F. Cardiff Strategic Cycle Network Plan

September 2013
The Plan
CARDIFF CYCLE NETWORK
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This report is also available in Braille and audio formats upon request.
EXECUTIVE SUMMARY

As part of a series of initiatives to improve the cycling environment (including route maintenance, cycle parking, cycle training and signage) this ‘Strategic Cycle Network Plan’ will assist in the identification of schemes for future investment in cycling facilities in Cardiff.

A review of a wide range of relevant background data relating to transport and cycling in Cardiff and the surrounding area was undertaken. A detailed ‘evidence base’ was assembled using a wide range of information including cycle casualty data, traffic and cycle flow figures, school census data and feedback from stakeholder workshops.

Detailed work was also carried out to determine the ‘target market’ for potential new cyclists. This used the ACORN database (a geo-demographic tool which segments the UK’s population into small neighbourhoods and classifies them into 56 ‘types’) and enabled those groups most likely to start cycling, or to cycle more, to be identified and mapped. An extensive site audit was undertaken to highlight sections of the existing cycle network that required improvement, and to identify gaps in existing provision which needed to be filled.

A ‘skeleton’ network based on the above work was produced and a list of potential schemes was appraised through a Prioritisation Framework. This listed a brief description of the proposed scheme, advantages and disadvantages, and scored the potential benefits to cyclists based on the 5 criteria of: Convenience, Accessibility, Safety, Comfort and Attractiveness. To this were added the potential to induce modal shift, impact on other road users, and the potential ‘risk to delivery’ which may be associated with the particular scheme.

All of the resulting schemes were plotted onto an outline of the Strategic Network Plan and further site work was then carried out to assess whether the potential schemes were deliverable. A final list of proposed schemes for development was then costed up and a shortlist produced. In total 104 projects have been identified for progression, listed in priority order. An extensive process of consultation was then carried out with a wide variety of stakeholders. The total value of schemes identified is approximately £6.5m.

A number of complementary initiatives have also been identified in addition to the proposed cycling infrastructure plan. A series of ‘mass action’ programmes are suggested, to tackle problems such as barriers on cycle routes, providing flush kerbs for cyclists at existing road closures, signing of key routes and so on. Engagement with the Cardiff Access Focus Group and the Council’s Equality and Diversity team was undertaken at the development stage to ensure that, as far as possible, the Strategic Cycle Network Plan meets the requirements of those with disabilities. As well as the proposed infrastructure plan, a Community Engagement Plan has also been produced, which helps to focus future Smarter Choices interventions to maximise the number of potential new cyclists.

In addition to this Strategic Cycle Network Plan, a Cycle Design Guide has also been produced. The Design Guide defines an approach to the design and provision of cycling infrastructure in Cardiff, based on best practice. Both the plan itself and the Design Guide have undergone an extensive Equality Impact Assessment (in conjunction with the Cardiff Council Access Focus Group) and a Health Impact Assessment (in conjunction with the Public Health Team and the Sustainable Development Unit). This work provides the basis for the delivery of an effective programme of measures over the next five plus years in Cardiff, to help ensure that cycling is chosen by more people more often.
1.0 INTRODUCTION

1.1 Background, Scope and Study Structure

1.1.1 This document sets out the Cardiff Strategic Cycle Network Plan. The aim of the Network Plan is to be:

- Informed by an understanding of existing travel patterns in the city including cycling use;
- Informed by an understanding of factors that prevent people who do not currently cycle from doing so;
- Based on a review of Cardiff’s existing cycling network;
- Informed by the views and aspirations of local cycling groups and people not affiliated to such groups including people who do not currently cycle;
- Fully integrated with actions to encourage cycling through the Council’s Smarter Choices programme including travel plan development;
- Fully integrated with the Council’s Safe Routes to Schools programme;
- Expand on work undertaken including cycling proposals for Cardiff City Centre as well as other strategy and study documents undertaken;
- Define a comprehensive core strategic cycle network focussing on key local trip destinations/generators, catering for a range of different needs and which serves to encourage people to cycle who do not already do so;
- Identify potential extensions and improvements to existing routes, new routes to be developed and necessary supporting infrastructure;
- Define an approach to design and provision of both on road and off road infrastructure that draws upon established guidance and good practice, but which is appropriate to Cardiff and the needs of existing and potential new network users in the city;
- Include an Equality Impact Assessment which comprehensively assesses the impact of the strategic cycle network on all equality strands;
- Identify potential constraints to network development and solutions to tackle such constraints;
- Identify network development opportunities arising from planned developments and allocations within the Council’s Local Development Plan;
- Identify packages of small scale improvements to the network as well as larger route development schemes;
- Include a phased programme of network development, including priorities for delivery based upon defined criteria; and
- Identify budget costs for infrastructure development.
1.1.2 This plan will define a core network of routes and links to be developed/improved and outline a prioritised Programme for network delivery over a five year timeframe.

1.1.3 The structure for this document is as follows:

- Section 2 provides a background to cycling in Cardiff, highlighting relevant policy documents, examining previous and current trends in cycle use and looking at the existing provision for cyclists in the city;
- Section 3 provides the ‘Evidence Base’ upon which the network plan is to be developed and demonstrates why particular schemes or projects have been identified for progression. It looks in detail at the different potential markets for new cyclists, and builds up the different layers of information which are required in order to produce a network of routes which are most likely to result in more people cycling in Cardiff;
- Section 4 outlines the work which was carried out in order to identify both improvements to existing cycle facilities, and also potential new routes and schemes. It also provides a prioritised list of proposed schemes for progression, and the Strategic Cycle Network Plan;
- Section 5 outlines the consultation and engagement process that was undertaken on the Draft Cycle Network Plan in order to arrive at the final report and network plan; and
- Section 6 presents a Community Engagement Plan, focusing on the means of communicating Cardiff’s cycling and other smarter choices options to the different target markets identified. This also recommends proposed locations for communications with target markets and the methods that could be used to communicate with them.
2.0 CYCLING IN CARDIFF – BACKGROUND

In March 2009 the Welsh Assembly Government announced that Cardiff would be the first Sustainable Travel City in Wales. The initiative is focussing on managing the pressures on the transport system and creating a sustainable transport hub in the City Centre, by integrating access by public transport, walking and cycling. Infrastructure improvements include modernising and making better use of the existing transport system, which is supported by a comprehensive programme of ‘soft’ measures which focus on embedding sustainable travel behaviour and promoting new sustainable transport facilities to ‘lock-in’ the benefits of modal shift.

2.1 Existing Cycling Network

2.1.1 The existing cycling network is made up of both on-road and off-road routes and is shown in Appendix 1. The off-road routes are predominantly traffic-free paths such as the ‘River Valley’ routes (Taff Trail, Ely Tail and Rhymney Trail), with some off road cycle tracks adjacent to busy roads. There are also sections where cyclists are advised to walk their bicycles and ‘shared space’ areas where cycling is permitted. The on-road routes are designated as signposted (blue) and advisory (yellow) cycle routes. Main road routes are sometimes supplemented with cycle lanes or bus and cycle lanes and there are also a small number of cycle contra-flows.

2.1.2 Additional infrastructure that benefits cyclists and that is represented on the cycling map includes cycle parking locations, Toucan and pedestrian crossings and cycle shops. Advanced stop lines (ASLs) are provided to give cyclists priority on approaches to a number of signalised junctions at various locations around the city. Cardiff also benefits from its position at the foot of the National Cycle Network Route 8 (The Taff Trail) which runs north-south between Cardiff and Holyhead. The three strategic ‘River Valley’ routes provide important opportunities for leisure and recreational cycling, as well as serving commuter trips.

2.1.3 Cardiff Council’s target for implementing the first 103.18km of Cardiff’s Strategic Cycle Network was achieved (LTP Performance Indicator 7), a year in advance of the 2008 target.
2.1.4 The road hierarchy in Cardiff is shown in Appendix 2a. Many of the principal roads in Cardiff are heavily trafficked, although they do often provide a direct route between trip origins and destinations and are therefore used by more confident cyclists as the quickest route between destinations. Cardiff has implemented a comprehensive programme of traffic calming works throughout the city over the last 10 – 15 years. This has used a combination of road humps, speed cushions and narrowings, with 20mph zones in some areas. Many of the traffic calmed streets offer useful routes for cyclists, with all of the traffic calming measures shown in Appendix 2b.

2.2 Welsh Assembly Government

2.2.1 In December 2003, the Welsh Assembly Government published its Walking and Cycling Strategy for Wales, (WAG 2003). The vision of the Strategy was “to halt the decline of walking and cycling and to increase their role in how we travel in Wales” and aimed to “maximise the opportunities afforded by walking and cycling and to point out the disadvantages of using private cars, particularly for short journeys.” It provided a framework for the development of walking and cycling in Wales, as well as general guidance on how to encourage, promote and provide for increased numbers of journeys using these modes. The Welsh Assembly Government also launched the Walking and Cycling Action Plan for Wales 2009-2013 which detailed the actions required to achieve six walking and cycling targets relating to adult recreational and non-recreational trips and children travelling to school.

2.2.2 In October 2010, the Welsh Assembly Government produced their “Climate Strategy for Wales” (WAG, 2010). This recognises that transport is an area where the individual can do much to reduce emissions, particularly through making smarter choices for local journeys. The Strategy supports initiatives to promote more walking and cycling.

2.3 South East Wales Transport Alliance

2.3.1 The South East Wales Transport Alliance (Sewta) provides the over-arching guidance within the ten authorities (including Cardiff) who make up the South East Wales region. In July 2006, Sewta launched its Cycling and Walking Strategy (Sewta 2006) as part of its Draft Regional Transport Plan. The goal of this Strategy was to ‘get to grips with [the identified economic and transport] problems, by significantly increasing the share of journeys made by walking and cycling in south east Wales and thereby reducing the impact of travel upon the environment and improving public health.’ The Walking and Cycling Strategy also details actions on cycling and walking under six strategic themes as well as providing details on the delivery mechanisms, responsibility for delivery and a forward timetable.

2.3.2 In November 2009, Sewta launched its Regional Transport Plan (RTP) (Sewta, 2009). The importance of cycling in the RTP was emphasised by stating in the vision that cycling should provide a real travel alternative for travel in the region. The RTP recognises that an increasing number of people commute from the South East Wales valleys to Cardiff and other large conurbations within the coastal belt, resulting in
significant traffic congestion and environmental pollution. Meanwhile, in large areas of the valleys, access to employment and services is poor and there are high levels of social deprivation. Sewta recognised that these major issues will not be overcome by simply adding new road capacity and that sustainable solutions to the problems identified will necessarily involve reducing the need to travel and making better use of existing transport facilities to meet local accessibility needs. Walking and cycling were listed as having a crucial part to play in this alternative approach and the purpose of the Strategy was to define the ways in which they can contribute most effectively.

2.3.3 The RTP lists eight key roles for Sewta’s activities and investment over the subsequent five years. Priorities one and two focus heavily on the role of cycling, listed as:

1. To improve access for all to services, facilities and employment, particularly by walking, cycling and public transport;
2. To increase the proportions of trips undertaken by walking, cycling and public transport.

2.4 Cardiff Cycling Strategy

2.4.1 Cardiff Council produced a comprehensive Cycling Strategy in 2007. The main aim was:

To provide for, promote and increase cycling as an enjoyable, safe and healthy activity for people of all ages and abilities and to reduce dependency on the car.

2.4.2 The strategy will be delivered through 41 actions under the following broad themes:

- Cycling Promotion and Awareness;
- Improving Safety, Security and Health;
- Improving Accessibility and Mobility;
- Improving the Cycling Environment;
- Planning and Development; and
- Working with Other Users and Interest Groups.

2.4.3 Appendix 3 shows how this Cycle Network Plan will directly contribute to the various Cycle Strategy actions. These actions are also linked wherever feasible to the Sewta Walking and Cycling Strategy actions.

2.4.4 The Cycling Strategy also includes a number of actions the continued delivery of which would complement the benefits of the schemes identified in this network plan. These strategy actions include:

- **CS13** The Council will continue to roll out its school cycling proficiency programme, on-road training and adult safety training courses.
- **CS25** The Council will continue to review all barriers provided to prevent cycle tracks being used by powered two wheelers in order to conform to the Disability Discrimination Act.
CS30 The Council will develop and clearly sign routes that lead to recreational facilities or link to the more rural areas to make them accessible to cyclists.

CS34 The Council will continue to undertake cycle audits of all proposed Council highway schemes, to ensure that the needs of cyclists are understood and taken into account.

CS35 The Council will endeavour to provide increased numbers of cycling signs, information points and lighting where appropriate and will seek to reduce street furniture clutter by amalgamation of signs, removal of poles etc. where appropriate in order to improve the quality of cycle routes.

2.5 Draft Cardiff City Centre Cycling Strategy

2.5.1 A draft Cycling Strategy to increase cycling specifically in Cardiff city centre was developed in January 2010. The strategy considered both improved cycling infrastructure and a range of measures to promote cycling and increase the modal share of cyclists in Cardiff city centre. The strategy area covered major trip attractors including: the retail centre, Cardiff Central and Cathay’s railway stations and the Millennium Stadium.

