally, telephone depth interviews were arranged which, along with providing a more cost-effective approach, also allowed greater detail to be investigated than is possible during on-street interviews. There was a total of 5 depth interviewees representing a cross section of Bike Park users from the occasional cycle shopper to the frequent cycle commuter.

Interviewees were asked how far they would be prepared to walk from where they parked their bikes to their eventual destination. The Bike Park was considered, by some, to be close enough to the town centre for the walking distance to be of little significance; 'I'd walk all around town once I'm there- the actual walking distance isn't an issue', and 'I would explore the entire town centre' were two comments relating to this.

However, another respondent said that if she lived on the other side of the town she probably wouldn't use the Bike Park. When interviewed, she said that she lived on the same side as the Bike Park, so she cycled in, parked her bike and continued to the town centre on foot.

One person said that she would walk for a 10 minute journey, but would prefer to cycle anything further. Another said that, due to health problems, she could not carry items of shopping very far and therefore needed to park directly outside each shop, often making the Bike Park an unsuitable option.

The charge for cycle parking was considered to be very favourable. One person 'couldn't believe that it was 20p all day', and another was 'surprised at how cheap it was'. One other mentioned the Bike Park's 'secure, central location' and its 'convenience'. The benefit of no longer having to worry about the bike once it was parked, making shopping a more pleasant experience, was mentioned too.

Most interviewees claimed that there was nothing that they disliked about the Bike Park. However, of the ones that did, comments included:

- The opening hours.
- Unreliable lockers.
- The distance to onward destination.
- The lack of weather protection.

One person was concerned that the 'grippa' bike stands might damage her bike, and found the 'Sheffield' design easier to use.

The main ideas for encouraging greater use centred around greater publicity, a better location and generally allowing more time to pass, (because the facility had been installed relatively recently). 'It's hidden down a side street where only motorists pass by', and 'they should advertise in bike shops and sport centres', were two typical comments. One interviewee suggested targeting the current cycle parking areas with a poster which read, 'Did you know there's a more secure place to leave your bike just around the corner'? It was also suggested that other bike shops should advertise the Bike Park (although they may

be reluctant to because the bike sales outlet at the Bike Park is in competition with the others).

All of the Bike Park users interviewed had, in the last two years, experienced bike or component theft, or considered theft to be a serious problem. One Bike Park user recently had her seat stolen, another claimed that there was a 'tremendous problem with cycle theft in Taunton'.

3.2.1 Taunton Non-Users

A separate survey was carried out of cyclists who were parking their bicycles in the town centre instead of the Bike Park to try to establish why they weren't using it. Although 74% of respondents had heard of the Bike Park in Taunton, only 48% knew exactly where it was. The most important reason for not using the Bike Park was its location (35%), followed by the fact that respondents were not parking their bikes long enough to make it worthwhile (17%), and the availability of cycle stands in the town centre (9%). Owning a more expensive bike or having personal experience of bike theft would persuade 13% of respondents to use the Bike Park. This highlights the link between the perception of theft and the propensity to pay for supervised cycle parking. 65% of respondents had left their bikes parked for less than an hour. This highlights the importance of a central location as, for short cycle parking durations, the journey from the parked bike to the destination is a higher proportion of total shopping time than for longer stays. When asked about the value of their bikes, 70% of the non-Bike Park users, said they were worth less than £200, whereas in the Leicester Bike Park this figure was just 44%. Average bike value was £186 in Taunton and £388 in Leicester. 85% of respondents who were in part or full time employment had secure bike parking available to them at their place of work, reducing the need for commuter cycle parking at the Bike Park.

In addition to the short quantitative survey, three cyclists who had parked nearby in the town centre, but chose not to use the Bike Park, were also interviewed in depth. One who had a touring bike (less likely to be stolen than a mountain bike), claimed to be, 'not too worried about theft,' although added, 'it's a question of luck as to whether your bike is still there when you return home afterwards'. Another reported that both she and her son had had bikes stolen from the bus and railway stations, and that they would not park them there again. However, she now parked her bike in the main shopping parade where it had never been tampered with. She had been put off using the Bike Park by its location. It was 'further down in the town – not where (she's) used to, and an extra 15 minutes walk from where she usually parks. If you shopped in Safeways or the Brewhouse you'd be tempted, but if you shop in the market area you wouldn't park there'. However, this respondent did go to this part of town (the Swimming Pool, directly adjacent to the Bike Park) in the evenings – when the Bike Park was closed.

3.3 Kirklees Cycle Lockers

In the planning of the user surveys, occupancy rates of the cycle lockers were lower than anticipated which made face-

to-face interviewing impossible. However, a good response was obtained from a self completion questionnaire left inside each occupied locker. This generated a sample of 28 users, many of whom went to some lengths to provide detailed answers to the questions asked.

