

The National Cycle Network

Route User Monitoring Report

To end of **2007**



Welcome

Welcome to Sustrans' report on usage of the National Cycle Network during 2007. I am delighted to report that the number of journeys has increased to over 354 million walking and cycling trips, an increase of 4.7% on the number of trips made during 2006.

This is the eighth year in succession that usage has increased, and it is growing much faster than the Network is extending in length. Since 2000 usage has nearly quadrupled from just under 90 million to 354 million trips a year. During the same period the Network itself has grown in length from under 5,000 miles to just over 12,000 miles.

As you read through the report it is worth remembering that Sustrans' vision for the National Cycle Network was that it would act as a catalyst for changing people's travel behaviour. The very simple idea is that if you create the right environment for people to walk and cycle, then people will choose to travel by foot and bike. Over the following pages you will see how the National Cycle Network is achieving this in communities throughout the UK.

Climate change, health, quality of life, equality of access, economic growth – all of these, to a lesser and greater extent, are the key priorities for transport policy within the UK. The National Cycle Network is playing a role in addressing all of these - all 354 million journeys made on the Network, for example, are physically active, non-congesting, zero emission journeys with no petrol necessary.

This year Sustrans, and our many partners, begin work on greatly extending local walking and cycling routes in 79 communities throughout the UK.

Connect2 will transform travel within these communities, enabling many more people to walk and cycle to the shops, school, work, or to reach friends and family as well as green spaces. We know that nearly 60% of car journeys are under five miles, so these networks will enable many more people to choose to travel differently.

This would not be possible if Sustrans had not worked long and hard to win the Big Lottery Fund's: the People's £50 Million contest. Thanks to all those who voted for Sustrans, this £50 million has leveraged matched funding from local authorities. The outcome is that the National Cycle Network will grow locally only because Sustrans beat three other very worthy contenders in a public TV vote.

The reality is that the National Cycle Network is a UK-wide transport infrastructure. During 2007 it carried nearly a third of the journeys made on our resurgent, well-funded rail network. Other than in Scotland, Sustrans receives no direct funding, from transport departments for the Network. As obesity spirals out of control, as greenhouse gas emissions from transport continue to rise, and as petrol prices rocket, is this fact sending the right message?

We urgently need to move towards a sustainable transport system. We will only be able to provide one when solutions that provide the right environment for walking and cycling - like the National Cycle Network - become integral to transport policy and are funded accordingly.



Malcolm Shepherd
Chief Executive



Why we need to change the way we move

Climate change, obesity and security of energy supply are some of the biggest policy concerns in the UK today. Underpinning these, and indeed all government strategy, is on-going economic growth. These are all closely related. The contribution that the National Cycle Network makes to the UK's economy is in its ability to enable people to change the way they move every day, and bring about low emission active travel.

The cost to our economy of climate change will be enormous. Our existing transport system is responsible for a quarter of UK emissions, with personal car use accounting for over 40% of transport emissions. A quarter of car journeys are under a mile, and two thirds under five miles – it is obvious that enabling people to walk and cycle much more could replace a large number of car journeys and the emissions they generate.

If obesity trends continue, our sedentary lifestyles and inactive travel behaviour could be costing our economy £50 billion a year by 2050. Enabling people to incorporate physical activity into their everyday lives is a key part of government health policy. Walking and cycling are obvious ways to achieve this, and creating the right environment to enable this will save money and lives.

In addition, oil (and therefore petrol) is a finite, and increasingly expensive resource, costing our economy millions every time the price of a barrel of oil rises a couple of dollars. Our transport system is extraordinarily vulnerable to oil shocks. The National Cycle Network enables people to reduce their consumption of oil – No Combustion is Necessary if you create the right environment for people to walk and cycle.



