

Push Bikes' submission to Birmingham City Council's Transport, Connectivity  
& Sustainability Scrutiny Committee.

**Preamble:**

As one world-famous cycle campaigner has said, on his experiences of cities abroad:

“[Copenhagen] is fantastic. And best of all: there are no bloody cars cluttering the place up. Almost everyone goes almost everywhere on a bicycle.... City fathers have to choose. Cars or bicycles. And in Copenhagen they've gone for the bike.... The upshot is a city that works. It's pleasing to look at. It's astonishingly quiet. It's safe. And no one wastes half their life looking for a parking space. I'd live there in a heartbeat.”

(Jeremy Clarkson, in The Sunday Times, 8th April, 2012.)

Building a city that cycles requires a choice to be made – a choice to encourage the use of bicycles – a choice that the whole city buys into. Building a city that favours bicycles does not need to be expensive, especially when factoring in the cost benefits of a high level of cycling, but it requires joined-up planning and development that relies on a political choice being made.

## **Abstract:**

The biggest barrier to a high-level of cycling is a lack of long-term, joined up, planning for bicycles. Political leadership is necessary to build awareness of, and responsibility for, cycling into the everyday thinking of all BCC officers. Without this buy-in, building a high level of cycling will be almost impossible.

The benefits from increasing cycling are potentially very large, with 109 new regular cyclists delivering £1 million in congestion, health and pollution benefits alone. A coherent 30-year plan for developing a close-meshed cycle network, linking in improvements for bicycles with ongoing road maintenance work, offers a very cost effective way of delivering results. With the long-term economic benefits greatly outweighing the long-term costs, delivering a **bikeable city** makes very good sense.

A key element of developing a close-meshed cycle network is to introduce a 20mph speed limit city wide (with some exceptions for main roads), along with allowing contra-flow cycling on most one-way streets and restricting through traffic in residential areas. This will deliver a road environment that is welcoming for bicycles, and make bicycles as, or more, convenient as driving a car.

High quality, dedicated, cycle provision on main roads will be needed. Flagship schemes should be targetted – particularly Bristol Road at the moment – which are more expensive, but will advertise cycling for many years. The major benefit of this will be to help non-cyclists to be able to imagine cycling as a practical and safe mode of transport – particularly non-cyclists stuck in congestion.

Junctions must also be targetted for redesigns, to provide obvious, safe routes for novice cyclists to negotiate the junctions. Designing junctions primarily to smooth traffic flow creates a deeply hostile environment for pedestrians and cyclists, and only increases traffic congestion. The safety of pedestrians and cyclists should be the primary priority for all junctions (except motorways) to reverse the shift to motor traffic that traffic smoothing has encouraged.

Bicycle hire schemes, on the Velib model, offer a very cheap way for people to try-out cycling, as well as increasing the convenience of cycling in the city-centre. A lack of secure cycle parking at home and at popular destinations, as well as a higher up-front cost than public transport, presents a barrier to trying cycling, which bicycle hire schemes can provide a solution to.

Providing cycle training to all school children is vital, but also important is promoting a culture of road safety. BCC can play an important role through setting and monitoring standards for professional drivers. Building up a support network in communities that can carry out basic bicycle maintenance is also essential, which can be done by working in partnership with leisure centres and Bicycle User Groups.

Finally, the direct benefits to retailers of a shift to bicycle use is often ignored. Setting up Bicycle-Friendly Business Districts, to encourage the use of bicycles in the daily running of businesses, as well as attracting bicycle user through special offers and services, can encourage the business community to support the shift to cycling.

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## **1.1 Why the bicycle?:**

The benefits of encouraging cycling are numerous:

**1.1.1** Increased cycling creates a more liveable city, with reduced air and noise pollution, more pleasant streets and more reliable journey times. Cyclists are not the only people who appreciate these improvements, as Jeremy Clarkson's comments about Copenhagen demonstrate. Creating a more liveable city makes the city more attractive for inward investment because of the quality of life on offer.

For example, how different Digbeth would feel if people from south of the city centre cycled through it in large numbers, rather than speeding through in cars and on trains and buses. The existing residential developments might not feel like islands in an industrial wasteland, discouraging investors.

**1.1.2** Cyclists are more mobile pedestrians – increasing footfall for the shops they cycle past, and helping rejuvenate local shopping areas. Impulse buying is easier for cyclists than car drivers or public transport occupants, as bicycles can be parked more easily than cars, and do not have predetermined stops like public transport.

For example, the development centred on the Custard Factory in Digbeth has empty retail units, and is too far from the main shopping area in the Bull Ring and markets to attract pedestrians. But if 30% of the people passing it every day in cars and buses were on bicycles, the retail units would be far more viable.

Another example are the restaurants on the Hagley Road / Monument Road crossroads. These are cheaper than those on Broad Street, but the people passing them in cars and buses can not stop there easily. Again, if 30% of those people were on bicycles, the viability of those restaurants would be much improved.

**1.1.3** Cycling is a great equaliser – designing a city for bicycles reduces 'transport poverty', reducing the cost of living significantly. Sustrans' recent report on Transport Poverty in England (<http://www.sustrans.org.uk/lockedout>) emphasises the ways in which the costs of transport are a serious burden even for households who can manage to run a car. People unable to afford a car are cut off from proper access to health care, education and jobs. Increasing cycling is perhaps the best way to tackle transport poverty.