2.5.2 The Strategy’s main conclusions and recommendations were:

- An independent Equality Impact Assessment should be undertaken on any proposals to permit cycling in vehicle restricted areas;
- The implementation of a 20mph zone on “appropriate streets” should be considered;
- The Department for Transport’s Hierarchy of Provision and the London Cycling Design Standards and matrix of cycle facility solutions should be followed;
- The installation of mandatory cycle lanes on Castle Street;
- A segregated cycle track adjacent to the road on Adam Street;
- A cycle facility adjacent to the road along Boulevard de Nantes;
- The Council should work with organisations in the city centre to promote cycle parking; and
- The installation of new cycle stands across the city to address existing and future demand.

2.5.3 The Draft Cardiff City Centre Cycling Strategy also reported on the 18-month trial conducted to permit cyclists to cycle through Queen Street in the city centre before 10am and after 4pm. Whilst cycling along Queen Street has subsequently been prohibited, this will be reviewed at a later date.
2.6  Cardiff Working Towards a Healthy City

2.6.1  Cardiff Council’s second Health, Social Care and Well Being Strategy sets out plans to improve the health of its citizens (Cardiff Health Alliance, 2010). One of its aims is to keep ‘people fit and healthy by promoting factors that can help develop and maintain a healthy lifestyle’.

2.7  Cardiff Housing Monitoring Schedule

2.7.1  Cardiff Council’s Housing Monitoring Schedule, published in March 2010, gives details of housing sites within the authority with planning permission (CC, 2010). Sites with 10 or more dwellings are shown in a Housing Monitoring 2009/10 Plan, reproduced in Appendix 4.

2.8  Cycle Hire

2.8.1  Cardiff Council launched a bicycle hire scheme in the city in September 2009. Operated by OYBike, the scheme has 106 bicycles stationed at 17 locations around the city centre (as of Jan 2011), that can be hired for no cost for the initial thirty minutes and then paid for on a sliding rate after that. Users must pre-register either through the Internet or by calling the OYBike registration line using a valid credit or debit card.

2.8.2  There is also a not-for-profit company, Pedal Power, operating in Cardiff who provide an ‘accessible cycling centre’ with a range of specially adapted cycles for hire for disabled adults and children, as well as conventional hire bikes. Pedal Power has two centres, one in Pontcanna near the city centre and one in Cardiff Bay.

2.9  Safer Routes to Schools Activities

2.9.1  Safer Routes to Schools projects are an important traffic management and demand restraint initiative, with approximately 20% of all peak time traffic involving trips transporting children to and from school. Cardiff Council has been developing Safer Routes to School projects to reduce parents and pupil’s reliance on the private car. Efforts to reduce child pedestrian casualties and provide safer walking and cycling routes have involved the implementation of School Safety Zones - where parental parking is prohibited, traffic calming measures and cycle storage facilities installed, new cycle lanes introduced and on-road cycle training for school pupils provided. On-road cycle training is also being provided by the Council’s Road Safety Team.
2.9.2 Safer Routes to Schools schemes have been implemented at:

- Llanrumney High School;
- Howell’s School Llandaff;
- Bishop of Llandaff;
- The Cathedral School.

2.10 Smarter Choices Initiatives

2.10.1 The Welsh Assembly Government published a Smarter Choices Guide for Wales in which they recommended 19 options to influence travel behaviour in favour of more sustainable transport modes such as the train, bus, bicycle or walking (WAG, 2007). Based on research undertaken by the Department for Transport, it is suggested that if an intensive ten-year plan to promote and implement Smarter Choices schemes is undertaken, then significant reductions in urban and rural peak hour traffic and overall traffic volumes could be achieved.

2.10.2 Smarter Choices include providing more focused information about travel options to people, marketing those options more effectively and targeting transport advice and services to particular groups of the population. The market research for this Cycle Network Plan meets the objective of Smarter Choices by identifying and consulting with target markets, as discussed in Section 5.

2.10.3 The document also cites case studies where Smarter Choices programmes have brought a measure of success, including the integration of cycling with buses and trains, such as the Beacons bus from Cardiff to Garwant and Brecon that tows a bike trailer on which up to 24 cycles can be stored, or the Vale of Glamorgan Bike Trains, the cycling equivalent of the Walking Bus initiative for journeys to school.

2.10.4 Sustrans have been working with 18 schools in Cardiff (17 primary schools and 1 secondary school) since September 2009 as part of the ‘Bike It’ initiative. A range of evidence-based activities have been delivered through the scheme such as bike fun shows, Dr Bike events, roller cycle races and route planning lessons. The scheme primarily targets children aged 9 to 12 years.

2.10.5 ‘Bike It’ organised 231 events during the 2009/10 academic year (September 2009-July 2010) with encouraging results. The proportion of pupils cycling regularly (once a week or more) to the targeted schools rose from 11% at the start of the year to 30% by the end, with 13% of pupils now cycling every day (up from 3%).

2.11 Travel Plans

2.11.1 As part of the 2007 Cycling Strategy, Cardiff Council has undertaken to ‘Ensure that travel plan production and implementation is tied to all major developments as a condition of planning permission’ (Action CS38), (CC, 2007).
2.11.2 Engaging local employers, developers and schools to develop and implement Travel Plans is one way of encouraging people to switch to using more sustainable modes of travel and to reduce reliance on the private car. Different types of Travel Plans can be prepared for schools, residential sites, sites with more than one occupier (such as business parks), proposed developments, etc.

2.11.3 Cardiff Council set out the following themes in their 2008 Travel Plan Strategy to encourage development of travel plans (CC, 2008):

- Improving promotion and awareness of sustainable transport;
- Working with others;
- Completing Council office Travel Plans;
- Promoting uptake of school Travel Plans;
- Promoting the benefits of voluntary Travel Plans to local employers; and
- Development Control requiring a Travel Plan when considering certain new developments.

2.11.4 At the end of 2009 there were 28 employer Travel Plans at various stages of development, 32 schools with submitted Travel Plans and a further 19 school Travel Plans under development. Cardiff Council has also completed Travel Plans for the offices at Bessemer Close, Brindley Road, City Hall, County Hall and the Willcox House and Global Link Buildings. The Council have also offered grants of up to £10,000 to assist organisations in putting their Travel Plans into effect.

2.12 Sustrans ‘Making the Most of the Welsh Sustainable Travel Towns’

2.12.1 The Welsh Sustainable Travel Towns (STT) project was established to enable towns in Wales to become exemplars of sustainable transport. ‘Making the Most of the Welsh Sustainable Travel towns’ report, (Sustrans, 2010 Report 1) sets out that the key measures are a combination of both infrastructure changes and smarter choices measures.

2.12.2 To support the promotion of increased trips by foot and bicycle, Sustrans provided a map with the report that indicated journey-time isochrones in 10 minute increments for both these modes of travel. The map, ‘Cardiff Sustainable Travel City Walking and Cycling Network Map 2010’ also highlights the key trip generators in Cardiff and is attached in Appendix 5.
2.13 Sustrans ‘Core Cycling Routes’ Report

2.13.1 The Sustrans ‘Core Cycling Routes’ Report (September 2010 update) suggests seven core routes in Cardiff that presently comprise of both established sections and potential sections of cycle routes (mostly off-road but with some on-road links) with the aim of establishing continuous cycle routes. The routes studied were:

- The Taff Trail: Tongwynlais to the City Centre, linking Radyr, Llanaff North, Llandaff, the Ely to Heath Park Route, Maindee and Pontcenna;
- The Ely to City Route, linking Ely with Leckwith, Cardiff City Stadium and Riverside;
- The Cardiff Bay Circular Route, linking Cardiff City Centre to Cardiff Bay and the Barrage;
- The Tremorfa Route, linking Tremorfa Park and Splott to Cardiff Central Station south of the main railway line;
- The Roath Brook Route, linking Llanishen, Cyncoed, Roath Park, Cathays and the city centre via the Cardiff Gate Route;
- The Ely to Heath Park link route, linking Fairwater, Llandaff, the Taff Trail, Gabalfa, Birchgrove and the University Hospital of Wales; and
- The Cardiff Gate Route, via part of the Rhymney Trail, linking Pentwyn, Park and Ride Sites, Rhymney, Llanrumney, Newport Road and Splott.

2.13.2 Each of the above routes is shown in Appendix 6 on annotated plans with the numbered markers representing particular points of interest. These include, for example, good links across rivers or railway lines which currently form barriers to cycle passage. The plans also highlight where there are wide footways available which may be suitable for conversion to shared use, where there are current gaps in provision, or where existing paths are overgrown or of insufficient width to permit shared use.

2.14 Development Opportunities

2.14.1 New developments offer a significant opportunity to improve or increase the network of facilities for cyclists through the planning process. Section 106 Agreements can require developers to contribute to cycling infrastructure to improve cycle access. Appendix 4, (the Cardiff Housing Monitoring Map), shows the major housing development areas within the city where there may be potential for additional cycling facilities to be provided. The map is also useful in identifying where there is likely to be a future requirement for the city’s cycling network to penetrate, in order to increase the potential for people to choose cycling over the car for their everyday journeys.

2.14.2 Experience from the English Cycling Towns programme shows the importance of developer contributions benefits from a well-developed cycle network plan and good relationships between transport / cycle planning officers and Planning & Development Control teams. It is envisaged that this Strategic Cycle Network Plan will be useful in the negotiation of developer contributions for new cycling infrastructure, as part of future developments in the city.
2.15 Wider Transport Information and Policy

2.15.1 Air Quality Management Areas (AQMAs): Cardiff contains four areas declared as AQMAs under Part IV of the Environment Act 1995. The areas and the pollutants declared are shown in Table 2.10 below.

Table 2.10: Air Quality Management Areas in Cardiff

<table>
<thead>
<tr>
<th>AQMA Name</th>
<th>AQMA Description</th>
<th>Pollutant(s) declared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newport Road</td>
<td>A number of residential properties along the A4161 Newport Road</td>
<td>Nitrogen Dioxide NO₂</td>
</tr>
<tr>
<td>Cardiff West</td>
<td>A number of residential premises along the A48 (Cowbridge Road West, Western Avenue) and A4119 through Llandaff Village (Cardiff Road).</td>
<td>Nitrogen Dioxide NO₂</td>
</tr>
<tr>
<td>The Philog</td>
<td>A number of residential premises along the A470 (Manor Way), The Philog, Birchgrove Road and Caerphilly Road</td>
<td>Nitrogen Dioxide NO₂</td>
</tr>
<tr>
<td>St Mary Street</td>
<td>An area encompassing St Mary Street, and properties on either side of the road.</td>
<td>Nitrogen Dioxide NO₂</td>
</tr>
</tbody>
</table>

Public Transport Provision – Bus

2.15.2 Cardiff has a network of local services run by operators including Cardiff Bus, Stagecoach, and First Cymru. Bus travel accounted for approximately 12.5% of journeys to work in Cardiff (2008). Cardiff also has three bus-based Park and Ride services located at:

- Cardiff East – Pentwyn Interchange-Dumfries Place;
- Cardiff South – County Hall;
- Cardiff West – Cardiff City Stadium-Leckwith.

2.15.3 The Council are also currently reviewing a previously proposed route for a Bus Rapid Transit (BRT) system for Cardiff. The proposed route in the Feasibility Report as of August 2010 is shown in Appendix 7.

Public Transport Provision – Rail

2.15.4 Cardiff is served by an extensive network of suburban railway stations as well as Cardiff Central which provides services to major destinations including London, Swansea, Bristol and the Midlands. Patronage figures for rail travel in the city have been increasing since 1998 and accounted for approximately 3.8% of journeys to work in Cardiff in 2008.

2.16 Demographics

2.16.1 The population of Cardiff is around 325,000 people with an estimated 1.1 million people living in the wider metropolitan area. A demographic profile of Cardiff is provided in Appendix 8 with a summary of the key points from the 2001 census set out below.

- Cardiff has a higher proportion of the 0-14, 15-24 and 25-44 age groups than Wales as a whole;
55.5% of 16-74 year olds in Cardiff are economically active, which is similar to the Wales average of 55.2%. However, the proportion of those in full time education is higher (4%), compared to the rest of Wales (2.3%); and

- Car ownership in Cardiff is lower than across the rest of Wales, with 29.7% of households in Cardiff not owning a car or van, compared to 26% across Wales.