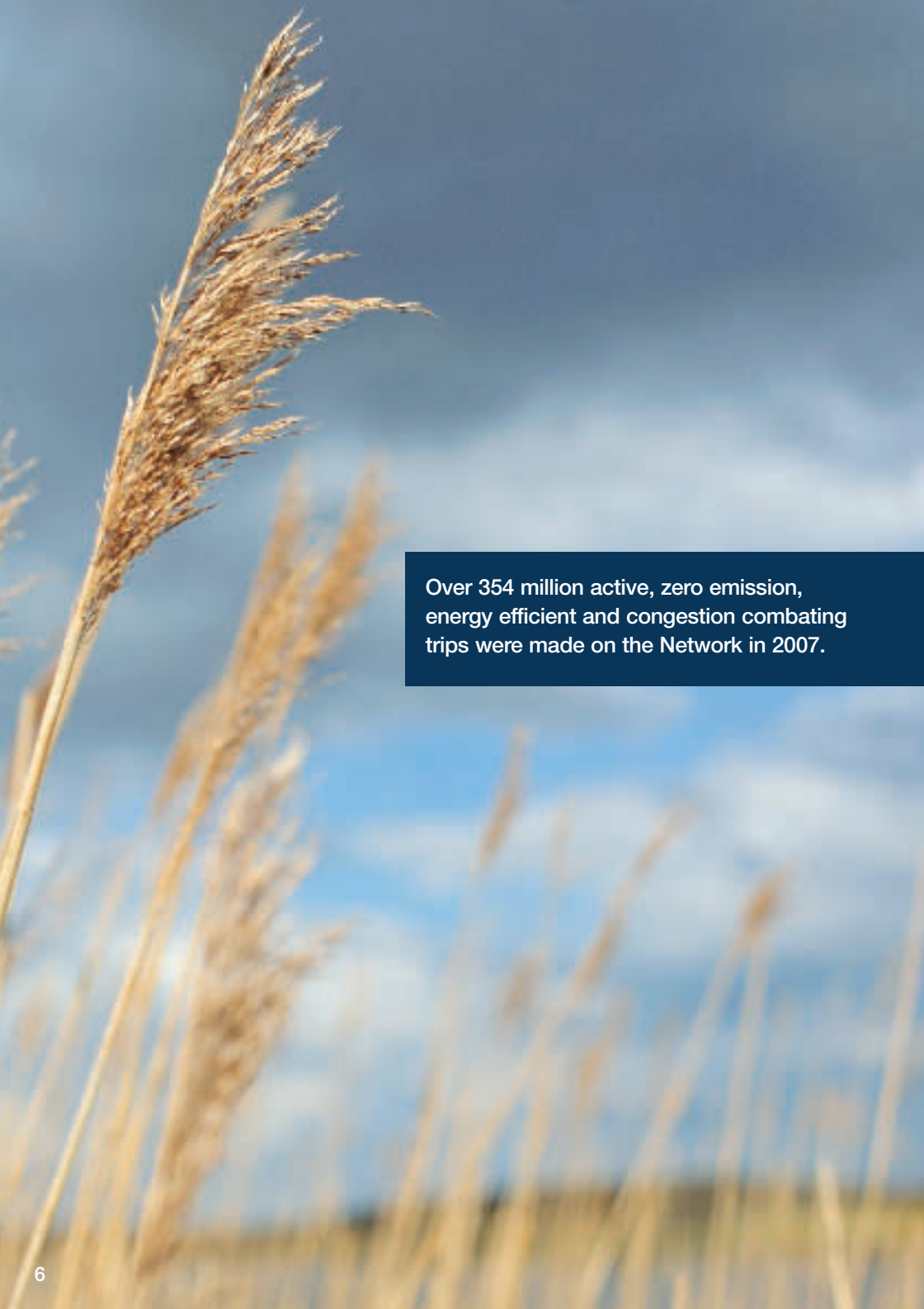
The National Cycle Network is enabling people to make everyday journeys to work, to the shops, to school, to visit family and friends, to green spaces and for leisure.

The National Cycle Network: the national local transport network

Despite the summer of 2007 being extremely wet, usage of the Network grew for the eighth year in a row. The Network carried over 354 million trips during the year, a 4.7% increase on the previous year. 50% of trips were made by bike, 50% on foot.

- usage increased on the Network in countries across the UK, with 35 million journeys in Wales, 39 million in Scotland, 10 million in Northern Ireland and 270 million in England
- those sections of Network that are free from motorised traffic continue to be the busiest. During 2007 these sections carried 82% of all journeys on the Network, even though they account for only a third of the Network overall
- however, the sections of Network that saw the most growth in usage during 2007 were those that are road-adjacent and on-road which saw usage increase by 6.5%
- 21% percent of users could have used a car but chose not to – 74 million journeys where people chose to leave their car behind
- over three quarters of users say that the National Cycle Network is enabling them to increase the amount of everyday physical activity they take, and 35% are planning to walk and cycle more in future
- the Network is encouraging people to take up or start cycling again – 9% of cyclists say they are new to or returning to cycling. This represents 15 million journeys
- the Network is enabling children to travel actively, and often independently, both to school and for play – young people under the age of 16 accounted for 15% of all journeys made during 2007.

9% of cyclists on the National Cycle Network described themselves as new to or returning to cycling.