**1.1.4** Cycling is also a great equaliser for the differently abled. The paralympics showed clearly how accessible cycling is to almost everybody (<http://www.guardian.co.uk/environment/bike-blog/2012/oct/02/disabled-cycling-london-2012-paralympics>). Bicycles, adapted to the needs of the rider, put everyone on the same level, and encourage integration in a way that few other physical activities do. In addition, bicycles offer access to cheaper transport for almost everyone.

**1.1.5** Cycling regularly improves physical and mental health, helping to cut health care costs (<http://www.ecf.com/wp-content/uploads/2011/10/Cycling-and-health-Whats-the-evidence.pdf>). Cycling is an ideal low-impact form of exercise which allows anybody to gently build-up their fitness levels. Building cardio-vascular fitness through exercise is more effective at reducing risk of death than losing weight through dieting, and the health benefits of cycling greatly out-weigh the risks of injury from cycling. Utility cycling – to work, shopping, visiting friends – is one of the easiest ways to build exercise into our daily routines.

## **1.2. Who cycles, and who can be easily encouraged to cycle?**

The stereotype of a 'cyclist' is a young to middle-aged, white, male, who is physically very fit, wears lycra and rides a racing bike. While these cyclists may be more visible, as they are often confident enough to ride on main roads with motor traffic and in a dominant road position, they do not form a majority of cyclists in Birmingham.

Birmingham is a diverse city, and cyclists in Birmingham reflect that diversity. Push Bikes' experience with holding Dr Bike sessions this summer has been that there is an interest in cycling across all demographics in Birmingham – there is no typical cyclist in Birmingham. Given the right conditions, most people in Birmingham can be encouraged to cycle. Rather than target particular groups, it would be better to target particular kinds of journeys:

**The aim should be to make cycling the natural choice for most journeys of 5 miles or less.**

This represents a 30 to 40 minute bicycle ride, travelling at a steady speed. At this distance, cycling is often faster than waiting for a bus, and can also be as fast as a car in heavy traffic. Almost 70% of all car journeys are less than 5 miles – many of these could be made by bicycle.

However there are several barriers that need to be addressed to make cycling easier.

## **2. What are the barriers to cycling?**

### **2.1 Secure and convenient bicycle parking – both at home and at desirable destinations.**

Many residential areas in Birmingham are dominated by terraced housing, with difficult, inconvenient access to rear gardens. These types of houses present a problem for cycle storage – while keen cyclists may be willing to have bicycles in their halls, or hanging from ceilings, most people do not want such a close relationship with their bicycles. The streets in these areas are turned over to on-street car parking, with no provision of secure cycle parking. These problems are exacerbated where houses have been converted into apartments, where there is no space to store bicycles inside.

### **2.2 Cost of investing in cycling**

Bus tickets for one year cost a minimum of £576.00 for one year, while a second-hand bicycle plus accessories can cost as little as £200, and be used for many years. However a monthly direct debit of £48.00 for bus tickets may be easier to manage than spending £200 at one time on a bicycle, especially if the person is unsure of whether they will like cycling or not.

Additional costs are incurred when bicycles are stolen – unlike bus tickets, they are not replaced for free. Many people who have their bicycle stolen do not buy a new one – they just stop cycling.

## **2.3 Poor infrastructure for cycling**

This includes roads that are designed solely for motor vehicles and roads where poorly-designed or maintained cycle infrastructure can be found.

While there are cyclists who can ride bicycles comfortably in the flow of motor traffic, this requires the ability to reach relatively high speeds (20 mph+) for short distances in order to negotiate multi-lane highways and junctions designed to keep motor traffic flowing. This level of fitness and skills is rarer among children, the elderly and people with physical impairments. Even for those with high levels of fitness and skill, these manoeuvres can be very difficult, and either thrilling or harrowing, depending on the individuals' addiction to adrenaline highs.

Many more cyclists are able to cycle on the edges of existing infrastructure, through selecting good routes, and using road positioning to stay safe. However this often requires the cyclists to get off and push their bicycles, or cycle illegally on footpaths. Pavement cycling does not indicate anti-social behaviour, but rather adaption to poor infrastructure design.

Poor infrastructure leads to a loss of momentum for cyclists – where cycling infrastructure has been designed to fit around motor vehicles, loss of momentum is a major issue. Toucan, and other light-controlled crossings, often have lengthy waits, frustrating their users and encouraging crossing at the wrong times. Off-road cycle routes that break at every side road also slow down cyclists significantly, and tire them out. The effort of starting again is done by the cyclist's muscles, not a petrol engine – the extra effort of building up momentum saps energy.

There is no close-meshed network of attractive (meaning continuous, convenient, fast and safe feeling) cycle routes to enable cyclists to travel easily across Birmingham.

## **2.4 Lack of cycling skills**

Cycling is an unknown to many people – they do not have the skills to successfully integrate cycling into their lives. Because Birmingham has a low level of cycling, individuals do not always know someone who does cycle and can assist them with starting to cycle. This lack of knowledge can be a barrier in several ways.

### **2.4.1 Difficulties in planning routes**

Most regular cyclists are used to finding convenient, fast and more enjoyable routes to cycle. Experienced cyclists can spot cut-throughs and routes that will make their journey more efficient. However someone who drives a car or takes public transport may have no awareness of alternative routes to the main roads between their home and their preferred destinations. They will not be aware of quieter back streets and off-road cycle routes that are more welcoming to novice cyclists. Where people do not have the ability to plan better routes, this can be a significant barrier to utility cycling.

### **2.4.2 Maintaining bicycles**

From Push Bikes' experience this summer with Dr Bike, many bicycles are unused because of simple flat tyres. Other simple repairs that prevent people cycling are

misaligned wheels and brakes, rusty or worn-out chains and seized-up cables.