2.16.2 The average distance travelled to work and the modal splits from the 2001 census data are set out in Table 2.6.

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Cardiff</th>
<th>Wales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average distance of travel to work (km)</td>
<td>11.25km (7 miles)</td>
<td>14.82km (9.2 miles)</td>
</tr>
<tr>
<td>Travel to work by train (%)</td>
<td>2,664 (2.04%)</td>
<td>15,316 (1.29%)</td>
</tr>
<tr>
<td>Travel to work by bus (%)</td>
<td>14,266 (10.95%)</td>
<td>62,322 (5.25%)</td>
</tr>
<tr>
<td>Travel to work by car / van / taxi (%)</td>
<td>73,329 (56.29%)</td>
<td>732,338 (61.73%)</td>
</tr>
<tr>
<td>Passenger in car / van / taxi (%)</td>
<td>9,299 (7.14%)</td>
<td>106,256 (8.98%)</td>
</tr>
<tr>
<td>Travel to work by bicycle (%)</td>
<td>3,514 (2.7%)</td>
<td>16,389 (1.38%)</td>
</tr>
<tr>
<td>Travel to work by motorcycle (%)</td>
<td>776 (0.6%)</td>
<td>8,888 (0.75%)</td>
</tr>
<tr>
<td>Travel to work on foot (%)</td>
<td>17,196 (13.2%)</td>
<td>122,732 (10.35%)</td>
</tr>
<tr>
<td>People who work mainly from home (%)</td>
<td>8,691 (6.67%)</td>
<td>115,323 (9.72%)</td>
</tr>
</tbody>
</table>

2.16.3 The 2001 Census data above indicates that the proportion of people travelling to work by cycle is higher in Cardiff than Wales as a whole. Wales matches the North East of England in having the lowest proportion travelling by bicycle (1.4%), compared to a UK-wide average of 3%. The Cardiff Council’s 2009 Transport Annual Progress Report also shows an increase in cycling in Cardiff since the 2001 census. The Ask Cardiff survey showed that the proportion of people cycling to work in Cardiff has increased between 2001 and 2008 to around 5.8%. Appendix 8 contains further detail on Cardiff’s demographics and a Ward Boundary Map is included as Appendix 9.
3.0 PROPOSED CYCLE NETWORK – EVIDENCE BASE

3.1 Cycling and Traffic Flows

3.1.1 Traffic and cycling flow trends in Cardiff are monitored by Cardiff Council using data recorded at several survey locations across the city. Classified traffic surveys were undertaken in September/October 2009 at 40 locations, with each survey site defined within one of the following four areas:

- City Centre Cordon (Central Area): 10 locations;
- River Taff Screenline: 8 locations;
- Cardiff Bay Cordon: 8 locations;
- County Cordon: 14 locations.

3.1.2 A map of these survey locations is attached in Appendix 10.

3.1.3 This survey data provides an indication of the traffic and cycle flows at various locations across the city during the AM and PM peaks and also over the 12 hour daytime period (07:00-19:00). The site-specific survey data forms a key part of the evidence base for this cycle plan and is attached as Appendix 11. The overall flows for each area are summarised below:

<table>
<thead>
<tr>
<th>Cardiff Survey Area</th>
<th>AM Peak (08:00-09:00)</th>
<th>Traffic</th>
<th>Cycles</th>
<th>PM Peak (16:30-17:30)</th>
<th>Traffic</th>
<th>Cycles</th>
<th>12 Hour (07:00-19:00)</th>
<th>Traffic</th>
<th>Cycles</th>
</tr>
</thead>
<tbody>
<tr>
<td>City Centre Cordon</td>
<td>12,138</td>
<td>443</td>
<td></td>
<td>13,187</td>
<td>559</td>
<td></td>
<td>119,562</td>
<td>3,967</td>
<td></td>
</tr>
<tr>
<td>River Taff Screenline</td>
<td>18,407</td>
<td>216</td>
<td></td>
<td>18,198</td>
<td>283</td>
<td></td>
<td>167,620</td>
<td>2,032</td>
<td></td>
</tr>
<tr>
<td>Cardiff Bay Cordon</td>
<td>5,600</td>
<td>190</td>
<td></td>
<td>5,628</td>
<td>149</td>
<td></td>
<td>49,199</td>
<td>1,218</td>
<td></td>
</tr>
<tr>
<td>County Cordon</td>
<td>35,324</td>
<td>63</td>
<td></td>
<td>31,617</td>
<td>71</td>
<td></td>
<td>302,546</td>
<td>540</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>71,469</strong></td>
<td><strong>912</strong></td>
<td></td>
<td><strong>68,630</strong></td>
<td><strong>1,062</strong></td>
<td></td>
<td><strong>638,927</strong></td>
<td><strong>7,757</strong></td>
<td></td>
</tr>
</tbody>
</table>

3.1.4 Analysis of trends in traffic and cycle flows can be seen in the ‘Cardiff Council Transport Annual Progress Report 2009’ (2009 APR) using survey data from the ‘City Centre Cordon’, the ‘Cardiff Bay Cordon’ and the ‘River Taff Screenline’. The Progress Report shows that traffic flows within the ‘City Centre Cordon’ have decreased by 14% between 1994 and 2008 (compared using 5 year rolling averages), whereas traffic flows within the ‘Cardiff Bay Cordon’ and the ‘River Taff Screenline’ have increased by 39% and 21% respectively during the same period. These statistics indicate that, although there has been a general increase in traffic levels in Cardiff over the last few decades, the concentration of vehicular movements may have moved away slightly from the city centre area.
3.1.5 Cycling flows are also monitored using survey data from the same cordons and screenlines. Analysis of this data within the 2009 APR indicates that cycling flows within the ‘City Centre Cordon’ and the ‘River Taff Screenline’ have decreased by 9% and 3% respectively between 1992 and 2008 (compared using 5 year rolling averages). Cycling flows within the ‘Cardiff Bay Cordon’ have only been monitored since 2007; however there has been a noticeable 7% increase in cycling flows between 2007 and 2008 on this cordon.

3.1.6 Cycling trips in Cardiff were forecast to grow by approximately 2% between 1996 and 2008 and by approximately 3% between 2008 and 2013 by the National Trip End Model developed by the Department for Transport. The cycle use trends noted above indicate that the first growth target may not have been achieved and that there may have been a decrease in the number of cycling trips between 1996 and 2008, although these only represent annual classified counts at the cordon/screenline sites.

3.2 Cycling to Work

3.2.1 Cycle to work data was analysed for the 29 administrative wards within the Cardiff unitary authority area, (a plan showing the ward boundaries is included in Appendix 9). Details of the total and cycling commuting patterns in Cardiff between wards are shown in Appendix 12.

3.2.2 An analysis of the travel to work data from the 2001 census shows that on average 3.5% of people cycle to work in Cardiff. The uptake of cycling does however vary across the city with Table 3.2 detailing the wards with the highest numbers of residents and workers cycling to work.

<table>
<thead>
<tr>
<th>Ward of Origin</th>
<th>Commuting Cyclists</th>
<th>% of commuters</th>
<th>Ward of Destination</th>
<th>Commuting Cyclists</th>
<th>% of commuters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plasnewydd</td>
<td>291</td>
<td>5.3%</td>
<td>Cathays</td>
<td>831</td>
<td>3.8%</td>
</tr>
<tr>
<td>Riverside</td>
<td>275</td>
<td>7.3%</td>
<td>Heath</td>
<td>348</td>
<td>4.7%</td>
</tr>
<tr>
<td>Canton</td>
<td>234</td>
<td>4.9%</td>
<td>Butetown</td>
<td>247</td>
<td>4.1%</td>
</tr>
</tbody>
</table>

**Cardiff Total 3.5%**

3.2.3 It is noted that a number of the wards with the highest levels of cycling are found in the southern areas of Cardiff. Analysis of the individual movements between wards shows that cycling accounts for 10.9% and 6.5% of commuter movements between Riverside – Cathays and Canton – Cathays respectively.
3.2.4 The cycle to work data for the four neighbouring authorities – Newport, Caerphilly, Rhondda Cynon Taf and the Vale of Glamorgan, can be seen in Table 3.3.

<table>
<thead>
<tr>
<th>Local Authority</th>
<th>Commuting Cyclists</th>
<th>% of commutes</th>
<th>Total Commuters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caerphilly</td>
<td>15</td>
<td>0.8%</td>
<td>1,981</td>
</tr>
<tr>
<td>Newport</td>
<td>47</td>
<td>1.3%</td>
<td>3,627</td>
</tr>
<tr>
<td>Rhondda Cynon Taf</td>
<td>30</td>
<td>0.4%</td>
<td>8,521</td>
</tr>
<tr>
<td>Vale of Glamorgan</td>
<td>172</td>
<td>1.1%</td>
<td>15,486</td>
</tr>
<tr>
<td>Cardiff Total</td>
<td>3,342</td>
<td>3.5%</td>
<td>95,589</td>
</tr>
</tbody>
</table>

3.2.5 The above analysis indicates that there are a significant number of commuters travelling by bicycle to Cardiff from the neighbouring authority of the Vale of Glamorgan. Further analysis reveals that 41 of the cycling commuters from the Vale of Glamorgan travel to Grangetown with 33 travelling to Cathays.

3.2.6 Appendix 12 contains a more detailed analysis of cycling to work patterns, which was used in the development of the Network Plan.

3.3 Cycling to School

3.3.1 Travel associated with schools generates a substantial number of trips. Pupil travel data for the schools in Cardiff has been analysed to:

- Provide an overview of school travel in the city and specifically the current level of cycling to school;
- Determine the schools that currently generate the largest number of cycle trips; and
- Investigate the schools that could have the potential to generate a significant number of cycle trips in the future.

3.3.2 Analysis of the 2008/9 school census data in Cardiff shows that only 1.4% of primary school pupils and 2.0% of secondary school pupils currently cycle to school in Cardiff, compared to 46.4% of primary school pupils and 44.8% of secondary pupils travelling by car. Only 14 of the 104 schools (13.5%) in Cardiff for which school census data was collected in 2008/09 have 10 or more pupils travelling to school on bicycle.

3.3.3 There are 92 primary and 28 secondary schools located in Cardiff. ‘Mode of Travel’ data from the 2008/09 school census has been analysed for the 82 primary and 22 secondary schools that provided data towards the 2008/09 census (nursery and infant schools have not been analysed). The following summarises the existing school travel situation in Cardiff:
• There are 32,774 school pupils in Cardiff schools (19,377 primary pupils and 13,397 secondary pupils);
• Only 1.4% of primary school pupils (270) travel to school on bicycle, with 2.0% of secondary school pupils (263);
• The majority (92.4%) of primary school pupils travel in car (46.4%) or on foot (46.0%);
• The majority (73.5%) of secondary school pupils travel in car (44.8%) or on bus (28.7%).

3.3.4 The primary and secondary schools in Cardiff that currently have 10 or more pupils travelling to school by bicycle are shown in Table 3.4 below and plotted on the map in Appendix 13:

Table 3.4: Schools with the Highest Levels of Cycling

<table>
<thead>
<tr>
<th>Rank</th>
<th>School</th>
<th>Phase</th>
<th>Pupils</th>
<th>Cycle</th>
<th>Cycle %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Llanishen High School</td>
<td>Secondary</td>
<td>1,518</td>
<td>74</td>
<td>4.9%</td>
</tr>
<tr>
<td>2</td>
<td>Ysgol Gyfun Gymraeg Glantaf</td>
<td>Secondary</td>
<td>939</td>
<td>45</td>
<td>4.8%</td>
</tr>
<tr>
<td>3</td>
<td>Whitchurch High School</td>
<td>Secondary</td>
<td>1,397</td>
<td>39</td>
<td>2.8%</td>
</tr>
<tr>
<td>4</td>
<td>Eglwys Wen Primary School</td>
<td>Primary</td>
<td>258</td>
<td>24</td>
<td>9.3%</td>
</tr>
<tr>
<td>5</td>
<td>Ysgol Gyfun Gymraeg Plasmawr</td>
<td>Secondary</td>
<td>584</td>
<td>22</td>
<td>3.8%</td>
</tr>
<tr>
<td>6</td>
<td>Glyn Derw High School</td>
<td>Secondary</td>
<td>487</td>
<td>20</td>
<td>4.1%</td>
</tr>
<tr>
<td>7</td>
<td>Ysgol Gymraeg Treganna</td>
<td>Primary</td>
<td>179</td>
<td>19</td>
<td>10.6%</td>
</tr>
<tr>
<td>8</td>
<td>Rhiwbina Primary School</td>
<td>Primary</td>
<td>495</td>
<td>14</td>
<td>2.8%</td>
</tr>
<tr>
<td>9</td>
<td>Ysgol Mynydd Bychan</td>
<td>Primary</td>
<td>194</td>
<td>14</td>
<td>7.2%</td>
</tr>
<tr>
<td>10</td>
<td>Cardiff High School</td>
<td>Secondary</td>
<td>582</td>
<td>12</td>
<td>2.1%</td>
</tr>
<tr>
<td>11</td>
<td>Corpus Christi R.C High School</td>
<td>Secondary</td>
<td>970</td>
<td>12</td>
<td>1.2%</td>
</tr>
<tr>
<td>12</td>
<td>Michaelston Community College</td>
<td>Secondary</td>
<td>492</td>
<td>11</td>
<td>2.2%</td>
</tr>
<tr>
<td>13</td>
<td>The Bishop Of Llandaff C.W High School</td>
<td>Secondary</td>
<td>1,220</td>
<td>10</td>
<td>0.8%</td>
</tr>
<tr>
<td>14</td>
<td>Fairwater Primary School</td>
<td>Primary</td>
<td>242</td>
<td>10</td>
<td>4.1%</td>
</tr>
</tbody>
</table>

3.3.5 Only 14 of the 104 schools (13.5%) in Cardiff for which school census data was collected in 2008/09 have 10 or more pupils travelling to school on bicycle, which is a relatively low level. There are a noticeable number of pupils travelling to school on bicycle at Llanishen High School (74 cycling pupils), Ysgol Gyfun Gymraeg Glantaf (45 cycling pupils) and Whitchurch High School (39 cycling pupils). No primary schools have more than 25 pupils cycling to school.