Over 354 million active, zero emission, energy efficient and congestion combating trips were made on the Network in 2007.

Reducing CO₂ emissions

The National Cycle Network is offering people the choice of zero emission travel by offering good access and connections, predictable end-to-end journey times and reliability. It is primarily a Network for short journeys, as, increasingly, is our road network.

- on the National Cycle Network 74% of journeys were solely made on foot or by bike
- 86% of users of the National Cycle Network have access to a car, but very few are using them for any part of their journey
- 12% of journeys on the National Cycle Network are commuting trips. The average trip length for commuters on bikes on the National Cycle Network is just under five miles, the same distance as nearly two-thirds of car journeys
- over nine million trips are being made to school on the National Cycle Network, reducing the impact of the school run on rush-hour traffic and giving children access to everyday physical activity
- the potential carbon dioxide saving of all journeys made on the Network during 2006 was over 450,000 tonnes of CO₂. Based on an average annual mileage of 8,190 miles, this is the equivalent of taking just under 200,000 cars off the road. This figure represents 8% of the total number of new cars sold in 2007
- if all the journeys made on the Network had been made by a car instead, the petrol consumed is estimated at 232 million litres, a cost of £269 million based on unleaded fuel prices in mid 2008.

The potential **carbon dioxide saving** of all journeys made on the National Cycle Network in 2006 was over **450,000 tonnes**. This is the equivalent of taking just under 200,000 cars off the road.



Case study

Increasing usage year-on-year

2007 is the eighth consecutive year that usage has increased on the National Cycle Network. Below we look at a route in Belfast which has been improved and extended over the last ten years. We have data from five surveys spanning 13 years showing just how this section of the Network is enabling people to choose to travel in ways that benefit their health and the environment.

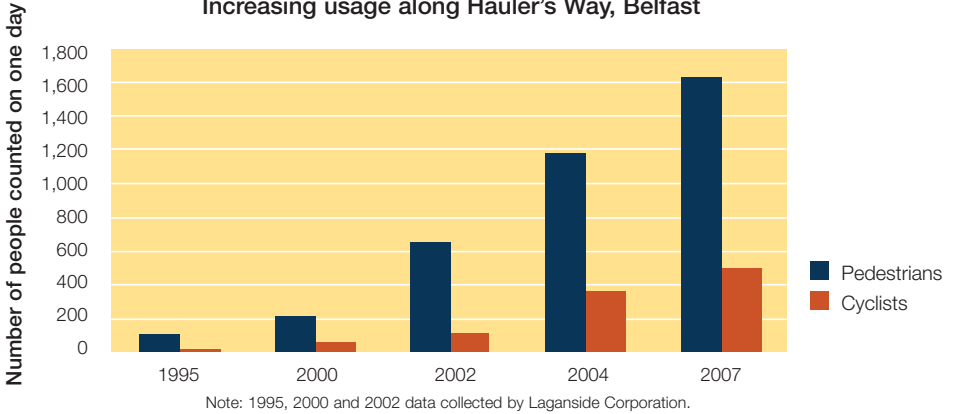
Hauler's Way in Belfast is a section of Network connecting Lisburn to Jordanstown. The riverside route on the city side of the River Lagan has been improved

at many points on its way through Belfast, and is a high quality, easily accessible and well connected cycling and walking route.

Sustrans has data from route user surveys on this section of Network dating back to 1995. The route was completed during 2000, and new links and access points added during 2002 and 2004. We surveyed the route again in 2004 and 2007.

The survey site is on the riverside path between the Albert and Ormeau Bridges on the west bank of the Lagan. At the Red Bridge there is a link from the path into the Gasworks Business Park via a subway under a railway line.

Increasing usage along Hauler's Way, Belfast



- completed by 1995
- completed by 2000
- completed by 2002
- completed by 2004
- other local walking and cycling routes

The survey conducted during 2007 shows:

- annual usage at the survey location is estimated as 511,000 trips, an increase of 42% since 2004
- cycling in particular has increased – from 88,000 trips in 2004 to 172,000 trips in 2007, a 95% increase
- pedestrians made nearly two-thirds of trips – in 2007 they made 318,000 journeys, a 20% increase on 2004
- children make 50,000 of the journeys – just under 10% of the total
- 32% of users could have used a car but chose not to, and for 17% of users a car was not an available option
- a third of people use the route frequently – 50% of journeys are for commuting, with 5% for shopping
- cycling is more popular for commuting – 75% of cycling trips are taking people to work, and cyclists are more likely to have chosen to leave their car behind – 59% of cyclists
- for 56% of pedestrians, going for a walk is the main reason for their journey
- 8% of cyclists are new to or returning to cycling
- between 2004 and 2007 the percentage of commuting trips increased from 39% to 50%.