These repairs are easy and low-cost to sort out, but un-economic for most bicycle shops to deal with. As a consequence, the price that bicycle shops charge for these minor repairs (in order to make them economically viable) discourages people from having the repairs carried out. In a community with a high volume of cyclists, everyone would know someone who had the tools and capability to carry out these minor repairs. But at the moment those conditions do not exist in the UK.

### **2.4.3 Bike handling and road awareness**

Many novice cyclists do not have the skills necessary to ride on roads with motor traffic. There is a very low uptake of Bikeability training among adults in Birmingham, and not all schools in Birmingham take advantage of the Bikeability training that is on offer.

## **2.5 Fear of cycling**

Surveys consistently report that most people feel scared of cycling on main roads in busy traffic. Push Bikes' experience is that the most common demand, particularly by non-cyclists, is for more 'cycle lanes' because the roads are too dangerous. This fear impacts decisions made both for an individual's own actions, and for the actions an individual will allow others to do – both head teachers and parents seem to be motivated by a fear to cycling in dissuading cycling by children in their care.

This fear has many roots: the presentation of cycling by popular media; confirmation bias influencing way in which real-life encounters (both as observer and participant) with cycling are interpreted; a general perception of road conditions, which influences walking as well as cycling decisions.

Fear of cycling is to a large extent mistaken. Cycling is statistically no more dangerous than other forms of transport, and the health benefits greatly outweigh the risks. On the other hand, the experience of large lumps of metal passing within 1 metre of you at a speed differential of 20 or 30mph is not pleasant. The distinction between the emotions of fear and aversion to unpleasant experiences is not easy to pin down.

Presenting solutions to the fear of cycling is not an easy task, and needs to take into account the nuances of the multiple factors feeding into that emotion.

## **3. What are the solutions to these problems?**

### **3.1 Secure cycle parking in residential areas**

On-street parking for 10 bicycles can be provided in the space needed for 1 small car.

The simplest and cheapest form of storage is the Sheffield stand. These are widely available and easy to install – although care must be taken to attach them securely to the ground. It is possible to install a Sheffield stand with an integral bicycle pump (<http://heklucht.posterous.com/heklucht-almere-haven>). There are also designs for cycle racks that provide some protection against cars, along with an integral bike pump (<http://www.cyclehoop.com/products/car-bike-rack>).

Bicycle racks, such as Sheffield stands, are suitable in residential areas for inexpensive

bicycles. For more expensive bicycles, cycle lockers are a good option, although they do cost significantly more than Sheffield stands.

Providing secure cycle parking can address barriers 2.1, 2.4.1 and 2.4.2, if information stands are built with the cycle stands, with maps of the local area and recommended cycling routes, plus integral bicycle pumps to keep tyres inflated.

### 3.2 Secure cycle parking in desirable destinations

Several new developments in Birmingham city centre are looking into the provision of 'Cycle hubs', offering a variety of services such as staffed secure cycle parking, showering and changing facilities and basic bicycle maintenance.

Major destinations offer an economy of scale that makes the provision of such services more viable. For commuters, the convenience offered by Cycle hubs may represent good value for money, especially when compared with car parking charges or other transport costs. These facilities can address barriers 2.1 and 2.4.2. They also offer the potential to address other barriers, by providing a community of cyclists in one location who can share knowledge.

However, for many cycle users, the ability to park close to any destination is more important than the security offered by Cycle hubs. For most destinations, Sheffield stands located close to the entrance are important – with a cover to provide protection from weather if possible. As noted in 3.1, these can include maps of the local area and integral bicycle pumps, to address barriers 2.1, 2.4.1 and 2.4.2.

### 3.3 Creating a close-meshed network of cycle-friendly routes

A well-designed network of attractive (continuous, convenient, fast and safe feeling) cycling routes could address barriers 2.3, 2.4.1 and 2.4.3, and contribute to addressing barrier 2.5. However, it must be emphasised strongly that **poor quality cycling infrastructure must not be built.**

Consistent road designs, with clear layouts, particularly at junctions, help novice cyclists to choose the safest manoeuvres (addressing barrier 2.4.3). For this reason, poorly designed and maintained cycle infrastructure is worse than no cycle infrastructure at all, when that poor quality puts cyclists in dangerous situations.

That having been said, clear, visible, 'flagship' cycle infrastructure on main roads can act as a visible aid to encourage people to try out cycling – allowing people to think “**I could cycle down this road.**” (overcoming barrier 2.5 for that route) Allowing people new to cycling to be able to imagine cycling to important destinations would significantly encourage more people to cycle, through addressing barrier 2.4.1.

One of the most important issues in designing a network of attractive cycling routes is helping cyclists to negotiate junctions safely. Even where cyclists may use minor roads for much of their journey, they are likely to encounter main roads at junctions. Promoting the flow of traffic (designing for 'traffic smoothing') often focuses on increasing the capacity of junctions on main roads – increasing the number of lanes; providing left-turn and right-turn lanes separately; putting in high volume roundabouts; removing Advanced Stop Lines for bicycles (ASLs) because they take up space for motor vehicles.

For cyclists who can not 'take the road' and behave like a motor vehicle, these 'traffic smoothed' junctions are difficult to negotiate at best, and impossible to negotiate at worst. Even for confident cyclists, crossing 2 lanes of motor traffic to enter a right-turn lane can be a difficult manoeuvre. Trying to act like a pedestrian and push your bicycle across the junction is sometimes no easier, as pedestrian light phases can be short, if they exist at all.