3.3.6 9 secondary schools have 10 or more pupils travelling to school on bicycle, which means there are at least 13 secondary schools with fewer than 10 pupils travelling on bicycle. Given that the average number of pupils at secondary schools in Cardiff is over 1000 (1043 – January 2010 number on roll data), there would appear to be significant opportunities to increase the level of cycling amongst secondary school pupils.
3.3.7 It is worth noting that not all schools provided complete ‘Mode of Travel’ data for the 2008/09 census, therefore absolute numbers may be artificially low. For this reason the schools have also been ranked by the proportion of pupils cycling to school, with the top ranked primary and secondary schools shown below:

Table 3.5: Primary Schools with the Highest Proportion of Pupils Cycling

<table>
<thead>
<tr>
<th>Rank</th>
<th>Primary School</th>
<th>Pupils</th>
<th>Cycle %</th>
<th>Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Eglwys Wen Primary School</td>
<td>258</td>
<td>9.3%</td>
<td>24</td>
</tr>
<tr>
<td>2</td>
<td>Ysgol Gymraeg Treganna</td>
<td>179</td>
<td>10.6%</td>
<td>19</td>
</tr>
<tr>
<td>3</td>
<td>Rhiwbina Primary School</td>
<td>495</td>
<td>2.8%</td>
<td>14</td>
</tr>
<tr>
<td>4</td>
<td>Ysgol Mynydd Bychan</td>
<td>194</td>
<td>7.2%</td>
<td>14</td>
</tr>
<tr>
<td>5</td>
<td>Fairwater Primary School</td>
<td>242</td>
<td>4.1%</td>
<td>10</td>
</tr>
<tr>
<td>6</td>
<td>Trelai Primary School</td>
<td>229</td>
<td>3.5%</td>
<td>8</td>
</tr>
<tr>
<td>7</td>
<td>St Francis RC Primary School</td>
<td>161</td>
<td>3.1%</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>Stacey Primary School</td>
<td>166</td>
<td>3.0%</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>St Joseph’s R.C Primary School</td>
<td>176</td>
<td>2.8%</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>Rhiwbina Primary School</td>
<td>495</td>
<td>2.8%</td>
<td>14</td>
</tr>
</tbody>
</table>

Table 3.6: Secondary Schools with the Highest Proportion of Pupils Cycling

<table>
<thead>
<tr>
<th>Rank</th>
<th>Secondary School</th>
<th>Pupils</th>
<th>Cycle %</th>
<th>Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Llanishen High School</td>
<td>1518</td>
<td>4.9%</td>
<td>74</td>
</tr>
<tr>
<td>2</td>
<td>Ysgol Gyfun Gymraeg Glantaf</td>
<td>939</td>
<td>4.8%</td>
<td>45</td>
</tr>
<tr>
<td>3</td>
<td>Whitchurch High School</td>
<td>1397</td>
<td>2.8%</td>
<td>39</td>
</tr>
<tr>
<td>4</td>
<td>Ysgol Gyfun Gymraeg Plasmaw</td>
<td>584</td>
<td>3.8%</td>
<td>22</td>
</tr>
<tr>
<td>5</td>
<td>Glyn Derw High School</td>
<td>487</td>
<td>4.1%</td>
<td>20</td>
</tr>
</tbody>
</table>

3.3.8 The Cardiff schools with the highest proportion of pupils cycling to school are also generally the schools with the highest number of pupils cycling. As outlined above, there are several schools with a significant number of pupils and a low level of cycling, which again indicates that there may be potential to substantially increase the level of cycling at these schools. Appendix 12 contains a more detailed analysis of cycle to work and cycle to school data.
3.4 Major Trip Attractors

3.4.1 A variety of major trip attractors within Cardiff have been identified through site assessments, extensive assessments of relevant data and consultation with key stakeholders. These locations attract a significant number of trips, and as such they could have the potential to attract a sizeable number of cycling trips. They have been considered throughout the development of the Cycle Network Plan. Key trip attractors in the city are shown on the map in Appendix 5 and are outlined below, grouped under relevant headings:

Table 3.7: Major Trip Attractors

<table>
<thead>
<tr>
<th>Employment</th>
<th>Shopping</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest Farm Industrial Estate</td>
<td>St David’s Shopping Centre</td>
<td>Cardiff University</td>
</tr>
<tr>
<td>BBC Cymru Wales Broadcasting House</td>
<td>City Centre Shops (Queen Street)</td>
<td>University of Wales Institute Cardiff (UWIC)</td>
</tr>
<tr>
<td>Ty Glas Industrial Estate</td>
<td>Capitol Shopping Centre</td>
<td>University of Glamorgan</td>
</tr>
<tr>
<td>Cardiff Gate International Business Park</td>
<td>Queens Arcade</td>
<td>Royal Welsh College of Music &amp; Drama</td>
</tr>
<tr>
<td>Companies House, Maindy</td>
<td>Mermaid Quay</td>
<td>Coleg Glan Hafren</td>
</tr>
<tr>
<td>Ely Bridge Industrial Estate</td>
<td>Cardiff Gate Retail Park</td>
<td>St David’s College</td>
</tr>
<tr>
<td>County Hall</td>
<td>Ty Glas Retail Park</td>
<td>Whitchurch High School</td>
</tr>
<tr>
<td>Welsh Assembly Government</td>
<td>Capital Retail Park, Leckwith</td>
<td>Llanishen High School</td>
</tr>
<tr>
<td>City Centre Employment Area</td>
<td>Cardiff Bay Retail Park</td>
<td>The Bishop Of Llandaff C.W High School</td>
</tr>
<tr>
<td>Cardiff Bay/Waterside</td>
<td></td>
<td>Radyr Comprehensive School</td>
</tr>
<tr>
<td>Queen Alexandra Dock</td>
<td></td>
<td></td>
</tr>
<tr>
<td>St Mellons/Links Business Park</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospitals</td>
<td>Attraction/Venue</td>
<td>Transport</td>
</tr>
<tr>
<td>Velindre Hospital</td>
<td>Millennium Stadium</td>
<td>Cardiff East Park &amp; Ride</td>
</tr>
<tr>
<td>University Hospital of Wales</td>
<td>St Fagans National History Museum</td>
<td>Cardiff West Park &amp; Ride</td>
</tr>
<tr>
<td>Whitchurch Hospital</td>
<td>Cardiff Castle</td>
<td>Cardiff South Park &amp; Ride</td>
</tr>
<tr>
<td>Cardiff Royal Infirmary</td>
<td>National Museum Cardiff</td>
<td>Cardiff Central Bus/Rail Station</td>
</tr>
<tr>
<td>St David’s Hospital</td>
<td>Wales Millennium Centre</td>
<td>Cardiff Queen Street Station</td>
</tr>
<tr>
<td>Rookwood Hospital</td>
<td>Cardiff Stadium</td>
<td></td>
</tr>
<tr>
<td>Landough Hospital</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.5  Proposed Transport Capital Schemes 2010-2011

3.5.1 A list of the 2010/11 Cycling Capital Schemes as of September 2010 is included in Appendix 14. The two highest value schemes are listed below:

- North Cardiff Peripheral Cycle Route Phase 2. A traffic free cycle route between Heol Hir, Thornhill and Llanishen High School (£200,000);
- Clarence Bridge Crossing and James Street Cycle Lanes. A controlled crossing of Clarence Road on the east side of the Clarence Bridge (£124,000).

3.5.2 The Draft City Centre Cycling Strategy identifies a number of potential cycle schemes in the city. These schemes (some of which have now been completed) included:

- Park Place (2010). Cycle facility south of Greyfriars Road with crossing at Park Place/Greyfriars Road becoming a Toucan;
- Customhouse Street (2010). Cyclists permitted to use bus lanes and bus gate;
- Churchill Way (2010). One way northbound TRO with contra-flow cyclist provision;
- High Street/St Mary Street (2010). ‘Pedestrian friendly environment’ with cyclist provision;
- Westgate Street. Bus routes diverting from High Street/St Mary Street;
- Wood Street. Redevelopment of Stand A at Cardiff Bus Station.

3.5.3 A new bridge has also been recently completed at Pont Y Werin. This forms part of a Sustrans Connect2 project to greatly increase accessibility on foot and by cycle, between Penarth and Cardiff. It also enables a 10km circular cycle ride around the Bay area for leisure users.

3.6  Road Casualty Data Analysis

3.6.1 An analysis of the summary collision data covering the 10 year period inclusive of 2000 – 2009 indicates that the total number of collisions occurring in Cardiff each year has been steadily decreasing since 2006. When broken down by severity, serious and slight collisions have also shown a downward trend matching the overall downward trend from 2006. The numbers of fatal collisions each year are remaining at a relatively constant level.

3.6.2 The total number of cyclists involved in collisions each year in Cardiff and the average number of cyclists involved in collisions in each successive three year period from 2000 are shown in Table 3.8 below. The figures shown in brackets are the proportion of total vehicles involved in collisions that year that cyclists represent.
Table 3.8: 10 year trend of cyclists involved in collisions in Cardiff, 2000-2009

<table>
<thead>
<tr>
<th>Year</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>Ave</th>
</tr>
</thead>
<tbody>
<tr>
<td>№</td>
<td>101</td>
<td>118</td>
<td>103</td>
<td>75</td>
<td>93</td>
<td>83</td>
<td>106</td>
<td>88</td>
<td>94</td>
<td>78</td>
<td>94</td>
</tr>
<tr>
<td>(%)</td>
<td>(5%)</td>
<td>(6%)</td>
<td>(5%)</td>
<td>(3%)</td>
<td>(4%)</td>
<td>(4%)</td>
<td>(5%)</td>
<td>(5%)</td>
<td>(6%)</td>
<td>(6%)</td>
<td></td>
</tr>
<tr>
<td>3 yr Ave</td>
<td>107</td>
<td>99</td>
<td>90</td>
<td>84</td>
<td>94</td>
<td>92</td>
<td>96</td>
<td>87</td>
<td></td>
<td></td>
<td>94</td>
</tr>
</tbody>
</table>

3.6.3 For comparison, road casualty statistics for Wales as a whole were analysed alongside the figures for Cardiff. DfT figures show that in 2009 there were 10,354 road casualties in Wales, of which 403 were cyclists (3.9%). The number of road casualties in Wales has decreased by 30% since 2002. There were 1,221 KSI (Killed and Seriously Injured) casualties in Wales during 2009, of which 84 were cyclists, (7%).

3.6.4 Road collisions in Cardiff that involved injury to a cyclist during the last 3 years (01/01/2007 to 31/12/2009) were studied in more detail to inform this evidence base. The locations of these collisions are shown on the plan in Appendix 15.

3.6.5 A number of routes and clusters were identified as having a relatively high number of collisions involving cyclists, with the main routes/clusters summarised in Table 3.9 below: This analysis has informed the development of the Strategic Cycle Network Plan.

Table 3.9: Key Cycle Collision Routes/Clusters

<table>
<thead>
<tr>
<th>Route/Cluster</th>
<th>Cycle Collisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>City Road/Crwsys Road/Whitchurch Road</td>
<td>15</td>
</tr>
<tr>
<td>Cowbridge Road East/Castle Street</td>
<td>14</td>
</tr>
<tr>
<td>Newport Road</td>
<td>12</td>
</tr>
<tr>
<td>Penarth Road/Clare Road/Lower Cathedral Road</td>
<td>9</td>
</tr>
<tr>
<td>Cathays Park area</td>
<td>8</td>
</tr>
<tr>
<td>Cathedral Road/Pen-Hill Road</td>
<td>7</td>
</tr>
<tr>
<td>Bute Street</td>
<td>6</td>
</tr>
<tr>
<td>Caerphilly Road</td>
<td>6</td>
</tr>
<tr>
<td>Pendywal Road/Park Road/Penlline Road/Merthyr Road/The Philog</td>
<td>5</td>
</tr>
<tr>
<td>Lake Road/Ninian Road/Fairoak Rd roundabout</td>
<td>5</td>
</tr>
<tr>
<td>James Street/Millennium Centre</td>
<td>5</td>
</tr>
<tr>
<td>Fitzalan Place area</td>
<td>4</td>
</tr>
<tr>
<td>Pen-y-lan Road</td>
<td>4</td>
</tr>
<tr>
<td>Grand Avenue</td>
<td>4</td>
</tr>
<tr>
<td>Western Avenue/Mill Lane junction</td>
<td>3</td>
</tr>
</tbody>
</table>
3.7 Market Analysis

3.7.1 Cycling England developed the principle of “People, Place and Purpose” for planning cycling facilities, based on their experience of developing and implementing the 18 Cycling Towns and Cities. This principle was adopted by the English Cycling Towns and Cities as a useful guiding principle for delivering the right kinds of infrastructure to meet the needs of their target markets. A similar approach was used in the development of Cardiff’s cycle network. This involves taking a ‘people first’ approach and identifying the ‘hubs’ where these groups can be reached.