The most popular trip purpose for users was shopping (43%), followed by commuting, personal business and leisure (all 14%). Although the overall numbers of cyclists in Kirklees was low, many of the sample were very regular cyclists, with 54% cycling six or seven days per week, and a further 36% cycling three to five days per week. 61% sometimes cycle to work, 46% to the shops and 68% for leisure. When asked what facilities they would like to see to encourage cycling in the area, most favoured cycle parking, (considered useful by 96%), followed by showers (43%) and lockers 39%. A bike repair service was considered useful by 57% and a bike shop by 79%.

Using the same method of evaluation as in Leicester gave the satisfaction scores shown in Table 3. The main needs of respondents were for a place where the bicycle and its components would be safe from theft and vandalism. The lockers satisfied these needs very well. After protection from theft and vandalism, the main needs of the Kirklees lockers were 'having a place to store clothes' and 'providing protection of the bicycle from the weather'. The users were well satisfied with the way the lockers protected their bicycles from the weather but less than 'quite well satisfied' with the lockers as a place to store clothing. Distance from the lockers to final destination was seen as quite important and the users were more than quite well satisfied with this. Because there were no associated shower facilities, these subjects were not asked to rate their satisfaction with them.

Table 3 The need for, and the satisfaction with, facilities at Kirklees

<i>Facility</i>	<i>Need (score out of 10)</i>	<i>Satisfaction (score out of 10)</i>	<i>Composite (out of 100)</i>
Distance from parked bike	5.0	7.0	35
Protection from theft	9.6	7.6	73
Protection from weather	5.9	7.7	45
Protection from vandals	9.1	7.7	70
Having a place to store clothes	6.7	3.9	14
Having a place to store belongings	4.4	5.1	22
Having a place to shower	2.8	Not applicable	Not applicable

The cycle lockers had not been very widely publicised, being less 'newsworthy' than the cycle centres. However, they are spread out over a wider area and therefore most users (54%) of the lockers found out about their existence simply by seeing them, 14% read the Kirklees Metropolitan Council promotional leaflet and 11% read about them in the local paper.

Before the lockers were provided, most users parked in various locations around the district. However, a significant amount (25%) said they did not previously cycle in at all, before the lockers were installed.

When asked what they most liked about the lockers,

bike safety headed the list with 32%, followed by security (21%). 11% liked the fact that they were informally staffed by guards (for the lockers at Dewsbury station) and that they were dry.

When asked how the lockers could be improved, the main comments related to the location and appearance of the lockers. Several thought that they should be signposted like car parks, they should be more eye catching, should be in more prominent locations, should be located at all train stations and that there should be permits for regular users.

The lockers have begun to influence cycle usage in the area. 50% said that they cycle the same amount as a result of the lockers but the other 50% said that they now cycle more.

4 Background issues

A number of surveys were carried out to investigate the general level of awareness and appreciation of cycling in the three locations. Information on general modal choice in the relevant counties was available from the 1991 National Census of Travel to Work. Cycle usage in Somerset was higher than the national average at 6%, in Leicester it was 4% and in West Yorkshire it was just 1%. West Yorkshire had a high proportion of work trips by bus (18%) compared with just 3% in Somerset and 11% in Leicestershire.

Members of the public in the vicinity, but not using the cycle parking facilities, were asked which transport measures would improve their journey. In all three locations, an improved bus service was considered the most important measure (34% in Leicester, 39% in Taunton and 44% in Kirklees). The second most important measure was increased car parking. In Taunton and Leicester, improved facilities for cyclists was the third most important measure with 11% at Taunton and 16% in Leicester. Only 4% of Kirklees respondents said that improved facilities for cyclists should be a priority, behind more pedestrianisation (11%).

Awareness of the two Bike Parks amongst the general public was very similar (Leicester 70%, Taunton 68%). However, in Kirklees, just 29% of respondents knew about the lockers, which had not had extensive publicity. Most people had found out about the cycle centres through either the media, word of mouth or as a passer by. Tellingly, very many more people found out about the Leicester Bike Park as a passer by (38%) than in Taunton (14%) where most people read about it in their local newspaper.

The opening of the Bike Park in Taunton was sufficiently newsworthy to have increased awareness of the general public from 14% (in the before survey) to 68%. However, in the depth interviews some people admitted that they knew of the Bike Park, but not exactly where it was.

A survey of the security measures used for bikes parked in areas close to the cycle centres was carried out in order to establish an impression of the fear of theft. This revealed that a significantly higher proportion of bikes were parked securely (fixing the bike with a D lock to a cycle stand or fixed object) in Leicester (75%), than in Taunton (50%). An even greater dichotomy existed between the number of mountain bikes locked securely in

the two locations with 97% of all mountain bikes locked securely in Leicester and just 52% in Taunton.