Foresight's Tackling Obesity report, published in October 2007, suggests that on current trends nearly 60% of the UK population could be obese by 2050, with the wider cost to society and business predicted to reach nearly £50 billion a year.

Increasing everyday physical activity

The National Institute for Health and Clinical Excellence (NICE) has published guidance that places walking and cycling at the heart of its recommendations for preventing and managing over 20 conditions, including obesity.

The National Cycle Network won the World Health Organisation's Combating Obesity Award in 2006 precisely because it creates an environment that enables people, including children, to be physically active everyday.

- 78% of all users say that the presence of the National Cycle Network in their community has helped them to increase the amount of physical activity they regularly take. This rises to 84% amongst women
- 42% of users of the Network are walking and cycling more than they were a year ago, and a third are planning to walk and cycle more in the future
- 51% of those using urban traffic-free sections of the Network are over the age of 45, whereas the National Travel Survey shows walking and cycling declining in people over the age of 40
- 14% of users of the Network are over the age of 60
- rural traffic free sections are particularly popular with people over 60 who make a quarter of their trips on these routes. Convenience of the routes is the most important reason within this age group as to why they use the Network
- the Network is enabling people to return to or begin cycling, particularly women, with 13% of women who cycle describing themselves as novice cyclists
- of the 354 million trips made on the Network during 2007, 54 million were made by children to travel to school and for fun, giving them access to both independent play and everyday physical activity
- men and women of all ages rate pleasant surroundings, safety and convenience as the main reasons why they use the National Cycle Network, all of which appear to be important in enabling active travel
- as a result over 41% of users of traffic-free sections of the National Cycle Network say they are more likely to be cycling and walking more in the future compared to less than 1% on road-adjacent sections.

78% of all users say that the presence of the National Cycle Network in their community has helped them to increase the amount of physical activity they regularly take.



Case study

Letting the kids take the kids to school

It has been calculated that at 8.50am on a school day as many as one in five cars on the road are making the school run. The Department for Transport in England has stated that reducing this level of congestion, pollution and crowding of our school gates by cars is a key cross-departmental policy requirement.

Currently 30% of boys and 40% of girls are not achieving the recommended one hour a day of exercise that is considered necessary for maintaining health and well-being. Report after report has recommended that walking and cycling to school is one of the most cost effective and practical ways of incorporating everyday physical activity into children's lives.

In Scotland, Sustrans, funded by the Scottish Government, has been delivering a

programme aimed at *Tackling the School Run*. Working in partnership with School Travel Co-ordinators across Scotland, different measures have been employed to increase active travel on the school journey. These have ranged from the building of walking and cycling paths to schools, lending bikes to children, installing cycle storage in schools and improving attitudes towards walking and cycling. Below we assess the impact of one of the Links to Schools built as part of the programme.

East Linton Primary in East Lothian is a small school in a small town about 20 miles east of Edinburgh near Dunbar. The aim of the *Tackling the School Run* scheme was to:

- provide a safer route to and from school for pedestrians and cyclists
- reduce the number of vehicles trying to access the area close to the school
- provide a better route for the wider community to use whenever they like.

The project involved improvements to what was an informal route along the side of a grassy field. The path is now well surfaced, well lit and dedicated to pedestrians and cyclists. Below we compare the results of surveys conducted before and after the work was complete.

- the number of children making use of the route increased by more than a third, from 113,000 trips a year to 152,000
- in terms of trips to school the average number of children counted during school travel periods increased from 93 to 168.

Wider community benefits

- the number of trips by those over the age of 60 has doubled, and in total the number of journeys being made has increased from 146,000 to 232,000
- women and girls have particularly benefited. They made 70% more journeys compared to 47% for men and boys
- pedestrians account for 88% of all journeys, but cycling levels have increased by 54% to 20,000 trips a year
- the journeys people are making on the route have changed – leisure trips have gone down as a percentage, with school and shopping trips seeing particular growth.

This is a relatively new link, but what happens to usage on a link to school over a couple of years? Does usage continue to increase or does it simply plateau? In England, Sustrans has been working on Links to Schools as part of a Cycling England funded initiative for four years.

One such link was built from the National Cycle Network to Lytham Church of England Primary School, an average sized school with just over 300 pupils. The link

connects to traffic-free sections of the National Cycle Network for those travelling from further afield.