3.7.2 Market research was carried out to help ensure that the new Cardiff Cycle Network Plan achieves its aim of getting more people cycling. It starts by identifying the groups, or target markets within Cardiff that are most likely to start cycling or cycle more often, and then identifying what their primary barrier to cycling is. Market research has also helped identify particular problem areas within the network that are preventing people from cycling or which are putting current cyclists off from cycling more often. The market research undertaken is detailed within a separate report reproduced in full in Appendix 16.

3.7.3 The market research results have been used extensively in the development of this Strategic Cycle Network Plan. The work as detailed in Appendix 16 outlines the target markets identified, what these groups want and need, specific areas of the Cardiff network that are causing existing and potential cyclists concern, suggested new network options and an indication of what can be done for each group to overcome their primary barrier to cycling. The market segmentation and analysis of the ACORN data (described below) also formed an integral part of the scoring system used to prioritise the different schemes (see Appendix 20).

3.7.4 **ACORN Data Analysis and Mapping:** ACORN is a geo-demographic segmentation of the UK’s population which segments small neighbourhoods, postcodes, or consumer households into 5 categories, 17 groups and 56 types using census data. ACORN provides an understanding of the people who interact with different organisations that can help organisations target, acquire, manage and develop profitable relationships and improve business results. The classification also gives a better understanding of places and the people who use them.

3.7.5 Of the 56 ACORN ‘types’, 14 were identified as being the most likely to cycle, or begin to cycle. Using Cardiff’s ACORN postcode database these ‘types’ were then mapped to households in Cardiff. This map is included in Appendix 17.
Summary of Key Target Markets: The following descriptions refer to the Cardiff ACORN ‘types’ shown in Appendix 17. These are listed in order of priority based on their size (number of people that exist within these group types) and their propensity to start cycling or cycle more often, (as identified within each ACORN group profile and as per national research indicators).

They key markets identified are:

- **Young, professional urban workers**: Target Market Number: 51,170 (15.5% of the total Cardiff population);
- **Older families with teenagers**: Target Market Number: 29,795 (9.02% of the total Cardiff population);
- **University students**: Target Market Number: 19,454 (5.89% of the total Cardiff population);
- **The over 50’s**: Target Market Number: 18,032 (5.46% of the total Cardiff population);
- **Children aged 8 to 11 and their parents**: Target Market Number: 15,098 (4.57% of Cardiff’s population are children aged 8 to 11 and their parents); and
- **Internal and External Stakeholders and Other Interested Parties**: Target Market Number: Estimate approximately 1,000 (0.3% of Cardiff’s population are internal and external stakeholders and other interested parties). This group consists of those who are interested in assisting the council in getting more people cycling including community cycling forums, clubs, associations, charities (e.g. Sustrans), schools, colleges, universities, businesses and other organisations that have travel plans aimed at increasing modal shift onto more sustainable travel forms.

It is acknowledged that there may be some overlap between the ‘older families with teenagers’ and the ‘over 50s’. The Total Target Market Number is approximately 130,000, representing 40% of Cardiff’s population.

Online Questionnaire: The information gathering aspects of the market research involved both an online questionnaire and a series of onsite Vox Pop interviews. A full analysis of the survey findings from the responses provided by these groups is included in Appendix 16 and the summarised responses are in Appendix 18. The key facts are listed below:

- The questionnaire was emailed to approximately 400 people using contact details supplied by Cardiff Council and Sustrans, as well as through Facebook, and through searching for companies, organisations such as rugby clubs, dance clubs and university blog sites. In total 840 responses were received;
- Respondents ranged from 17 to 70 years old, with 65% of respondents being 26 to 50 years old;
- 50% of the respondents (420 people) were recorded as cycling everyday as their main form of transport;
- 40% of the respondents (338 people) were recorded as cycling regularly but not every day;
10% of respondents (82 people) were recorded as cycling only occasionally or not at all;

Altogether over 700 respondents stated 'lack of off-road routes' and 'speed of the roads leading to a lack of confidence' as their main concerns when it came to getting on a bike;

Over 300 respondents stated that the lack of a bike was stopping them from cycling;

Over the whole survey, lack of off-road routes, unsuitable/not connected on-road routes and lack of a bike appear to be the main barriers to more cycling;

Other factors affecting the level of cycling in Cardiff are; the good rail network, the ease/comfort of driving into the city and acceptable walking times for many journeys;

50% of people perceived their place of work in Cardiff city centre to be the most difficult to cycle to and 25% thought the train station in Cardiff city centre would be the most difficult, making 75% of people who answered the survey state the city centre as the least permeable place for cycling;

In the group ‘cycles everyday’, the majority were male and in the group, ‘does not cycle or has not cycled in over a year’ the majority were female. The group, ‘cycle sometimes or occasionally’ were evenly split between males and females.

3.7.10 **Vox Pop Interviews:** ‘Vox Pop’ style interview techniques were also used to capture the thoughts, ideas, perceived and actual barriers to cycling in Cardiff. Vox Pop interviews involve two people conducting short video interviews, with members of the general public. Usually the interviewees are filmed in public places, and the aim is to capture people giving spontaneous opinions in a chance encounter.

3.7.11 **Positive Feedback from Car Users:** The Vox Pop interviews indicated that most car users were generally positive about cyclists and cycling and think it is a good thing, even if they do not do it themselves. Of the people asked, many seemed willing to put up with some inconvenience if it improved and encouraged cycling. However, another common thread is the feeling that drivers are not sufficiently aware or used to cyclists and some kind of training or awareness campaign is needed for them to deal with cyclists on the road.

3.7.12 **Actions that were proposed by interviewees that could assist them overcome their key barriers to cycling are listed in full by target market and ACORN ‘types’ in Appendix 16 but included:**

- Link up disjointed cycle routes;
- Provide more off-road paths alongside major arterial routes;
- Improve current routes such as the Taff Trail, Ely Trail and Bay Trail;
- Provide rides in the parks or a leisure riders club;
- Consider fast and slow lanes for different types of cyclists;
- Widen the lanes and paths;
- Sign the off-road routes from the main roads;
- Leaflet local cycle routes relevant to particular areas and the city centre; and
- Consider naming or identifying the routes, similar to bus route branding.

### 3.8 Stakeholder Workshops

3.8.1 Two workshops were held in July 2010. The first workshop was with key stakeholders to inform the development of the Cycle Network Plan. Representatives from NHS Wales, Cardiff Pedal Power, South Wales Police, Sustrans, Cardiff University BUG (Bicycle User Group) and CTC (Cyclists’ Touring Club) participated in this. The second workshop was for relevant Council officers including designers, engineers, planners, auditors etc. Full responses are included in Appendix 19, and the results of this feedback have been considered in the development of the Strategic Network Plan, where appropriate.

3.8.2 Figure 3.1 and 3.2 summarise the main suggestions made at the Stakeholder Workshop for specific locations that could be improved as part of the Cycle Network Plan:

**Figure 3.1: Cardiff cycling stakeholder comments**

<table>
<thead>
<tr>
<th>Network for All</th>
<th>Reduced Traffic Speeds</th>
<th>Permeable City</th>
<th>Continuous Routes</th>
<th>Reallocation of Road Space</th>
<th>Well Designed Junctions</th>
<th>High Quality Cycle Provision</th>
<th>Public Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Links to/from river corridors</td>
<td>20mph zone around the city centre</td>
<td>Cycle access through cul-de-sacs, dead ends and road stoppages</td>
<td>Cycle routes to not end abruptly</td>
<td>Reallocation carriageway from private cars to cyclists</td>
<td>Improved waiting times at signal junctions</td>
<td>Bus lanes wide enough for cyclists to overtake at bus stops</td>
<td>Bus/Taxi driver training</td>
</tr>
<tr>
<td>Arterial routes to the city centre with segregated lanes</td>
<td>All roads currently 30mph to be reduced to 20mph</td>
<td>VRAs to allow cycling consistency through the city</td>
<td>Provision to continue through junctions</td>
<td>Cycle priority lights at signal junctions</td>
<td>Cycle priority lights at signal junctions</td>
<td>Bus lanes with cycle symbol as reminder that cyclists are welcome</td>
<td>Cycle lanes to be continuous</td>
</tr>
<tr>
<td>Traffic calming infrastructure</td>
<td>Alternative routes to be clearly marked</td>
<td>Cycle lanes on pavements to have priority at junctions</td>
<td>Signage</td>
<td>Controlled crossings on busy roads</td>
<td>No staggered crossings</td>
<td>Shared lanes over segregated lanes</td>
<td></td>
</tr>
</tbody>
</table>

![Figure 3.1: Cardiff cycling stakeholder comments](image-url)
Figure 3.2:

**General**

- Arterial routes
- Southern arc of the city
- Pinch points
- ASL with approach lanes
- Reduce speeds in the suburbs to 20mph

**Enhanced access into the City Centre**

- Newport Road/Queen Street/Station Terrace junction
- Custom House/Bute Terrace/Churchill Way
- Grayfriars Road/Park Place
- Westgate Street/Wood Street
- Callaghan Square
- Queen Street time limited access

**Reallocation of Road Space**

- Newport Road
- Penarth Road
- Cowbridge Road
- Ninian Park Road
- Castle Street Bridge
4.0 DEVELOPMENT OF THE STRATEGIC NETWORK PLAN

4.1 Methodology

4.1.1 A ‘skeleton’ network was developed with an audit undertaken of the existing infrastructure in areas identified as being key to providing a cohesive network to serve existing and potential cycle journeys. Gaps in provision, suitable schemes and additional links were then indentified.

4.1.2 A total of 277 potential cycle network improvement schemes were initially identified from extensive site work and graded from 1 to 3 as follows.

1 = Good potential to form new addition to the draft strategic network.

2 = Some potential though not considered a priority for the 5 year programme.

3 = Low priority.

4.2 The Prioritisation Process

4.2.1 ‘Priority 1’ schemes were transferred into a prioritisation framework and scored for their potential benefits to cyclists based on the 5 criteria of: Convenience, Accessibility, Safety, Comfort and Attractiveness, as well as the potential to induce modal shift, impact on other road users, and the potential ‘risk to delivery’ which may be associated with the particular scheme. The full prioritisation framework, (and detailed scoring criteria), are included as Appendix 20. The initial prioritised list of schemes together with the draft Network Plan, were the subject of considerable consultation and engagement with stakeholders. The full consultation process is outlined in Section 5.

4.3 The Proposed Priority Improvement Programme

4.3.1 The above process resulted in a network of ‘Core’ and ‘Secondary’ routes being developed. The Core Routes serve key existing and potential cycle trips, as identified in the Evidence Base Section of this report, and the majority of the proposed improvement schemes are located on these Core Routes. Secondary Routes serve a ‘feeder’ function for the Core Network, to be expanded and improved as available resources permit. Figure 4.1 overleaf shows the proposed Strategic Cycle Network, superimposed onto the existing Cardiff Cycle Map.