A network of attractive cycle routes requires junctions to be designed with safety for pedestrians and cyclists. This can be achieved through the use of ASLs, or through separate green phases for bicycles, to provide segregation in time.

Without safe junctions, there can be no continuous network of attractive cycle routes.

### **3.4 Bicycle hire schemes – Velib / Barclays Cycle Hire style**

This type of hire scheme offers a convenient solution to barriers 2.1, 2.2, and 2.4.2. They are excellent at encouraging new people to cycle, by reducing the cost of trying out cycling, and eliminating worries about cycle theft and maintenance. Where located on quiet routes and public transport links, they can indirectly address barrier 2.5, by allowing individuals to cycle on routes they feel safe on, while using walking or public transport for sections that they feel scared of.

The cost of trying a Barclays Cycle Hire bicycle is half the cost of a single bus ticket. The impact this has on the ease of trying out cycling is bigger than any other single measure.

The mean hire distance for Barclays bikes in London is just under 2km – or in other words, from New Street Station to any location within the Middleway ring road. The mean hire duration is 15 minutes. A cycle hire scheme on the Barclays Cycle Hire model would not only enable an increase in cycling in Birmingham city centre, but would also help with the regeneration of the city centre, by increasing the speed and reliability of transport links from the main stations to areas such as Digbeth. Driving a car, or taking public transport from one side of the city centre to the other is not simple and easy, but hiring a bicycle and cycling would be simple and easy.

Extending a cycle hire scheme like this into the residential areas immediately outside the Middleway ring road would enable people to cycle into the city centre, rather than taking buses. A 40 minute walk only takes 15 minutes on a bicycle, which makes cycling more attractive than public transport or driving a car.

### **3.5 Bicycle hire schemes – medium term hire**

There are a couple of medium term (up to 6 months) cycle hire schemes in Birmingham – Castle Vale Cycle Loans, which uses recycled bicycles; Bike North Birmingham, which also uses recycled bicycles. These two schemes are free of charge, and offer a way for people to try out cycling without having to make a large investment up-front. While these are very useful schemes, they only address barrier 2.2. They need to be combined with improved secure cycle parking in residential areas and popular destinations, as they have the same issues as privately-owned bicycles.

### **3.6 Alternative ways to purchase bicycles – Cycle to Work scheme**

An additional way to address barrier 2.2 is through schemes that spread the cost of buying a new bicycle over 1 or 2 years. The Cycle to Work scheme has been adopted by many

companies in Birmingham, and, belatedly, BCC.

A major issue with the scheme, however, is that many low-paid workers are excluded because they are on temporary contracts or working through agencies. And students and the unemployed are excluded completely. Ironically, the people who most need access to ways to spread the cost of investing in cycling are those who can not access these schemes.

The private sector has done well in extending the Cycle to Work scheme to many employees, but now the state and voluntary sectors may be needed in finding alternative ways to purchase bicycles to excluded groups.

### **3.7 Cycle training**

Barriers 2.4.1, 2.4.2, 2.4.3 and 2.5 can all be addressed through cycle training schemes.

Bikeability training is offered across Birmingham, but is not accessed by all schools in Birmingham. There is evidence that children who receive bicycle training at school are more likely to cycle as adults, and in the Netherlands all children receive cycle training and broader road safety training. Providing cycle training to all children is an important part of long term building of a broad cycling culture.

Bikeability training for adults in Birmingham is also offered. The experience of Push Bikes, however, is that adults may be less likely to accept the need for cycle training. Some adults have commented that 'if they have to think about cycling, instead of just enjoying it, they won't do it.' It may be that formal bicycle training may alienate some adults – in which case they might be better reached through other cycling activities, such as group rides or maintenance workshops, which include advice about riding skills as asides.

Maintenance training is also essential for building a wider cycling culture. There are organisations in Birmingham that offer maintenance training, such as the Birmingham Bicycle Foundry and Bike North Birmingham. These need to more widely publicised and encouraged, to build up the numbers of people who are able to maintain bicycles and support cycling in their communities.

### **3.8 Introducing 20mph speed limits and reducing through traffic - 'rat-runs'**

Barriers 2.3, 2.4.3 and 2.5 can be addressed by these measures, and measure 3.3 can be assisted.

For most of the highway network, a speed of 20mph is more appropriate than 30mph. Traffic collisions are less fatal at this speed, and with on-street parking, high density residential areas, and a busy town centre, 20mph is a safer speed for observing and reacting to hazards.

Introducing a maximum speed of 20mph will not significantly change average speeds through much of the city – instead excessive acceleration and braking will be reduced. Stopping at junctions already limits the average speeds in Birmingham – accelerating to hit the 30mph speed limit in between junctions is simply wasteful driving.

Having a 20mph speed limit changes the calculations of motor vehicles encountering bicycles on the road. With a bicycle travelling in front at 10mph, overtaking to achieve a

top speed of 30mph appears to be a rational choice, whereas overtaking to achieve 20mph does not provide such apparent benefits.

Reducing through traffic, by reducing the speed to 20mph and using one-way streets and road closures, also benefits local residents and cyclists. With careful planning, cyclists can continue to use the streets at the same speed, but enjoy a quieter road environment. Local residents will have less air and noise pollution, as well as having streets that are more people friendly – increasing community ties (see <http://www.carfreeday.org.uk/traffic-community-research.aspx>)

### **3.9 Promote a culture of road safety.**

This addresses similar issues to that of 3.7, but from a different angle, targetting barriers 2.4.3 and 2.5. The focus lies in moving away from a transport planning system which accommodates the errors of motor vehicles in infrastructure design, to one that focuses on addressing the source of danger – the large, heavy, lumps of metal travelling at speed on the infrastructure. (<http://rdf.org.uk/road-danger-reduction/>)

BCC does not have the ability to create new laws regarding vehicle behaviour, but BCC does have the ability to influence the enforcement of existing laws, which currently are ignored to a large extent, as well as set standards for their contractors.