Furthermore, in Taunton, 50% of bikes surveyed had detachable accessories left on them (lights, panniers, water bottles etc), whereas in Leicester this figure was only 11%. These results suggested that there was a significantly greater fear of theft in Leicester than there was in Taunton, thereby increasing the likely demand for the protection from theft which a cycle centre provides.

5 Discussion

It was difficult to compare the results of the cycle centres, as the locations and facilities themselves were very different. However, consideration of the different characteristics of the three locations enabled some lessons to be learnt, and some hypotheses to be made.

Fear of cycle theft was the dominant influence in all three areas. The decision to use a parking facility will be determined by the relationship between the perceived risk of theft, and its implications. The owner of a high-value bike in a location thought to be dangerous will be the most inclined to use safe storage. Conversely, a low value bike in an area where other factors contributed to lowering the perception of crime risk would attract less use.

The location of the cycle centre was found to be of the utmost importance. The Leicester Bike Park was ideally placed, as most of the city centre shopping facilities were within a five minute walk. In a report by Taylor & Halliday (1996), it was concluded that unmanned cycle parking facilities should be within 25 metres of the cyclist's destination or they may be ignored in favour of more convenient informal parking arrangements. Although cyclists would be likely to walk further for a proper cycle centre, the importance of a central, conspicuous location cannot be overstated.

Leicester was a city with many busy roads where cycling remained unattractive despite the efforts of the local authorities to add cycle lanes. The group discussions presented a scenario where people were encouraged to re-start cycling mainly for leisure purposes, buying a new mountain bike. The realisation of how much more enjoyable cycling could be with a modern bike compared to 'an old boneshaker' encouraged them to try cycling to the town centre. The realisation then that an expensive bike (or its quick-release components) was more likely to be stolen than the old bike helps to explain the attraction of the cycle centre's secure parking.

The Bike Park in Leicester appeared to fit very well within the city's overall aims to be environmentally at the forefront. It put cycling at centre-stage in the city, in the heart of the city centre and opposite the tourist information office. The regulars enjoyed the 'club feel' and many commented on the helpful and friendly staff. This all helped to strengthen the cycling culture and to make cycling feel like a 'normal' or even a 'superior' activity.

In Taunton, there was a tradition of much higher levels of cycling with 9% of journeys to work being undertaken by bicycle, compared with 4% in Leicester and 1% in

Kirklees. Taunton is attractive for the users of any type of bicycle, being fairly flat and having a series of good paths through green spaces right into the centre. Depth interviews suggested that cyclists were treated reasonably well by other road users, and that road widths were sufficient to allow motor vehicles to overtake cyclists without great danger.

The value of bicycles parked in Leicester and in Taunton reflected the different type of cycling. Traditional bikes were more popular in Taunton and 70% were estimated to be worth less than £200. This compares with the more expensive mountain bikes in Leicester where only 44% were worth less than £200. In Taunton a survey of bicycles parked in the town centre revealed that many bikes were locked insecurely with detachable accessories left on, suggesting a lower fear of cycle theft than in Leicester.

Previous surveys have shown that the need for additional cycling facilities can depend upon cycling frequency. Regular cyclists tend to have less need for complex facilities, being more prepared to 'make do'. In the report by Gardner & Ryley (1997), those who cycle regularly were found to make less use of shower facilities than new users. Areas with a tradition of cycling, such as Taunton, are more likely to have good basic cycle parking facilities outside local shops, and in large employers. It is perhaps not surprising, therefore, that Taunton cyclists were reluctant to walk an extra five minutes and pay for facilities that they have adapted to do without.

Despite generally low levels of cycling in Kirklees, the actual users of the lockers were very frequent cyclists. Because the district was very hilly, the opportunity to use a better bike (with a wider range of gears) was welcome. Fear of crime was particularly strong here however, and users were not quite so sure that the lockers afforded the same degree of protection as a manned centre. One suggestion for improving this was to locate the lockers where there was more informal surveillance, such as outside a busy shop or in a manned car-park.

Additional information from Liverpool and Dublin cycle centres helped to strengthen understanding of principal requirements. The Liverpool Cycle Centre, despite a good location near the convergence of Liverpool's main arterial routes, was still more than a five minute walk from the main city centre shops and railway station. This made it inconveniently placed for the cycle shopper which, in the other cycle centres, provided the most custom. The Liverpool Cycle Centre operated to capacity in the summer months but was down to 25% usage in the winter. The Dublin Bicycle Park opened in 1982 and attracted between 200 and 300 cyclists per week from local companies, colleges, theatres, restaurants and shops. Over 15 years of custom had shown that, although the provision of supervised parking was not economically sustainable in isolation, it provided the bike shop with a loyal customer base and was therefore an important component in a successful enterprise.