4.3.2 The proposed Improvement Programme contains 104 schemes which have been ranked to show those that are likely to be the most beneficial to cyclists (24 points) down to those considered to be less beneficial (1 point). The schemes vary in cost between approximately £800,000 for a traffic calming / mixed priority route treatment down to approximately £1,000 to provide flush kerbs. By reviewing the prioritisation framework (Appendix 20) alongside the proposed Strategic Cycle Network Plan, (Figure 4.1 overleaf), the potential benefits for cyclists in different parts of Cardiff can be quickly identified.
Figure 4.1 – Strategic Cycle Network Plan
4.3.3 Figure 4.2 below lists the top ten highest scoring schemes, and gives an indication of the types of schemes which are proposed:

**Figure 4.2 – Top Ten Scoring schemes**

<table>
<thead>
<tr>
<th>Scheme Ref</th>
<th>Location</th>
<th>Description</th>
<th>Score</th>
<th>Cost Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>MR28</td>
<td>Museum Avenue and Gorsedd Gardens</td>
<td>Delineate cycle route using e.g. pavers</td>
<td>24</td>
<td>£4,000</td>
</tr>
<tr>
<td>MR20A</td>
<td>Colum Road between North Road and Corbett Road</td>
<td>‘Bicycle Street’ treatment (or traffic calming)</td>
<td>23</td>
<td>£450,000</td>
</tr>
<tr>
<td>TK37</td>
<td>Junction of Cowbridge Road and Western Avenue</td>
<td>Convert roundabout to signalised junction and provide off road cycle facilities with toucan crossings</td>
<td>21</td>
<td>£250,000</td>
</tr>
<tr>
<td>CW33</td>
<td>Newport Road between Rhymney River Bridge Road and Colchester Avenue</td>
<td>Provide off-road cycle track on south eastern side using footways and service road for two-way cycle use</td>
<td>19</td>
<td>£200,000</td>
</tr>
<tr>
<td>TK79</td>
<td>Dunleavy Drive (southern section)</td>
<td>Widen southern footway and convert to cycle track (Note: part covered by 2010/11 scheme) + sign to make continuous route</td>
<td>18</td>
<td>£20,000</td>
</tr>
<tr>
<td>TK38</td>
<td>Cowbridge Road West between Western Avenue and Mill Road</td>
<td>Construct new foot/cycle bridge to south of bridge over Ely River and realign Mill Road junction to provide toucan crossings; convert southern footway on remainder of Western Avenue to Cowbridge Road to cycletrack</td>
<td>17</td>
<td>£750,000</td>
</tr>
<tr>
<td>MR30</td>
<td>Junction of Fairoak Road, Wedal Road, Lake Road West, Ninian Road and Shirley Road</td>
<td>Alter roundabout to continental geometry in order to make safer and more comfortable for cyclists</td>
<td>17</td>
<td>£25,000</td>
</tr>
<tr>
<td>MR45</td>
<td>Excelsior Road between Western Avenue and link to Taff Trail</td>
<td>Review off road cycle tracks to ensure connectivity and provide new Toucan Crossing across Excelsior Road to link Taff Trail to existing off road route southward (along eastern side of Western Avenue)</td>
<td>17</td>
<td>£120,000</td>
</tr>
<tr>
<td>MR20</td>
<td>Junction of North Road and Colum Road</td>
<td>Alter junction to provide clear crossing of North Road on to Taff Trail</td>
<td>16</td>
<td>£45,000</td>
</tr>
<tr>
<td>MR23A</td>
<td>Path through Cathays Cemetery between Allanbank Road and Fairoak Road</td>
<td>Provide continuous link and permit cycling</td>
<td>16</td>
<td>£50,000</td>
</tr>
</tbody>
</table>

4.3.4 It is intended that the Programme is used to assist in the planning of cycling facility improvements over a period of 5 years and potentially longer. A total 104 schemes with a value of £6.5m were identified from the prioritisation process. It should be stressed that it is not intended for the full package of £6.5m worth of schemes to all be implemented over a 5 year period, but the Programme outlined enables informed decisions to be made on which schemes should be selected and progressed first. It should also be noted that the £6.5m does not include the ‘Mass Action’ work outlined in Section 4.4 below.
4.3.5 When particular schemes or packages of schemes are selected for progression from the initial Programme, these will be subject to individual consultation and engagement with relevant stakeholders at an early stage. An Equality Impact Assessment will be carried out on all schemes to be progressed, and engagement with Cardiff Council Access Forum Group and the Council’s Access Officer will form an integral part of scheme development.

4.4 Other Identified ‘Mass Action’ Schemes

4.4.1 In addition to the above Prioritised Programme, a number of ‘Mass Action’ interventions have also been identified. Many of these have potential to form ‘quick-win’ interventions which will help raise the profile of cycling in Cardiff, and demonstrate progress with implementation of the Plan relatively quickly. These are outlined below in Table 4.1:

<table>
<thead>
<tr>
<th>MA1</th>
<th>Direction signing of key cycle routes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA2</td>
<td>Audit of city centre cycle route legibility, and programme to sign / demarcate all routes in a format sensitive to city centre environment</td>
</tr>
<tr>
<td>MA3</td>
<td>Cycle exemption at cul-de-sacs, (including review of Traffic Regulation Orders)</td>
</tr>
<tr>
<td>MA4</td>
<td>Programme to introduce cycle contra-flows on all one-way streets</td>
</tr>
<tr>
<td>MA5</td>
<td>Programme to install flush kerbs at various points around the existing cycle network, with appropriate tactile surfacing</td>
</tr>
<tr>
<td>MA6</td>
<td>Review all ‘End of Route’ &amp; ‘Cyclist dismount’ signing, with a view to removal</td>
</tr>
<tr>
<td>MA7</td>
<td>Review all access barriers on cycle routes and remove where practical</td>
</tr>
<tr>
<td>MA8</td>
<td>Implement Advanced Stop Lines at all traffic signal junctions</td>
</tr>
<tr>
<td>MA9</td>
<td>Review all bus lanes with a view to widening / improving for cyclists as necessary</td>
</tr>
<tr>
<td>MA10</td>
<td>Cycle parking, (ongoing programme – not considered in detail as part of this Plan)</td>
</tr>
<tr>
<td>MA11</td>
<td>Packages of minor upgrades to Taff Trail, Ely Trail and Rhymney Trail, (surface improvements, signing, removal of barriers etc.)</td>
</tr>
<tr>
<td>MA12</td>
<td>Implement 20mph zone throughout city centre area</td>
</tr>
<tr>
<td>MA13</td>
<td>Review all existing cycle lanes with regards to width, continuity and surface condition, and implement a programme of measures to improve</td>
</tr>
<tr>
<td>MA14</td>
<td>Review all signalled cycle crossing timings in order to minimise delay to cyclists</td>
</tr>
</tbody>
</table>

4.4.2 It is also important to consider the ongoing maintenance of the city’s cycle network, including path sweeping, cutting back vegetation, upgrading lighting and resurfacing as necessary. The value of an enhanced network of facilities for cyclists is greatly reduced if the network is not maintained, and this is an issue which has often suffered in many local authorities as revenue budgets become more stretched.
5.0 CONSULTATION

5.1 Introduction

5.1.1 Public consultation on a draft version of the Cycle Network Plan showing the proposed routes and schemes outlined in the initial Plan. This Section outlines the feedback obtained from this consultation process and how it is has informed the final Cycle Network Plan. The schedule for the consultation process is shown below:

Figure 5.1: Consultation Programme
5.2.2 The consultation on the Cycle Network Plan was designed to be visually engaging, interactive and involve everyone in the process as much as possible. The aim of the consultation was defined as:

“To inform, engage and excite people from Cardiff about the Strategic Cycle Network Plan and provide the means by which they can respond, participate and ultimately add value.”

5.1.3 The consultation was delivered through ‘Vox Pop’ interviews and interactive consultation events, as discussed in the following sections.

5.2 Vox Pop Surveys

5.2.1 A series of ‘Vox Pop’ interviews of Cardiff citizens within the various target markets, identified through the market research, were carried out during October 2010.

5.2.2 50 people of various ages (16 to 74) were interviewed, with 31 female and 19 male interviewees. Key findings from these surveys include:

- **Heavy Traffic:** One of the main barriers to cycling seems to be the perception that traffic volumes are too high and the roads are therefore too dangerous for cycling.

- **Pinch Points and Barriers:** There were a number of key areas and routes that were identified as major barriers, such as Newport Road and Gabalfa roundabout.

- **Students:** The location of the colleges and universities and their proximity to student residential areas makes walking the most obvious option, especially given that the parking facilities are perceived to be limited and expensive.

- **Convenience:** Many people find it very convenient to drive, primarily as Cardiff is seen as a small city and therefore driving is a relatively quick option.

- **Peer Examples:** Having peers who cycle does seem to encourage non-cyclists, both amongst children and adults.

- **Parental Involvement:** Many parents say they are very keen for their children to cycle, even if they do not cycle themselves. Improved cycling routes to parks and cycling amenities could potentially play an important role in getting both children and parents cycling more.

- **Information:** There seems to be the perception that there is a lack of accessible information available about cycling in the city and people do not always know where to look for it.

- **Other Road Users:** Most car users seem generally positive about cyclists and cycling and think it is a good thing, even if they do not cycle themselves. Of the drivers interviewed, many seemed willing to put up with some inconvenience in order to improve cycling in the city, although it is recognised that this view may not be representative of the majority of drivers.

- **Awareness:** A common issue was the perception that drivers are not sufficiently aware of cyclists or experienced at dealing with cyclists on the roads, with the suggestion that training/awareness campaigns are required.
5.3 Interactive Consultation Events

5.3.1 Interactive public consultation events were held on 3 days in October 2010 (Saturday 16th, Thursday 21st and Saturday 23rd) in a vacant shop unit on Queen Street in Cardiff city centre. Over the three days approximately 200 people, aged between 14 and 72, provided feedback on the Cycle Network Plan through an interactive survey. A number of other people also entered the events to obtain information on the Plan. A series of workshops and talks were also hosted in the shop as part of the events, including talks by local cycling groups and free bicycle maintenance workshops.

5.3.2 The concept behind the interactive survey was that participants be asked questions in a tactile way, with previous responses visible. The survey was hosted online with questions designed to gain a broad insight into the views on the proposed routes and schemes, as well as the wider perceptions on whether Cardiff Council should be improving cycling infrastructure. The survey questions are attached in Appendix 21.

Figure 5.2: Images from the Public Consultation Events
5.3.3 Awareness of the public consultation events was generated in the following ways:

- Over 2,000 flyers were distributed in and around Cardiff;
- Social networking sites such as twitter and facebook was used to gain further exposure and create a way of discussing the project;
- Email invitations were sent to interested groups, stakeholders and companies, such as UWIC (University of Wales Institute Cardiff), Cardiff University, RWCMD (Royal Welsh College of Music and Drama) and Chapter Arts Centre;
- A bike trailer with advertising boards to promote the consultation was cycled around various locations in the city, engaging members of the public and informing them about the consultation; and
- Press coverage of the consultation included four features in The Guardian Cardiff, the Echo covered transport issues within Cardiff with comments on the consultation and ‘YourCardiff’ also produced a piece on the shop consultation.

5.4 Consultation Results

5.4.1 The following Section presents the preliminary results from the interactive survey.

**Question:** Which routes are most relevant to you on a day-to-day basis from a commuter/leisure point of view?

5.4.2 The ‘wordles’ below give a proportional overview of the important origins and destinations suggested by respondents:

*Figure 5.3: Suggested Key Journey Origins*
Figure 5.4: Suggested Key Journey Destinations

Figure 5.5: Suggested Key Journey Destinations (excluding City Centre & Cardiff Bay)

**Question:** Are there any routes that you would add or feel have been left out?

5.4.3 The ‘wordle’ below give a proportional overview of the key routes suggested by respondents:

Figure 5.6: Suggested Key Routes

5.4.4 **Newport Road:** There were mixed views about the proposals for Newport Road, with some responses suggesting the proposals are good for new or nervous cyclists, but inefficient for experienced cyclists. There were also suggestions that experienced cyclists will just continue using Newport Road all the way into the city centre.
5.4.5 **Queen Street:** Queen Street was mentioned more than 60 times in responses with the vast majority of respondents being in favour of allowing access for cyclists, at least for a restricted time during the day as previously trialled. A common suggestion was for a well-marked cycle path running down Queen Street and for very obvious marking of the route. Boulevard de Nantes was also mentioned a number of times, with the main concern relating to current restrictions on Queen Street and the alternative options if restrictions are not lifted.

5.4.6 Other specific issues that were raised include the perceived inefficiency of some routes, the impact of park closures at night (particularly Bute Park), and a lack of routes in the eastern parts of Cardiff. The primary concerns regarding these issues relate to the potential increase in travel time and the reduction in safety.

**Question:** Will this cycling strategy unlock new cycling potential for you and your family?

5.4.7 There were a number of positive and negative comments to this question, including:

- **Positive:**
  - “My partner is very nervous of cycling, with a much-improved network she will be more confident, which will allow us to cycle places together rather than use the car.”
  - “I would cycle more often and be more inclined to cycle with my family for leisure and not just for commuting.”
  - “I will feel happier about taking my grandson on the back of my bike and so not use the car”
  - “We would be more likely to cycle than drive”
  - “My wife is not happy cycling on the existing network. I hope these improvements might convince her”
  - “May encourage my girlfriend to use her bicycle in short distance journeys.”
  - “I would be more likely to take my children out cycling, with appropriate cycle lanes rather than routes. Ideally I would like to see separate off road cycle lanes as opposed to ones painted onto the road. These are neither wide enough or designed with parking in mind.”

- **Negative:**
  - “We already cycle and I have no faith in the Council”
  - “I already cycle... the wife and dog don’t!”
  - “I cycle everywhere anyway and my wife would not ride a bike no matter what is done!”
  - “It’s just not ambitious enough- just a bit more paint on the road. Very disappointing.”

5.4.8 At the end of the survey participants were given the opportunity to raise issues that they felt had not been covered. The responses revealed several clear themes:
5.4.9 **Enforcement:** Multiple responses highlighted the problem of cars parking on cycle lanes, linking back to the issue of overall awareness. Many raised the point that there is a perceived lack of enforcement of current cycling provisions, with concerns that new infrastructure would be open to the same problems. Overall the new cycle provisions were welcomed, but were regarded by some as “pointless” unless stringently enforced - “The lack of enforcement of illegal parking in cycle lanes and on double yellow lines makes cycling dangerous. This needs action by the Council otherwise the improvements will be worthless”.