## **4. How can these solutions be implemented by BCC?**

The discussion of implementation by BCC will include discussion of partners that can be involved, and the resources that may be needed.

When resources are being discussed, however, it is important to note that an increase of just 109 additional people cycling at least 3 times per week generates benefits in reduced congestion and pollution, and increased health, worth £1 million. (Adrian Lord, <http://www.cyclenation.org.uk/papers/0911notts/0911-1.pdf>)

Resources spent on increasing cycling bring measurable savings in other areas of public expenditure, while resources spent on 'traffic smoothing' mainly bring increased volumes of motor traffic, rather than reducing congestion.

Investment in big public transport infrastructure schemes such as the extension of the Metro to reach New Street Station is measured in the hundreds of millions of pounds – these schemes are admirable and praiseworthy, but a fraction of that money spent on bicycle infrastructure could create a high quality network of routes across the whole of Birmingham, directly benefiting every single Birmingham resident.

There is great cynicism in the cycling community about the commitment of national and local government and bodies such as Centro to increasing the use of bicycles. When the resources spent on 'traffic smoothing' and big public transport projects dwarf that spent on improving cycling, that cynicism seems well justified.

- Billions of pounds have been spent on improving Birmingham's highways to meet the needs of motor traffic, resulting in even higher numbers of motor vehicles being used, often still stuck in congestion.

- Hundreds of millions of pounds have been and are being spent on improving public transport in Birmingham, with considerable success, as demonstrated by the high numbers of people using public transport.
- A few million pounds have been spent on improving conditions for Birmingham's highways to meet the needs of bicycle users, with the result that few people ride bicycles.

This result is not particularly surprising.

So, how can the proposed solutions be implemented by BCC?

**4.1** Ensure that the whole of BCC, both councillors and officers, buy into encouraging cycling, and are accountable for the influence that their jobs have on cycling conditions

Resource implications – Minimal. The biggest cost is training sessions.

Partners – Cycle campaign groups, such as Push Bikes, the CTC, Sustrans; Outside experts, such as ARUP and the Dutch Cycling Embassy

This is the most important step to be taken to achieve a high level of cycling in Birmingham.

Two recent examples bear this out:

- The 'cycle' lanes on the Selly Oak bypass were designed without any apparent consultation of cyclists. Push Bikes has been told by traffic engineers involved in this project that they did not have any guidelines for what cycle infrastructure should be like. That they did not make the effort to find out illustrates the general attitude to cycling among many BCC officers.
- The new Morrisons' development next to Five Ways included the removal of a dropped-kerb that facilitated the transition of cyclists from the key infrastructure under the Five Ways roundabout onto Hagley Road. The solution, after this issue was raised by a cyclist, was to designate the pavement a shared path. In other words, to make no design concessions for the needs of bicycles, resulting in a bodged solution that is unsatisfactory for pedestrians and cyclists.

Enquiries made to BCC about infrastructure relating to cycling are routinely routed through a couple of 'cycling' officers – who presumably then liaise with the department that was originally contacted in order to find out an answer.

This is not only a gross waste of time and resources, but serves to enforce the impression that 'cycling is the lowest priority' and 'a problem for someone else, not me'. If there is not acceptance by the whole of BCC that cycling is their responsibility, then the rest of the recommendations in this report may as well be ignored as well.

These are some minimum requirements:

- (1) Highways and planning officers need regular staff development sessions focusing on the impact that their jobs have on cycling, and the ways in which infrastructure can be altered to facilitate cycling. Some of these staff development sessions must

- include cycle training and cycle tours of infrastructure.
- (2) Clear design standards need to be set for infrastructure, which are published and publicly available to private developers and contractors, and for the electorate. These design standards need to be regularly reviewed, with input from people who use bicycles.
  - (3) Measurable targets need to be set, which individual BCC departments can be held accountable for. These targets must include the quality of infrastructure (measured against the design standards), and not just the quantity of 'infrastructure'. These targets need to be made publically available, so that the electorate can measure the success of BCC departments.
  - (4) Create a clear 30-year masterplan for cycling routes in Birmingham, against which all infrastructure works must be compared. This must be publically available, so that the electorate can measure the progress of BCC in achieving that plan.

These measures require strong political leadership from councillors to ensure that BCC officers take them seriously.

Push Bikes is very pleased to note that several prominent councillors are strong supporters of increasing cycling in Birmingham. Our message to other councillors, however, is that we believe all councillors should come out strongly in favour of cycling – this is not an issue that can be left to only a few councillors, no matter how prominent they are.

Push Bikes will continue to push for all councillors to support the growth of cycling, and educate councillors on cycling issues.

#### **4.2 Include infrastructure improvements for bicycles in the rolling highway repairs programme.**

Resource implications – Minimal, absorbed in the maintenance budget and spread over a long period.

Partners – AMEY, and sub-contractors

This depends on the 30-year masterplan recommended in 4.1, and requires the buy-in of the Highways department in BCC, in order to maintain the long-term focus required for this to work.