It can be argued that the protection offered to existing users is only part of the story of promoting cycle use. Research such as that by Davies et al (1997) has shown the importance of generating a 'pro-cycling culture'. It is this

and not just safe parking, for example, that has made the difference between cycling levels in Delft (or Cambridge or Helsinki) and Kirklees. In this respect the Bike Park in Leicester had been a particular success in raising the profile of cycling, and the provision in Taunton and Kirklees had yet to make its mark.

6 Conclusions and recommendations

The cycle centres studied in this report brought a wide range of benefits to cyclists. Primarily, they removed cyclists' fears that their parked bicycles would be stolen or vandalised. This meant that:

- Respondents who were already cycling to the area served by the cycle centres claimed that they now cycled in more frequently (50% of respondents).
- Respondents who claimed that they previously did not cycle to the area served by the cycle centres, now did so (25% of respondents).
- Respondents who continued to cycle as often as they did before, now had additional peace of mind and reassurance against theft and vandalism. This allowed them to enjoy using a higher quality bike.

However, the number of parking spaces provided was not sufficient to generate significant transfers between modes of travel.

The interview data showed that staffed parking provision and a central location, coupled to a range of services (changing rooms, showers, bike shop) could provide a focal centre for cyclists and promote a pro-cycling culture.

Other principal findings were:

- There was a high demand for clearly signed, secure cycle parking in or very close to town/city centres (within a five minutes' walk) where fear of theft was high and alternative cycle parking provision was low.
- The greatest cycle parking demand was by shoppers and the most common cycle parking duration was between one and two hours.
- Cyclists preferred the cycle parking to be supervised.
- Cycle centres with showers and changing facilities were used by commuting cyclists, provided that the opening hours bracketed normal working hours with an adequate margin (at least 30 minutes).

The central location, extensive facilities, widespread publicity and comprehensive signing of the cycle centre in Leicester led to high levels of use, with over 300 bikes parked per week at peak periods. Observed levels of use were lower in Taunton and Kirklees: in Taunton the cycle centre was neither signposted nor occupied a central location, the opening hours were less convenient and the facilities less extensive than in Leicester; in Kirklees, the lockers were distributed throughout the borough, were not supervised (except informally at the railway station), had not had much publicity, and were in an area with very low levels of cycling generally.

This research confirms or gives weight to the following recommendations:

- Cycle parking does require supervision. This can be informal, by passers by, semi-formal such as by car park attendants, or dedicated such as in a cycle centre. Parking facilities need to be very centrally located.
- If a suitable centrally located site is not available then good quality provision of enclosed cycle lockers in sites that have formal or informal supervision should be tried first. This can help to establish the demand levels before opting for a full cycle centre.
- A cycle centre has the advantage over other forms of cycle parking in that it can help create a sense of belonging. This change in cycling culture might help to increase levels of cycling even more than the practicality of the facility itself, and should be emphasised.
- The provision of cycle parking in isolation in the UK is unlikely, at least initially, to be a profitable venture. Providers will require some form of financial support, such as a public subsidy, contributions from local businesses or preferential treatment in the planning process, or must be part of additional profit making enterprises such as a bike shop or cafe. The long-term ability to attract people away from car usage is likely to produce a positive social cost-benefit ratio provided that the cycle centre is well located and effectively managed.

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Abstract

As part of the Cycle Challenge initiative, a number of different types of secure cycle parking have been provided ranging from an indoor cycle centre to cycle lockers. Three such facilities are considered in this report. To examine the influence that these facilities have had on the attitudes and behaviour of users, a mixture of qualitative and quantitative research was used. The importance of the type of facility, its location and the underlying cycling culture is examined. Factors that influence the success of a cycle centre are discussed. Users' views on the different types of facility are presented, demonstrating that the additional features of a fully equipped cycle centre are appealing and are appreciated, but that the overriding need is for protection of bicycles from theft and vandalism.

Related publications

- TRL346 *Cycling for a healthier nation* by L M Pearce, A L Davis, H D Crombie and H N Boyd. 1998 (price code J, £35)
- TRL309 *Trip end facilities for cyclists* by G Gardner and T Ryley. 1997 (price code E, £20)
- TRL284 *Cycle theft in Great Britain* by K Bryan-Brown and T Savill. 1997 (price code H, £30)
- TRL266 *Attitudes to cycling: a qualitative study and conceptual framework* by D G Davies, M E Halliday, M Mayes and R L Pocock. 1997 (price code E, £20)
- TRL189 *Bike and ride: its value and potential* by S B Taylor. 1996 (price code H, £30)

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