The work was completed in spring 2005, and Sustrans surveyed usage of the route in July 2005 and again in September 2007.

- within school periods the number of children walking and cycling to school on an average school day increased from 78 to 109, a 40% increase
- the number of children cycling increased from 31 to 46 on an average day
- general use by children increases nearly threefold from 35,000 trips to 104,000 a year.

Wider community benefits

- the number of trips being made by those over the age of 60 more than doubled
- usage by women nearly trebled from 38,000 to 111,000 trips
- the percentage of people who said they could have used a car but chose not to increased from 16% to 52%. This equates to nearly 39,000 trips, or potentially 107 fewer cars each day
- the percentage of those who say that the route had helped them to increase the amount of physical activity they regularly take also increased from 38% to 59%
- the usage of the route is more varied, with trips being made to school, to work, to college, to the shops and other local services, as well as for leisure
- over a quarter of cyclists described themselves as returning to cycling, or occasional cyclists, suggesting that this link and the traffic-free routes of the National Cycle Network to which it connects is enabling people to gain cycling confidence.



We estimate that the National Cycle Network now passes within a mile of 55% of people living in the UK...

Improving access for all

...and with new links to schools and local networks with Connect2 schemes being completed over the coming years, many more people will be able to access the Network.

Anyone can use the National Cycle Network to reach work, shops, family and friends, as well as countryside and green spaces.

- 14% of all journeys on the Network in 2007 were made by people without access to a car. A fifth of users over the age of 60 have no access to a car, and in urban areas 15% of pedestrians on traffic-free sections of the Network do not have access to a car
- 67% of cyclists and pedestrians identifying themselves as Black and Minority Ethnic (BME) had no access to a car in their household. This increased to 75% of cyclists identifying as BME
- 55% of BME cyclists are using the Network to get to work
- 16% of users are aged 16-24. In this age group three times as many trips are being made by females than males – the only age group in which journeys by women are more than by men
- whilst men use the Network more than women, the share of journeys being made by women has increased year on year since 2000, and during 2007 women made 42% of all journeys on the Network
- 3% of trips on the Network are made by people with a disability – this rises to 5% in those over 60.

42% of all journeys on the National Cycle Network in 2007 were made by women.



Case study

Access to green spaces

The National Travel Survey reveals that during 2006 the number of trips made by car for leisure, including days out to green spaces, accounted for 23% of car driver trips. Enabling travel to green spaces by foot and bike is a way of reversing the trend for people to use their cars for days out, whilst increasing access for those without a car.

The National Cycle Network links many towns and cities to local green spaces, and many of the Network's iconic routes are destinations in their own right.

The Celtic Trail in Wales runs along the South Coast, and links people along its length to local places, including green spaces. Much of the Celtic Trail is dedicated to pedestrians and cyclists, providing a safe and green space for trips on foot and bike.

Usage of the Celtic Trail varies along its length, so in Swansea usage is very high for commuting, shopping and leisure. At Nantgarw, where the Celtic Trail meets the Taff Trail on a key section of traffic-free route through woodland, there is good access for those who live in Cardiff to the south, Caerphilly to the east and Pontypridd to the north, providing a gateway to the countryside for these communities.

Sustrans conducted a survey in 2006 and again in 2007 to see how usage was changing. The Nantgarw data shows:

- 14% of journeys are for commuting (this has increased significantly between 2006 and 2007), but the majority (85%) of journeys are for leisure
- 83% of respondents are using no other mode of transport to make their journeys despite the fact that 92% of users have access to a car within their household
- the total number of users annually is estimated at 42,000, with cyclists accounting for 82% of all journeys
- children account for 16% of all users, and those over 60 for 8%. Between 2006 and 2007 the number of trips by children has increased by 43% and by people over 60 by 77%
- the number of women and girls using the route has also increased by 13%
- 91% of cyclists say that the presence of the route has enabled them to increase the amount of physical activity that they take on a regular basis. 14% of cyclists describe themselves as new to or returning to cycling

- over half of cyclists say that they intend to cycle more in the future.

In a very different location the National Cycle Network leaves the River Thames in London and passes north through Hackney, one of the most deprived Boroughs in London where car ownership is low by UK standards at 44% of households.

The route enables access to Hackney Marshes, a vast green space in the North East of London, and the River Lee that runs north to Ware in Hertfordshire. Sustrans conducted a survey at Friends Bridge, close to Hackney Marshes in 2003 and then again in 2007.