The rationale behind this is that the cheapest time to introduce changes in infrastructure is when other major work on that infrastructure is being carried out. The materials and workforce are already in place, the road closures have already been planned and much of the infrastructure will already have been planned to be torn up in the process. This is the best way to build a cycle-friendly close-meshed network, although for extended periods of time, parts of the network will be unavoidable disjointed. The existence of a 30-year masterplan is essential for ensuring that disconnected sections are eventually joined up, and in convincing the cycling community that this is not just the same old disjointed bones of a network.

It needs to be noted that much of the infrastructure to be used already exists. No wide-spread expensive alterations to accommodate bicycles are needed on the majority of residential streets – instead rather there will be cheap changes that can be made, through changes to parking, priorities and signs, which can have a big impact on the experience of cycling on these streets. Expensive alterations may be needed on main roads, but these

will generally be the exception rather than the norm. The main obstacle is a lack of joined-up planning.

#### **4.3 Redesign junctions to create clear, consistent and efficient solutions for bicycle users.**

Resource implications – Expensive highways work. This can be off-set by either: national government funding for dangerous junctions improvements; incorporation into ongoing infrastructure maintenance.

Partners – AMEY, and sub-contractors; National government (funding); Centro

This is separate to point 4.2, because junctions represent the biggest risk to bicycle users, and are therefore higher priority. Because junctions potentially take bicycle users across the paths of motor vehicles, particular care must be taken with junction design, as mistakes will result in accidents.

The provision of ASLs is the minimum standard for junctions, and may not even be an acceptable minimum where cyclists need to turn right across several lanes of motor traffic. Junctions designs that provide segregation in time (through separate light phases) for cyclists may be more appropriate.

The most important thing is that novice cyclists can easily understand the junction, and take the safest route across, while drivers of motor vehicles are able to accurately predict bicycle users' behaviour at the junction.

#### **4.4 Build flagship cycling infrastructure on major roads into the city centre.**

Resource implications – Expensive highways work, but already off-set by ear-marked funding, such as that for Bike North Birmingham, and the money available through Centro for the Bristol Road, Pershore Road and Warwick Road corridors.

Partners – AMEY; Centro

This, again, is separate to point 4.2, because of the benefits presented by early flagship projects.

The pot of money available for Bristol Road, Pershore Road and Warwick Road represents an opportunity to set a high standard for cycle infrastructure, to show that BCC can design for bicycles and is taking bicycles seriously. Because of the width of the pavements on Bristol Road and the comparatively low number of side roads, it represents an excellent opportunity.

Flagship cycling infrastructure is important because of its visibility. The Rea River route is a very popular route for cyclists, but is not well known as a cycling route for non-cyclists because it is not on a main road. Bike North Birmingham is wonderful, but Push Bikes discovered that many people in New Oscott did not know of its existence. Having highly visible, high quality, cycling infrastructure on Bristol Road – and joining it up with the city centre – would have the potential to attract a lot of new people to cycling.

It is not necessary to have high volumes of highly visible cycling infrastructure (indeed, as noted in 4.2, much of the network will consist of residential streets), but it is necessary to have at least some, in order to introduce the possibility of cycling into the minds of people stuck in congestion on Birmingham's main roads. Money invested in high-visibility flagship projects directly advertises cycling for as long as it exists – it is an investment that keeps

on giving.

#### **4.5 Build secure cycle parking in residential areas**

Resource implications – low to medium, possibly offset through advertising revenue or electricity generation

Partners – Amey; Advertising companies; Electricity companies; local residents; employers

This work would also need to be carried out outside of the maintenance schedule, as residential roads are not renewed as often as busier roads.

Advertising opportunities could be created, especially if information stands are installed at the same time, although these might not be considered appropriate in the many conservation areas in Birmingham.

There are electricity companies who offer to install free solar panels (<http://www.uswitch.com/solar-panels-home/free-solar-panels/>) for residential properties. Covered cycle storage, next to lamp-posts for easy access to the mains network, may be attractive as sites for solar panels, with the company offsetting the cost of installing the parking. There are also companies selling canopies with PV cells installed (for example: <http://www.ablecanopies.co.uk/faraday-solar-canopies-c-764.html>) with a potential return on investment of about 20 years.

One benefit of installing PV panels on bicycle shelters could be the provision of charging points for electric bicycles. This would be increasingly popular as electric bicycles become cheaper, and would represent a better investment than electric car charging points.

For bicycle lockers, it may be more appropriate to offer subsidised prices to local residents, or offer rental schemes, rather than BCC covering the whole cost of the locker. As individual lockers would be available to only 1 person or household, it would be impractical to offer to all residents for free, so some form of rationing mechanism would be necessary. It might be possible to encourage employers to subsidise individual lockers for their employees as part of packages to facilitate cycling to work.

#### **4.6 Build secure cycle parking at popular destinations**

Resource implications – medium, possibly offset through advertising revenue, or through parking charges

Partners – Amey; Advertising companies; employers; local businesses; Centro

This work is not included as part of the maintenance schedule, since many of the sites will be on privately owned land, or off the highways.

Advertising revenue could be used, as discussed in 4.5, with the advantage that there will be fewer planning objections to advertising at these sites. On private land, most of the costs would be borne by local businesses and employers. It may be necessary to convince businesses of the financial benefits of cycle parking for them.

Some destinations, especially for commuters, may be viable locations for cycle hubs – which could be supported by Centro or run by private businesses. Local employers may be persuaded to subsidise the use of cycle hubs by their employees, as part of schemes

designed to encourage cycling to work.