5.4.10 **Infrastructure:** Views on the prescription of cycle routes were mixed and varied for dedicated and shared use routes. Opinions related to the ease of usage and safety on dedicated routes, with others suggesting that they see shared routes as a step towards the full integration of cycling as an essential part of the Cardiff’s growth and development. There was a general consensus that there should be a continuous route for cyclists in and around the city was required.

5.4.11 Cycling through the city centre, in particular on Queen Street, was an issue that was raised by several respondents. City centre routes are seen as an essential link between the east and west of the city and many suggested that a 20mph zone be implemented through the city centre to ease the flow of traffic and create a safer and more attractive environment for existing and potential cyclists. Many pointed out that there are currently no east/west ‘cross-city’ routes that avoid the city centre.

5.4.12 **Maintenance:** The majority of people believe that cycle lanes particularly suffer from poor maintenance/cleaning, which can be especially problematic during the winter months.

5.4.13 **Cycle Parking and Security:** A number of responses centred around the level of security of cycle parking stands in the city centre, with participants indicating that there is a perceived high level of theft and vandalism that discourages even the most committed cyclists from parking in the city centre.

5.4.14 **Information:** Many participants commented on the lack of information that was currently available in relation to cycling routes within the city from both a commuter and leisure point of view. Many stated that they did not know where to source this information, whilst others believed existing route maps were not user-friendly.

5.4.15 **Incentives:** In addition to infrastructure improvements, some suggested the need for incentives to encourage people to cycle more. Specific suggestions included Government/Local Authority incentives such as cheaper or free bikes to people who could demonstrate a commitment to start cycling and workplace schemes.

5.4.16 A number of responses on specific aspects of the proposed routes were collected as part of the consultation process and these have been taken into account within the final version of the Cycle Network Plan.

5.4.17 As well as the work highlighted above, further consultation was undertaken to gather as wide a range of views as possible on the draft Cycle Network Plan. These included:

- A presentation and question / answer session with the Cardiff Cycle Campaign, 4th October 2010;
• A presentation and debate at the Sustainable Travel Town Board meeting, 5th October 2010;
• A presentation to the ‘Keeping Cardiff Moving’ Conference, 22nd November 2010;
• Meetings with Cardiff Council Access Focus Group on 27th October and 23rd November 2010; and
• A workshop with Cardiff Council Officer Group, 23rd November 2010.

5.4.18 These events and meetings resulted in a wide variety of responses and input into the initial draft. Numerous other responses from individuals, Council Officers, elected Members, Cardiff Cycle Campaign and Sustrans Wales were also received and informed the final Plan. These various responses are outlined in Appendix 22, together with an indication of how the draft plan was amended as a result of the feedback.

5.5 Consultation Conclusions

5.5.1 The aims of the Cycling Network Plan appeared to be generally endorsed by the majority of people that participated in the ‘Vox Pop’ interviews and consultation events. The main public concerns identified were:

• Knowledge of routes;
• Confidence;
• Skills and training;
• Enforcement;
• Uninterrupted and permeable cycle routes;
• Maintenance of facilities and routes; and
• Secure storage for bikes.

5.5.2 Insights were also gained into the social factors around cycling, such as the influence of peers and family encouragement. Intervention measures could be tailored to capitalise on these factors, one suggested example was extending the existing peer cycle groups based on a ‘Ramblers’ style approach, such as that already in place with the ‘Ely Wheelies’ cycle group.

5.5.3 Based on the consultation responses, there appears to be a need to focus on ‘smarter choice’ interventions alongside the development of infrastructure, with suggestions that a programme of training, education and behaviour change could contribute to the success of the strategy. The Community Engagement Plan outlined in Section 6 offers an outline of how these smarter choice measures will be targeted and further developed.
6.0 COMMUNITY ENGAGEMENT PLAN

6.1 Introduction

6.1.1 This Community Engagement Plan focuses on the means of communicating Cardiff’s cycling and other smarter choices options to the different target markets identified in Section 3.7 from the ACORN analysis (where neighbourhoods are classified into one of 56 categories). The Plan notes the top 10 recommendations for encouraging more people to cycle or increase the number of trips cyclists make on their bicycles from responses to the online questionnaire and Vox Pop interviews. The Plan outlines both the locations of communications with target markets and a variety of different communication media. The basis of these recommendations is explained in more detail in the Market Research report in Appendix 16. A breakdown of the different proposed actions is included as Appendix 23.

6.1.2 The market research undertaken as part of the development of the Cycle Network Plan provides an indication of the typical nature, perceptions, attitudes and views of each target market in relation to cycling in Cardiff, as discussed in this section.

6.2 Target Market 1: Young Urban Professionals

6.2.1 The largest potential for creating new cyclists lies in the young urban professionals target market. There are many young urban professionals within Cardiff who want to cycle, but currently do not. According to the research, a large proportion of these potential cyclists live in Ely, Roath, Canton, on the edge of the city centre and in the Cardiff Bay area. They typically have friends who have recently started travelling to work and social activities by cycle and they too are now considering doing the same. They often have considerable time pressures and want to make the most of their time outside of work, and as such they see cycling as a way of saving time. They tend to be conscious of environmental issues and attempt to recycle as best they can. They also typically like to be considered stylish, modern and forward thinking in their approach.

6.2.2 People within this group who are on the verge of taking up cycling tend to currently either walk or drive. They like the idea of cycling and perceive that it will be more convenient, allow for quicker travelling times and keep them fit, (without having to pay for the use of a gym), with peer pressure/encouragement to be a responsible member of the community also providing an additional stimulus.

6.2.3 This group see the speed of traffic and congestion as potential barriers, and most are of the opinion that they will use off-road paths and parks initially to build up their confidence. They believe the facilities in Cardiff could be better; they want more off-road routes alongside the main arterial roads and see the lack of secure cycle parking in the city centre and their other places of work as a key concern. Some may have safety concerns, particularly women, but most are reasonably confident riders and just need a bike and secure lock-up facilities at work to start cycling regularly. This is an important group to consider when it comes to street lighting as they are more likely to consider cycling at night.
6.2.4 Some professionals within this group currently use rail to commute in from further away and see no point in cycling to work because the rail network currently serves their needs. However this group may consider cycling for leisure purposes, such as to pubs, shopping areas and friend’s houses.

6.2.5 A positive modal shift already seems to be occurring within this target group, due to the deterrents for driving into the city centre (e.g. increasing congestion and parking charges) and the fact that many young urban professionals are seeing friends starting to cycle.

6.2.6 ACORN demographic classifications of young urban professionals include:

- 17: Young Educated Workers, Flats;
- 19: Suburban Privately Renting Professionals;
- 25: White Collar Singles/Sharers, Terraces.

6.2.7 Young urban professionals typically frequent the following locations:

- Wine bars and social places in the Cardiff Bay area;
- Corporate gyms and spas, such as David Lloyd and Fitness First;
- Local pubs and eateries;
- Coffee shops;
- Cardiff Arts Centre and cinemas;
- City centre shopping areas; and
- Online on social networking websites such as Facebook and Twitter.

6.2.8 According to the research, not having a bike or not being able to afford a bike is the primary barrier to cycling for this group. They often had a bike when they were younger, and want to get one, but the initial cash outlay is a concern and they have a slight inertia in purchasing one. The group are very aware of the HMRC ‘Cycle to Work’ scheme, however many of the retailers or smaller employers within Cardiff do not currently operate the scheme.

6.2.9 The research indicates that the following measures could help young urban professionals to overcome this perceived barrier to cycling:

- Continue with the ‘Cycle to Work’ scheme and promote in larger workplaces;
- Help smaller employers join and promote the ‘Cycle to Work’ scheme;
- Improve access to cheaper second-hand bikes through bike recycling/refurbishment centres;
- Provide guidance on how to choose the right bike, either online or door-drop;
- Provide a helmet, lock and lights once they have purchased a bike; and
- Have a cycle hire scheme that is as widespread, easy to use and professional looking as the scheme currently operating in London.
6.2.10 Once they have overcome this perceived barrier, there are a number of other potential actions that could encourage young urban professionals to cycle, such as:

- Travel distance is a potential barrier as young urban professionals are unlikely to cycle a journey that they feel it would be more logical to drive or use public transport;
- Continuous on-road cycle routes to the city centre and other main employment areas;
- More off-road cycling options, with improved signing to off-road routes from the main roads;
- Cycle route information, like bus route information, delivered to their door or online;
- Online networking, not necessarily in a formal capacity by the Council, but just having an active presence in relevant local forums and blogs; and
- Some women indicated that ‘City Cycle Training’ would encourage them to cycle; although others said they would rather ask friends to help in this regard.

6.2.11 Young urban professionals raised the following specific areas of Cardiff as key locations for improvement:

- Main arterial routes, with more off-road cycle routes, wider cycle lanes and reduction in traffic volumes;
- City centre routes, particularly cycle routes to/from, through and across Queen Street and also more secure cycle parking; and
- The Taff Trail - widening, improving the surface and lighting at night.

6.3 Target Market 2: University Students

6.3.1 Students who are more receptive to cycling will use the mode of travel for journeys where it is the logical choice, once they have overcome the initial barrier of obtaining a bike. 20 minutes of walking is considered a fair amount within this group, with bikes used for larger distances, if they are running late or simply want to travel faster.

6.3.2 They may be ‘freshers’ at university that are looking at their travel options, or they could be in later years and are looking to save money, time and keep fit. Students that live a little further out from the university campus are more likely to consider cycling; those that live closer tend to walk to university. Students that live closer to the university campus sometimes cycle to visit friends that live further away in areas such as Roath, Canton, Cathays and Ely.
6.3.3 There appear to be a significant number of university students that are considering getting bikes, but they seem to require an additional push to take the first steps towards cycling. In order to purchase a bicycle, students often explore options such as borrowing from parents, waiting for student loan payments, investigating the availability of ‘bike to university’ schemes and looking to obtain cheaper bicycles through private ads etc. Students are also a key group to consider when it comes to lighting as they will also be considering cycling late at night.

6.3.4 ACORN demographic classifications of university students include:

- 20: Student flats and cosmopolitan sharers;
- 23: Student terraces.

6.3.5 University students typically frequent the following locations:

- University campus;
- Halls, bars and social rooms;
- Student bars and clubs in the city centre, particularly at specific student nights; and
- Student events and communal campus areas, such as the university shop.

6.3.6 The potential benefits that university students perceive they can gain from cycling are that they will get about much quicker and more conveniently.

6.3.7 As with young urban professionals, the primary perceived barrier to cycling for university students is not having a bike. They often had a bike when they were younger or they did not bring their bike to university/college. Those that are open to cycling and purchasing a bicycle are concerned about the initial outlay of money and they have a slight inertia in using their often limited financial resources, they want the initial cost to be lower. The university/colleges do not appear to offer student cycle purchase schemes. Many of the university students are aware of the ‘Oy Bikes’ scheme, but a large proportion do not use them.

6.3.8 The research indicates that the following measures could help university students to overcome this perceived barrier to cycling:

- Universities and colleges offer a student cycle scheme to assist with bike purchases;
- Help smaller employers join the ‘Cycle to Work’ scheme, for those students that also work;
- Improve access to cheaper second-hand bikes through bike recycling/refurbishment centres, retailers based on campus and online;
- Provide a helmet, lock and lights once they have purchased a bike; and
- Have a cycle hire scheme that is as big, easy to use and professional looking as the scheme currently operating in London.

6.3.9 Once they have overcome this perceived barrier, there are a number of other potential actions that could encourage university students to cycle, such as:
• Students that live further away from the city centre/workplaces/university are more likely to cycle, with those within a 20 minute walk of these places more likely to walk;
• Peer/friends encouragement, such as ‘recommend a friend’ type initiatives;
• More off-road options like the Taff Trail, with improved signing to off-road routes from the main roads;
• Cycle route information, like bus route information, delivered to their door or online; and
• Online networking, not necessarily in a formal capacity by the Council, but just having an active presence in relevant local forums and blogs.

6.3.10 University students raised the following specific areas of Cardiff as key locations for improvement:
• Links into the city centre from surrounding areas such as Roath, Cathays, Canton and Ely;
• City centre routes, particularly cycle routes to/from, through and across Queen Street and also more secure cycle parking; and
• Taff Trail improvements such as widening and lighting at night.

6.4 Target Market 3: Parents of Teenagers

6.4.1 This group consists of parents of teenagers that typically live in the suburbs, villages and outer edges of the city. These parents are usually 40 to 55 years old and are looking to cycle as it will help them get fit and is also often an activity that they used to do and can get back into relatively easily.

6.4.2 Parents of teenagers often do not own a bike; however purchasing one is not usually seen as a major obstacle. This group, particularly mothers, have road safety concerns regarding cycling, particularly the speed of traffic and the lack of off-road facilities. They also tend to have the same concerns in relation to their children cycling, although they also see the potential benefits in providing children with independence and a way of keeping fit.