- the annual number of users is estimated at 134,000, compared to 87,000 in 2003
- whilst 17% of all journeys are for commuting (26% for cyclists), the majority of journeys are for leisure
- 51% of users do not have access to a car
- 64% of users are cycling – usage by cyclists has increased significantly since 2003, from 33,000 to 86,000. 33% of cyclists are new to or returning to cycling
- 90% of users say that the route is enabling them to increase the amount of physical activity they take on a regular basis
- 7% of users are children and 3% are over the age of 60.



Case study

The economic benefits of cycle tourism

The National Cycle Network is not only offering people the choice of low emission and active travel for everyday journeys – many of its routes are also destinations in their own right. Although a small part of its usage, there are a significant number of people, particularly cyclists, using the Network for day trips and holidays. During 2007, of all the cycling trips on the Network, 16% were day trips and 1% were cycling trips of more than three days.

Given concerns about climate change and the rising cost of long-distance travel, the notion of local sustainable tourism is now higher up on people's agendas. Generally speaking it is a big change in people's travel behaviour to swap a holiday to Florida for two weeks cycling on the National Cycle Network. However, for those who enjoy physically active holidays and are keen to try something new, the National Cycle Network is one of the most sustainable holiday destinations on offer.

Sustrans undertook a study on behalf of the North East Regional Development Agency, One North East (ONE) which funded the development of a network of cycle routes in the North East of England. Four routes were evaluated for their economic benefit and their potential in terms of sustainable tourism development. The routes were chosen because they were designed to be used for both short, everyday journeys, as well as cycle tourism:

C2C

(Sea to Sea) Cycle Route (Newcastle to Whitehaven)

Coast and Castles South

Cycle Route (Newcastle to Edinburgh)

Hadrian's Cycleway

(following Hadrian's Wall)

Pennine Cycleway

(northern section)

The report was underpinned by a literature review, an overview of tourism policies, and an analysis of primary data collected on the National Cycle Network by Sustrans in the period 2001-2006.

The study utilised a model that explores the wider relationship between the economic and social values associated with cycle tourism route development.

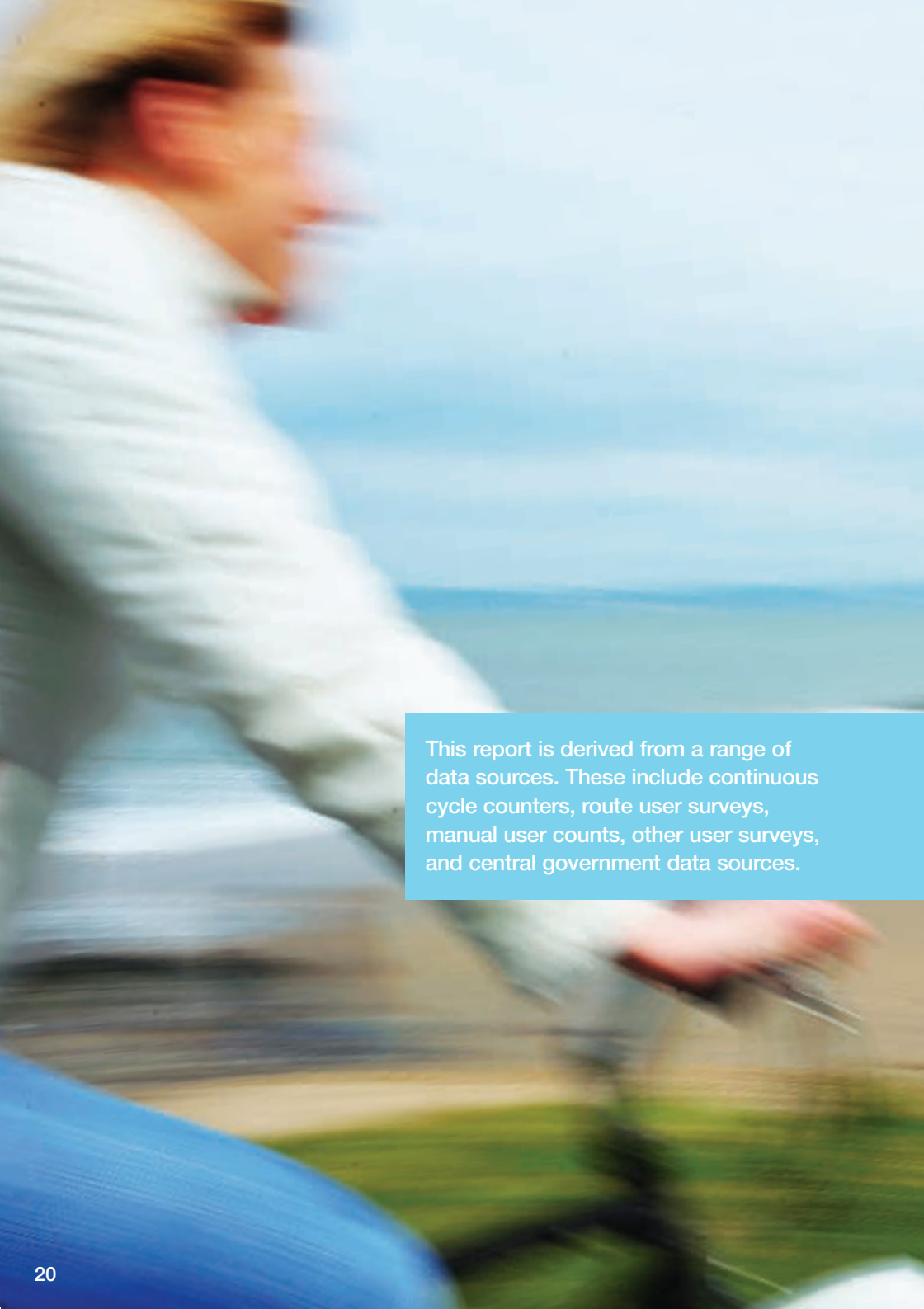
The three core elements are:

1. **Spending:** directly related to the development of cycle routes in the North East.
2. **Spillovers:** indirect benefits within the region.
3. **Social value:** the value associated with the routes and the experience which is beyond monetary value.

It was estimated that:

- route users within the region contributed £9.6 million in direct expenditure to the North East economy in 2006
- this represented a value of £13.4 million to the wider North East economy
- this supported 216 jobs in the immediate vicinity of the routes
- out-of-region users generated £5.9 million, supporting an additional 95 full-time equivalent jobs
- the value of the four routes in their entirety (including the sections of the C2C and Hadrian's Cycleway in Cumbria) rises to £22.3 million
- cycling activity is important to local supply chains, with major implications for the circulation of income in the local tourism economy.

In addition, Sustrans asked how much people would be willing to pay to use the routes. On average the price they were prepared to pay for each trip was £5.59, a potential amenity value for all the routes of an additional £1.7 million.



This report is derived from a range of data sources. These include continuous cycle counters, route user surveys, manual user counts, other user surveys, and central government data sources.

Methodology

Sustrans would like to thank all the partners who have contributed to the National Cycle Network monitoring programme. Those requiring more information on any part of this report, or wishing to become involved in the programme, should contact Sustrans' Research and Monitoring Unit.

Measuring changes in the levels of cycling

Sustrans has been collating data from local authority networks of automated continuous cycle counters throughout the UK for several years. This data is the basis for expressions of the changing levels of cycle use. A sample of over 300 counters formed the basis for this year's change measurement. An independent review of analytical techniques employed is currently underway.

Estimating total National Cycle Network use

A complex model is used to generate estimates of National Cycle Network usage. Figures for usage on different types of routes, combined with the figures describing changes in levels of cycling, form the basis for national level aggregation. The process used this year is consistent with that used in 2005 and 2006. Pedestrian use of road adjacent routes is not assigned as Network use. An independent review of the model is currently underway.

Profiling the use of the Network

Profiles of National Cycle Network usage are derived from route user surveys. A further 42 of these were conducted in 2007. Sustrans holds a database of over 35,000

face-to-face interviews with route users collected over the past seven years. Survey response data is weighted on the basis of concurrent local user counts and national Network usage estimates, in-line with the recommendations of an independent review of the survey process.

Case studies

The case studies presented are derived from count and survey data collected by Sustrans and partners.

Future reporting

We are always seeking to improve our methodology for interpreting the data we collect. **Over the next few years we particularly wish to:**

1. Improve the sophistication of cycle usage estimation based on better modelling of count data.
2. Generate better 'levels of change' data for cycling activity.
3. Enhance our understanding of pedestrian activity on road-adjacent routes.

We hope to be able to improve in all three of these areas in the process of delivering Connect2. As well as benefiting from research projects that will be using Connect2 to learn much more about the benefits of walking and cycling to our environment and health, we will also be developing new tools for monitoring usage of different kinds of routes.

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Calculating usage

The National Cycle Network is a UK-wide infrastructure. One of the aspects of its use that we believe we have always underestimated are the very short journeys that take place, particularly in urban areas.