#### **4.7 Increase permeability for bicycles – one-way streets**

Resource implications – low to medium

Partners – Amey

Recent changes to DfT guidelines have made it easier to allow contra-flow cycling on one-way streets.

Many one-way streets are wide enough to accommodate contra-flow cycling comfortably, although clear signs are necessary to prepare road users for the presence of bicycles.

On some one-way streets, on-street parking has restricted the width of the roads. In some cases, moving the parking bays to cushion the contra-flow from on-coming motor traffic may be appropriate. This would be more expensive.

This measure fits in well with 4.8 and 4.9 – 20mph speed limits and reducing through traffic.

#### **4.8 A blanket 20mph speed limit, city wide, with exceptions only for some main roads.**

Resource implications – medium

Partners – Amey; Centro; pedestrian campaign groups

This change would benefit from the cost implications of being city-wide. Rather than paying for 20mph signs for individual zones, signs would be concentrated at the junctions between the exempted main roads and the rest of the highway network. An additional benefit would be that a blanket speed limit would cause less confusion than a patchy implementation, and so encourage better compliance with the new speed limit.

#### **4.9 Reducing through traffic**

Resource implications – low to medium (depending on measures used)

Partners – Amey; pedestrian campaign groups; local residents; Sustrans

This change can be simply effected by the smart use of one-way streets and road closures. It has already been used successfully in many roads in Birmingham, but needs to be more widely used – the goal should be to have roads for travelling between different areas, and roads that are used only for reaching destinations within an area.

By increasing the time required for short, local journeys by car, while keeping longer journey times by bus and car constant, walking and cycling will become more attractive choices for local travel. High volumes of short car journeys, which add to congestion and slow down bus routes, would be replaced by cyclists and pedestrians – a win-win situation for everyone.

Enforcement of 4.8 and 4.9 may be better carried out through the use of clear signs and traffic cameras where possible, rather than infrastructure such as speed bumps, which can create problems for some bicycles, especially tricycles, and lead to increased cycling accidents.

Measures 4.7 and 4.9 depend on the development of a clear 30-year plan for cycling infrastructure, in order to properly plan these traffic reduction measures. The roads where these measures are carried out will form a large part of a close-mesh cycle network, and will not require more expensive measures such as separate bicycle lanes if the traffic reductions are effective. Over time, many of the main routes for bicycles may separate from the main routes for motor traffic, as these measures facilitate the smooth flow of cycle traffic and discourage motor traffic.

#### **4.10 Introducing short-term bicycle hire schemes**

Resource implications – high, but might be offset by private investment  
Partners – Centro; Private companies (see below); employers and businesses

This could have many benefits for Birmingham, but does represent a substantial investment.

In Paris, JCDecaux finance the Velib scheme, in return for advertising rights. In London, the cost of the 'Barclays' Cycle Hire is only partially covered by Barclays – perhaps a less financially practical example.

A German company, Nextbike, runs and finances cycle hire schemes from city-wide schemes to schemes just for one business. This model may be worth investigating, to see if employers and businesses could be brought in to support the initial set-up of limited cycle hire schemes.

In the long run, short-term easy cycle hire would make a valuable contribution to Birmingham's economy, and so the options are well-worth investigating.

#### **4.11 Increasing the provision of medium-term bicycle hire schemes**

Resource implications – low to medium  
Partners – Charity and voluntary sector; Centro; Sustrans; NHS

These schemes are very useful, particularly for people who may not have the funds to spend on a new bicycle.

A particularly good way to expand these schemes maybe to involve the NHS, and have doctors prescribe cycling as a low-impact form of exercise. The provision of a loan bicycle for 6 months, with perhaps some cycle training and route planning, could be a good way to facilitate the up-take of cycling for groups where the health benefits would be greatest.

#### **4.12 Increase the availability of cheaper bicycles**

Resource implications – low  
Partners – Charity and voluntary sector; bicycle retailers; educational institutions; employers

Schemes like Cyclechain's refurbishment workshop are a good way to provide cheap refurbished bicycles. Cyclechain is already working with local universities to provide bicycles to students. Other charities, such as the Birmingham Bike Foundry, also provide refurbished bicycles.

While there is space for this provision to grow, many of the bicycles come either from private donations of unwanted bicycles or from police auctions of unclaimed bicycles. These sources are not sufficient to satisfy potential demand for cheap, practical, bicycles.

It is informative to look at the bicycles for sale on the British and Dutch Halfords websites. British cycle retailers survive by their profit margins on low-volume, high-value specialist bicycles. Dutch cycle retailers deal with high-volume, low-value utility bicycles. This is not a criticism of British cycle retailers – they sell to the British market. However the effect of this does impact the availability of cheap bicycles in the UK.

It might be worthwhile investigating the economics of mass orders of cheap utility bicycles, with pre-orders put in through employers and educational institutions, to compensate for this problem with the British cycle market.

Although BCC may take a role in initiating discussions, it is not suggested that BCC be involved in the purchase, other than as an employer. This is a solution that is best left to negotiations between the buyers and bicycle retailers, once the initial idea has been presented. However, offering the opportunity to purchase cheap, reliable utility bikes to BCC employees through the Cycle to Work scheme may be quite popular.

#### **4.13 Provision of cycle training to all Birmingham school children**

Resource implications – medium

Partners – Birmingham schools; Bikeability; Sustrans; logistics companies

This is an important measure whose cost will unfortunately be ongoing every year, but which is important. The easiest time to reach large numbers of people with cycle training is when they are at school. On its own, cycle training will not create a mass cycling culture, but it is pivotal in creating a safer cycling culture.