6.4.3 Parents of teenagers often perceive that their children view mainstream cycling as unfashionable. Teenagers typically prefer to ride BMX and street trials bikes on journeys to friend’s houses and the city centre. A sizable proportion of teenagers live close to their school, with many walking or getting dropped-off in cars by parents as part of their route to work.

6.4.4 Parents of teenagers may initiate cycling within the family, often for the fitness benefits. Mothers sometimes cycle for leisure rides or to go to the shops, whereas fathers tend to cycle to work or with their children. Parents often ride together for leisure, utilising routes within parks, the Taff Trail and Cardiff Bay to build up their confidence.
6.4.5 ACORN demographic classifications of parents of teenagers include:
- 9: Older Families, Prosperous Suburbs
- 29: Mature families in Suburban Semis

6.4.6 Parents of teenagers typically frequent the following locations:
- Garden centres on the outskirts of Cardiff;
- Pub quiz events in residential areas;
- Corporate gyms and spas, such as David Lloyd and Fitness First;
- Local pubs and eateries;
- Coffee shops, cinemas and arts centres; and
- City centre shopping areas.

6.4.7 The potential benefits that parents of teenagers perceive they can gain from cycling are that it will increase their fitness, show more social responsibility and enable more of a community spirit.

6.4.8 The main perceived barriers to cycling for parents of teenagers are that cycling is not as easy and convenient as they would like it to be, there is not enough continuity between off and on-road routes and they struggle to find the time to change their lifestyles. Many parents within this group also do not own a bike yet or have only just purchased one for leisure reasons.

6.4.9 The research indicates that the following measures could help parents of teenagers to overcome this perceived barrier to cycling:
- Join up the on-road cycle facilities to provide more continuous routes;
- Provide more off-road paths alongside major arterial routes;
- Improve existing routes such as the Taff Trail, Ely Trail and Bay Trail;
- Consider providing fast and slow facilities for different types of cyclists;
- Widen the cycle lanes and paths;
- Sign the off-road routes from the main roads; and
- Provide information on cycle routes in their local area and within the city centre. Consider naming/numbering cycle routes to make them clearer and more easily identified, like bus routes.

6.4.10 Once they have overcome this perceived barrier, there are a number of other potential actions that could encourage parents of teenagers to cycle, such as:
- Continue to offer the ‘Cycle to Work’ scheme;
- Help smaller employers/self-employed join the ‘Cycle to Work’ scheme;
- Rides, walks and scoots from schools to encourage community spirit;
- It must be more logical to cycle on journeys rather than use other travel modes;
- More off-road cycling options such as the Taff Trail, with improved signing;
• Cycle route information, provided like bus route information to their door or online; and
• More cycle relevant activities at schools, such as BMX or mountain biking as a sports option within Physical Education classes or organising cycle based events/adventures.

6.4.11 Parents of teenagers raised the following specific areas of Cardiff as key locations for improvement:
• Links into the city centre from surrounding areas such as Roath, Cathays, Canton and Ely;
• Reduce the speed of traffic around schools and improve off-road cycle routes to secondary schools; and
• The Taff Trail needs widening, improving and lighting at night.

6.5 Target Market 4: The over 50’s

6.5.1 Typically, the over 50’s that are most likely to cycle or consider cycling are those that want to use their bikes to get around, socialise and increase their fitness levels. They often have concerns about the impact of burning fossil fuels on the environment. Over 50’s often have older children and as such can also fit into the ‘parents of teenagers’ category. They often want to get back into cycling as it is something that they used to do. Statistics indicate that over 50’s will shortly make up 50% of the UK population, so their opinions are important.

6.5.2 This group are mainly looking to ride their bikes to the local shops, for leisure, to get fit and to travel in a more environmentally friendly way. They generally perceive the speed and congestion associated with vehicular traffic as the main barriers to cycling. This group would like to see many more off-road options, such as the Taff Trail, with only the most confident over 50’s willing to progress onto riding their bike to work or on the busier roads. Many over 50’s drive on longer journeys and others, mainly those that reside in apartments, tend to use public transport or walk.

6.5.3 ACORN demographic classifications of the over 50’s include:
• 43: Older People, Rented Terraces (many over 75 years, but ACRON still indicates that there are still potential cyclists within this category);
• 6: Older Affluent Professionals;
• 8: Mature Couples, Smaller Detached Houses;
• 33: Middle Income, Older Couples;
• 36: Older People, Flats.

6.5.4 They also form part of other ACORN groups, including:
• 9: Older Families, Prosperous Suburbs;
• 29: Mature families in Suburban Semis.
6.5.5 The over 50’s typically frequent the following locations:

- High streets and shopping areas;
- Supermarkets such as Tesco’s, Sainsbury’s and Waitrose;
- Garden centres, arts centres, cafés and coffee shops; and
- Door to door within their local residential areas.

6.5.6 The potential benefits that the over 50’s perceive they can gain from cycling are improved fitness, social activity and environmental credibility.

6.5.7 The primary perceived barrier to cycling for the over 50’s is that there are not enough off-road cycle routes, although a lack of confidence in cycling is also a concern for this group.

6.5.8 The research indicates that the following measures could help the over 50’s to overcome these perceived barriers to cycling:

- Join up the on-road cycle facilities to provide continuous routes;
- Provide more off-road paths alongside major arterial routes;
- Improve existing routes such as the Taff Trail, Ely Trail and Bay Trail;
- Provide cycle rides in the parks or a leisure riders club;
- Consider providing fast and slow facilities for different types of cyclists;
- Widen the cycle lanes and paths;
- Sign the off-road routes from the main roads; and
- Provide information on cycle routes in their local area and within the city centre. Consider naming/numbering cycle routes to make them clearer and more easily identified.

6.5.9 Once they have overcome this perceived barrier, there are a number of other potential actions that could encourage the over 50’s to cycle, such as:

- Continue to offer the ‘Cycle to Work’ scheme;
- Rides, walks and scoots from schools or village cycling events to encourage community spirit;
- Cycle route information, provided like bus route information to their door or online.

6.5.10 The over 50’s raised the following specific areas of Cardiff as key locations for improvement:

- Links into the city centre from surrounding areas such as Roath, Cathays, Canton and Ely;
- City centre routes, particularly cycle routes to/from, through and across Queen Street and also more secure cycle parking;
- The Taff Trail needs widening, improving and lighting at night; and
Cycle paths within parks need more promotion.

6.6 Target Market 5: Children Aged 8 to 11 and their Parents

6.6.1 Children aged 8 to 11 are a key target market when it comes to cycling, not just in the short term, but also in order to create a culture of cycling, as positive early associations with cycling can lead to prolonged use as they grow older. A number of cycling initiatives provided by the Council and Sustrans are aimed at children within this age group and many parents have provided positive feedback on activities such as ‘Bike It’ and cycle training. Parents typically want even more activities to engage their children. Considering how to promote parents cycling with their children can help to instil the required positive associations with cycling.

6.6.2 Parents within this group often regard their children as too young to cycle alone on-street. This group tends to limit cycling to a family activity in local parks, along the Taff Trail and in more rural areas.

6.6.3 The key to creating more cyclists within this group is to encourage the parents to consider cycling, whether it be for commuting or travelling to the local shops. These families often live closer to the city centre than the more affluent demographic groups. The parents within this group are mainly over 35, both work and are looking to save money. A consideration for these parents is often deciding which one of them will drive to work and which will cycle. Children aged 8 to 11 attend either primary or secondary school and often have siblings of a similar age. Parents typically see cycling as a good way to introduce physical activity into the time they spend together with their children as a family.

6.6.4 ACORN demographic classifications of children aged 8 to 11 and their parents include:

- 40: Young Working Families;
- 42: Home Owning Families, Terraces.

6.6.5 Children aged 8 to 11 and their parents typically frequent the following locations:

- In the school playground or at school events;
- At work, typically involving professional, manufacturing, retail and clerical type roles;
- High street shops, particularly mothers looking after children;
- In local parks; and
- Door to door within their local residential areas.

6.6.6 The potential benefits that parents of children aged 8 to 11 perceive they can gain from cycling are improved fitness and happiness for the whole family.
6.6.7 The primary perceived barrier to cycling for parents of children aged 8 to 11 is that it is not as easy and convenient as walking or driving. Parents within this group often have to juggle caring for children, the school run, work and shopping on a daily basis. They have concerns that there are not enough off-road routes for children to cycle alone to school.

6.6.8 The research indicates that the following measures could help children aged 8 to 11 and their parents to overcome these perceived barriers to cycling:

- Provide more off-road paths to link residential areas and schools;
- Improve existing cycle routes such as the Taff Trail, Ely Trail and Bay Trail for family riding;
- Consider providing different types of facilities for different types of cyclists;
- Widen the cycle lanes and paths;
- Sign the off-road routes from the main roads; and
- Provide information on cycle routes in their local area and within the city centre. Consider naming/numbering cycle routes to make them clearer and more easily identified.

6.6.9 Once they have overcome these perceived barriers, there are a number of other potential actions that could encourage children aged 8 to 11 and their parents to cycle, such as:

- Continue to offer the ‘Cycle to Work’ scheme;
- Help smaller employers/self-employed join the ‘Cycle to Work’ scheme;
- Rides, walks and scoots from schools to encourage community spirit;
- More off-road cycling options such as the Taff Trail, with improved signing to off-road routes from the main roads;
- Cycle route information, provided like bus route information to their door or online; and
- More cycle relevant activities at schools, such as BMX or mountain biking as a sports option within Physical Education classes or organising cycle based events/adventures.

6.6.10 Parents of children aged 8 to 11 raised the following specific areas of Cardiff as key locations for improvement:

- Links into the city centre from surrounding areas such as Roath, Cathays, Canton and Ely;
- The speed of traffic around schools and off-road cycle routes to secondary schools; and
- The Taff Trail needs widening, improving and lighting at night.
6.7 Internal/External Stakeholders and Other Interested Parties

6.7.1 This group consists of those who are interested in assisting the Council in getting more people cycling, including:

- Council employees that work to increase the levels of cycling in the city;
- External persons and organisations with a vested interest in cycling;
- Regular cyclists;
- Community cycling forums, clubs and associations;
- Cycling charities such as Sustrans and Peddle Power;
- Schools, colleges, universities, businesses and other organisations that have Travel Plans in place that aim to increase the levels of sustainable travel.

6.7.2 Key stakeholders raised the following specific areas of Cardiff as locations for improvement (figures in brackets indicate the number of online survey respondents mentioning the particular route or area):

- City centre (94)
- Newport Road (52)
- Cowbridge Road East (29)
- Roath (20)
- Queen Street (18)
- City Road (14)
- Canton (14)
- Albany Road (13)
- Penarth Road (13)
- Boulevard-de-Nantes (11)
- North Road (10)
- Gabalfa (10)
- Ely (8)
- Cathays Terrace (8)
- Llandaff (8)
- Bute Park (8)
- Castle Street (7)
- Western Avenue (7)
- Crwys Road (6)
- Cathedral Road (6)
- High Street (5)
6.7.3 Other internal and external stakeholders may not necessarily be key target markets in terms of encouraging new cyclists, though they should be considered as an important advisory group representing mainly existing cyclists and, as such, consulted regarding various aspects of the Community Engagement Plan.

6.8 Conclusions & Key Recommendations

6.8.1 The full market research is presented in Appendix 16, along with the Community Engagement Plan summarised in table format. The document outlines the target markets identified, the facilities these groups want and need in order to consider cycling more, specific areas of the network that are causing them concern, suggested new network options and an indication of what can be done for each group to overcome their primary barrier to cycling. It also aims to demonstrate the key parts of the network causing problems for the people who are already cycling every day.

6.8.2 Further mass action considerations for community engagement include:

- Market research to work out the exact details of a promotion or event to ensure its success;
- Filter postcode data so that proposed events are accessible for the target audience and not too far away;
- Getting the balance correct between investment and cycling uptake;
- Community involvement to get more people using the service;
- Try not just to attract current cyclists; and
- Consider the content and tone of the message for the target audience.

6.8.3 It is considered that this work forms a good starting point from which to develop a focused Community Engagement Plan to be implemented in conjunction with the Strategic Cycle Network Plan. Only by combining both ‘hard’ and ‘soft’ measures in this way will potential for more people to start cycling in Cardiff be maximised.

6.8.4 Consultation on the Draft Cycle Network Plan elicited responses from a wider variety of individuals and organisations, some of which were of a detailed nature. All of the responses received were analysed, and have been summarised in a table which is included as Appendix 22. The table includes a column which lists the action taken in response to the consultation comments received, in order to demonstrate how the Council has taken on board the results of the consultation and amended the Plan appropriately, and to hopefully ensure more people begin to cycle more often in Cardiff.
7.0 REFERENCES


South East Wales Transport Alliance (Sewta) 2006. A Walking and Cycling Strategy for South East Wales.


WAG, 2010b. Climate Strategy for Wales.