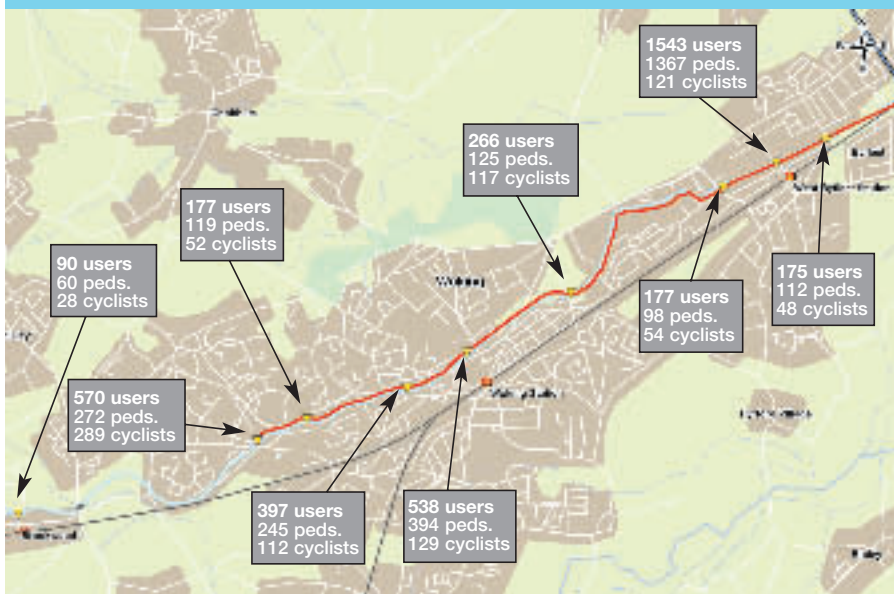
During 2007 we undertook a 12 hour survey on one day on a canal towpath in Woking. The towpath runs through the heart of Woking, linking residential, commercial and industrial centres and sits near to the main railway station.

We collected data from nine points on an eight mile stretch. If most of the journeys on the Network were longer you would expect to see fairly constant usage along its length, with the same users passing most of the points and being counted.

This is not, however, the case. The numbers for different points vary from 90 users at one location to over 1,500 at another. This underlines the extent to which the Network is used for short journeys as well as longer trips.

Data of this kind emphasise how important the National Cycle Network is in enabling very local journeys, and providing a spine for cross-town trips. Other data sets indicate that the number of access points available to sections of Network also influence usage – the greater the access, the higher the usage, particularly by pedestrians who tend to make shorter journeys.

It is also indicative of the challenge we have in monitoring usage of the Network, with selection of monitoring locations crucial to the recording of these short journeys. This is a key reason why we suspect usage is greatly understated.



About Sustrans

Sustrans is the UK's leading sustainable transport charity.

Our vision is a world in which people choose to travel in ways that benefit their health and the environment. We work on practical, innovative solutions to the transport challenges facing us all.

The National Cycle Network is one of these solutions. Working in partnership with hundreds of local authorities, and many other organisations and funders, just over 12,000 miles of routes and links were completed by December 2007.

This Route User Monitoring Report describes usage of the National Cycle Network during 2007. It is full of facts and figures showing how people all over the UK use the Network.

We can only publish a selection of the mass of data we collect. For fuller and more detailed information, visit the Research and Monitoring section of our website at www.sustrans.org.uk to see other data as it becomes available.

For more copies of this report please visit www.sustrans.org.uk to download a PDF or e-mail researchandmonitoring@sustrans.org.uk for printed copies.

Sustrans is also the charity behind Safe Routes to Schools, Bike It, TravelSmart, Active Travel, Connect2 and Liveable

Neighbourhoods, all projects that are changing our world one mile at a time. If you think what we do sounds sensible, we urgently need people like you to help us do more. By giving from £5 a month you'll start to make a difference. Without this financial support, Sustrans and projects such as the National Cycle Network would probably not exist.

To find out more about Sustrans or to become a Sustrans Supporter please visit www.sustrans.org.uk or call **0845 113 00 65**.

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Photography

Sustrans staff and Ted Giffords/Sustrans (p18)

Design

www.trmvs.co.uk

Print

Printed on Revive 100 Offset. This is an FSC certified paper made using 100% post-consumer waste.

©Sustrans June 2008

ISSN 1755-3434 (print) ISSN 1755-344X (online)
Registered Charity No. 326550 (England and Wales)
SC039263 (Scotland)
VAT Registration No. 416740656



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