It would be a good idea to include cycle training in a wider road safety awareness programme. Recently logistics companies have been involved in providing heavy goods vehicles for awareness raising sessions for cyclists – although the lessons learnt are highly applicable to walking and driving as well. Another example is that in the Netherlands, school children are taught to open car doors with the hand furthest from the door, which encourages them to look out of the car before opening the door. This improves their safety on the road, as well as benefiting other road users. The goal of a programme like this is to build a culture of road safety that develops awareness of the implications of everyone's actions in all modes of transport – rather than teaching children solely how to adjust their bicycle riding to compensate for other road users' behaviour.

Currently not all schools and head teachers are keen to provide cycle training, so political leadership by BCC is necessary to ensure the comprehensive provision of this vital service.

#### **4.14 Provision of adult cycle training**

Resource implications - low

Partners – Voluntary and charity sector; Cycle groups; Bikeability; Sustrans; Leisure centres; Employers; CTC and British Cycling

This includes both cycling skills and maintenance skills.

As adults may feel that they do not need cycle training, or may be embarrassed to ask for it, it is important to target adults at locations where they will be interested in exercise – such as leisure centres – or in social situations – such as with cycle groups – or where cycle training may represent a positive reward – such as during work hours.

Convincing employers of the benefits of actively encouraging their employees to cycle to work (in addition to providing the Cycle to Work scheme) could result in employers being willing to offer a few hours from work time for cycle training – if, in the long run, the employees will have more reliable commute times and less sick days, as well as being more alert and productive at work.

#### **4.15 Provision of basic maintenance for bicycles**

Resource implications – low

Partners – Cycle retailers; Voluntary and charity sector; Leisure centres

Cycle retailers will not find minor repairs to be commercially viable, but the value of advertising opportunities and referrals for more complex repairs and expensive parts may make it worthwhile for them to provide free or low-cost supplies – such as inner tubes, puncture repair kits and basic tools.

Leisure centres are an ideal location for free basic bicycle maintenance, but this requires the presence of a few members of staff who are trained in basic repairs. This could be provided cheaply by local charities, such as the Birmingham Bike Foundry, or by local cycle retailers. The materials for repairs could come from local cycle retailers, in return for advertising and referrals.

In Push Bikes' experience, Dr Bike sessions at leisure centres are very popular. To provide this service across Birmingham, however, the leisure centres need to organise these themselves.

#### **4.16 Setting up local Bicycle User Groups**

Resource implications – low

Partners – Voluntary and charity sector; local residents; employers; community centres and leisure centres (for facilities and storage); national cycling groups – Sustrans, CTC, British Cycling

Helping local residents, or employees in businesses, to set up Bicycle User Groups (BUGs) would assist in measures 4.15, 4.14, 4.12 and perhaps 4.11.

BUGs need assistance in initial setting up of the group – finding members, establishing methods of communication, finding out what resources there are in Birmingham, finding a storage place if there are communal tools, etc. - and also in publicising the existence of the group to local people who might need support from the BUG to cycle.

They can be very useful in creating a cycling community for new cyclists, with a shared pool of knowledge and experience. As there is such a low level of cycling in the UK, there is limited social network support for many new cyclists – BUGs help to bridge that gap.

#### **4.17 Setting up Bicycle-friendly Business Districts**

Resource implications – low

Partners – Businesses; retailers; employers; Sustrans; Birmingham LEP and BCG, etc.; bicycle deliver companies

Retailers and businesses need to be helped to see the connection between supporting local shops and the use of bicycles. Bicycle-friendly Business Districts (BFBDs) are areas where businesses work together to create an area that is attractive to cycle to, and where the businesses also use bicycles for utility purposes ([www.transportissuesdaily.com/emerging-trend-bicycle-friendly-business-districts](http://www.transportissuesdaily.com/emerging-trend-bicycle-friendly-business-districts)).

These are a combination of measures to target customers – cycle parking, basic cycle maintenance, discounts for cyclists – and use of bicycles by local businesses – for commuting, small to medium deliveries, going to business meetings.

Encouraging cycling would create good advertising for the local businesses, as well as creating a local atmosphere that was conducive to leisurely browsing and impulse buying – streets with high volumes of motor traffic and on-street car parking, do not lead to high sales.

It seems that businesses in Birmingham often are missed out of cycle issues, and the benefits of increased cycling are not explained to them. There would be benefits to convincing Birmingham businesses that cycling is good for business.

#### **4.18 Promote a culture of road safety**

Resource implications – low

Partners – BCC contractors; All companies using professional drivers; insurance companies; Bikeability; motoring bodies, such as the AA.

The behaviour of motor traffic can have a very strong influence on the perceptions of the dangers of cycling that the public has. Training professional drivers in considerate driving techniques, and holding them to account for their driving standards, has a large role to play in changing the behaviour of motor traffic. Advances in technology has made monitoring of driving standards much easier than even 5 years ago. Insurance companies are rolling out devices that monitor the standard of driving of a vehicle, allowing the company to modify insurance premiums to match the statistical risk of those driving patterns. Many people are also taking high-quality video cameras onto the roads now, recording vehicles' behaviour – eliminating reliance on possibly biased and unreliable eye witness statements.

It should now be possible to set meaningful driving standards that will improve safety for other road users and properly monitor them. BCC could insist that their contractors adopt these standards, train their drivers and monitor their driving. This would be an important shift away from policies of accommodating driver errors in road design (which results simply in more risk taking) to placing the onus for safety onto the vehicles that present the danger. Providing cycle training is important, but focusing only on that is a form of victim-blaming.